Construction Environmental Management Plan

KENT ROAD PUBLIC SCHOOL

DEPARTMENT OF EDUCATION

KENT ROAD, NORTH RYDE

St Hilliers Project Number: 18087
Revision 8

Table of Contents

B.1 - Preliminary 4
B.2 - Purpose of the Construction Environmental Management Plan 5
B.3 - Project Overview 6
B.4 - Policy 7
B.4.1 - Environmental Policy 7
B.4.2 - Environmental Overview 7
B.4.3 - Induction and Training 7
B.4.4 - Risk Analysis 7
B.4.5 - Environmental Roles and Responsibilities 8
B.5 - Project Environmental Statement 11
B.6 - Objectives and Targets 12
B.6.1 - Objectives 12
B.6.2 - Client Environmental Objectives 12
B.6.3 - Targets 12
B.6.4 - Reports Included in CEMP 12
B.7 - Hazard Identification, Risk Assessment and Control (HIRAC) 13
B.8 - Legislation, & Guides 14
B.8.1 - Guides and Standards 14
B.8.2 - Environmental Protection 14
B.8.3 - Soils 14
B.8.4 - Air 14
B.8.5 - Noise and Vibration 14
B.8.6 - Dangerous Goods 15
B.8.7 - Asbestos 15
B.8.8 - General 15
B.9 - Environmental Consultation 16
B.9.1 - Induct Personnel 16
B.9.2 - Conduct Toolbox Talks 16
B.9.3 - Conduct Daily Pre-Start Meetings 16
B.9.4 - Perform project Safety Risk Analysis 17
B.9.5 - Review Subcontractor Environmental Controls 17
B.9.6 - Community Consultation & Complaints 18
B.10 - External Lighting 20
B.11 - Project- Potential Hazard management 21
B.11.1 -Traffic & Pedestrian Management 21
B.11.2 -Air Quality/ Dust Control 21

B.11.3 -Asbestos 23
B.11.4 -Contaminated Land 25
B.11.5 -Cultural Heritage 26
B.11.6 -Stormwater, Groundwater, Erosion and Sediment Controls 28
B.11.7 -Flora and Fauna 29
B.11.8 -Hazardous Substances and Dangerous Goods 31
B.11.9 -Noise 33
B.11.10 -Vibration 34
B.11.11 -Waste Management 35
B.11.12 -Surface Water Quality 36
B.11.13 -Essential Services 38
B.12 - Environmental Procedure Management 39
B.12.1 -"Chance finds" procedure- for unexpected finds 39
B.12.2 -Conduct Audits 39
B.12.3 -Perform Environmental Baseline and Conditioning Monitoring 41
B.12.4 -Site Inspections 41
B.12.5 -Report Monthly Environmental Performance 43
B.12.6 -Report Environmental Incidents 43
B.12.7 -Manage Enquiries and Complaints 45
B.12.8 -Manage Incident Involving Hazardous Substance 46
B.13 - Appendix A – St Hilliers Quality, Health, Safety and Environmental policies 47
B.14 - Appendix B - Traffic & Pedestrian Management Plan 177
B.15 - Appendix C - Construction Soil & Water Management Plan 251
B.16 - Appendix D - Construction Waste Management Plan 268
B.17 - Appendix E – Construction Noise & Vibration Management Plan 286
B.18 - Appendix F – Flood Emergency Response Plan 313
B.19 - Appendix G – Safety Risk Assessment 320
B.20 - Appendix H – Asbestos Remediation Action Plan 379
B.21 - Appendix I – Asbestos Management Plan 440
B.22 - Appendix J – Contamination Report for Waste Classification 481

Table Listing

Table 1: Version Control 4
Table 2: Distribution List 4

B.1 - Preliminary

Version Control

Table 1: Version Control

Version Number	Date	Version Description	Approved by
1	20.11.19	Construction	Greg Malenstein
2	22.11.19	Update ACM	Greg Malenstein
3	26.11.19	Change in PM	Greg Malenstein
4	13.12.19	ACM information	Greg Malenstein
5	03.02.20	Change in PM	Greg Malenstein
6	10.03.20	Change in PM	Greg Malenstein
7	11.05.20	Change in PM	Matthew Bass
8	13.08.20	Change in PM & CA LTEMP requirements added. *	Ben Owens

Note: Revision 8 follows a review of the Plans following issue of the CCR, IEA Report, S4.55 Modification approval and the issue of the Site Audit Statement (including the LTEMP) and the Site Audit Report.

Distribution

Table 2: Distribution List

Copy	Recipient
Ben Owens	Project Manager
Greg Malenstein	Construction manager
Anne Warren	Client Project Manager

B.2 - Purpose of the Construction Environmental Management Plan

This Construction Environmental Management Plan (CEMP), developed in accordance with the St Hilliers Management System, establishes responsibilities and practices to be followed by the project team throughout the project from the Point of Handover from the Bid Team. The CEMP aims to deliver the project in accordance with client requirements and without safety and environmental incident to employees and the community. It is a tool to clearly identify HSE Risk, Hazards and Aspects, and then develop controls and improvements to manage these issues.

This CEMP details environmental management aspects and controls specific to this project in accordance with St Hilliers Integrated Management Systems and project requirements. St Hilliers aims to have zero environmental incidents on the project.

The project CEMP will address and include items nominated within the Notice of Determination issued by State and Local Authority Statutory Authorities. Refer to Appendix J – Independent Environmental Audit Program

St Hilliers National Health and Safety (HSE) Systems Manager has Corporate Responsibility for maintaining systems in accordance with ISO 9001, ISO 14001 & ISO 45001 requirements.

Ben Owens is the St Hilliers Project Manager with executive responsibility for safety, quality and the environment and responsible for implementation of the requirements of the CEMP in accordance with individual position descriptions.

The intent of this CEMP is to be a “Live” Document that is revised to reflect the changing nature of the project as required.

B.3 - Project Overview

Construction of the following building and ancillary works:

- Construction of 34 new permanent teaching spaces (two x three storey buildings), a new 2 storey administration building including canteen and staff area;
- New student facilities;
- Supply and installation of Furniture, Fixtures and Equipment; and
- Landscaping of school grounds and walkways.

B.4 - Policy

B.4.1 - Environmental Policy

St Hilliers' Integrated Management System (IMS), certified to ISO 14001, supports the achievement of Client and business objectives by effectively managing environmental aspects without adversely impacting the environment and communities in which we work. St Hilliers believes that environmental management is as much about protecting the natural environment as implementing environmentally responsible design and we recognise the potential environmental and social impacts associated with working in the construction industry.

St Hilliers is committed to sustainable development through:

- Complying with applicable environmental statutory and regulatory requirements, project specific requirements and our IMS.
- Applying corporate environmental objectives and targets across our projects through detailed work instructions and Project Plans.
- Implementing suitable project specific controls and resources.
- Communicating requirements and responsibilities to staff and those working on or behalf of our organisation.
- Providing initiatives that prevent pollution, achieve waste minimisation/recycling and reduce energy and water usage.
- Managing design initiatives to provide optimum environmental outcomes.
- Continually improving our environmental management performance.

St Hilliers performance against this Environmental Policy is monitored regularly. This policy is reviewed annually by senior management to assess its suitability and effectiveness in accordance with changing business, community and government expectations. The success of this policy and our sustainable future relies significantly on the culture of our business, led by senior management, in accordance with the St Hilliers systems.

B.4.2 - Environmental Overview

St Hilliers is committed to providing the services it offers in a manner which conforms to the contractual requirements of its customers and to all relevant regulatory, legislative and statutory requirements. To achieve this objective St Hilliers plans, implements and controls systems which facilitate the management of the environmental aspects of its projects.

In accordance with corporate objectives and its requirements, this Project has been assessed for potential environmental risks associated with the Project activities. Project activities have been planned and where considered necessary, controls have been developed to mitigate or eliminate the perceived environmental risks.

B.4.3 - Induction and Training

All site personnel will attend a Project Induction, which will incorporate all project environmental aspects, prior to commencing on site.

Training (formal and toolbox talks) will be undertaken regularly throughout the duration of the project.

Daily Pre-starts will be utilised to ensure that the activities to occur on the day are adequately controlled in consultation with those performing the works, ensuring that the controls agreed are compliant.

B.4.4 - Risk Analysis

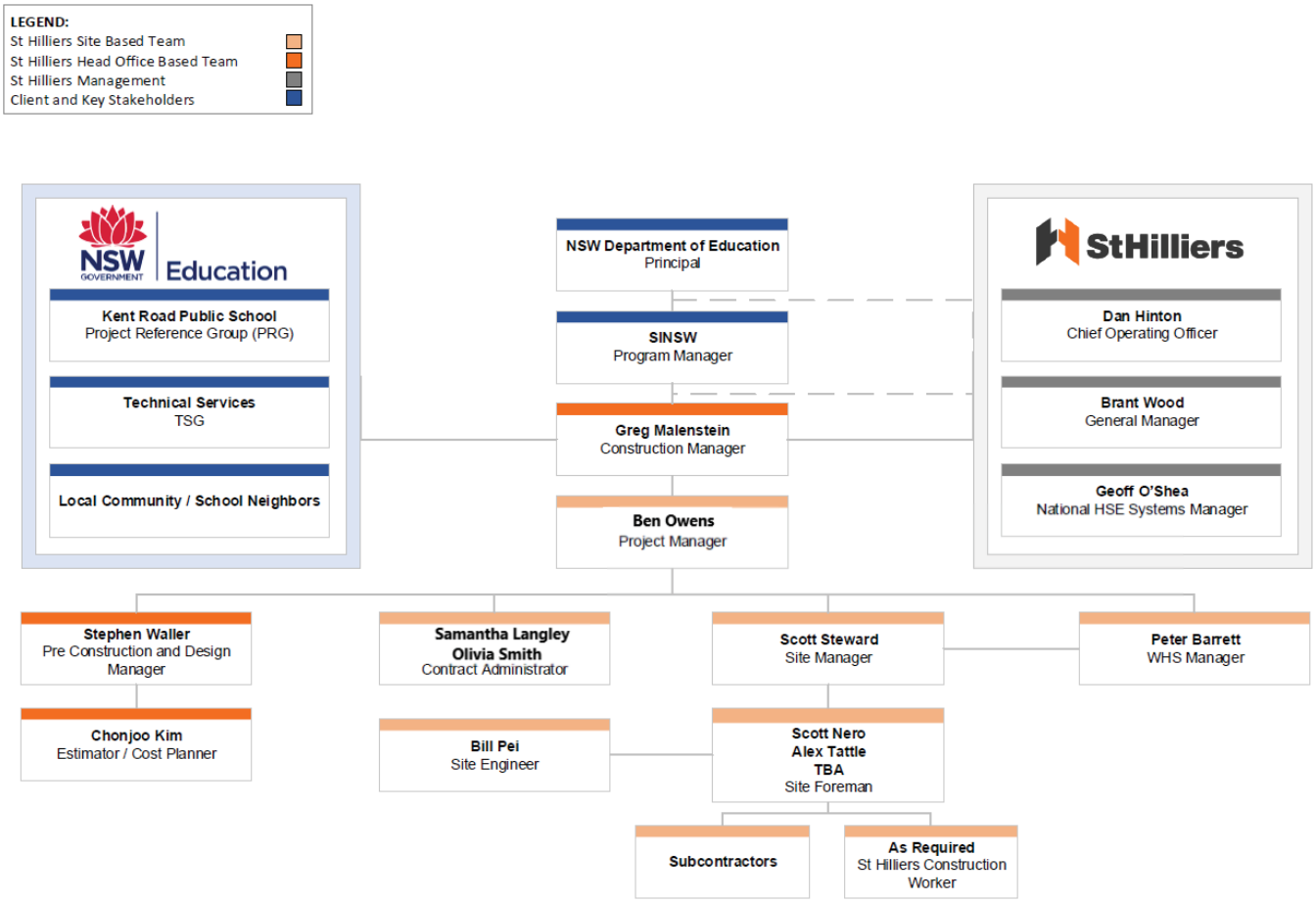
Environmental risk analysis will form part of any work Process Plan and or Safe Work Method Statement. Areas of concern will be identified by the Project Team and HSE Manager prior to commencement of specific work activities and controlled by the relevant instruction developed.

Environmental risks will also be identified by using past environmental investigations, on-site knowledge, and any approvals and permits for the project.

B.4.5 - Environmental Roles and Responsibilities

Key environmental issues will be managed throughout the works.

B.4.5.1 - St Hilliers Organisational Chart



B.4.5.2 - acknowledgement of responsibilities

Signatures on this page acknowledge that;

- St Hilliers staff have been consulted in the development of this CEMP;
- Understand and accept their responsibilities and roles documented within this CEMP, relevant Work Instructions, Training modules (eg: 15 in 15 HSE modules); and
- Are committed to implementing and complying with this CEMP (and any associated documentation relating to this CEMP) as far as reasonably practicable (ie: allowing for amendments on condition that the control is no less than equal to the original control- eg: movement of a silt control device during excavation works)

Position	Name	Signature	Date
General Manager*	Brant Wood		13/08/2020
Construction Manager	Greg Malenstein		13/08/2020
Project Manager	Ben Owens		13/08/2020
Site Manager	Scott Steward		13/08/2020
Contracts Administrator	Samantha Langley		13/08/2020
Contracts Administrator	Olivia Smith		13/08/2020
Site Foreman	Alex Tattle		13/08/2020
Site Engineer	Bill Pei		13/08/2020
HSE Systems Manager*	Geoff O'Shea		13/08/2020
HSE Manager*	Peter Barrett		13/08/2020
Site Foreman	Scotty Nero		13/08/2020

B.4.5.3 - Whole of Project responsibilities

Responsible party	Responsibilities	Reporting to
St Hilliers Property Pty Ltd- PCBU, Principal Contractor	Ensure risks are identified and compliant controls developed prior to commencing works Ensure all relevant Stakeholders are aware of the CEMP and site-specific issues and requirements Ensure all workers are inducted into the site-specific requirements, and approved controls Ensure all works are conducted in accordance with the CEMP controls Monitor (through regular weekly documented inspection) the controls implemented, and ensuring they are adequately maintained throughout the works	Superintendent

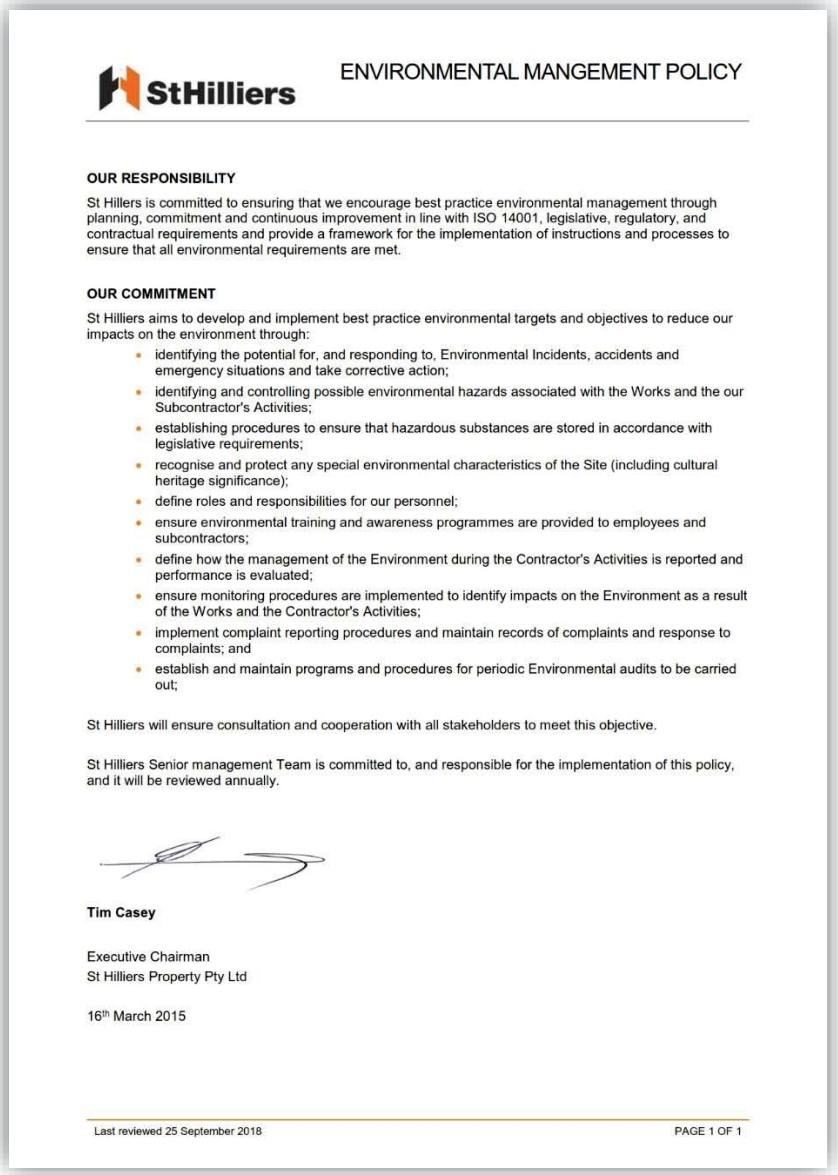
	Amend any plans/controls to maintain compliance, including seeking any required approvals Undertaking regular audits (as per St Hilliers IMS- within 2 months of commencement and every 6 months thereafter- unless required frequency differs by contractual requirement) Ensuring opportunities for improvement are documented, inclusive of any action items associated with the inspection or audit processes. Reporting as required by contract	
Environmental Consultants, Engineers, Competent persons	Comply with the CEMP Review identified site-based risks, and provide compliant control options to mitigate risk when contracted to do so (eg: Occupational Hygienists assessment and delivery of Asbestos Removal Control Plans) Undertake additional testing, monitoring as required by any legislative requirements or standard (eg: Air monitoring) Provide validation reports, summaries, test results or guidance materials as soon as practicable (eg: air monitoring results by COB next business day) Report any environmental incident, hazards or non-conformances as soon as practicable after identification Implement corrective actions as required Provide guidance in environmental incident investigations	St Hilliers, Superintendent
Subcontractors	Comply with any reasonable instruction, verbal or written to ensure compliance with environmental requirements and this CEMP Ensure environmental controls are implemented and maintained throughout any works; and ensure the identified controls within the CEMP are the minimum standards maintained Implement and maintain any additional controls required as a result of a non-conformance Immediately contain and environmental incidents to prevent inadvertent damage/contamination Understand and implement the “Chance Finds” process on site Report any suspected environmental incidents- including, but not limited to “chance finds” of heritage items, suspected asbestos containing material, previously unidentified hydrocarbons or potential contaminants, and/or items of potential indigenous significance	St Hilliers

B.5 - Project Environmental Statement

Management will lead by example to ensure that statutory and contractual requirements are met. Environmental performance will be continuously monitored and work instructions reviewed with the aim of eliminating risk to the extent possible and ensure continual improvement. Employees are responsible for complying with these instructions, rectifying or reporting harmful environmental conditions, and actively participating in meetings and various training sessions on environmental issues.

Environmental Management activities will cover the following areas:

- Noise and Vibration Management
- Water Quality, Sediment and Erosion Control
- Air Quality and Dust Management
- Solid Waste Management
- Contaminated Soil Management
- Flora and Fauna
- Cultural Heritage
- Demolition Environmental Management



StHilliers

ENVIRONMENTAL MANGEMENT POLICY

OUR RESPONSIBILITY

St Hillers is committed to ensuring that we encourage best practice environmental management through planning, commitment and continuous improvement in line with ISO 14001, legislative, regulatory, and contractual requirements and provide a framework for the implementation of instructions and processes to ensure that all environmental requirements are met.

OUR COMMITMENT

St Hilliers aims to develop and implement best practice environmental targets and objectives to reduce our impacts on the environment through:

- identifying the potential for, and responding to, Environmental Incidents, accidents and emergency situations and take corrective action;
- identifying and controlling possible environmental hazards associated with the Works and the our Subcontractor's Activities;
- establishing procedures to ensure that hazardous substances are stored in accordance with legislative requirements;
- recognise and protect any special environmental characteristics of the Site (including cultural heritage significance);
- define roles and responsibilities for our personnel;
- ensure environmental training and awareness programmes are provided to employees and subcontractors;
- define how the management of the Environment during the Contractor's Activities is reported and performance is evaluated;
- ensure monitoring procedures are implemented to identify impacts on the Environment as a result of the Works and the Contractor's Activities;
- implement complaint reporting procedures and maintain records of complaints and response to complaints; and
- establish and maintain programs and procedures for periodic Environmental audits to be carried out;

St Hilliers will ensure consultation and cooperation with all stakeholders to meet this objective.

St Hilliers Senior management Team is committed to, and responsible for the implementation of this policy, and it will be reviewed annually.

Tim Casey

Executive Chairman
St Hilliers Property Pty Ltd

16th March 2015

Last reviewed 25 September 2018 PAGE 1 OF 1

B.6 - Objectives and Targets

B.6.1 - Objectives

The specific objectives for Environmental Management are:

Review legislative, regulatory and contractual requirements and provide a framework for the implementation of instructions and processes to ensure that all environmental requirements are met, including:

- Meeting Client and Stakeholder requirements
- Satisfying any contractual Objectives, Targets and Key Performance Indicators
- Compliance with legislation, ministerial and authority requirements.

B.6.2 - Client Environmental Objectives

The Environmental Objectives are to:

- to encourage best practice environmental management through the planning, development, implementation and continuous improvement of environmental management procedures during the Contractor's Activities and the Works;
- to prevent and minimise adverse impacts on the Environment;
- to recognise and protect any special environmental characteristics of the Site (including cultural heritage significance); and
- Prevent as far as practicable any environmental incident can be attributed to being as a result of the project works

B.6.3 - Targets

The key environmental targets for the Project are:

- Zero number of environmental incidents
- Meet all contractual and statutory environmental requirements within the established constraints
- Maintain adequate environmental controls throughout the project

B.6.4 - Reports Included in CEMP

The following sub-plans have been relied upon for information & reference whilst preparing the CEMP in accordance with the SSD9344 Conditions:

- Construction Traffic & Pedestrian Management Sub-Plan (in accordance with condition B16)
- Construction Noise & Vibration Management Sub-Plan (in accordance with condition B17)
- Construction Waste Management Sub-Plan (in accordance with condition B18)
- Construction Soil & Water Management Sub-Plan (in accordance with condition B19)
- Flood Emergency Response (in accordance with condition B20)
- Safety Risk Assessment (in accordance with condition B21)

B.7 - Hazard Identification, Risk Assessment and Control (HIRAC)

St Hilliers has identified the following potential hazards in relation to the project works:

- Impact with essential services (in-ground services, above ground services)
- Possible contaminated soils (eg: Asbestos, Hydrocarbons)
- Construction noise and vibration
- Construction traffic & pedestrian management
- Construction waste management requirements
- Construction environmental devices controls requirements for silt and sediment
- Groundwater contamination
- Community & Stakeholder engagement

B.8 - Legislation, & Guides

The following is a summary of statutory and regulatory guides that the works on site, as far as reasonably practicable, will be conducted in accordance with:

B.8.1 - Guides and Standards

- ISO 14001: 2015 Environmental management systems - Requirements with guidance for use
- ISO 14004: 2016 Environmental management systems - General guidelines on principles, systems and support techniques

B.8.2 - Environmental Protection

- Protection of the Environment Operations Act 1997 (POEO ACT) and Regulations-
- Protection of the Environment Operations (Waste) Regulation 2014
- Environmental Protection and Biodiversity Conservation Act 1999
- National Environment Protection Council (NSW) Act 1995

B.8.3 - Soils

- Australian and New Zealand Environment and Conservation Council (ANZECC)/National Health and Medical Research Council (NHMRC) - Guidelines for the Assessment and Management of Contaminated Sites.
- NSW Department of Planning, Industry and Environment- Managing Urban Stormwater- Soils and Construction
- National Environmental Protection (Assessment of Site Contamination) Measure, 1999 NEPC.
- NSW Asmac Acid Sulfate Soil Manual (August 1998).
- National Environmental Protection (Assessment of Site Contamination) Measure as amended 2013
- AS4482 Guide to the Sampling of Potentially Contaminated Soil, 1997.
- Erosion and Sediment Control Manual, Department of Main Roads, 1998.

B.8.4 - Air

- AS 3580 Methods of Sampling and Analysis of Ambient Air
- AS 2986.1-2003 Workplace air quality - Sampling and analysis of volatile organic compounds by solvent desorption;
- National Environmental Protection (Ambient Air Quality) Measure as amended 2016
- EPA NSW (2016): Approved Methods for the Modelling and Assessment of Air Pollutants in NSW;
- EPA NSW (2007): Approved methods for the Sampling and Analysis of Air Pollutants in NSW;
- AS 2986.2-2003 Workplace air quality – Part 2: Diffusive sampling method;

B.8.5 - Noise and Vibration

- Interim Guidelines and Technical Notes for Road Traffic Noise Amelioration (DMR 1992).
- EPA NSW (2013): Noise Guide for Local Government
- E1 Environmental Guideline "Noise from Construction, Maintenance and Demolition Sites" (EPA 1989).
- AS ISO 2631.2:2014 Mechanical vibration and shock - Evaluation of human exposure to whole-body vibration, Vibration in buildings (1 Hz to 80 Hz)
- AS 2436 Guide to Noise Control on Construction, Maintenance and Demolition Sites.
- AS 2659.1 Guide to the Use of Sound Measuring Equipment.
- AS 2659 Sound Level Meters.

- AS 2702 Acoustics - Methods for Measurement of Road Traffic Noise.

B.8.6 - Dangerous Goods

- Roads and Rail Transport (Dangerous Goods) Act 2008
- AS 1216 Classification, Hazard Identification and Information Systems for Dangerous Goods.
- AS 1678 Emergency Instruction Guides - Transport.
- AS 1940 Storage and Handling of Flammable and Combustible Liquids.
- AS 2508 Safe Storage and Handling Information Cards for Hazardous Materials.
- AS 2809 Road Tank Vehicles for Dangerous Goods.
- AS 2931 Selection and Use of Emergency Instruction Guides for Transport of Dangerous Goods.
- AS3780.8 The Storage and Handling of Corrosive Substances

B.8.7 - Asbestos

- NSW EPA Asbestos and Waste Tyres Guidelines (2015).
- Code of Practice- How to Safely Remove Asbestos (August 2019) NSW Government
- Code of Practice- How to Manage and Control Asbestos in the Workplace (February 2016)
- SafeWork NSW (March 2014): Managing asbestos in or on soil

B.8.8 - General

- Work Health and Safety Act 2011
- Environmental Planning and Assessment Act 1979
- NSW EPA (2014) Waste Classification Guidelines
- The Waste Avoidance and Resource Recovery Act 2001(December 2019 update pending)
- Sydney Water Act (NSW) 1994
- SafeWork, NSW (1993). Code of Practice: Safe Work on Roofs, Part 1, Commercial and Industrial Buildings;
- SafeWork, NSW (1997). Code of Practice: Amenities for Construction Work;
- SafeWork, NSW (1997). Code of Practice: Cutting and Drilling of Concrete and Other Masonry Products;
- SafeWork, NSW (1992). Code of Practice: Electrical Practices for Construction Work;
- SafeWork NSW (July 2014): Code of Practice: Excavation Work;

B.9 - Environmental Consultation

B.9.1 - Induct Personnel

B.9.1.1 - Description

The site-specific induction is the process for inducting new personnel onto the site. It will communicate site specific requirements and ensure all workers are advised of current HSE Acts, regulations, standards, Codes of Practice and other documentation relevant to Workplace Health, Safety and Environment.

Where identified, site specific environmental controls will be delivered within the induction process, and as required, contractually with the Subcontractor.

B.9.1.2 - Responsibilities

Project Manager, Site Manager, Subcontractors, Health, Safety & Environment Manager

B.9.1.3 - Process

Where identified, contractual & site-specific environmental controls will be delivered within the induction process, and as required, updated. Where changes have been made, workers will be required to undertake a re-induction to the controls (eg: Topic specific Toolbox addendums)

B.9.2 - Conduct Toolbox Talks

B.9.2.1 - Description

Site Manager will implement a program of toolbox talks / meetings for all personnel. The sessions will be of adequate duration to cover all relevant information and structured to encourage full participation by personnel.

B.9.2.2 - Responsibilities

Site Manager, Subcontractors, Project Engineer

B.9.2.3 - Process

Toolbox talks will be conducted on a regular frequency (eg: as Alerts are issued on the St Hilliers IMS), and from time to time (eg: may be conducted during the daily works to update new process, procedures or controls), as legislative or site conditions change to ensure the most current information is being delivered to all Workers (both St Hilliers, and Subcontractor employees)

B.9.3 - Conduct Daily Pre-Start Meetings

B.9.3.1 - Description

The pre-start meeting is a tool for informing the workforce of the day's activities, safe work practices, environmental protection practices, work area restrictions, activities that may affect the works, coordination issues with other trades, hazards and other information that may be relevant to the day's work.

B.9.3.2 - Responsibilities

Site Manager, Subcontractor, Project Engineer

B.9.3.3 - Process

Daily pre-starts will be delivered to ensure that the works being conducted on the day are compliant with the site rules, legislative obligations, CEMP, and Subcontractor Safe Work Method Statements. HIRAC will be incorporated to ensure adequate controls (eg: permits) are in place, current and adequate to site

conditions- prior to works commencing. All workers (including St Hilliers employees) will be required to sign in to the Pre-start as acknowledgement of understanding.

B.9.4 - Perform project Safety Risk Analysis

B.9.4.1 - Description

A risk analysis (HIRAC) is a formal process for assessing the likelihood of an event preventing an objective being met. Risk management philosophy is based on the principle of reducing risk to a level that is 'As Low As Reasonably Practicable'

B.9.4.2 - Responsibilities

Project Manager, Health, Safety & Environment Manager, Site Manager

B.9.4.3 - Process

A pre-commencement Project Risk register will be completed by the project team. This Project Risk register (PRR) will define task specific controls (Work health & Safety, and Environmental). The PRR will be issued to Subcontractors prior to commencement for consultation, and as a tool to provide assistance in the development of site-specific SWMS (Safe Work Method Statements), JSAs or procedures. The PRR will be considered a "live" document and will be amended throughout the works in consultation with relevant Stakeholders.

B.9.5 - Review Subcontractor Environmental Controls

B.9.5.1 - Description

St Hilliers will; ensure that environmental controls are:

- Included in Subcontractor control documents (eg; SWMS)
- Compliant with site specific control requirements
- Maintained throughout the works
- Updated as required where conditions change.

B.9.5.2 - Responsibilities

Project Manager, Site Manager, Subcontractor, HSE Manager

B.9.5.3 - Process

As a rule, Subcontractor work on a project will be performed under this Plan (CEMP). However, as the competent person/trade, the Subcontractor may provide copies of their own procedures to ensure environmental compliance, which are assessed by the HSE Manager (or delegate) against the requirements of St Hilliers CEMP.

Alternatively, the Subcontractor may choose to adopt the St Hilliers CEMP as the standard for environmental management while on site. This is a formal agreement to adopt the St Hilliers CEMP as part of their subcontract status to undertake work on site.

B.9.6 - Community Consultation & Complaints

As per condition B15 (a)(viii) the below section addresses these requirements

B.9.6.1 - Description

Defines the process for relevant Stakeholders including members of the general public impacted by the construction phase to be able to enquire and complain about environmental impacts.
The objectives will include:

- Build upon existing and new key school community stakeholder relationships
- Manage and address complaints and/or enquiries in a timely manner, accurately
- Ensure community expectations are acknowledged and addressed so as to have minimal impact on the broader community and the project as a whole including construction activities
- Promote positive communication processes engaging relevant stakeholders
- Ensure compliance with Department of Education- Community Engagement Requirements for School Infrastructure Projects

B.9.6.2 - Responsibilities

Project Manager, Superintendent

B.9.6.3 - Process

Construction:

B.9.6.3.1 - Hours of work

As per condition B15(a) (i) and C5 of SSD9344 states that St Hilliers are permitted to work between the following hours:

- 7:00am and 6:00pm, Mondays to Fridays inclusive; and between
- 8:00am and 1:00pm, Saturdays
- No work may be carried out on Sundays or public holidays.

This will include ensuring minimal disruption to Drop off and Pick up times for the school by eliminating Construction activities on the boundary (including vehicle and plant movements through project access gates.

Activities may be undertaken outside of the hours listed above if required, under the following specific situations as allowed by Condition C6 of the SSD

- By the Police or public authority for the delivery of vehicles, plant or materials; or
- In an emergency to avoid the loss of life, damage to property or to prevent environmental harm; or
- Where the works are inaudible to the nearest sensitive receivers; or
- Where a variation is approved in advance in writing by the Planning Secretary or her nominee if appropriate justification is provided for the works.

Notification of such activities must be given to affected residents before undertaking the activities or as soon as is practical afterwards in accordance with condition C7.

B.9.6.3.2 - Noise & Dust

Mitigation measures will be in place to manage noise and dust levels throughout the works to ensure the safety of the school and local community including:

- hoarding to minimise the effects of noise and dust
- rumble grids/shakers and as required hosing down to minimise the risk of materials transported or laid down on community access areas around the project
- Any activity that could exceed approved construction noise management levels will be managed in strict accordance with the Protection of the Environment Operations Act 1997.

B.9.6.3.3 - General complaint and enquiry framework

The following table identifies the preferred process and timeframes for Community complaints and enquiries

Complaint	Response timeframe	Close out
Phone call or email during business hours	As agreed with caller, and/or at time of interaction via email	Within 2 business days (unless otherwise agreed)
Phone call or email after hours	Response required by phone or email within 2 hours after returning to site office	Within 2 business days (unless otherwise agreed)

Enquiry	Response timeframe	Close out
Phone call or email during business hours	As agreed with caller, and/or at time of interaction via email	5 business days (unless otherwise agreed)
Phone call or email after hours	Response required by phone or email within 2 hours after returning to site office	5 business days (unless otherwise agreed)
Attendance to Site Office	As agreed at time of interaction	5 business days (unless otherwise agreed)
Letter/other correspondence	N/A	5 business days (unless otherwise agreed)

B.9.6.3.4 - St Hilliers Project Staff contact list (for Complaints or enquiries)

As per condition B15 (a) (ii) In case of an emergency the 24-hour contact details will be:

Position	Name	Email	Mobile	After hours contact:
Project Manager	Ben Owens	bowens@sthilliers.com.au	0435 259 514	YES
Site Manager	Scott Steward	ssteward@sthilliers.com.au	0438 241 478	YES
Site Foreman	Alex Tattle	atattle@sthilliers.com.au	0435 876 715	YES
General Manager	Brant Wood	bwood@sthilliers.com.au	0417 773 122	NO
HSE Manager	Peter Barrett	pbarrett@sthilliers.com.au	0411 555 878	YES

B.10 - External Lighting

As per Condition B15 (a) (vii) External lighting complies with AS4282 – 1997 Control of the obtrusive effects of outdoor lighting

Givent the construction hours, the likelyhood for external hours isnt anticipated, however in the event of requirement for external lighting during construction, this will be installed in accordance with AS4282-1997

B.11 - Project- Potential Hazard management

B.11.1 - Traffic & Pedestrian Management

As per Condition B15 (b) the below section addresses these requirements

B.11.1.1 - Description

The traffic management plan will be implemented across the project to ensure the safety of the workers and public.

B.11.1.2 - Responsibility

Project Manager, Site Manager, HSE Manager

B.11.1.3 - Reference Document

Appendix B - Evolution Group- Traffic Management Plan PWZTMP - 0038127305

B.11.1.4 - Process

St Hilliers will ensure:

- Perimeter fencing/hoarding is installed to restrict unauthorised or inadvertent access to the project site
- Signage will be placed at conspicuous locations indicative of the hazard (eg: Truck and pedestrian warning signage at entry points, pedestrian access route signage, and Danger/Warning- No Unauthorised Access signage at regular intervals on aspects of the project open to public access)
- A detailed and compliant Traffic Management Plan (TMP) will be developed by a suitably qualified and experienced person(s) that will include heavy vehicle routes, access and parking and any specified exclusion zones for plant/traffic movements about the project (pick-up and drop off times of 8:00 am-9:30am & 2:30pm- 4:00 pm Weekdays)
- Where required- procedures to notify the community and relevant stakeholders of the TMP and of “special conditions” for works items such as concrete pours where excess traffic flow is expected
- Signage will be implemented as set out within the Long Term Environmental Management Plan (LTEMP)

B.11.2 - Air Quality/ Dust Control

As per Condition B15 (a) (iii) and C25 & C26 the below section addresses these requirements

B.11.2.1 - Description

Air quality can have major impacts on human and environmental wellbeing. Management principles are designed to reduce and control the effects of air pollution generated from site activities on adjacent receptors, travelling public, workers and flora and fauna.

B.11.2.2 - Reference document:

Appendix C - TTW Construction Soil & Water Management Plan

B.11.2.3 - Responsibilities

Site Manager, HSE Manager

B.11.2.4 - Process

B.11.2.4.1 - Project related risk mitigation

St Hilliers will as far as practicable implement measures to:

- Minimise risk of any wind-borne items or dust leaving the confines of the site
- Ensure access routes are kept free of dust, soil, spoil to prevent wind uplift, and if present as a result of plant/vehicles, removed immediately
- Keep odour levels to a minimum

B.11.2.4.2 - Determine Air Quality Impacts for Site or Project

The locations of sensitive receptors and the main causes of air pollution at these locations will be determined, taking note of:

- Prevailing wind directions
- Activities on site that will generate dust or emissions to air including, bulk excavations and haul routes.
- Plant operation.

B.11.2.4.3 - Mitigation of Air Quality Impacts

- Burning of any materials onsite will be prohibited.
- Allowances will be made for wind direction and high wind warnings during working hours.
- Any unreasonable release (as defined in EnviroLaw) of odours, dust and smoke to the atmosphere will not be allowed
- Plant and equipment will be maintained as per the manufacturers' requirements to reduce (as far as practicable) the risk of unnecessary emissions that could be controlled by adequate and proper maintenance
- Management strategies for controlling dust that will be employed include:
  - The use of non-potable water for dust suppression and soil binders
  - Signage to vehicle drivers and plant/equipment
  - Installation of dust barriers (e.g. vegetation, walls).
  - Watering of work areas will be supplemented with wet brooming and the retrieval of deposited dirt from sealed access points and affected roads with street sweepers etc.
  - All dust-generating activities will be inspected daily.

B.11.2.4.4 - Monitoring Air Quality

- Baseline monitoring (if required by contract) will be undertaken at nominated locations using appropriate monitoring equipment.
- Real time monitoring equipment may also be used to facilitate onsite assessments as required.
- Onsite monitoring will be established as soon as practical after receiving a complaint and continued until normal conditions prevail.
- The details of any monitoring will be included in monthly reports.

B.11.2.4.5 - Corrective Action

Where significant nuisance to sensitive receptors and exceeding of performance criteria occurs, the following actions will be taken:

- Cease work at the location or modify to correct the problem.
- Implement daily monitoring of the performance criteria until the levels are in compliance.
- Stand down any machinery found with excessive (prolonged and visible) emission levels, until appropriately repaired or newer equipment supplied with more effective mufflers/emission systems.
- Consider remedial measures such as dust suppressants, wetting agents, water for dust suppression, or installation of curtains to reduce or eliminate the problem.

The Site manager (or delegate- eg: Foreman) will consult the HSE Manager should the need for alternative measures arise.

B.11.3 - Asbestos

As per Condition B8, B9 & B10 the below section addresses these requirements

B.11.3.1 - Description

Even where not identified, asbestos procedures will be followed in the event they are found. The most likely scenario for will be during removal of pre-existing materials left in soils post previously conducted demolition works, and removal of redundant services pipes. If discovered, the area will cease operations and the site supervisor will follow the approved asbestos management guidelines.

Other known sources of Asbestos that may be present from previous demolition: sprayed insulating coating on steelwork and concrete, lagging on pipes and boilers, insulation board in walls and on doors and ceilings, asbestos cement for roof and wall coverings, pipes and tanks, decorative plasters, asbestiform mineralogy, and vinyl.

B.11.3.2 - Reference document:

Appendix H – Asbestos Remediation Action Plan

Appendix I – Asbestos Management Plan

B.11.3.3 - Responsibilities

Asbestos Removalist, Team Leader, Asbestos Permit Issuer, Asbestos Permit Holder

B.11.3.4 - Process

B.11.3.4.1 - Asbestos Management Plan

Legislative compliance requires that an Asbestos Management Plan will be developed for a project or workplace where the presence or risk of exposure to asbestos has been identified.

If asbestos products are known to be in the vicinity of operations, the supervisor and workforce will be notified to ensure correct handling techniques are included in the documentation, including Safe Work Method Statement (SWMS) for the task.

If asbestos is known to be present within a building, its type and location will be shown in a Building Asbestos Register or Hazardous Materials audit report, which the architect (or appropriate person) is to arrange as part of his building audit prior to issuing tender documents.

B.11.3.4.2 - Potential Exposure to Hazardous Substances

- Work will cease immediately, the area evacuated and closed, and a review of monitoring activities and nominated control measures will be undertaken when:
- A failure of nominated control measures is suspected
- Accepted exposure limits are exceeded
- When individuals are unexpectedly exposed to hazardous substances that weren't previously known to be present on-site.

An investigation will be conducted in accordance with Incident and Near Miss Management in consultation with HSE Managers and/or qualified consultants to determine corrective/preventive actions.

B.11.3.4.3 - Medical Treatment and Health Surveillance Assessment

Individual's potentially exposed to hazards will be directed to seek medical treatment at a registered medical practitioner to assess exposure and any requirement for ongoing health surveillance.

An Injury Notification Report will be completed for individuals potentially exposed to hazardous substances.

When medical practitioners advise that health surveillance is required, a review of monitoring activities and nominated control measures, including any recommendations by the registered medical practitioner, will be undertaken in consultation with HSE Managers and/or qualified consultants to determine corrective/preventive actions.

B.11.3.4.4 - Access to Areas Affected by Hazardous Substances

Access to areas closed due to potential hazardous substance exposure will not be permitted until certification is received from a suitably qualified person, and the suitability of monitoring requirements and nominated control measures have been assessed, recorded and improved as necessary.

B.11.3.4.5 - Unexpected Finds of Asbestos or Contaminated Soil

As per condition B10 and B15 (h) refer to the following for Unexpected Finds Protocol.

When unexpected finds of asbestos or contaminated soil are made, St Hilliers site management will cease all work in the area and set up an exclusion zone of 10 metres, the details of which are to be consulted to all employees. Work in adjacent areas may not proceed unless the asbestos is deemed to be not friable by a hygienist.

Unexpected finds and the potential requirements for monitoring and control measures and health surveillance will be assessed in accordance with Hazardous Substances Monitoring, Control and Health Surveillance.

St Hilliers will ensure that the nominated Hygienist is engaged in consultation with the Superintendent & the St Hilliers HSE Manager. NOTE: Greencap have been nominated as the preferred supplier for the Kent Road Public School project

The hygienist will assist with the development of a management plan and control procedures for the removal of the asbestos/contamination. The hygienist will determine if the asbestos is friable or bonded. This will determine if an AS1 (friable) or AS2 (bonded) Asbestos licensed contractor can conduct the works.

If a find of bonded asbestos is greater than 10m², or if a find of friable asbestos of any amount, an Asbestos licensed contractor will be engaged to conduct the works. An Incident Investigation will record details and actions of the unexpected finds incident.

B.11.3.4.6 - Waste Testing and Tracking

Any potential asbestos material which will be sent for disposal will be tested to determine type and concentration of asbestos. All tests will be done by a NATA accredited laboratory.

Any asbestos material which needs to be disposed of will be sent to a licensed landfill facility. Depending on the amount of waste and State, the material will be tracked using waste tracking records.

Subcontractors who are handling and disposing of waste will be suitably licensed, or will at least be aware of health, safety and environmental requirements for handling and disposal.

All test records and waste disposal records for asbestos will be kept for at least thirty years.

B.11.3.4.7 - Asbestos Permit

Permits for the removal and disposal of asbestos will be issued according to Comcare and/or State-based requirements. The following information describes the basic requirements.

Only certified persons will undertake the removal and disposal of asbestos. Removal and disposal of asbestos will be subcontracted to a licensed Asbestos Removalist, who will prepare the required Health and Safety plans and inductions for the work.

Personnel engaged in the removal of asbestos will not be issued with an access permit unless they are members of a company or firm that holds a current asbestos removal licence as required under legislation.

The Access Permit formally transfers the responsibility for compliance with Health and safety regulations to the signatories of the permit.

The process for issue of a permit will be as follows:

1) Complete relevant documentation including a Safe Work Method Statement (SWMS) and review it with the crew performing the work.
2) Assess the conditions of the work environment for which the permit is being issued.
3) Complete the permit, including any precautions or instructions necessary.
4) The authorised person (i.e. the HSE Officer or, in their absence, the Site Manager or Project manager, referred to as the Asbestos Permit Issuer) issues the permit to the person nominated as

the 'Asbestos Permit Holder', first ensuring that all safety requirements have been met. When a project involves a team of more than one employee, the permit is issued to the Team Leader. This person will be responsible to ensure that:

5) Team members are individually aware of their responsibilities
6) Each employee's signature appears on the appropriate section of the permit.
7) Display the issued permit in a prominent position at the entrance to the work area.
8) Each worker signs on the permit before commencing the work and signs off once they have completed the work.
9) When work is completed, or at expiry of the permit (whichever occurs first), sign and return the permit to the nominated officer, who is to cancel it after ensuring that a safe situation exists and maintain a register of all access permits which have been issued and cancelled.

B.11.3.4.8 - Long Term Environmental Management Plan

1) The strategies and recommendations stated in the Long Term Environmental Management Plan will be implemented on site throughout the Construction period duration.

B.11.4 - Contaminated Land

B.11.4.1 - Description

Describes the process for identifying and managing contaminated land on the project site. Sources of contamination may include debris such as hazardous materials.

B.11.4.2 - Responsibilities

Contaminated Land Consultant, Regional Environmental Officer, Site Manager, HSE Manager

B.11.4.3 - Process

B.11.4.3.1 - Identifying Contaminated Land

Types of land use where contamination may be present include service stations, cattle dips, tanneries, wood treatment sites, landfills and refuse tips.

Land may also be contaminated by hazardous materials (as potentially contaminating processes), e.g. bonding foams used in bridge construction, cement in batching plant applications, fuels such as diesel and associated hydrocarbons, pesticides and herbicides, cleaning agents (hydrochloric acids), curing compounds and motor vehicle oils.

B.11.4.3.2 - Unidentified Contamination

Refer to "Chance Finds" procedure listed below

If any previously undetected contamination is discovered during construction, cease work, isolate the area and report such findings to the project manager and or the HSE Manager or delegate. The EPA and other relevant authorities will be advised.

In the event that contaminated areas are discovered, St Hilliers will appropriately mark such areas to eliminate potential for harm and communicate these areas and any specific steps to be taken at the site inductions, via toolbox talks and notified at Daily Pre-Starts.

B.11.4.3.3 - Determine Land Impacts

Contamination may be indicated by noticeable staining or discolouration, unnatural odours, metal debris in fill and ash/charcoal fill.

B.11.4.3.4 - Mitigation of Contaminated Land Impacts

In addition to managing existing contamination, the project will take measures to prevent further contamination.

Site inspections will be undertaken to determine the extent of contaminated land, and soil tested to determine contaminants.

The volume of material for disposal will be minimised by defining contaminated and clean areas.

Machinery and equipment will be thoroughly cleaned prior to its arrival on site

- Site investigations will be undertaken prior to the movement of soil. Where required, the project will seek advice from the Contaminated Land Consultant.
- The EPA supports the national target of 50% reduction in waste going to landfill and promotes onsite remediation as the preferred option for treating contaminated soils. However, St Hilliers will dispose of contaminated soils to an approved and/ or licensed landfill.
- Excavation of any material in contaminated areas will be done in accordance with directions from the EPA or experienced personnel. This type of material will be removed to a nominated site using a waste tracking system with the EPA.
- Identified contaminated soils will be excavated and stored separately to 'clean' soils and volumes will not be altered by 'diluting' the impacted soils with clean materials.
- Treatment of spills will be managed as per the process 'Report environmental incidents.

B.11.4.3.5 - Contaminated Land Licenses, Permits and Approvals

- Approvals are required for the removal and disposal of contaminated soils from site
- Disposal permits enable appropriate and legal disposal and tracking of contaminated soil or materials. The EPA issues disposal permits for specified volumes of soil and only approves the removal of contaminated soil to a site listed on the EMR.
- The EPA may issue a notice to investigate if it reasonably believes that a hazardous substance contaminating the land may cause serious or material environmental harm.
- Comply with a notice to prepare or commission a site management plan for a contaminated site unless a waiver received from the EPA. A notice may be issued if a site investigation was conducted and contamination managed by limiting the spread and impacts.
- Comply with a notice to remediate contaminated land including a remediation and validation report of all remediated sites.

B.11.4.4 - Potential discoveries of contaminated materials within soil or spoil

B.11.4.4.1 - Stockpiles:

Stockpiled contaminated materials within any construction zone will be deemed as temporary. Stockpiles not able to be stored within the site approved storage area, will be protected and contained to prevent potential leeching, and covered to prevent unwanted movement of material (wind).

B.11.4.4.2 - Soil:

As a rule- contaminated soil will be kept on site where facilities exist for storage and management of waste/contaminants (adopting a "Re-use not remove" procedure for material that is potentially contaminated).

B.11.4.4.3 - Water quality- Groundwater and Surface water

Containment methods (as above will be employed to prevent potential leeching into groundwater, and to prevent overland movement of potentially contaminated materials. Silt & Sediment controls will be employed about the works zone (in accordance with the Superintendent and agreed management plan)

B.11.4.4.4 - Treatment

Where treatment (including potentially contaminated waste water) is unable to be treated/stored and managed on site- a waste contractor will also be engaged to assist in the management and disposal of the waste to an approved treatment facility Potential discovery of Asbestos Containing materials (including soil)

B.11.5 - Cultural Heritage

As per Condition B15 (i) and C31 & C32 the below section addresses these requirements

B.11.5.1 - Description

Management of Cultural Heritage is a statutory requirement. Cultural Heritage is defined as areas, objects and places displaying archaeological or historic significance. This includes objects situated on or under the surface of the land and remains of ships or other objects in the territorial waters of the State. In addition, the EPBC Act 1999 lists Commonwealth interests as issues in Environmental and Cultural Heritage management.

Note- Currently no identified Heritage impacts expected for this project

B.11.5.2 - Responsibilities

Site Manager, HSE Manager, Archaeologist

B.11.5.3 - Process

B.11.5.3.1 - Mitigation of Cultural Heritage Impact

- Liaise with the Stakeholders to ensure adequate knowledge is acquired of any culturally significant areas or objects at the site or project. Generally these sites form part of an EIS/EIA process, which can be the basis for ongoing consultations.
- If the site or location is deemed to contain any element of non-indigenous heritage, undertake an onsite survey to assess the impacts on such a site.
- Ensure protocols exist for communication of newly discovered sites and the process for the project to proceed to afford these areas adequate protection.
- Determine the management protocols for a cultural heritage site by agreement.
- Museums may be interested or involved in reports or archaeological excavations for indigenous and heritage items.

B.11.5.3.2 - Duty of Care

Duty of care exists under various State legislation for non-indigenous heritage and requires prevention of damage unless instructed otherwise to proceed with construction.

B.11.5.3.3 - Procedures for Discovery of Heritage Items

1) When any heritage item is discovered during operations or construction, take the following steps:
2) Work will cease and care taken to minimise further disturbance.
3) The Supervisor will be notified immediately, who will then report the find to the Health Safety Environment Manager.
4) The area will not be disturbed until an assessment is completed, an inspection undertaken and direction to proceed provided.
5) A known Archaeologist will be engaged to assess the site.
6) The exact location of the discovery will be photographed.
7) The site will be protected and managed to restrict access, prevent disturbance of materials or the site, erect barriers and proceed with protective measures.
8) The project may additionally liaise with the local heritage agency to determine what other course of action is required.

B.11.5.3.4 - Monitoring Indigenous Heritage

The project will engage specialists to undertake monitoring of indigenous heritage to record items being disturbed. St Hilliers will also work closely with Traditional Owners if mitigation of an area is discovered. Reports will be provided to the State heritage agency and Register of National Estate prior to destruction or disturbance.

Monitoring equipment will include a digital camera, GPS unit, documents recording photos and locations, maps of the site, tape measures, callipers and reference books.

The above steps as outlined in Discovery of heritage items will be adhered to should an indigenous discovery be made. Progress associated with Cultural Heritage issues will be reported in the project Monthly Environmental Report.

B.11.6 - Stormwater, Groundwater, Erosion and Sediment Controls

As per Condition B15 (a)(iv)(v)(vi) and C28 & C30 the below section addresses these requirements

Description

The effects of poor management of erosion control lead to sediment that can be highly visible and environmentally damaging. A number of statutory obligations require a high standard of soil and sediment management to reduce the effects of storm water run-off and unauthorised discharges from the project or site.

B.11.6.1 - Responsibilities

HSE Manager, Site Manager, Project Team

B.11.6.2 - Reference document

Appendix C - TTW Construction Soil & Water Management Plan

B.11.6.3 - Process

B.11.6.3.1 - Responsibility for Stormwater, Groundwater, Erosion and Sediment Controls

The EPA has introduced laws to control the impacts of erosion and sediment, Local councils are very diligent in following up public complaints regarding erosion and soil sediments leaving development sites.

In the event of an uncontrollable discharge of sediment from site, a fine may be issued by the relevant regulatory authority. For the Kent Road Public School project the HSE Manager will liaise with the Site Manager to determine erosion and sediment control requirements.

The Project Team is responsible for the implementation and monitoring of these controls through regularly auditing for site stabilisation and erosion; especially after rain.

B.11.6.3.2 - Stormwater, Groundwater, Erosion and Sediment Controls

The principles for erosion control are to divert clean water around disturbed project areas, minimise the velocity of such water and cover bare soils as quickly as possible. Controls may also include design and installation of the following:

- Sediment traps
- Drainage systems with discharge and holding ponds with required discharge rates
- Maintain a clear hardstand area to prevent and or remove spoil from project vehicles as required.
- Installation of interceptor drains and sedimentation basins on down gradients
- Ongoing management and regular removal of surficial metal fragments.

Additional fundamental controls may include the installation of filter socks and the retention of water in sediment bags.

Stockpiles are to be adequately maintained to avoid release to storm water and surrounding waterways. Vegetation and soil stockpiles should be kept separate where possible to maximise the use of vegetation for sediment erosion control. Mixing of soils and spoil from different areas will not be encouraged unless it is free of contaminates.

The removal of trees and the clearing of site will be done only when adequately maintained sediment erosion controls are in place.

B.11.6.3.3 - Determine Stormwater, Groundwater, Erosion and Sediment Controls Impacts for Site or Project

The highest risks to the Project is the tracking of mud/material onto local roads and the run off of sediment laden water from the site onto the roads and/or into waterways. As such the following procedures will be followed:

- Erosion and sediment control structures will be installed early in the project, and adequate labour and time allowed to maintain them, in particular following rain.
- As areas are completed, controls will remain installed until the area is stabilised and the project is completed.
- The project will observe general prohibitions that exist against pollution and sediment releases into roads, drains, gutters and waterways.

B.11.6.3.4 - Installing and Maintaining Controls

- Groundwater will be pumped from de-watering wells through settlement tanks.
- Materials, stockpiles, topsoils and rehabilitation will be appropriately managed.
- Water will be diverted around construction. Clean and dirty areas will be separated so that only runoff that falls on disturbed areas needs to be managed.
- Silt socks will be employed, where appropriate, as a method of controlling runoff on hard surfaces where silt fences cannot be used (finished concrete drains, stormwater inlets).
- Water quality parameters / limits will be monitored, and storm water areas identified in the Water Quality processes within the Project Management System.
- Hay or straw bales, preferably, will not be used as they are vectors for weeds and have high maintenance requirements.
- Inspection of erosion and sediment control structures will be undertaken regularly and after rain events, to identify maintenance requirements.
- Material will not be stored where environmental harm could result from pollution of water.

B.11.6.3.5 - Hardstand and Lay Down Areas

The following controls will be considered when managing hardstand and lay down areas:

- Hardstand and Lay-down areas will be designed and planned to provide access into and around the areas for all site personnel. A process of access will be established for all site personnel.
- Roads will not be washed down, as the sediment enters drainage lines and sumps. A street sweeper will be used where necessary, but prevention is the preferred approach and is more cost effective than remedial works. It is illegal to wash down roads unless the sediment is prevented from entering stormwater drains. Aggregate or sand filled filter socks will be used to protect inlets.

Protective measures will be taken to prevent soil, mud, pollutants, weed seeds, fuels and oils leaving the site on trucks and truck wheels. For example, wash-down bay, wheel wash sump or spray unit and Shaker Pits when exiting site.

B.11.6.3.6 - Sediment and Erosion Control Licenses, Permits and Approvals

The project will refer to specific State requirements relating to licences, permits and approvals. The following are general guidelines for this project:

- There is a Common Law requirement not to impact upon neighbour's land.
- Nuisance laws relate to creating a general nuisance from sediment or mud leaving a site.
- Conditions exist for compliance requirements of any licence or permits issued to control water run-off leaving a site.

The "Blue Book" (Managing Urban Stormwater: Soils and Construction – Volume 1, 4th Edition reprinted July 2010) will be used as a reference point for soil and water management.

B.11.7 - Flora and Fauna

B.11.7.1 - Description

All Australian native animals are protected under Law, and the Nature Conservation Acts lists vulnerable species for which a permit is required if disturbing or relocating them. Protected flora species are listed at Federal and State level and include protected ecosystems and bioregion areas where associations of plant species are under threat by development during clearing.

B.11.7.2 - Responsibilities

Site Manager, Project Manager, Project Engineer, HSE Manager

B.11.7.3 - Process

The HSE Manager will liaise with the Site Manager to determine fauna and flora requirements. Necessary controls will then be implemented by the Project Team.

Generally, the management of fauna and flora will be undertaken as follows

B.11.7.3.1 - Identifying Endangered Species and Sensitive Areas

- Bird-boxes or equivalent to be placed about the project site.
- Sightings of rare or endangered flora or fauna species on site will be recorded and photographs taken if possible. Appropriate information will be appended to photographs to assist in identifying fauna and locations of finds; as a minimum requirement, this will include the date, time and place of find.
- If endangered species of fauna or flora are encountered, a management strategy for their relocation will be implemented and the area cordoned off to protect them until removed and/or relocated.
- The project will check the requirements to refer any actions that may impact on rare or threatened species.
- Areas of specific sensitivity will be identified and illustrated on a site map. This information will be conveyed to the workforce during site inductions, toolbox talks and pre-start meetings.

B.11.7.3.2 - Contact with Harmful Species

In the unlikely event that contact is made with harmful species, i.e. snakes, spiders, wild pigs, during construction activity it is the responsibility of the person who discovers the animal to not approach it and report the findings to the area supervisor; who can get in contact with the necessary agency to relocate the animal so as no harm will come to the animal or site staff.

In the event that through no fault of the construction worker they are bitten and or injured by the animal the necessary steps for medical attention need to be completed.

First aid treatment of snakes and spider bites will be administered by a trained first aider until medical help arrives..

B.11.7.3.3 - Fauna and Flora Licenses, Permits and Approvals

- Disturbing, removing or clearing vegetation or wildlife will require a permit; the project will check and observe State requirements.
- Under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), actions that have, or may have a significant impact on a matter of national environmental significance require approval from the Commonwealth Environment Minister.
- In order to reduce impacts on registered species, the EPBC Act may require submission of an EPBC referral for an activity involving a ‘Controlled Action’. The project may additionally need to submit an assessment of the impact, prior to approvals granted.
- If required, a species management plan will be developed for specifically mentioned threatened species of flora and fauna (as per Environment Protection and Biodiversity Conservation (EPBC) Act 1999).
- The project will check and observe State licence requirements for wildlife handlers.
- The Catchment Management Authority’s or Land Agency’s categorisation of regional ecosystems and their classification listing for the area will be confirmed.
- However unlikely; if required by the local State Act, a permit will be obtained prior to disturbing marine waters, tidal waters and associated habitats containing vegetation, especially mangrove habitat.
- Conservation regulations protect the unauthorised disturbance of nests, trees and burrows. Strict conditions will apply when clearing habitat trees and vegetation to minimise disturbance, under relevant State laws.

Construction areas will be clearly demarcated on site in line with the approved Site Management plan, to limit damage to adjacent vegetation and/ or fauna habits. Clearly marked vegetation is to be retained before clearing and trimming.

B.11.7.3.4 - Weed Management Plan

- The Site Manager will inspect the site for weeds during the weekly environmental inspection.
- The site manager must refer to the site weed management plan for Weeds to be removed
- Any weeds identified during the inspection will be marked for removal.
- Removal will be carried out physically by St Hilliers Construction worker and disposed of in the green waste bin.
- Reporting of inspections and comments are by Hammerteck

B.11.8 - Hazardous Substances and Dangerous Goods

B.11.8.1 - Description

A hazardous material is one that poses a hazard to human health or the environment when improperly handled, stored or disposed of. The hazard may arise from acute or chronic toxicity or carcinogenicity of the substance or its corrosive or flammable nature.

B.11.8.2 - Responsibilities

Site Manager, HSE Manager

B.11.8.3 - Process

B.11.8.3.1 - Identify Hazardous Materials

Hazardous materials that may be encountered during construction work are broadly identified and categorised as solid, liquid or gaseous:

- Solid hazardous materials are normally associated with activities involving hazardous spoil, construction materials and explosives.
- Liquid hazardous materials comprise flammable and combustible liquids and toxic chemicals including pesticides, insecticides and liquefied gases, acids, solvents, lime and degreasing agents.
- Gaseous materials which may be hazardous are flammable gases, toxic gases and gaseous emissions from construction works.

Details related to a substance's physical properties, flammability, toxicity, special precautions, transport and storage are detailed in an Australian Safety Data Sheet (SDS- formerly called an MSDS).

B.11.8.3.2 - Managing Hazardous Materials

- A current Australian SDS will be made available for any hazardous substance or dangerous good stored and handled at the premises:
  - Copies of the SDS will be available at the work site and readily accessible to all persons working on the premises and to the emergency services authority.
  - The SDS sheet will be provided by the supplier of the substance. If it is not, it will be obtained from a reliable source by the relevant person.
  - The project will check the SDS is the most current version, less than 5 years old.
- All licenses, permits and approvals will be retained on site as required by the statutory obligations, for each type of hazardous material.
- Controls detailed in the SDS will be recorded in the Safe Work Method Statement (SWMS) relating to the activity that involves the use of the substance.
- A Hazardous Substance Register will be maintained for all hazardous substances used on the project (usually generated by the Project Safety Team):

  - A hard file copy will be kept at the substance storage area and a copy kept with all first aid equipment and facilities.
  - The Hazardous Substances Register will be reviewed monthly to ensure all SDS are current.
  - Quantities of materials will be tracked when they are decanted and taken to another area for use. The containers will be labelled and an SDS made available at the location.
- Prior to bringing any hazardous material on to site, the licensing requirements to store the material will be determined from the:
  - Australian Standard for storage and handling of Hazardous Substances (AS1940-2004)
  - Australian Dangerous Goods Code
  - Safety Data Sheets (SDS).
- Significant quantities of chemicals may trigger the requirements for permits under relevant State legislation.
- A risk assessment will be performed on the use and disposal of the material, and the appropriate controls implemented.
- Quantities of hazardous substances stored on site will be kept to a minimum.

B.11.8.3.3 - Transporting Dangerous Goods

All materials moving to and from site will be tracked using dockets and receipts. Only licensed transporters will be used to move and dispose of these materials.

When transferring dangerous goods measures will be taken to control spills, overflows and leaks, minimise static electricity and control vapour generation. If significant quantities are being transported, local authorities will be notified in case of an emergency situation or spill during transit.

B.11.8.3.4 - Chemical Hazard Communication

Communication on any substances introduced at the project site is established on the basis of an obligation to inform and consult with employees and others in regard to the hazard and the individual's 'right to know'.

- Suppliers and Subcontractors will be informed that substances will not be introduced to the project site unless an SDS has been made available for review, PRIOR to delivery to site.
- Ad hoc suppliers and local Subcontractors bringing items such as lubricants and fuels to site will also supply SDS information at their point of arrival on site.
- Such materials that arrive at the project site without an approved SDS having been made available for assessment in advance will be held in 'quarantine' in a suitable storage/lay down area until that information is available and the risk from exposure has been assessed.
- Hazardous substances will be handled, stored and transported in accordance with state statutory requirements and the NOSHC Guidance Notes and Code of Practice.
- Any inventory/register of all hazardous materials will be established and maintained in each area in order to assist with materials management, environmental management and emergency planning. A copy of the Hazardous Substances Register will be maintained at each storage place for use by emergency services. The register will be update after a significant change in volume or risk category of substance held on that particular area or location.
- The requirements for the storage, handling and use of substances will be subject to risk assessment prior to their being made available for site use.
- Personnel working with substances will be provided with information and training concerning those materials where appropriate. The SDS must be specific and relevant and is to be used to develop the Safe Work Method Statement.
- Manufacturers or distributors warning labels must be attached to the substance containers and maintained until the containers are safely disposed of in accordance with the directions of the supplier or manufacture. All other substance containers used will also be labelled with the same or comparable information.

B.11.8.3.5 - Storing Hazardous Substances

- All containers of hazardous chemicals including oil and fuel, will be stored in a bunded area so the capacity of the spillage containment compound is adequate.

- Where possible, the bunded area will be covered to prevent rain and water filling the area, resulting in additional treatment requirements during disposal and management of the storage areas.
- The storage area will be clearly signposted.
- Where the storage area is part of a building, ventilation will be provided at the floor and ceiling levels, of an adequate size to allow circulation of air. AS1940 has strict conditions in relation to firewalls and containment when storage is within the same building as persons and other general goods.
- Storage areas will be kept locked at all times and secured against unauthorised access and potential theft.
- Where different substances are stored in the same room, the SDS will be consulted prior to storage to verify compatibility of substances. A bunded floor liner may also be required to prevent seepage and spillage. Non-compatible dangerous goods will be stored separately so that loss of containment will not cause a dangerous situation.
- All storage tanks containing hazardous substances will have the contents and volume clearly identified, be numbered if in a cluster, and have the appropriate Hazchem signs displayed to legislative requirements and AS 1319.
- Storage areas will be protected against damage from impact with vehicles, mobile plant etc.
- In each area of the premises where dangerous goods are stored or handled, provision will be made for spill containment that will:
  - Contain the spill of dangerous goods
  - Enable spilled or leaked dangerous goods and any solid or liquid effluent arising from the incident to be cleaned up and disposed of or otherwise treated.
  - Spill kits must be on standby for this action and maintained
- Appropriate work force training will be provided for spill management and the use of spill response kits and supplies.
- Incident reporting procedures will be followed in the event of a spill.
- Where sources of ionising radiation have been identified, they will be handled in accordance with the requirements of the relevant State radiation safety act and radiation safety regulations.

B.11.8.3.6 - Disposing of Hazardous Waste

All unused or excess chemicals and materials will be removed and disposed of in accordance with the SDS and waste disposal guidelines, to approved locations.

Disposal of containers as well as any leftover contents will be tracked via the waste disposal processes outlined in the process for Waste management.

B.11.9 - Noise

As per Condition B15 (c) and C16, C17, C18, C19, C20 & C21 the below section addresses these requirements

Description

Describes the measures to be taken to strictly control the impacts of noise on the project, in accordance with legislative health, safety and environmental requirements.

B.11.9.1 - Responsibilities

Project Manager, HSE Manager, Site Manager

B.11.9.2 - Reference document

Appendix E - 20191003GKA R1 Construction Noise Vibration Management Plan - Acoustic Logic

B.11.9.3 - Process

Noise will be managed on projects according to the standard Occupational Noise Management, AS 1209. The environmental and safety aspects of noise will be managed separately.

B.11.9.3.1 - Managing Environmental Impacts of Noise

Industrial noise levels will be kept to levels consistent with uniform National Standards for occupational noise, such levels are not to adversely affect any other personnel or the public.

The project will manage the environmental impacts of noise as follows:

- The main causes of noise on site will be identified. This will take into consideration all types of site machinery and equipment and, where practical, locate them so as to minimise noise and avoid grouping too many machines together, as this increases noise levels.
- Noise limits will be imposed in accordance with relevant local and state authority regulations for both construction staff and residents/public accordingly.
- Ongoing spot check monitoring will be performed where necessary to ensure limits are not being exceeded.
- Monitoring of noise issues will be performed within 48 hours of receiving a complaint, to verify if they are related to the project works.
- The details of noise measurements and the results of any corrective actions or complaints received will be included in monthly reports.
- Monitoring equipment (if required) will be kept correctly calibrated.
- To reduce noise from plant, vehicles and equipment, the project will:
  - Investigate whether the noise can be eliminated by using a different method or equipment / machine, e.g. smaller machine
  - Keep equipment well maintained
  - Monitor equipment sound power levels
  - Limit the revving of engines on mobile or stationary machines and shut down any equipment not in use
  - Limit the use of horns, bells, hooters or other audible signals on mobile equipment to the maximum practical extent
  - Consider ‘white noise’ reverse alarms
  - Locate fixed plant and equipment (including material stockpiles and vehicle parking areas) as far as practical from residences
  - Use two-ways to communicate and try circular or loop loading methods to avoid reversing.
  -

B.11.9.3.2 - Education

The project will hold toolbox talks on the topic of the effects of noise induced hearing loss and environmental requirements relating to noise.

B.11.10 - Vibration

As per Condition B15 (c) and C16, C17, C18, C19, C20 & C21 the below section addresses these requirements

B.11.10.1 - Description

Exposure to vibration is normally classified as either whole body (e.g. driving a truck) or segmented (e.g. hand-held power tools such as jackhammers). Segmented vibration (hand, fingers) can cause carpal tunnel syndrome, nerve and blood vessel degeneration, loss of grip strength, damage to joints and muscles in wrists and elbows and pain and cold sensations between attacks of white fingers. With continued exposure to vibration, symptoms become progressively severe and will reach a stage where they become irreversible. Vibration is measured in acceleration rate.

B.11.10.2 - Responsibilities

Site Manager

B.11.10.3 - Reference document

Appendix E - 20191003GKA R1 Construction Noise Vibration Management Plan - Acoustic Logic

B.11.10.4 - Process

B.11.10.4.1 - Managing Environmental Impacts

Vibration management varies depending on the construction activities undertaken. The HSE Officer in conjunction with other relevant members of the Senior Project Team will review SAFE Work Method statements to ensure activities involving vibration are correctly assessed and managed.

B.11.10.4.2 - Measuring Zones of Influence

Zones of influence will be measured according to the following process:

1) Activities and equipment that are sources of vibration will be identified.
2) Impact distances will be measured. Zones of Influence distances are determined by multiplying the safe working distances by predetermined factors (normally 3 times the safe working distance). However, this will be confirmed locally. Examples of safe working distance:
    a) Pile Driving is 60 metres multiplied by three = 180 metres
    b) Heavy Rolling is 20 metres x 3 = 60 metres
    c) Light Rolling is 10 Metres x 3 = 30 metres.
3) From these fields of impact, it will be determined how many workers, people and properties fall within each zone of influence.
4) This information will be overlaid on a site plan to determine where activities are likely to occur, so a Condition Survey for that location can be conducted. Sensitive buildings such as historical monuments may have a smaller zone of influence due to the nature of their sensitivity.
5) The information gathered will be used to identify locations of sensitive receptors and develop strategies to reduce vibration. These will include limits on working hours and times of activities, using alternative methods and techniques such as directional compacting.
6) If possible, activities will be spread during timeframes when impacts will not continue every day. Wherever possible, a break in work activities will be allowed for.

B.11.11 - Waste Management

As per Condition B15 (d), B18, C33, C34, C35 & C36 the below section addresses these requirements

B.11.11.1 - Description

A general environmental duty of care exists to manage and control our waste materials. Policies and guidelines become mandatory if referred to in the Environmental Protection Act 1994. Note: Waste management requirements for asbestos and hazardous substances are included with the processes for those materials.

B.11.11.2 - Responsibilities

Site Manager, HSE Manager and/or delegate, Project Manager, all Site Personnel

B.11.11.3 - Reference Document

Appendix D - APC Waste Consultants- Construction Waste management Plan

B.11.11.4 - Process

The Senior Construction Team will liaise with the HSE Manager to ensure waste management procedures are enforced on site.

During demolition and construction works at least 80% of all waste by weight (except hazardous waste) is to be either reused or recycled.

The Subcontractor will provide records each month confirming weight of all wastes leaving site, weight of waste that was recycled/reused (i.e. not sent to landfill) and the destination and/or name of recycler/waste hauler. Soil stockpiled on site for reuse as fill will not be counted in the calculation of waste.

B.11.11.4.1 - Mitigation of Waste

The following controls will be implemented by St Hilliers to mitigate project waste:

- Identification of possible waste streams generated by the project and management opportunities (e.g. avoid / reuse / recycle).
- Provision of the appropriate number and types of bins onsite for each of the different types of waste. Bins will be clearly marked and monitored for cross-contamination of wastes.
- Disposal of hazardous wastes according to State requirements.
- Daily inspections on all waste collection areas.
- Tracking of disposal of hazardous wastes or goods through dockets and manifests.
- Salvage and reuse of certain demolition materials (drainage structure, electrical cables, fences) and recycling wherever possible.
- Recycling of waste oils and disposal of waste tyres at approved locations only.
- Details of waste disposed of and recycled will be recorded in the monthly Environmental report. All waste dockets and manifests, quantities, methods, location and inspection times and dates will be included.

B.11.11.4.2 - Waste Management Licenses, Permits and Approvals

The project will observe the following in regard to licences, permits and approvals:

- Bins will have lids to retain waste
- Subcontractor must be licensed and require permits for disposal of demolition material.
- Approvals for changes in land use and the disposal of regulated waste materials require a licence.
- Industrial wastes require Local Government approvals prior to disposal in approved sites (in NSW).
- Asphalt and concrete are not regulated wastes. However, approval will be sought from the Transport- Roads & Maritime Services or Local Government Council before recycling this type of waste.
- Nuisance laws exist to limit littering around sites and are a general duty of care provision.

B.11.11.4.3 - Waste Removal

At completion of the project:

- Waste piles will be removed from site to the correct receiving facilities
- Specialised bins will be emptied, waste tracking dockets received, and all bins and skips returned to owners
- All project lay-down areas will be cleared of items and waste and returned to a state approved by the Stakeholder and contract administrator.
- The site office area will be cleaned and all items and waste removed.

The Waste Removal Register will be used to capture information about waste removal; the specific waste streams will depend on project input/output.

B.11.12 - Surface Water Quality

As per Condition B15 (a)(iv) the below section addresses these requirements

B.11.12.1 - Description

Managing water quality for the project site ensures that receiving waters surrounding the site do not suffer sustained or significant deterioration and minimises disruption to landholders, property and third-party users. Water quality management is closely linked to environmental issues such as erosion and sediment control, hazardous substances management and quality of the surrounding environment.

B.11.12.2 - Responsibilities

Project Team

B.11.12.3 - Reference documents

Appendix C - TTW Construction Soil & Water Management Plan

B.11.12.4 - Process

B.11.12.4.1 - Sources of Impacts on Water Quality

Potential sources of impacts on water quality include:

- Sediment from roads, gutters, and kerbs (or from vehicles deviating from defined roadways)
- Stockpile and storage locations, e.g. storage of fuels and chemicals in improper areas
- Plant and equipment vehicle access that may impact drainage and sediment controls, weeds and pathogens into a watercourse
- Existing condition of receiving waters
- Lack of, or inappropriate erosion and sediment controls
- Localised flooding or storm water run-off
- Oil, fuel or chemical spills near waterways and servicing and refuelling of plant and equipment.

Prohibited releases include scrap metal, motor vehicle bodies or parts, building waste, sawdust, domestic waste, water treatment waste, concrete (including slurry), paint products, manufacturing waste with a pH outside allowable limits, biocides, oil. The relevant approvals and permits have been obtained to allow discharging of water to stormwater or sewer subject to the permit conditions.

B.11.12.4.2 - Mitigation of Water Impacts

In summary the nature of the project means that the area which may receive rainfall and contribute to low quality runoff will be minimal. Potential impacts relate mostly to material trucked onto adjacent roads as a consequence of excavation and cartage of fill as well as discharge of dirty water from site. This will be controlled through maintaining clean loading areas through washing / brooming. Monitoring by the Project Team will be ongoing to ensure no materials are tracked from site. Water will be tested before discharge as required to ensure compliance with license conditions.

Controls to mitigate the impact of water include:

- Maintaining clean loading areas for wash down and maintenance of equipment/plant. Ongoing monitoring will ensure no materials are tracked from site.
- A separate washout area will be established for the concrete pump hopper and truck chutes only. Concrete truck chutes will be washed out in supplied skips on site; the truck itself will be required to wash out off site.
- Clean water will be diverted around the site to minimise the quantity of water impacted by construction.
- All dewatering activities will be controlled.
- Sand, silt or mud will not be deposited in roadside gutters, stormwater drains or swales.

The “Blue Book” (Managing Urban Stormwater: Soils and Construction – Volume 1, 4th Edition reprinted July 2010) will be used as a reference point for soil and water management.

B.11.13 - Essential Services

B.11.13.1 - Description

The Project will be undertaking large volume excavation works and plant movements below existing essential services. Controls will be implemented to mitigate risk of inadvertent impact in accordance with the St Hilliers Work Instruction for Excavation.

B.11.13.2 - Responsibility

Project Manager, Site Manager, HSE Manager

B.11.13.3 - Reference Document

St Hilliers Work Instruction -WI F12 Excavation Work

B.11.13.4 - Process

Sites are required to ensure ALL potential or known essential services are located PRIOR TO ALLOWING EXCAVATION WORKS TO COMMENCE.

The procedure to be followed is as follows:

- Obtain relevant services drawings and plans from the authority/owner of the services- eg: Dial before you dig, GFIS Drawings &/or supplied services drawings from the Client/property owner.
- Employ a Service locator to attend site to conduct scans of the proposed works zones- this to include opening pits, verifying depths and locations, in most cases requiring hand excavation and/or potholing.
- Ensure all services are surveyed (including depths), and a detailed as-built plan is provided by the competent surveyor, and/or locator
- Ensure above ground indicators are present identifying services locations and where relevant depths and location paths through or around your excavation locations
- These Drawings are to be included in your Excavation permits
- Things to be considered- Conducting scans around the perimeter of your excavation zone, & identifying adjacent structures that have services leading in to the ground.
- Progressive As-con drawings must be included in each progressive Excavation permit.
- Sites should review local authority guidelines (eg: Ausgrid, Telstra) in relation to required exclusions around in-ground services and incorporate same into the Project Risk Register WI F01, Subcontractor SWMS and Excavation permits. Note that some authorities require you obtain written approvals for excavation near, and/or over their services.

Additional controls for Overhead essential services will include:

- Ensuring a minimum 3m exclusion zone is implemented prevent plant operations within the exclusion zone
- Ensuring Spotters are in place for movement of plant and equipment under existing power lines
- Engaging a suitably qualified and experienced expert (ESO- Electrical Safety Observer) should plant operations be required within the exclusion zone
- Ensuring the ESO has endorsed the work procedures (SWMS) for the activity

B.12 - Environmental Procedure Management

As per condition B14 refer to the following for Environmental Management Plan.

B.12.1 - "Chance finds" procedure- for unexpected finds

As per condition B10 and B15 (h) refer to the following for Unexpected Finds Protocol.

B.12.1.1 - Description

St Hilliers "Chance Finds" procedure has been developed to ensure that all workers on site have a procedural plan to follow whenever they encounter an unknown including the following:

Potential Indigenous or Heritage significant item (including bones of any description)

Possible Asbestos Containing Material- (assume non-friable at all times)

Hydrocarbon or potentially hazardous ground contamination

B.12.1.2 - Responsibilities

Project Team, Subcontractors, Client

B.12.1.3 - Process

Where an unexpected find is identified, the following process will be implemented:

B.12.1.3.1 - Initial discovery- Subcontractor and/or St Hilliers will:

- Stop Work- avoid disturbance as far as practicable
- Implement an exclusion zone of 10m
- Notify St Hilliers Site management

B.12.1.3.2 - Management process, St Hilliers will:

- Make safe- prevent disturbance with barricades, signage, fencing or similar
- notify the Client representative immediately
- As directed- engage a suitably qualified and experienced expert/consultant/engineer as per contract requirements (eg: specified Occupational Hygienists from the approved list supplied by SINSW) to assess the hazard- including testing as required
- Ensure all workers and relevant Stakeholders are consulted in the management of the unexpected find (eg: Toolbox on excluded zones, and permitted works around that zone)
- Ensure the nominated and approved suitably qualified and experienced expert/consultant/engineer provides a management process for the find (may include air monitoring, PPE/RPE requirements, Removal Control Plans, and/or Health monitoring)
- Ensure clearance is issued by the suitably qualified and experienced expert/consultant/engineer
- Ensure waste tracking is provided to ensure the waste was disposed of to an approved location
- Ensure records/registers are updated to reflect the clearance
- Provide all documentation associated with the management of the unexpected find as required by contract or applicable legislation (eg: All ACM management documentation)

B.12.2 - Conduct Audits

B.12.2.1 - Description

Project audits are part of the continual improvement process used to identify opportunities and ascertain whether systems, processes, products, procedures and quantities comply with specified, agreed and/or statutory requirements.

B.12.2.2 - Responsibilities

Project Team, Subcontractors, Client

B.12.2.3 - Process

B.12.2.3.1 - Auditing Approach

- Project audits will be performed to ensure compliance with contract requirements, ISO 9001, as well as identify opportunities for improvement.
- An audit schedule will be developed to cover a period of at least 12 months or up until the end of the project.
- The audit schedule will be maintained and updated throughout the life of the project.
- Audit timing and frequency will be planned to suit the status, importance and risk of the activities and areas to be audited. The audit schedule will be based on the significance of risks and results of previous audits and the procurement schedule.
- Occasionally an audit my not be carried out as scheduled for a variety of reasons. Where this is the case, the audit will be rescheduled as soon as possible and the Project Audit Schedule updated to reflect this.
- At the project start-up stage, the focus will be on the preparation of management plans to ensure Clients requirements as specified in the project agreement are fully addressed. Risks and opportunities will also be fully assessed at an early stage so as to minimise impacts to the project. When proceeding to the construction stage, audits will focus on the review of onsite construction activities. At project close, the focus will be on proper close-out of outstanding and defect items and the proper handover of relevant documentation to the Client for operation and maintenance purposes.
- Scope of audits will include compliance to the Integrated Management System and St Hilliers Subcontractor requirements.
- If any Consultant, Supplier or Subcontractor managed by St Hilliers is applying their own management system, it will be included in the audit schedule.
- Only competent, trained resources will be allocated to implement the audit schedule.
- In accordance with legislative requirements Safety related audits will be reviewed and approved by the Project Manager using the relevant approval form.

B.12.2.3.2 - Internal Environmental Clearance

During construction St Hilliers allows for escorted access as required by contract to the construction site to monitor and formally audit compliance and notifying the Superintendent of any non-compliance and or environmental incidents.

B.12.2.3.3 - Subcontractor/ Consultant/ Supplier Audits

Subcontractor, Consultant, Supplier audits will be performed at intervals dependent on the risk of the product or service. Audit reports will be retained, and a copy forwarded to the project management team. Corrective actions will be reviewed and, if necessary, the audit schedule amended to include more frequent audits.

B.12.2.3.4 - Conducting an Audit

An audit involves the following stages:

- Audit Checklist: The Auditor will review the relevant documentation to prepare a draft Audit Checklist. Before the audit, the Auditor will circulate this checklist to all attendees for comment.
- Opening Meeting: At the start of the audit, an opening meeting will be conducted to establish the communication protocols that will apply during the audit and to introduce and discuss the Audit Plan.
- Perform Audit: The Auditor will record the audit findings in the Audit Checklist (template dependant on type of Audit being undertaken) and use the following formats to record deficiencies or improvements identified during audits: Observations, Recommendations, Corrective Action Requests, Non-Compliances.

- Closing Meeting: After collecting, verifying and reporting on findings, the Auditor will conduct a closing meeting to debrief the auditee with the audit findings and action items for agreement and sign off.
- Audit Report: The Auditor will prepare and issue an audit report that includes an Audit Action List to the auditee.
- The Opening and Closing Meeting may not occur at all audits e.g. Internal Project Safety Audits are on process rather than a specific contractor or team and therefore issues will be addressed by the auditor and communicated as necessary to the various Project Personnel as required.

B.12.3 - Perform Environmental Baseline and Conditioning Monitoring

B.12.3.1 - Description

Baseline readings of dust, noise or vibration levels and waterway conditions etc. may be undertaken prior to commencing works (as required by the CEMP or Contract conditions). 'Compliance monitoring' then compares those readings to the observed conditions while work is in progress. This continued monitoring establishes compliance levels.

B.12.3.2 - Responsibilities

Project Team, HSE Manager, Consultant

B.12.3.3 - Process

Where required, the project contract may conduct baseline monitoring of environmental factors: e.g. real time or deposition dust, noise and water quality. Additional factors that may also be considered include vibration, vehicle emissions, dust deposition, potential acid sulphate soils, contaminated land, cultural heritage surveys and rain records.

Where required, baseline-monitoring will be undertaken by the Project Team in liaison with a suitably qualified and experienced expert, & the HSE Manager for relevant environmental factors e.g. noise, dust, water quality etc.

B.12.3.3.1 - Baseline Monitoring Requirements (if required)

- Baseline monitoring will be undertaken by a suitably qualified and experienced expert in consultation with the Project Team or a contractually obligated Consultant dependant on the requirement.
- Dust (real time or hi volume) and noise (logger) will be monitored on an ongoing basis depending upon the construction activities being performed at the time.
- When monitoring noise near buildings, the monitor will be a minimum of one metre from vertical structure (e.g. walls, fences) and placed where it can record and add any impacts arising from subsequent St Hilliers Construction' work sites.
- Water quality will be monitored on an ongoing basis (refer topic 'Surface Water Quality).

B.12.4 - Site Inspections

B.12.4.1 - Description

Site inspections are used to identify workplace hazards and deficiencies and assess safety and environmental compliance against St Hilliers regulatory requirements and best practice processes and initiatives. Site inspections cover all aspects of project works.

B.12.4.2 - Responsibilities

HSE Manager, Site Manager, Project Manager, Subcontractor, Project Engineer, Client

B.12.4.3 - Process

Types and frequency of inspections for the Project are identified below.

Any Hazards identified through these inspections will be managed in accordance with the instruction 'Identify Hazards and Improvements'.

B.12.4.3.1 - Daily Inspections

- All employees are to conduct a daily visual site inspection of their work area and report any hazards to the area supervisor.
- Each Foreman will conduct visual site inspections of their work areas every shift/day to ensure that any potential hazards and deficiencies are identified, assessed and controlled as required. The inspections will include health and safety issues, environmental issues, working practices and housekeeping.
- Any hazards identified during the inspection will be managed and recorded as described in the process Identify hazards and improvements.

B.12.4.3.2 - Weekly Inspections

Inspections will be conducted at least weekly to identify Safety and Environmental issues and monitor effectiveness of controls. Weekly inspections as required in the LTEMP will be carried out.

Outcomes of these inspections will be documented on the Weekly Safety Inspection Checklist and Weekly Environmental Inspection Checklist.

B.12.4.3.3 - Closure of raised items

Evidence that items raised during inspections have been closed-out will be documented on the Weekly Safety Inspection Checklist and Weekly Environmental Inspection Checklist. Subcontractors will be issued copies of the weekly inspections to address any items they are responsible for closing out.

B.12.4.3.4 - Trends Analysis

The data will be transferred to the Weekly Inspection Trends Register for analysis by the site team, and for data collection by the Systems Team.

Weekly site inspections will be managed as follows:

- Weekly site inspections will be performed the Safety and Environmental Manager and the HSE Officer.
- The Weekly Safety Inspection Checklist will be completed as a record of the inspection.
- Any hazards and deficiencies identified during the inspection will be managed and recorded as described in the process Identify hazards and improvements.
- A weekly inspection of environmental related issues will be undertaken by the Safety and Environmental Manager.

The Weekly HSE Deliverables Cover Sheet identifies relevant information to be submitted to the HSE Manager on a weekly basis. HSE Manager will be responsible for assessing submitted information and proposing necessary actions at the Business Systems Team meeting. Information will be included in the Corporate Services Report (Business Systems Safety section) which then forms part of the monthly State and Board reports.

B.12.4.3.5 - Subcontractor Inspections

Subcontractors Site Safety Person will inspect the site with St Hilliers HSE Officer in the form of Site Safety Walk Inspections. These will occur on a minimum of twice weekly and the results will be distributed to the Site Safety Committee for review. Where possible, other Subcontractors workers will also be involved in the Site Safety Walk Inspections.

B.12.4.3.6 - Client Inspections

The Client or representative may inspect the project under conditions outlined in the contract agreement.

B.12.4.3.7 - Inspections of Subcontract Work

In addition to the system audit / surveillance carried out on the Subcontractor's activities, the Site Manager will carry out frequent inspections of all works in progress. Subcontractors will be required to participate in audits and inspections of their work.

Where applicable, the Subcontractor understands the importance of completing them correctly and in a timely manner.

If Subcontractor work on the site is being performed contrary to the Subcontractor's SWMS and/or applicable legislative requirements, action will be taken immediately. This may include a direction to stop work if necessary.

Performance of scheduled inspections by relevant personnel will be monitored using the 'Monthly Compliance with Health and Safety Inspections & Communications Register'.

B.12.5 - Report Monthly Environmental Performance

B.12.5.1 - Description

Reporting of project data to the head office, Client and St Hilliers senior management is to occur at the end of each month and prior to the 14th of the next month

B.12.5.2 - Responsibilities

Project manager, HSE Manager

B.12.5.3 - Process

The reporting of monthly environmental performance will be managed by the HSE Manager as follows:

The environmental data extracted from the system includes but is not limited to:

- Monitoring and audits
- Regularity of environmental issues arising from inspections
- Instances of non-compliance.

B.12.6 - Report Environmental Incidents

B.12.6.1 - Description

Describes how environmental incidents are classified (as low to high severity) and reported.

B.12.6.2 - Responsibilities

HSE Manager

B.12.6.3 - Process

B.12.6.3.1 - Classifying Incidents

Incident - exposure to a hazardous substance or dangerous good.

The reporting of environmental incidents relating to harmful effects is classified into three levels of incident:

- Level 3: Low severity occurrence defined as pollution or degradation with short-term (less than one month) and reversible detrimental effects on the environment and/or community. For example, minor oil spill completely remediated.
- Level 2: Medium severity defined as pollution or degradation with persistent (greater than three months) but not reversible detrimental effects on the environment and/or community.
- Level 1: High severity event defined as pollution or degradation that has or may have irreversible detrimental effects on the environment and/or community, for example, illegal clearing of endangered plants.

B.12.6.3.2 - Recording Incidents

The HSE Manager will be contacted immediately when incidents occur to assist the reporting process and provide an Incident Report number from the Master Incident Register. The Incident Report will be completed by a competent person within 24hrs of the incident occurring or as directed otherwise by the HSE Manager. The Written incident report will be compiled in accordance with the Written Incident Notification Requirements as shown below in B.12.6.3.3

For this task a competent person is a person who:

- Is a senior site representative (e.g. Project Manager/Site Manager as nominated in the Project Plan);
- Is the HSE Manager; or
- Has received training in incident management; or
- Is nominated by the HSE Manager.

The reporting process will involve where possible representatives from the project team and senior management (e.g. Project Managers, Operations Managers, State Managers, HSE Manager etc.) and other parties as required.

The aim of this report is to document the known facts of the incident and immediate actions taken to prevent further risk of harm. Interpretations and opinions will not be included.

Incident reports will not be submitted, complete or in part, to external parties, including statutory authorities, without documented approval from St Hilliers Legal. The Incident Report will be signed off by the person completing the report, the Project Manager and the HSE Manager.

The Project Manager will be responsible for copying the Incident Report to the National HSE Systems Manager and recording the incident on the projects Incident Report Register. The National HSE Systems (QHSE) Manager will be responsible for updating the Master Incident Register and communicating the incident to senior management.

In the event of a serious incident the Serious Incident Response Chart will be initiated and the above steps in this work instruction followed.

The reporting process will also include any requirements as outlined within the Contract for the works (e.g.: CLIENTS REP reporting requirements).

Additionally, where a Statutory Authority is required to be notified of an environmental incident, St Hilliers will advise CLIENTS REP within 2 hours and provide written notification to CLIENTS REP within 5 working days of Class 1 or 2 incidents.

B.12.6.3.3 - Written Incident Notification Requirements

1. A written incident notification addressing the requirements set out below must be emailed to the Department at the following address: compliance@planning.nsw.gov.au within seven days after the Applicant becomes aware of an incident. Notification is required to be given under this condition even if the Applicant fails to give the notification required under condition C45 or, having given such notification, subsequently forms the view that an incident has not occurred.
2. Written notification of an incident must:
    a. identify the development and application number;
    b. provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident);
    c. identify how the incident was detected;
    d. identify when the applicant became aware of the incident;
    e. identify any actual or potential non-compliance with conditions of consent;
    f. describe what immediate steps were taken in relation to the incident;
    g. identify further action(s) that will be taken in relation to the incident; and
    h. identify a project contact for further communication regarding the incident.
3. Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, the Applicant must provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a detailed report on the incident addressing all requirements below, and such further reports as may be requested.
4. The Incident Report must include:
    a. A summary of the incident
    b. Outcomes of an incident investigation, including identification of the cause of the incident.

c. Details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and
d. Details of any communication with other stakeholders regarding the incident.

B.12.6.3.4 - Investigations by Statutory Authorities

Where a Statutory Authority attends site to investigate an incident, the following is a guide for St Hilliers in providing accurate information.

- State the facts only.
- If you don't understand the question or believe it to be two questions in one, ask to "clarify the question further"
- Do not anticipate the questions
- Do not try and reconstruct the events in your own view. Do not speculate or give your opinion - neither is relevant.
- You are not obligated to re-construct the event
- Always state "to my best recollection" when asked a question
- Do not answer with second hand knowledge
- You can always clarify your statement from previous answers.

B.12.7 - Manage Enquiries and Complaints

As per condition B14 (g) the below section addresses these requirements

B.12.7.1 - Description

Enquiries / complaints will be dealt with in a responsive manner so that stakeholders feel their concerns are being seriously dealt with and not dismissed. This will assist in building a relationship of trust and reliability between the community and project team.

B.12.7.2 - Responsibilities

Project Manager

B.12.7.3 - Process

The Project Manager will handle the enquiries and complaints that arise on a project and be available 24 hours a day, seven days a week.

If any member of the project team is approached in the field by someone distressed or concerned about the project, they will notify the Project Manager immediately.

A central point of contact will be maintained for enquiries and complaints, to enable the content and distribution of information to the community and stakeholder to be managed and monitored.

Details of enquiries / complaints will be recorded and maintained in the project's Community Database. The following protocol will be used as a basic guide used for handling enquiries and complaints:

- The member of the project team who receives the enquiry / complaint will record and forward it to the Project Manager immediately; normally the project manager or delegate
- If approached directly by a member of the community with a complaint, the project team member will listen to the person's concerns and advise them to contact the Project Manager. Alternatively, the team member will ask for the person's contact details and advise that a team member will be in contact as soon as possible.
- The project manager will nominate someone from within the project team and ensure a response and appropriate action has commenced within two working hours of receiving the enquiry/ complaint.

- In conjunction with project management, the enquiry / complaint will be managed until resolved.
- No member of the construction team will speak to the media; they will politely decline comment and put them in contact with the Project Manager.

B.12.8 - Manage Incident Involving Hazardous Substance

B.12.8.1 - Description

Describes the management of incidents involving hazardous substances include fire, explosion, spillage, leakage or other escape into the environment.

B.12.8.2 - Responsibilities

Project Manager, Environmental Protection Agency, Consultant

B.12.8.3 - Process

- Activities where hazardous substances are in use will maintain an emergency response capability and suitable number of spill kits or suitably stocked area in a proximate container to combat approximately 200 litres of fuel or chemical spill.
- In the event of an incident or near miss involving dangerous goods spill or leak, the project will:
  - take immediate action to reduce any risk associated with the spill or leak
  - investigate the incident to determine the likely cause, record the outcome of the investigation (keep these records for the life of the facility) and take appropriate remedial actions
  - review the risk assessment required in the relevant State regulations and take appropriate actions to reduce risk.
  - excavate or remove contaminated ground (spills up to five litres or less) in a sensitive area, or remedy through an approved process
  - coordinate remediation works through the Environmental Protection Agency (EPA) if the spill is a Level 2 Medium with a persistent impact over three months
  - conduct soil sampling and monitoring of the clean-up area if required
  - obtain inputs from Consultants if required.
- Reporting of spills will be conducted as follows:
  - Less than 20 litres will be reported through the internal SH&E Incident Management System and Monthly Environmental Report.
  - Over 20 litres will be reported to the Project Manager immediately and managed by them.
  - Significant spills / incidents may require upward reporting.
- The appropriate authorities will be notified in accordance with legislative requirements, and/or as detailed within the CEMP or Client contractual requirements for the works

B.13 - Appendix A – St Hilliers Quality, Health, Safety and Environmental policies

WORK HEALTH AND SAFETY POLICY

St Hilliers considers the health and safety of all workers employed by the company and those affected by our operations to be of the utmost importance. Accordingly the company is committed to ensuring that our workplaces and projects are safe and without risk to the health and safety of all our workers, our contractors and our customers.

This commitment recognises that every person has the right to a safe and healthy working environment and it is the mutual objective of the directors, managers and workers to actively promote the maintenance of a work environment free from harm.

In meeting its work health and safety obligations St Hilliers is committed to consulting workers directly affected by our undertakings on all matters that may affect their health and safety.

Our WHS Policy strives to:

- Promote the highest practicable standard of work, health and safety in all our workplaces and on all our projects
- Include health and safety consideration in all business planning activities "as early as possible":
  - In the design and planning phase of the project;
  - In the design of machinery and tools;
  - In the selection of working methods, and
  - In carrying out operations
- Ensure compliance with the Work Health Safety Act 2011 and associated regulations, standards and codes of practice as they apply in each Australian State and Territory in which we carry out a project;
- Establish measurable health and safety objectives and targets to ensure continued improvement aimed at elimination of work-related injury and illness and achieving and maintaining an injury free workplace;
- Consult with workers on matters involving their health and safety;
- Provide a continuous program of information and training to ensure our workers and contractors work in the safest possible way;
- Ensure all systems of work used are safe and meet or exceed minimum standards;
- Set up and monitor a system for identifying, assessing and eliminating or controlling all actual and potential hazards related to the company's undertakings.

Tim Casey

Executive Chairman
St Hilliers Property Pty Ltd

22nd November 2016

HOT AND COLD ENVIRONMENT POLICY

COMMITMENT

St Hilliers is committed to implementing and establishing appropriate measures to eliminate or control risks to employees who work in hot or cold environments. This commitment is made in accordance with the relevant Work Health and Safety Legislation and Codes of Practice for those States and Territories in which St Hilliers operates including from time to time New South Wales, Australian Capital Territory, Victoria, Queensland, South Australia and Western Australia.

RESPONSIBILITY

St Hilliers recognises and accepts its responsibility in ensuring that it takes a proactive and consultative approach in ensuring our obligations are met in hot and cold environments.

TEAM EFFORT

St Hilliers understands that safety is a team effort involving all employees at all levels including Subcontractor management and employees.

All employees are expected to demonstrate a willingness to participate and adhere to hot and cold safety policies and procedures so that working conditions and work practices will not give rise to more serious problems.

ST HILLIERS OHS CONSULTATION WITH EMPLOYEES

St Hilliers will respond and address any concerns about hot and cold work environments raised by employees by conducting a risk assessment of the area of concern. This will be carried out in accordance with relevant State/Territory Legislation, Codes of Practice and in consultation with employees impacted by such environments.

SUBCONTRACTOR HOT AND COLD ENVIRONMENT POLICY, JSA/ SWMS, CONSULTATION

The Subcontractor will take responsibility for ensuring that they establish a Subcontractor's Company Hot and Cold Environment Policy in consultation with their employees.

Subcontractors will include Hot and Cold Environment procedures as part of the Job Safety Analysis and/or Safe Work Method Statement applicable to State Legislation requirements.

Any concerns or issues concerning the Hot and Cold Environment may be raised through the Subcontractor's Employee Supervisor and/or OHS Representative/HSR and/or Safety Committee/DWG.

Subcontractors must provide UV protection such as appropriate PPE and sunscreen to their employees.

ST HILLIERS CONSTRUCTION PROVIDES

St Hilliers provides the following in managing hot and cold environments on its project sites:

- Air-conditioned lunch sheds and change rooms.
- Boiling and drinking water, refrigerators and food warming facilities in the lunch sheds.
- Water bubblers at various locations throughout the site.
- Sunscreen SPF+30 is available through nominated site locations as indicated in the Site Induction and/or Site Safety Management Plan.
- Appropriate Personal Protective Equipment to St Hilliers employees.

IN CONCLUSION

St Hilliers expects a personal commitment to safety from management and employees, including Subcontractors. It places highest priority on the achievement of safe workplaces, including the physical and psychological well-being of all its employees.

Tim Casey

Executive Chairman

St Hilliers Property Pty Ltd

8th February 2012

ST HILLIERS INDIGENOUS PARTICIPATION POLICY

St Hilliers acknowledges the need to increase opportunities for Indigenous employment and the involvement of Indigenous-owned businesses within our supply-chain network, in line with Commonwealth Indigenous Procurement Policy (IPP) Guidelines.

To not only achieve the minimum requirements, but to strive to exceed them, St Hilliers is committed to increasing the Indigenous skills and economic participation in our projects through the following initiatives,

Initiatives to maximise the participation of Indigenous Businesses in our projects, St Hilliers will:

- As part of our procurement plan, consult national Indigenous resource registers such as the Supply Nation and Black Business Finder for businesses that have the potential capacity and capability to meet the requirements of the procurement and invite tenders from these businesses.
- Build on existing relationships with Indigenous businesses in the regions to develop work packages around their capabilities.
- As part of project start-up activities, meet with local Indigenous groups to identify opportunities for involvement of Indigenous business.

and

Initiatives to facilitate the employment of Indigenous Australians on our projects will include:

- Consultation with the local Indigenous community to identify pathways for involvement of Indigenous people.
- Liaise with established networks promoting the employment of Indigenous resources. There are a number of local groups & businesses that place Indigenous jobseekers into businesses either as casual or permanent employees and provide ongoing support
- Encourage existing employees to identify their Indigenous Heritage.
- Provide opportunities for Indigenous employees to attain a formal qualification during their time on our projects, through funded TAFE course(s) or similar, upskilling them to increase future employment opportunities.
- Facilitate positive Indigenous employment initiatives through subcontract arrangements.
- Recruit, as appropriate, project staff who have Indigenous Heritage.

St Hilliers Indigenous Participation Policy shall be reviewed annually within the Corporate Services Group to ensure the Policy remains compliant with State legislation in regards to workplace diversity, equal opportunity and the APIC guidelines.

Tim Casey

Executive Chairman
St Hilliers Property Pty Ltd

LOCAL INDUSTRY PARTICIPATION POLICY

St Hilliers is committed to the principles of sustainable development using the St Hilliers sustainability framework as a guide.

In our procurement decision making processes we provide full, fair and reasonable opportunity for local industry to contribute to our activities subject to satisfying relevant prequalification requirements. We will actively promote initiatives to upskill the local workforce and create employment opportunities in the regions we work, this being critical in providing legacy benefits to the community.

St Hilliers is committed to early communication with the local business communities to maximise the potential for local industry participation, and to regularly audit St Hilliers' Local Industry Participation Policy outcomes.

Scope

This policy applies to all St Hilliers activities regardless of geographic location. Federal & State specific policies and strategies shall be developed in compliance with this Policy, taking into consideration all legal and regulatory requirements.

Procurement Activities

To implement and comply with this policy St Hilliers shall:

- Be proactive with local companies by providing briefings as early as possible to maximise the potential local sourcing opportunities
- Identify capable local Subcontractors & Suppliers of goods and services for projects
- Develop and implement a Local Industry Participation Plan for every Project which outlines the
- Project's specific approach to the engagement with, and use of, competitive local Subcontractors & Suppliers
- Ensure that local capabilities are considered during development of work scopes so as to enhance local content without impacting economic returns
- Provide full, fair and reasonable opportunity for local industry Consultants, Subcontractors& Suppliers to prequalify for work on each project
- Make all major prequalified tenderers aware of St Hilliers' Local Industry Participation Policy and require this policy to be appropriately reflected in the Subcontractors resourcing and purchasing strategies
- Ensure competitiveness of potential Suppliers to each project by prequalifying tenderers where qualified bidders are available
- Commercially evaluate competitive tenders inclusive of environment, health, safety, life cycle costs, quality, delivery, price, service and socio-economic factors.
- Where comparative tenders are commercially competitive and technically acceptable, give preference to those tenderers, that maximise local content in both labour and materials
- Work with government, industry representative bodies and communities to improve local industry participation, capability and competitiveness

Training & Employment

To implement and comply with this policy St Hilliers shall:

- Engage early with local training organizations, including group trainers, to identify local industry capability to meet project benchmarks for trainee and apprentice participation.
- Create initiatives to provide increased opportunities for local trainees and apprentices where possible, through both direct engagement with St Hilliers and through our subcontract partners.

Accountability for the application of this policy lies with the Executive Chairman in conjunction with Project Teams.

Tim Casey

Executive Chairman
St Hilliers Property Pty Ltd

25th September 2018

QUALITY POLICY

St Hilliers policy to is to deliver its Clients quality construction projects nationally through the following policy commitments:

St Hilliers is committed to:

- Maintaining it's quality management systems that is accredited to AS/NSZ ISO 9001,
- Ensuring on-going review and systems improvement through regular third party auditing to ensure continual improvement of the IMS and it's Quality aspects
- Providing adequate resources to implement, manage and maintain the Quality System
- Utilise the best quality products and services in the delivery of projects at a competitive cost
- Encourage Employees to integrate the Quality System into the way St Hilliers work
- Encourage Subcontractors to incorporate and adopt compliant procedures into the delivery of their materials, products and services
- Fostering positive relationships with Clients, Subcontractors and Suppliers to improve overall quality of delivery
- Ensuring as far as practicable the delivery is on time, on budget, and compliant with applicable legislation, codes, specifications, and standards
- Set achievable and consistent targets and objectives
- Strive to deliver defect free construction, first time, every time.

Management will ensure it monitors and observes the quality policy.

Management will promote all initiatives to attain and achieve genuine quality, ensuring Stakeholder consultation including Employees, Clients, Subcontractor and Suppliers throughout delivery.

Tim Casey

Executive Chairman
St Hilliers Property Pty Ltd

RISK MANAGEMENT POLICY

St Hilliers is aware of the obligation to develop, implement, maintain and improve risk and opportunity management systems. This Risk Management Policy constitutes the commitment of all management and employees to risk management.

St Hilliers will ensure that it will consult with all relevant Stakeholders (including Employees, Clients, and the public) that could be affected by our business operations to ensure informed and effective risk management.

This commitment includes:

- Understanding and managing the risks associated with meeting business objectives from a Corporate level and down through to daily site operations;
- Identifying and evaluating opportunities in the context of implementing adequate controls based around risk
- Utilising risk management to ensure better management decisions are made and implemented;
- Ensuring Employees are provided with on-going and up-to-date training on risk management policies and procedures;
- Ensuring adequate resources are provided to manage risk and reduce as far as practicable the likelihood and consequence of incidents, accidents and injuries within the organisation and the works performed both by St Hilliers employees and those employed on our sites;
- Ensuring risk management is incorporated into our everyday practices and business processes to improve our business;
- Ensuring there is a robust business appropriate risk assessment (HIRAC) and reporting system;
- Ensuring Employees are active participants in the risk management processes and procedures, and have comfort in reporting situations that require assessment and control;
- Ensure on-going and adequate monitoring, reviewing and improvements of the system within the business as a result of trends, legislative requirement changes, industry and company development, or as a result of any incident, accident or injury. This to include conducting both regular internal audits, external audits and implementing actions where required in a timely manner;
- Utilising risk management to make better company decisions
- Ensuring Hazards and risk are managed utilising the Company HIRAC (Hazard Identification, Risk Assessment & Control) methodologies in a timely and efficient manner
- Ensuring on-going and continual review at a Corporate and Site based level to ensure the effectiveness of the HIRAC methodologies.

Tim Casey

Executive Chairman
St Hilliers Property Pty Ltd

22nd November 2016

WORK HEALTH AND SAFETY POLICY

St Hilliers considers the health and safety of all workers employed by the company and those affected by our operations to be of the utmost importance. Accordingly the company is committed to ensuring that our workplaces and projects are safe and without risk to the health and safety of all our workers, our contractors and our customers.

This commitment recognises that every person has the right to a safe and healthy working environment and it is the mutual objective of the directors, managers and workers to actively promote the maintenance of a work environment free from harm.

In meeting its work health and safety obligations St Hilliers is committed to consulting workers directly affected by our undertakings on all matters that may affect their health and safety.

Our WHS Policy strives to:

- Promote the highest practicable standard of work, health and safety in all our workplaces and on all our projects
- Include health and safety consideration in all business planning activities "as early as possible":
  - In the design and planning phase of the project;
  - In the design of machinery and tools;
  - In the selection of working methods, and
  - In carrying out operations
- Ensure compliance with the Work Health Safety Act 2011 and associated regulations, standards and codes of practice as they apply in each Australian State and Territory in which we carry out a project;
- Establish measurable health and safety objectives and targets to ensure continued improvement aimed at elimination of work-related injury and illness and achieving and maintaining an injury free workplace;
- Consult with workers on matters involving their health and safety;
- Provide a continuous program of information and training to ensure our workers and contractors work in the safest possible way;
- Ensure all systems of work used are safe and meet or exceed minimum standards;
- Set up and monitor a system for identifying, assessing and eliminating or controlling all actual and potential hazards related to the company's undertakings.

Tim Casey

Executive Chairman
St Hilliers Property Pty Ltd

22nd November 2016

COMMUNITY & STAKEHOLDER POLICY

St Hilliers understands the obligations both legislatively and morally to ensure that it's Construction activities are:

- Risk assessed to identify potential adverse influence on the community and/or stakeholders, and
- Consultative arrangements are implemented as soon as practicable after contract award
- Minimise as far as practicable any adverse effects on the Stakeholders

Stakeholders

We shall ensure we identify all relevant Stakeholders including but not limited to:

Employees, Clients (and Client representatives), the public (about our Construction sites, and those that could be affected by our activities), asset owners (eg: Essential Services providers- Power, Water, Sewer, Gas and Communications), adjacent property owners, Councils, Police, Emergency Services, property owners and their relevant stakeholders (eg; Defence EMOS, Base Management, Environmental Officers), Transit authorities or asset managers (eg: Bus companies, Department of Main Roads)

Consultation and Communication

We will ensure we maintain effective communications methods at all times, responding in an accurate and timely manner.

We will, at all times, enhance community relationships ensuring we consider a social perspective into decision making processes.

We will ensure that we support and respect local traditions, policies, history and culture obtaining relevant and competent advice at all times when these issues are identified. This will include managing indigenous, European, and/or culturally significant sites with dignity and respect, while ensuring compliance with applicable law and policy for same.

We will plan our works to ensure we ensure the Health & Safety of the Community and relevant Stakeholders, and ensuring we do not adversely affect the environment.

Tim Casey

Executive Chairman
St Hilliers Property Pty Ltd

St Hilliers Group

Fitness for Work:

Drug and Alcohol Management Policy for Building and Construction on Project Sites

Date last reviewed 25 September 2018

Next review due by September 2019

Status Final

Based on the version adopted by the Master Builders Association 8 October 2015

Warning: any amendments or alterations to this Policy may void its compliance with the Building Code 2016

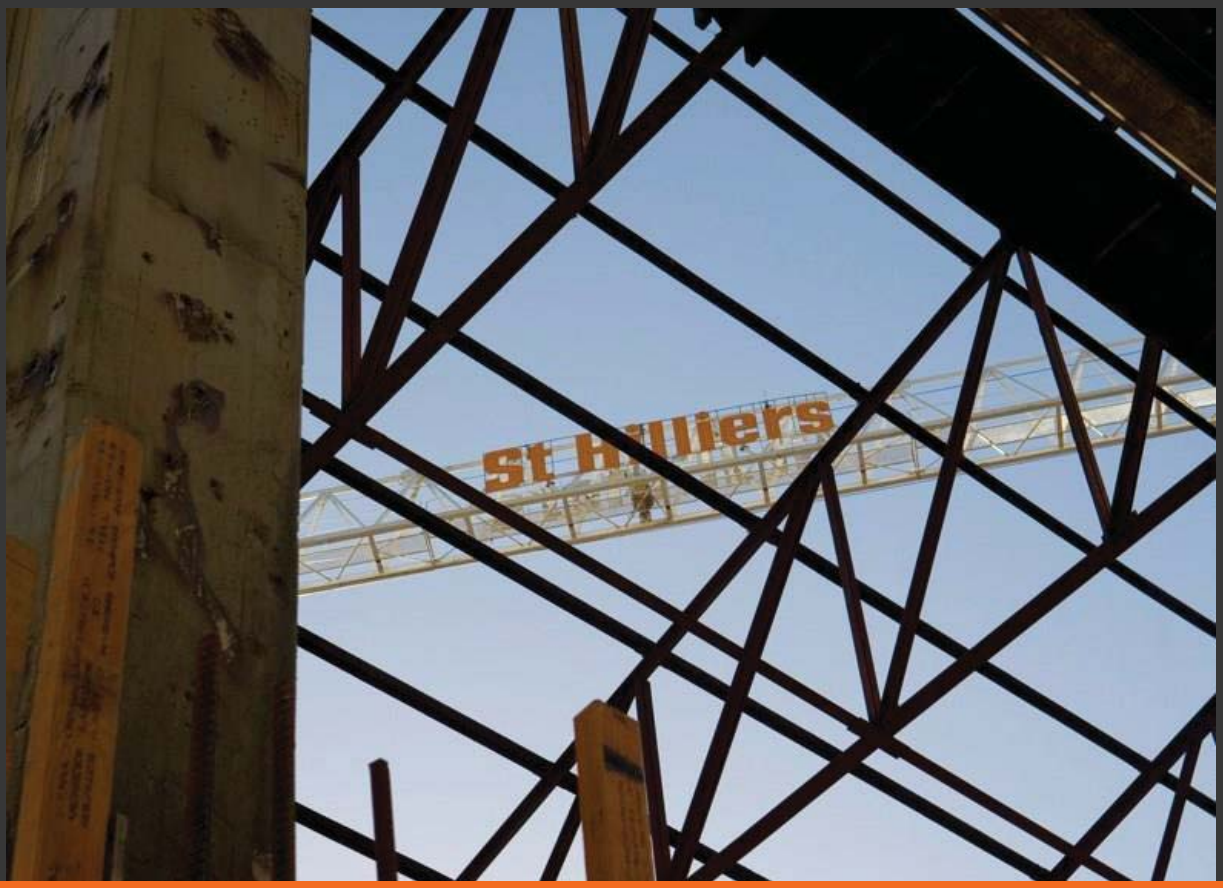


Table of Contents

TABLE OF CONTENTS **2**
1 FOREWORD **4**
2 CONTEXT **4**
3 DEFINITIONS **5**
4 CONFIDENTIALITY **8**
5 DUTY OF CARE AND RESPONSIBILITIES **8**
5.1 EMPLOYER 8
5.2 PROJECT / WORKPLACE MANAGER OR NOMINATED PERSON 9
5.3 PRINCIPAL CONTRACTOR'S HEALTH AND SAFETY MANAGER 9
5.4 SUPERVISORS 9
5.5 CONSULTATIVE ARRANGEMENTS 9
5.6 WORKERS AND OTHER PERSONS 9
5.7 NON-COMPANY PERSONNEL (SUBCONTRACTORS / CONSULTANTS) 9
6 POSSESSION **10**
7 CONSULTATION AND TRAINING **10**
8 EMPLOYEE ASSISTANCE, COUNSELLING AND REHABILITATION **10**
8.1 PERSONAL WORKPLACE SUPPORT 10
8.2 ASSISTANCE PROGRAM 11
8.3 REHABILITATION SUPPORT 11
8.3.1 Voluntary Rehabilitation 11
8.3.2 Referred Rehabilitation 11
9 DRUG AND ALCOHOL MANAGEMENT PLAN EXEMPTIONS **12**
9.1 APPROVED FUNCTIONS 12
9.2 STORAGE OF ALCOHOL 12
10 MEDICATIONS **12**
10.1 PRESCRIPTION MEDICATION 12
10.2 OVER-THE-COUNTER MEDICATION 13
10.3 COMBINING MEDICATION 13
10.4 TESTING 13
11 DRUG AND ALCOHOL TEST PROGRAM **14**
11.1 WHO CAN BE TESTED? 14
11.2 SUBSTANCES TO TEST 14
11.3 PREFERRED TESTING METHODOLOGY 14
11.4 TESTING OPTIONS 15
11.5 TESTING OFFICERS 18
11.6 TESTING REQUIREMENTS 18
11.7 SELF-DECLARATION 19
11.8 REFUSAL TO TEST 19
11.9 INVALID RESULT 20
11.10 TAMPERING 20
11.11 TEST RESULTS 20
12 DISCIPLINE **22**
12.1 FIRST OCCASION 22
12.2 SECOND OCCASION 22
12.3 THIRD OCCASION 23

13 AGGRESSIVE AND ABUSIVE BEHAVIOUR 23
14 REVIEW AND AUDIT 23
15 RETURN TO WORK REQUIREMENTS 23
APPENDIX 1 - FITNESS FOR WORK - DRUG AND ALCOHOL MANAGEMENT POLICY SUMMARY 24
APPENDIX 2 - DRUG AND ALCOHOL COUNSELLING ASSISTANCE 26
APPENDIX 3 – TEST TARGET CONCENTRATIONS FOR ORAL FLUID 28
APPENDIX 4 – FITNESS FOR WORK – DRUG AND ALCOHOL MANAGEMENT POLICY WORKFLOW 30
APPENDIX 5 – DRUG TESTING CONSENT AND CHAIN OF CUSTODY FORMS 32
APPENDIX 6 – RETURN TO WORK PROCEDURES AND RELATED ISSUES – ST HILLIERS AND SUBCONTRACTORS 33

1 Foreword

This Policy is consistent with the Building Code 2016 (**the Code**) Sections 16A, 32 (2)(a) & Schedule 4. The building work to which this Policy applies is defined in Part 2 of this Policy under "Relevant Building Work".

In this Policy, "St Hilliers" means St Hilliers Property Pty Ltd and any related entities within the meaning of the Code.

Under the Code:

1) The Principal Contractor for Relevant Building Work must have a WHS & R management plan which contains a 'Fitness for Work' Policy to manage alcohol and other drugs in accordance with Schedule 4 of the Code (and where St Hilliers is the Principal Contractor for Relevant Building Work, this Policy is such a policy); and
2) All building contractors and building industry participants for Relevant Building Work must have a WHS & R management plan that shows the way in which drug and alcohol issues in the workplace will be managed to help ensure that no person enters a site under the influence of alcohol or other drugs (and where St Hilliers is a building contractor or building industry participant for Relevant Building Work, this Policy meets that requirement).

St Hilliers has consulted appropriately with its own employees prior to implementing this Policy.

2 Context

This Policy applies to all Workers engaged by St Hilliers, its subcontractors and consultants, to perform building work on Site (including construction and site office workers) for any St Hilliers project that involves Relevant Building Work where St Hilliers is the principal contractor and the Head Contract Principal does not implement its own Fitness for Work Policy on the relevant Site. St Hilliers enforces this policy contractually with its subcontractors and consultants and requires that they include similar contractual provisions in their own secondary subcontracts.[1]

The purpose of this Policy is to deal with alcohol and drugs and their effects on a Worker's fitness for work whilst performing duties or attending any project Site.

This Policy ensures that when it is acting as the Principal Contractor and the Head Contract Principal does not implement its own Fitness for Work Policy on the relevant Site, St Hilliers has a mechanism to appropriately manage, and ensure that its subcontractors and consultants manage, the misuse of alcohol and drugs in the workplace through testing, education, counselling, rehabilitation and discipline, where required. The sharing of responsibility between Employers under this Policy is described in the following table, and the terms of this Policy should be read in the context of this Table.

1

[1] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 1: how those on site (including employees of the principal contractor, subcontractors and their employees and others) will be required to comply with the relevant fitness for work policy (i.e. through contract or some other enforceable means).

Table 1 – Responsibilities

Mechanism	St Hilliers	Other Employers (St Hilliers subcontractors and consultants)
Testing	Will undertake testing of Workers on Site who are employed by St Hilliers, its subcontractors or consultants	May also undertake testing of their own employees and the employees of any secondary sub-contractors
Education	Will conduct educative Toolbox talks prior to testing and has responsibility for education of own employees.	Have primary responsibility for education of their own employees.
Counselling	Responsible for own employees.	Responsible for own employees.
Rehabilitation	Responsible for own employees.	Responsible for own employees.
Discipline	May require any Worker to leave the Site in accordance with this Policy. Responsible for consequential discipline of own employees.	Responsible for own employee required to leave the Site returning home safely. Responsible for consequential discipline of own employees.

When acting as Principal Contractor, St Hilliers will not pass on the implementation and cost of drug and alcohol testing to its subcontractors or consultants[2], provided however that in certain situations described in this Policy the Worker is responsible for the costs of testing.

3 Definitions

Accredited Laboratory means a laboratory which meets minimum Australian performance standards set by an accrediting agency, being the National Australian Testing Authority (NATA).

Alcohol refers specifically to the chemical substance ethanol which, in this context, may occur in either a liquid or gaseous form.

Amphetamine-type stimulants may include, but are not limited to, the following: amphetamine, methylamphetamine, methylenedioxymethylamphetamine (MDMA), methylenedioxyamphetamine (MDA).

B.A.C or blood alcohol content is the measurement of alcohol in the body, in grams of alcohol per 100 millilitres of blood and recorded as a percentage i.e. 0.00%.

Chain of Custody is a series of procedures to account for the integrity of each oral fluid specimen by tracking its handling and storage from point of collection to final disposal.

Cocaine includes cocaine and its metabolites including cocaine, benzoylecgoine and ecgonine methyl ester.

Company means St Hilliers Property Pty Ltd and its related companies.

Confirmatory Test refers to a second alcohol breath test to confirm the initial reading or, in the case of drugs, an oral fluid analysis conducted at an accredited laboratory to confirm the non-negative ("fail") result obtained in the initial test. The confirmatory test results in a definitive positive (fail) or negative (pass) result.

Confirmed Positive Result (Fail) means a:

- Secondary onsite breath test for alcohol in excess of 0.00 grams per 100 millilitres (0.00%) of alcohol;

[2] Code subsection 16A (2).

- Secondary test conducted at an accredited laboratory for drugs in excess of the levels contained in AS 4760:2006, performed at an accredited laboratory. Note: Benzodiazepine level[3] to be provided by the prescribed testing laboratory.

A confirmed positive result as described above is a fail.

Drug means a substance that has a physiological effect on the body, either by itself or through its metabolite(s). The term 'drug' refers to the drug and/or its metabolite(s) for the purpose of detecting a target drug in oral fluid.

Employer should be read as having the same meaning as a 'Person Conducting a Business or Undertaking' (PCBU) and shall mean a person who employs one or more other persons under contracts of employment or contracts of training. Generally in this Policy 'Employer' will refer to St Hilliers but may, depending on the context, refer to the Head Contract Principal or to subcontractors.

False Negative is a screening test result that appears negative when it should not.

False positive result is a screening test read positive when the drug or drug metabolite is not present or its concentration is less than the cutoff level.

Fit for Work means a person who has a BAC of 0.00% and tests negative for the list of substances noted in section 11.1 of this policy.

For Cause Testing is drug and alcohol testing which may be carried out for any of these scenarios:

- An individual or group of individuals' fitness for work may have been a contributing factor in an incident, accident or near miss.
- There is a direct observation or indication of impairment or unusual behaviour or actions by the individual.
- Evidence or reason to believe the individual is involved with the use of alcohol or other drugs while at work.
- Where safety precautions or processes may have been breached by the individual.

HSE means health and safety and the environment.

HSE Manager means the St Hilliers HSE Manager or, where the context indicates, the equivalent manager of the relevant Employer.

Health and Safety Committee is defined as per Division 4 of Part 75 in the New South Wales Work Health and Safety Act 2011 (WHS Act) or, in relation to any other jurisdiction, the relevant provisions of the respective legislation

Health and Safety Representative means a Health and Safety Representative for a designated work group who has been elected in accordance with Division 3 of Part 50 in the WHS Act.

Initial Screening Test is defined as indicative testing conducted at the workplace to exclude the presence of alcohol and/or a drug or a class of drugs as provided by Australian Standards AS3547:1997, AS 4760:2006 and AS/NZ 4308:2008. The Initial Screening Test provides a "negative" or "non-negative" result. Where a "non-negative" ("fail") result is obtained, confirmatory testing must be conducted to provide a conclusive result.

NATA is the National Association of Testing Authorities, who accredit laboratories, inspection bodies and calibration services, produce certified reference materials and provide proficiency testing schemes throughout Australia.

Negative Result means a test result at or below the prescribed or nominated target concentration levels and this is therefore considered a "pass".

Non-Company Personnel refers to any worker who is not directly employed by the Principal Contractor.

Non-Negative Result has the same meaning as a Preliminary Positive Result means an initial screening test result that indicates the presence of alcohol or drugs above the prescribed or nominated target

[3] Benzodiazepine concentrations are to be confirmed with the relevant Drug & Alcohol testing provider.

concentration levels and is therefore considered a “fail”. A secondary onsite breath test for alcohol or accredited laboratory test for drugs is to be conducted to determine a confirmed positive (fail) or confirmed negative (pass) result.

Preliminary Positive means an initial screening test result that indicates the presence of alcohol or drugs above the prescribed or nominated target concentration levels and is therefore considered a “fail”. A secondary onsite breath test for alcohol or accredited laboratory test for drugs is to be conducted to determine a confirmed positive (fail) or confirmed negative (pass) result.

Opiates may include but are not limited to the following: morphine, codeine and 6-cetylmorphine.

Over-the-Counter Medication means medicines/drugs sold directly to the consumer without a prescription from a healthcare professional.

Prescription Medication means medication that is prescribed by a healthcare professional.

Random Testing refers to drug and alcohol testing completed at the workplace on a randomly selected day and time (keeping within the parameters defined in this procedure, eg testing required monthly) on a randomly selected group of individuals or teams.

Relevant Building Work means Type B Building work as set out in Schedule 2 of the Code for which the Commonwealth contributes funding that is at least:

1) $5,000,000 and where the sum is at least 50% of the total construction project value; or
2) $10,000,000 (irrespective of its proportion of the total construction project value)

Site means any St Hilliers project location.

Targeted Testing refers to testing conducted for Workers working in high risk activities or once returning to work after a confirmed positive (fail) drug or alcohol test.

Testing Officer means a suitably competent and trained provider or person approved by the H&S Manager to conduct drug and alcohol sampling of Workers at the workplace. This person may be an independent person or employed by the Employer.

THC refers to tetrahydrocannabinol, also known as marijuana or cannabis.

WHS Act means the New South Wales Work Health and Safety Act 2011 or the equivalent legislation in any other jurisdiction, as applicable.

WHS Regulation means the New South Wales Work Health and Safety Regulations 2011 or the equivalent legislation in any other jurisdiction, as applicable.

WHS&R means work health safety and rehabilitation.

Worker means:

1) an employee of St Hilliers, or
2) a contractor, consultant or subcontractor, or
3) an employee of a contractor, consultant or subcontractor, or
4) an employee of a labour hire company who has been assigned to work in the person’s business or undertaking, or
5) an outworker, or
6) an apprentice or trainee, or
7) a student gaining work experience, or
8) a volunteer, or
9) a person of prescribed class.

Workplace means a place where work is carried out for a business or undertaking and includes any place where a Worker goes, or is likely to be while at work, including all facilities provided to Workers for the purpose of conducting works for their Employer. A workplace includes, but is not limited to:

1) head office
2) plant and laydown yards

3) site/project offices
4) car parks
5) sheds and rooms
6) amenities
7) working locations
8) shipping containers and site safes
9) company vehicles

4 Confidentiality

1) All information gathered as a result of alcohol and other drug testing is collected for the purpose of implementing this Policy.
2) St Hilliers is committed to ensuring that results from all drug and alcohol testing remain confidential and use/access/dissemination of the results shall be restricted to those who have a genuine requirement to access the results of the drug and/or alcohol test.
3) St Hilliers will adhere to the following principles in implementing this Policy:

a) Testing will be conducted in a location that to all reasonable extent possible maintains the privacy and dignity of the individual.
b) Workers who record a non-negative ("fail") or confirmed positive (fail) result will be treated at all times in a respectful and non-judgmental manner by all involved in the management of the matter.
c) Alcohol and drug test records, which may include a register and results, will be retained on file. These records will be suitably secured.
d) Where the Worker tested is not an employee of St Hilliers but of a subcontractor or consultant or secondary subcontractor, St Hilliers will share all relevant information with the Worker's Employer. Otherwise, but subject to clause 4.4, St Hilliers will only release information to a third party as required by law.
e) The HSE Manager or Nominated Person is authorised under this Policy to delegate and assign authority for access and use of the information obtained under this Policy, including but not limited to authorised government agencies and insurers (for claims submissions, where applicable).

5 Duty of Care and Responsibilities

Under this Policy the duty of care, responsibilities and obligations of employers, employees, contractors and others at the workplace are derived from and reflect the respective obligations under the WHS Act and specified responsibilities detailed in this Policy.

5.1 Employer

The WHS Act states that Employers (PCBUs) must provide a safe and healthy workplace for Workers or other persons by ensuring, so far as reasonably practicable:

1) Safe systems of work
2) A safe work environment
3) Safe use of plant, structures and substances
4) Facilities for the welfare of Workers are adequate
5) Notification and recording of workplace incidents
6) Adequate information, training, instruction and supervision is given
7) Compliance with the requirements under the WHS Regulation
8) Effective systems are in place for monitoring the health of Workers and workplace conditions.

5.2 Project / Workplace Manager or Nominated Person

The Project Manager or Nominated Person is responsible for ensuring adequate resources are allocated for the implementation, education, training and support of this Policy. The Project Manager or Nominated Person must also ensure this Policy is applied fairly and consistently.

5.3 Principal Contractor's Health and Safety Manager

The HSE Manager or Nominated Person is responsible for ensuring this Policy remains current, is readily available and is applied in the way it was intended. The HSE Manager or Nominated Person must also ensure that all St Hilliers employees who work on Site know and understand the Fitness for Work – Drug and Alcohol Management Policy (the Policy).

5.4 Supervisors

Supervisors must ensure that all individuals in their area of responsibility understand and comply with the requirements of this Policy and ensure, so far as reasonably practicable, that no Worker commences or continues work on Site if the Worker appears to be affected by alcohol or other drugs or where the Worker's fitness for work could be otherwise impaired (eg appears tired, breaks between shifts less than 10 hours, night works). In this case, the matter should be referred to the Project and HSE Managers for further investigation or action, as applicable.

5.5 Consultative arrangements

Established consultative arrangements (eg civil sites with a single subcontractor) will be used to assist with consultation between St Hilliers and its employees in instigating, developing and carrying out measures designed to ensure the health and safety of the employees at work.

5.6 Workers and Other Persons

The WHS Act requires that a Worker must, while at work:

1) Take reasonable care for their own health and safety
2) Take reasonable care for the health and safety of other Workers who may be affected by the employee's acts or omissions, and
3) Cooperate with their Employer with respect to any action taken by the Employer to comply with requirements imposed by the Act, Regulations or guidelines.

It is the responsibility of the Worker to present themselves in a fit state for work and have the appropriate level of rest afforded to them between shifts. Any Worker, who believes that they may be unfit for work for any reason is expected to not commence work and to inform their Employer immediately.

Workers should notify their Supervisor if they are taking medication of any kind which may impair their ability to conduct work safely 1) at Site induction or equivalent, if they are already taking the medication or (2) if they commence taking the medication later, immediately they commence the medication. Workers should also notify their Supervisor if they have an alcohol or drug issue which may be in breach of the requirements in this Policy 1) at Site induction or equivalent, if they already have the issue or (2) if the problem commences later, as soon as they become aware of the issue.

Workers must also notify their Supervisor when they become aware of any breach or potential breach of this Policy.

5.7 Non-Company Personnel (Subcontractors / Consultants)

The Employer of non-company Workers is to provide any support, counselling, rehabilitation and disciplinary actions to a similar and suitable standard as noted within this Policy.

6 Possession

Workers must not have any alcohol or drugs in their possession or control at the workplace, except for:

1) Drugs prescribed by a medical practitioner, or
2) Non-prescribed medication (being over -the -counter medications).

7 Consultation and Training

Prior to any implementation of this Policy, St Hilliers is required to consult its workforce. Following that initial consultation, this Policy will be implemented on site.

All subcontractors will be required to ensure that their employees and those of any secondary subcontractor they engage are compliant with the requirements of this Policy, as a minimum, at any time they are present at St Hilliers controlled Sites.

All St Hilliers subcontract and consultancy agreements shall require compliance with this Policy.[4]

St Hilliers will develop tailored drug and alcohol education and awareness training which will be delivered to all St Hilliers employees at suitable intervals, and to Site Workers by Toolbox talks immediately prior to testing, the content in each case being as determined by the risks associated with the specific working environments.

The education and awareness training will generally include education and guidance on:

1) The effects of drugs and alcohol on the individual and society as a whole, including prescription and over the counter medications.
2) Medications which may affect the Worker's ability to work safely.
3) Medications and other factors which may trigger a false positive.
4) The adverse effects of drugs and alcohol on work practices in the workplace.
5) Testing methods and threshold limits to be employed.
6) Selection methods.
7) The management and safe use of legal drugs and alcohol.
8) Counselling and rehabilitation resources.

A summary of the Policy, for use during such education and training activities, may be found in Appendix 1.

8 Employee Assistance, Counselling and Rehabilitation

The respective Employers and any Work Health and Safety Committee will provide information and assistance to Workers seeking help for alcohol or drug related issues confidentially and without prejudice.

Any person who suspects they have an alcohol or drug dependency condition is encouraged to seek advice and to take appropriate treatment before their job performance is impaired.

8.1 Personal Workplace Support

Persons experiencing difficulties relating to substance use (drug and/or alcohol) may approach any of the following persons with their Employer and/or within the St Hilliers workplace for confidential advice and assistance:

[4] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 1: how those on site (including employees of the principal contractor, subcontractors and their employees and others) will be required to comply with the relevant fitness for work policy (i.e. through contract or some other enforceable means).

1) HSE Manager or Coordinator
2) Human Resources Department
3) Supervisor
4) Project Manager
5) Health and Safety Representative
6) Responsible Person
7) Union representative

8.2 Assistance Program

Assistance with rehabilitation and/or counselling relating to substance use may also be provided through an Employee Assistance Program provided by the relevant Employer, or through external service providers.

There are several options where individuals seek assistance, including referral of persons to:

1) a medical practitioner, or
2) a suitably qualified health professional, or
3) an Employee Assistance Program (EAP), where provided to employees of the relevant Employer, or
4) an industry provided program.

Further details regarding these services may be found in Appendix 2.

8.3 Rehabilitation Support

Workers identified through testing or declaration as having an issue with alcohol or drug use, misuse, abuse, or dependency are encouraged to take advantage of a rehabilitation program. Voluntary participation in these programs is encouraged.

The participation and details of the programs will be held in confidence and the Worker will not, by virtue only of their participation in such a program, be subjected to adverse judgment or treatment prior to, during or post participation in these programs.

8.3.1 Voluntary Rehabilitation

Those who voluntarily seek assistance for substance use issues may utilise their entitlement in respect of approved accrued leave to participate in a rehabilitation program without jeopardising their continued employment with their Employer.

It should be noted that voluntary participation in treatment programs will not prevent disciplinary action being applied for procedural violations that may have already occurred (or may occur in future).

Entry and participation in a rehabilitation program should not adversely affect future employment opportunities within the Employer. The program is confidential and no person is to be discriminated against solely for participating in a rehabilitation program.

8.3.2 Referred Rehabilitation

Following a confirmed positive (fail) drug and/or alcohol test (ie second of two non-negative tests), the relevant employee may be required by their Employer to participate in a rehabilitation program.

The following is to apply if referred rehabilitation is accepted by a person:

1) Failure to successfully complete a rehabilitation program may result in further action by the Employer.
2) Failure by Workers to undergo drug and/or alcohol tests as part of the rehabilitation program will result in further action by the Employer.
3) Where any drug and/or alcohol test carried out as part of a rehabilitation program returns a confirmed positive (fail) result, it will be recorded and will result in disciplinary action. The rehabilitation

professional is to liaise with the relevant Employer's HSE Manager or Nominated Person regarding the progress of the rehabilitation program.

Where an employee utilises an EAP agreed by the Employer, the Employer is to pay for counselling sessions conducted up to the agreed amounts within the terms of the EAP. Workers are expected to utilise their own time and/or agreed leave entitlements whilst participating in counselling and rehabilitation programs.

9 Drug and Alcohol Management Plan Exemptions

9.1 Approved Functions

It is recognised that from time to time an Employer may organise, endorse, sponsor or allow social functions to celebrate various achievements, successes or generally recognised events. For example, project milestones. Return to Site/workplace after an approved function is not permitted.

Under such circumstances the Employer can approve exemptions applying to the particular function and of its timing, place and health and safety arrangements.

The Employer also recognises that alcohol may be consumed at business related functions or at other working locations on an irregular and informal basis.

The Employer maintains it is an individual's responsibility to behave in an acceptable and legally responsible manner at all times, taking into account all relevant laws and cultural boundaries that may apply to the location or area.

The use of Employer vehicles for travel during or following approved functions remains subject to the Employer's vehicle policies and all relevant legislation.

9.2 Storage of Alcohol

The storage of alcohol at a workplace by employees may be allowed (if not otherwise prohibited by the Employer) under the following conditions:

1) The Employer has approved its storage for a period of time, and
2) The alcohol is stored securely and out of general view or access.

The short term storage of alcohol purchased by or gifted to individuals is allowed, provided such alcohol is removed from the workplace as soon as it is practical (i.e. at the end of the working shift).

10 Medications

10.1 Prescription Medication

Workers who are taking prescription medication which might affect their ability to undertake any kind of work safely should advise their Supervisor (1) at Site induction or equivalent, if they are already taking the medication or (2) if they commence taking the medication later, immediately they commence the medication, so the risks can be managed.

Workers taking medication should consult their medical practitioner regarding the potential effects of the medication. During this consultation Workers should explain their work duties to the medical practitioner in order to determine if their ability to work safely will be adversely affected by the medication. Any directions or warnings on the medication should also be read carefully and followed.

It is recommended that Workers obtain a medical clearance letter from their medical provider outlining this information so an accurate fitness for work assessment can be made on site.

10.2 Over-the-Counter Medication

Wherever possible, Workers should ask the pharmacist about the short and long term effects of medication and whether or not their ability to perform their work duties safely may be affected by the medication. They should also, whenever possible, select medication which will not cause side effects that may impact on their work.

Workers should always be alert to the fact that commonly taken medications, including antihistamines taken for allergies or as cold medicine, can cause drowsiness and impair the ability to work safely and may provide a positive drug test result.

10.3 Combining Medication

Workers should be aware that combining different medications may alter the intensity or the effect of the medication. It is advisable for Workers to seek advice from their medical practitioner or pharmacist about any possible side effects arising from mixing medications.

Combining medication and alcohol may also alter the side-effects of medication and affect an individual's ability to work safely

10.4 Testing

1) Any Worker required to participate in drug testing is obliged to declare any medication taken immediately prior to the test being conducted. Such information will be kept confidential (to the extent provided in this Policy) and only used in determining if such medication has contributed to or caused a non-negative ("fail") result.
2) If the Worker declares the medication prior to any testing being conducted, and
    a. the drug class declared is consistent with the drug class detected at the initial screening test, then:
        i. the Worker is NOT permitted to continue work. Neither their Employer nor St Hilliers may permit the Worker to remain on Site;
        ii. the Worker will be required to provide a sample to be sent for confirmatory testing;
        iii. an Action Request Form J07a will be issued by the St Hillier Project Manager confirming (ii) and requiring the Worker to provide a doctor's certificate as to the medication prescribed.
    b. If the levels determined in the confirmatory test match the prescribed dosage and the doctor's certificate is provided to St Hilliers, then the Worker may return to work and no disciplinary action will be taken.
    c. If the levels do not match, then the disciplinary process will be followed.
3) If the Worker did not declare the medication prior to the testing being conducted, or if the drug class declared is inconsistent with the drug class detected, then:
    a. the Worker will also be assessed as unfit for work and neither their Employer nor St Hilliers may permit the Worker to remain on Site; and
    b. an Action Request Form J07a will be issued by the St Hillier Project Manager.
    c. The Worker is NOT permitted to return to work until a confirmed negative (pass) drug test is returned or sufficient evidence is provided by an appropriately qualified provider (eg certificate from treating doctor) outlining the medication taken (consistent with the drug test result) and the effects on fitness for work.
    d. Disciplinary action may also be undertaken for breach of this Policy.

11 Drug and Alcohol Test Program

11.1 Who can be tested?

In accordance with section 16A, & Schedule 4(1) of the Building Code 2016, and, as a condition of entry to the site, any worker** who enters on to the site will be required to comply with the requirements of this Policy.

This includes any worker engaged through contract or some other enforceable means, such as:

1) Site based St Hilliers employees including both construction workers and site office workers**
2) Subcontractors, and employee workers** of those/any subcontractors
3) Others (eg: Visitors, Volunteers, or Consultants engaging in any work within the site at the time of testing)**

**Note: Meaning of worker:

A person is a worker if the person carries out work in any capacity for a person conducting a business or undertaking, including work as:

a) an employee; or
b) a contractor or subcontractor; or
c) an employee of a contractor or subcontractor; or
d) an employee of a labour hire company who has been assigned to work in the person's business or undertaking; or
e) an outworker; or
f) an apprentice or trainee; or
g) a student gaining work experience; or
h) volunteer; or
i) a person of a prescribed class.

(Ref: Model Work Health & Safety Act as at 21 March 2016)

11.2 Substances to Test

The program includes testing for those substances required to be tested in accordance with the Code. As at the date of writing of this Policy, the following substances are required to be tested:

1) Alcohol
2) Opiates
3) THC (Marijuana)
4) Cocaine
5) Benzodiazepines
6) Amphetamines
7) Methamphetamines[5]

Refer to Appendix 3 for the test target concentrations.

11.3 Preferred testing methodology

St Hilliers policy is to ensure testing methods are objective methods providing legitimate, reliable and repeatable results.

[5] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 3 the requirement that all of the following substances are tested for: [being the list as above].

St Hilliers has chosen to rely on testing procedures that are accurate, independent and deliver on-site results. As such, St Hilliers' preferred testing methods are to:

1) conduct Oral (saliva) based drug testing, and
2) use calibrated alcohol test devices for alcohol breath testing, calibrated to return a positive result in excess of 0.00.

11.4 Testing Options

The program testing options include[6]

1) Self-testing
2) Random testing and staged testing
3) Targeted testing
4) 'For cause' or 'reasonable suspicions' testing
5) Pre-employment testing (as per employee pre-employment requirements)[7]

1) Self-Testing[8]

Self-testing for alcohol will be available on Site for Workers prior to presenting for work. Breathalyzers will be suitably calibrated and meet the minimum requirements as outlined in AS 3547. A Worker undertakes self-testing on his/her behalf and therefore no documented record will be produced.

Workers who return a self-test greater than 0.00% must report to their supervisor that they are deemed unfit for work, and not permitted to perform work on site until they can supply a 0.00% BAC result. If the reading is greater than 0.00% the Worker must leave the workplace immediately. All reasonable assistance is to be offered by the relevant Employer to ensure the Worker can make their way from the workplace to a safe location without harm (i.e. taxi, lift from a friend or Supervisor). An agreed leave of absence arrangement with their Employer or loss of pay is to apply.

If the reading was 0.02% or less, the Worker may be retested as per section 11.11 of this Policy.

If an individual has repeated occurrences with self-test results >0.00%, section 12 (Discipline) may apply.

2) Random and Staged Testing[9]

For random testing, Workers will be selected for testing using a random selection process nominated by management following consultation in accordance with established consultative arrangements (eg civil sites with a single subcontractor). For this project, the selection method to be employed will be coloured marble selection in accordance with the minimum requirements as follows:

- where there are less than 30 workers on site – at least 10% of the workforce per month;
- where there are 30 to 100 workers on site – a minimum of 5 workers per month; and
- where there are greater than 100 workers on site – a minimum of 10 workers per month.

Random selection of Workers to complete the testing will be conducted in a clear and transparent manner in the presence of the Testing Officer, PCBU representative and a Health and Safety Representative/Committee member where appointed.

Refer to Appendix 4 for Policy Workflow Diagram.

[6] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 2 -the use of an objective medical testing method/s to detect the presence of drugs or alcohol in a worker's system and outline the detection method/s to be used on the project.

[7] Per the Employer's specific requirements.

[8] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 7 - procedures for the selection of personnel to be tested (including staged selection across a worksite or random selection for testing if the entire workforce is not to be tested in a testing round).

[9] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 7 - procedures for the selection of personnel to be tested (including staged selection across a worksite or random selection for testing if the entire workforce is not to be tested in a testing round).

3) Frequency of Random testing[10]

Drug and alcohol testing will be conducted periodically (at least once per month), involving all Workers on the project, as defined. Testing will be conducted based on the following scales:

a) Where there are less than 30 Workers on site, a minimum of 10% of the workforce will be tested.
b) Where there are 30 to 100 Workers on site, a minimum of 5 Workers will be tested.
c) Where there are greater than 100 Workers on site, a minimum of 10 Workers will be tested.

4) Targeted Testing[11]

Workers may be required to participate in targeted testing when working in high risk construction activities or once returning to work after a confirmed positive (fail) drug or alcohol test.

Testing may be conducted for high risk activities, as defined by the project, in addition to the random drug testing program.

High risk construction work is defined in clause 291 of the WHS Regulations. The following are deemed high risk construction work activities:

a) Involves a risk of a person falling more than 2 metres, or
b) Is carried out on a telecommunication tower, or
c) Involves demolition of an element of a structure that is load-bearing or otherwise related to the physical integrity of the structure, or
d) Involves, or is likely to involve, the disturbance of asbestos, or
e) Involves structural alterations or repairs that require temporary support to prevent collapse, or
f) Is carried out in or near a confined space, or
g) Is carried out in or near:
    i. A shaft or trench with an excavated depth greater than 1.5 metres, or
    ii. A tunnel, or
h) Involves the use of explosives, or
i) Is carried out on or near pressurised gas distribution mains or piping, or
j) Is carried out on or near chemical, fuel or refrigerant lines, or
k) Is carried out on or near energised electrical installations or services, or
l) Is carried out in an area that may have a contaminated or flammable atmosphere, or
m) Involves tilt-up or precast concrete, or
n) Is carried out on, in or adjacent to a road, railway, shipping lane or other traffic corridor that is in use by traffic other than pedestrians, or
o) Is carried out in an area at a workplace in which there is any movement of powered mobile plant, or
p) Is carried out in an area in which there are artificial extremes of temperature, or
q) Is carried out in or near water or other liquid that involves a risk of drowning, or
r) Involves diving work.

Workers will be randomly or stage selected in accordance with the random and stage selection process outlined above or alternatively the group completing the high risk construction work will be selected to participate in the test program.

Workers who return to work after a confirmed positive (fail) drug or alcohol test may be subjected to testing in the following month; this will assist in ongoing management and to identify individuals who may require further assistance.

[10] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address 6: the requirement that, as a minimum, frequent and periodic testing (at least once per month) of the workforce (both construction workers and site office workers) will be as follows:

[11] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address:8 - procedures for the targeted testing of higher-risk activities

5) 'For Cause' Testing[12]

'For cause' testing may be conducted where:

a) The individual was involved in a Notifiable Incident or Serious injury occurrence;
b) An individual's lack of fitness for work may have been a contributing factor in an incident, accident or near miss;
c) There is a direct observation or indication of impairment or unusual behaviour or actions by the individual – that is, a responsible person has formed a reasonable suspicion (see 11.3(6)) that drugs or alcohol have been taken;
d) There is evidence or reason to believe the individual is involved with the use of alcohol or other drugs while at work; or
e) Where safety precautions or processes may have otherwise been breached by the individual.

The privacy of the Worker is a priority at all times and any discussion will be held away from other Workers. The Worker may request the presence of a witness which may be the elected project Health and Safety Representative, provided that the witness must be immediately available and must not in any way affect or delay the testing process.

Workers should be given an opportunity to explain their behaviour. A person may appear to be impaired from alcohol or prohibited drugs but not necessarily have taken any such substances. For example, the Worker may be suffering the side effects of medication prescribed by their treating medical practitioner or suffering from sleep deprivation.

'For cause' testing is to be applied fairly, objectively and equitably. Testing Officers must act in an ethical and professional manner and with consistency for all Workers on each occasion they are required to conduct an assessment.

6) Forming 'Reasonable Suspicions'

The Reasonable Suspicion process involves 3 steps –

- Observation and identification of issues
- gathering and documenting evidence, and
- testing.

The identification phase includes the observation of work performance, behaviours or appearance for identification of issues. For example, the employee may have aggressive behaviour, has difficulty walking or is now unable to perform job duties that were properly handled in the past.

The **evidence must then be documented**. The documentation is the written record that explains what was witnessed and/or the patterns of behaviour that indicates someone is impaired. The evidence must be specific, verifiable by independent sources, and concrete.

The documentation should include the names of any witnesses, the time and dates of the occurrences and any other observations that support the Reasonable Suspicion.

The overriding concern is the safety of the employee, their co-workers and other company stakeholders including clients.

The evidence needs to be strictly facts and not opinions, and the facts should focus on safety in the workplace, particularly with employees performing safety sensitive jobs.

Once the facts are documented and checked, the St Hilliers Site Management staff should report any "Reasonable Suspicion" circumstances to their HSE Manager for advice on process and procedure prior to asking the worker to submit to a drug and alcohol test.

The HSE Manager will (in consultation with the employee's Supervisor, Manager or HSE Representative) present the findings to the employee, with the intent of the employee being asked to submit to a drug and alcohol test.

Reasonable Suspicion Assessment Triggers:

[12]Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 8 - procedures for, for-cause testing

Based upon (but not limited to): Behaviour / actions / observations reported prior to this assessment: (this can be reported by any employee, witness or person)

Physical Indicators which might be observed:

- Strong smell of alcohol on breath
- Slurred, incoherent or disjointed speech (losing track)
- Unsteadiness on the feet
- Poor coordination / muscle control
- Drowsiness or sleeping on the job or during work breaks
- Inability to follow simple instructions
- Nausea / vomiting
- Reddened or bloodshot eyes
- Jaw clenching
- Sweating / hot and cold flushes

Assessment should not be limited to a single trigger, but reflect a combination of triggers assessed at the same time (eg reddened or bloodshot eyes may only be as a result of lack of sleep).

7) Pre-employment Testing

a) St Hilliers Employees:

St Hilliers has not identified the need to conduct Pre-employment screening (as at time of the Policy review in March 2017). Pre-employment testing, or the requirement for same, will be reviewed annually at the corporate level, and introduced if deemed required.

b) Subcontractor Employees:

St Hilliers requires that all workers attending site be “fit for work” (not under the influence of drugs or alcohol). St Hilliers does not specify a contractual requirement for Subcontractors to conduct pre-employment testing, but fully endorses and supports Subcontractors who have developed and implemented pre-employment testing programs.

11.5 Testing Officers

Drug and alcohol testing is to be undertaken by either external Testing Officers from an independent provider or suitably qualified internal Testing Officers[13].

Where the Employer’s personnel are required to deliver this testing process the HSE Manager or suitable alternate must be present to confirm the procedural accuracy and fairness of the testing process.

11.6 Testing Requirements

The following test requirements will be adhered to by the person/s conducting the testing, (whether an independent provider or suitably qualified internal Testing Officer):[14]

1) Alcohol testing equipment will be used, tested and calibrated according to the manufacturer’s instructions and certified to AS 3547:1997, Breath alcohol testing devices for personal use.
2) Oral fluid testing will be conducted for drug screening and will be used, tested and calibrated to the manufacturer’s instructions and certified to AS 4760:2006, Procedures for specimen collection and the detection and quantitation of drugs in oral fluid.
3) Testing will be conducted in a designated area which ensures privacy for the duration of testing; this room is to be determined by the HSE Manager or Project Manager.

[13] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 2 - the use of an objective medical testing method/s to detect the presence of drugs or alcohol in a worker's system and outline the detection method/s to be used on the project.

[14] ibid

4) The integrity of the sample and testing will be maintained through testing records and chain of custody paperwork.
5) When an individual is selected for testing for any reason defined within this Policy they must immediately proceed to the testing station. They may not leave the site for any reason and must cooperate fully with any reasonable instructions given by the authorised Testing Officer.
6) Unless medically required, no food or drink is to be consumed for 15 minutes prior to the initial screening test. While waiting for testing, the Worker is to be supervised at all times.
7) Testing of a worker under the age of 18 years (or a work experience person) is to be referred to the HSE Manager and an appropriate parent or guardian informed that the testing is to take place.
   a) All persons will be required to confirm their identity with photo identification.
   b) All confirmatory drug testing is to be conducted by an accredited laboratory in accordance with AS 4760:2006, regardless of location.

Refer to Appendix 3 for Test Target Concentration Levels

Refer to Appendix 4 for Policy Workflow Diagram

11.7 Self-Declaration

Where any Worker notifies that they have a drug or alcohol issue, that person shall not be subjected to immediate disciplinary action. The Worker may however be suspended from any work either by their relevant Employer or by St Hilliers with immediate effect in order for an assessment to be made of the duties they are able to perform safely.

Workers will not be disadvantaged for self-disclosure and therefore may be supported by their Employer through counselling and rehabilitation processes. In such cases the Worker may be required by the Employer to take accrued or negotiated unpaid leave and may be allowed to return to work when fit for duty.

11.8 Refusal to Test

1) The following steps should be undertaken if a Worker refuses to take an initial screening test for alcohol or drugs:[15]
   a) The Testing Officer will inform the Worker who has refused the test that the refusal will have the same consequences as a non-negative result ("fail"), i.e. that the Worker will be deemed to be unfit for work.
   b) If the Worker still refuses, the Testing Officer will notify the Worker's Supervisor or the Project Manager of the refusal to take the test. This person should consult the Worker regarding the requirements, process and consequences of refusing to test and encourage them to partake in the test. This would be the second and final request to be tested.
   c) If the Worker still refuses, the refusal will be treated as a confirmed positive (fail) result. An Action Request Form J07a will be issued by the St Hillier Project Manager, and they will be subjected to the actions noted in sections 11.9.1 Alcohol Testing, 11.9.2 Drug Testing and 12. Disciplinary Action in this policy.
   d) All reasonable assistance is to be offered by the relevant Employer to ensure the Worker can make their way from the workplace to a safe location without harm (i.e. taxi, lift from a friend or Supervisor). An agreed leave of absence arrangement with their Employer or loss of pay is to apply.
   e) The HSE Manager will ensure all documentation is retained for recording and filing.
2) In order to return to work, the Worker is required to present for a BAC test upon arrival at work, which must provide a confirmed negative (pass) BAC result prior to re-commencing work. Where the Worker is project based they are also to attend the next available induction.

[15] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 5 - how a person who returns a positive result will be prevented from performing work until they can prove they are fit to return to work, and other processes that will apply in the event of a positive result or deemed positive result (i.e. a failure to submit to a test).

3) Where a Worker has refused the testing provided by St Hilliers or the Employer, the liability for all costs associated with the provision of the confirmed negative (pass) result remains with the Employer, where the testing was provided by St Hilliers, or by the Worker, where the testing was provided by the Employer.
4) Contractors engaged by the Employer will be subjected to the conditions outlined in this section. Time spent away from work due to refusing a test will be managed by the relevant Employer.

11.9 Invalid Result

An Invalid Result will occur where a control line fails to appear. This may be caused by incorrect procedural techniques being applied or insufficient specimen volume.

Where an Invalid Result occurs the following steps shall be undertaken:

1) The Testing Officer will review the procedure and repeat the test using a new test panel.
2) If the problem persists, the Testing Officer will discontinue testing immediately and contact the supplier.

11.10 Tampering

Any attempt to tamper with samples, cheat, introduce, dilute or otherwise alter the concentration of alcohol or other drugs in their own, or another's saliva, or breath will constitute a serious breach of this Policy and may be dealt with as equivalent to Section 10.6 Refusal to Test. Wilful tampering, altering, cheating or diluting and may be dealt with by either St Hilliers or the relevant Employer including removing the Worker from the Site. Disciplinary action may be taken against any Worker found tampering with samples.

11.11 Test Results

1) Alcohol Testing

Following the completion of an Initial Screening Test, results shall be interpreted as follows:

a) Workers recording a 0.00% BAC reading [a negative (pass) result] are permitted to return to work immediately.
b) Workers recording a BAC result above 0.00% [a non-negative ("fail") result] are required to stand down and could be required to complete a Confirmatory Test 60 minutes after the Initial Screening Test or at the discretion of the Testing Officer.
    i. Where a Worker refuses to complete the Confirmatory Test and elects to leave the workplace, they are to do so in an agreed leave of absence arrangement with their Employer or loss of pay is to apply. Counselling and rehabilitation services are to be made available for the Worker by their Employer.[16]
    ii. Where a Worker completes the Confirmatory Test and a result of 0.00% is obtained [a confirmed negative (pass) result], they are permitted to return to work immediately. No loss of pay is to apply.
    iii. Where a Worker completes the Confirmatory Test and a result greater than 0.00% is obtained [a confirmed positive (fail) result] they are deemed not fit for work, are NOT permitted to return to work and will be required to leave the Site as soon as possible[17]. An agreed leave of absence arrangement with their Employer or loss of pay is to apply. Counselling and rehabilitation is to be offered to the individual by their Employer.[18]

[16] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 9 - how workers who attend for work affected by drugs or alcohol will be counselled and assisted, apart from any disciplinary process that might apply.

[17] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 4 - that a person who returns a positive result for any of the substances listed above will be deemed not to be fit for work (in respect of each substance listed above, subject to testing detectable levels, there is a zero level tolerance).

[18] Schedule 4: 9.

c) Workers recording a BAC result of above 0.00% [a non-negative ("fail") result] are NOT permitted to return to work.[19] A Confirmatory Test will be completed immediately to confirm the test result. The Worker will be required to leave the Site as soon as possible. An agreed leave of absence arrangement with their Employer or loss of pay is to apply. Counselling and rehabilitation is to be offered to the individual by their Employer.[20]

Workers who are required to leave Site or elect to leave due to an initial screening test non-negative result or a confirmed positive (fail) alcohol breath test are required to present for testing before their following shift to meet the fitness for work requirements. The Worker is not permitted to return to work until a confirmed negative (pass) result is obtained.[21]

All reasonable assistance is to be afforded by the relevant Employer to ensure an affected person can make their way from the Workplace to a safe location without harm (e.g. taxi, lift from a friend or Supervisor, etc).

Contractors engaged by the Employer will be subjected to the conditions outlined in this section. Time spent away from work due to a confirmed positive (fail) reading will be managed by the respective Employer.

2) Drug Testing

Workers selected for drug testing will be asked to disclose any use of drugs including prescription and over the counter medication prior to testing.

The allowable level of detectable prohibited substances for Workers at the Workplace is to be determined in accordance with the relevant Australian Standard.

Threshold levels for on-site initial and subsequent confirmatory testing are derived from the following:

- AS 4760:2006, Procedures for specimen collection and the detection and quantitation of drugs in oral fluid as noted at Appendix 3.

Following the completion of an Initial Screening Test, results shall be interpreted as follows:

a) Workers recording a negative result (pass) are permitted to return to work immediately.

b) Workers recording a non-negative result ("fail") will NOT be permitted to return to work[22] and are required to provide further oral fluid sample (Sample A and Sample B) immediately, under controlled conditions, for confirmatory testing at a NATA accredited laboratory. See Appendix 5 for related Chain of Custody documentation. The Worker will be required to leave the Site as soon as possible. Counselling and rehabilitation services are to be made available for the Worker by their Employer.[23]

   i. If the Worker refuses to provide secondary samples (Sample A and Sample B) for confirmatory testing then the process in section 11.6 'Refusal to Test' will apply. If the Worker refuses to cooperate with the testing, they are deemed not fit for work, are NOT permitted to return to work and will be required to leave the Site as soon as possible. An agreed leave of absence with the Employer or loss of pay is to apply. Counselling and rehabilitation is to be offered to the Worker by their Employer[24].

   ii. Where confirmatory test results provide a negative result (pass) for prohibited drugs, the Worker is permitted to return to work. No loss of pay or disciplinary action is to apply.

   iii. Where confirmatory test results verify the initial screening test positive result (fail) the Worker is NOT permitted to return to work.[25] An agreed leave of absence arrangement with their employer or loss of pay is to apply. Counselling and rehabilitation services are to be made available for the Worker by their Employer. [26]

[19] Schedule 4: 4.

[20] Schedule 4: 9.

[21] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 5 - how a person who returns a positive result will be prevented from performing work until they can prove they are fit to return to work, and other processes that will apply in the event of a positive result or deemed positive result (i.e. a failure to submit to a test).

[22] Schedule 4: 4.

[23] Schedule 4: 9

[24] Schedule 4: 9

[25] Schedule 4: 4

[26] Schedule 4: 9

iv. The Worker may dispute the confirmatory test and elect to have their Sample B tested at the same or an alternative NATA accredited laboratory at their cost. If an alternative NATA accredited laboratory is selected, the Worker must also pay for the cost of transporting the sample. If the result from testing the Sample B is negative (pass), the Worker will be reimbursed for the testing costs by their Employer and may return to work with no loss of pay or disciplinary action. If the result is confirmed positive (fail) the Worker will not be permitted to return to work and an agreed leave of absence arrangement with their Employer or loss of pay is to apply. Counselling and rehabilitation services are to be made available for the Worker by their Employer.[27]

A confirmed negative (pass) drug test result must be obtained upon return to Site, which must provide a confirmed negative (pass) result before the individual can return to work.

Workers declaring the use of particular prescribed drugs or medication prior to an Initial Screening Test are required to discuss with the Testing Officer the likely effects of the substance on the test results. In the case where a non-negative result is obtained, refer to section 10 of the Policy.

Contractors engaged by the Employer will be subject to the conditions outlined in this section. Time spent away from work due a confirmed positive reading (fail) will be managed by the relevant Employer.

All reasonable assistance is to be afforded by the relevant Employer to ensure an affected person can make their way from the Workplace to a safe location without harm (e.g. taxi, lift from a friend or Supervisor, etc).

12 Discipline

The following sets out the action which may be taken when a Worker returns a confirmed positive (fail) result to an alcohol or drug test. In circumstances where the breach is of a more serious nature or a deliberate breach, the Employer has the discretion to take action which does not conform to the process below and may result in termination.

The following steps shall be applied:

12.1 First Occasion

A Worker who has received a confirmed positive (fail) test for alcohol or drugs will be:

a) Offered support by their Employer for rehabilitation through an appropriate provider.
b) Informed by their Employer and (in its discretion) St Hilliers of the consequences of testing positive and their obligations to present, or remain in a fit state.
c) Given a verbal warning by their Employer with diary entry placed on file.
d) Required, when requested by their Employer or St Hilliers, to undertake alcohol and drug testing in the following month as a minimum, and
e) Informed by their Employer of further disciplinary action and testing requirements should they have a confirmed positive (fail) result (alcohol or drug) within the next 12 months.

12.2 Second Occasion

A Worker who has received a second confirmed positive (fail) test for alcohol or drugs within any 12 month period will be:

a) Informed by their Employer and (in its discretion) St Hilliers of the consequences of testing positive and their obligations to present, or remain in a fit state
b) Issued a written warning letter by their Employer with a copy placed on file
c) Encouraged by their Employer to attend counselling through EAP or an equivalent provider and participate in a rehabilitation program

[27] Schedule 4: 9

d) Required, when requested by their Employer, to undertake alcohol and drug testing in the following month as a minimum, and
e) Informed by their Employer of further disciplinary action and testing requirements should they have a positive result (alcohol or drug) within the next 12 months.

12.3 Third Occasion

A Worker who has received three confirmed positive (fail) test results for alcohol or drugs in a 12 month period may be dismissed under the Employer's disciplinary processes.

13 Aggressive and Abusive Behaviour

If an individual displays aggressive or violent behaviour when required to undertake an alcohol and/or drug test, those involved in the testing process should remain calm and not argue with or mirror the individual's behaviour.

Emphasis should be placed on getting the individual to calm down and discussion kept away from personal issues. The individual should be asked to comply with the direction of the Employer and/or St Hilliers as the case may be.

If the individual refuses to modify their behaviour, they should be reminded that acts of aggression or violence will not be tolerated and may result in their removal from the Site.

In the case of actual or apprehended violent behaviour, the individual is to be advised that the Police will be called. This option is to be used as a last resort.

The Project Manager, HSE Manager or Nominated Person should be consulted during this time.

14 Review and Audit

The Policy will be reviewed periodically by the HSE Manager or Nominated Person in consultation as outlined in the WHS Management Plan. As new testing technology becomes available for alcohol and other drugs testing it should be considered in any review, provided it is based upon levels of drugs and alcohol outlined in the relevant standards and best practice.

The Policy is also to be reviewed annually or as required at management level.

Records must be maintained for auditing purposes.

15 Return to Work Requirements

No person can return to work on a St Hilliers Site until they have tested negative for relevant drugs and alcohol ie received a confirmed negative (pass) drug test result on a secondary Site-based test. See generally Form J07a Action Request Drug and Alcohol Testing.

See further: clauses 10.4(c)(ii), 11.2.4, 11.5, 11.6(b), 11.9.1, 11.9.2

See flowchart at Appendix 6.

Appendix 1 - Fitness for Work - Drug and Alcohol Management Policy Summary

The purpose of this Policy is to deal with alcohol and other drugs and their effects on a Worker's fitness for work whilst performing duties or attending the workplace.

Counselling and Rehabilitation

- The Employer will provide information and assistance to Workers seeking help for alcohol or drug related issues confidentially and without prejudice.
- Refer to Appendix 2 of the Policy for a list of providers.

Medication

- Workers taking medication which might affect their ability to undertake any kind of work safely should advise their Supervisor or Health & Safety Representative, who will assist to manage the workplace arrangements.
- Workers taking medication should consult their medical practitioner regarding the potential effects of the medication. For over-the-counter medication, Workers should ask the pharmacist about the short and long term effects of medication and whether or not their ability to perform their work duties safely may be affected by the medication.

Self-Declaration and Testing

- Any person notifying that they have a drug or alcohol issue shall not be subjected to immediate disciplinary action. An assessment will be made of their fitness for work and a drug and alcohol test performed to determine what further measures will be undertaken.
- Self-testing for alcohol will be available at the project for Workers prior to presenting for work. Workers who return a BAC self-test greater than 0.00% should report it to their Supervisor and not undertake any work.

Random Testing

- Random drug and alcohol testing will be conducted periodically (at least once per month), involving all Workers (including employees, contractors and visitors) on the project, including site office staff.
- Workers will be selected for testing using a random selection process.

Targeted Testing

- Workers will be required to participate in testing when working in high risk activities or once returning to work after a confirmed positive (fail) drug or alcohol test.

'For Cause' Testing

'For cause' testing may be carried out for any of these scenarios:

- An individual's fitness for work may have been a contributing factor in an incident, accident or near miss.
- There is a direct observation or indication of impairment or unusual behaviour or actions by the individual.
- Evidence or reason to believe the individual is involved with the use of alcohol or other drugs while at work.
- Where safety precautions or processes may have been breached by the individual.

Employer Internal Procedures and Discipline

On the First Occasion a Worker receives a non-negative (fail) result, confirmed positive (fail), or refuses to test:

- The Worker must leave site immediately and is not allowed to return to work until a confirmed negative (pass) test result is provided. (If related to a drug test, return to work will involve

provision of a negative test result from a NATA accredited laboratory and an accompanying medical practitioner letter, with all costs to be paid by the Worker).

- Leave of absence is to be negotiated with Employer (ie must use your personal leave / unpaid leave).
- Offered counselling and rehabilitation by Employer.
- Required, when requested by Employer, to undertake alcohol and drug testing in the following month as a minimum.
- Given a verbal warning by Employer with diary entry placed on file.

Second Occasion (within 12 month period):

- All items noted in "First Occasion", above, plus:
- Instead of being given a verbal warning, issued a written warning letter by Employer, with a copy placed on file.
- May be required by Employer to attend a counselling and rehabilitation program.

Third Occasion (within 12 month period):

- Dismissal by Employer.

Note that a different process is followed in the case where medication is involved.

See section 10 of the Policy document for details.

Return to Work

See generally Form J07a Action Request Drug and Alcohol Testing.

No person can return to work on a St Hilliers Site after testing has revealed evidence of drugs or alcohol until they have tested negative for relevant drugs and alcohol ie received a confirmed negative (pass) drug test result on a secondary Site-based test. They must also be re-inducted on recommencing work on a St Hilliers Site.

Whether or not non -St Hilliers employees have been provided with counselling and rehabilitation by their Employer is a matter for their Employer and St Hilliers will not require evidence of such matters in relation to the return of the relevant Worker to work on St Hilliers Sites.

Appendix 2 - Drug and Alcohol Counselling Assistance

Alcoholics Anonymous (AA)

National Tel: 1300 22 22 22

24 hour Helpline: (02) 9477 9820

www.aa.org.au

Australian Drug Foundation (ADF)

Tel: 1300 858 584

www.druginfo@adf.org.au

Family Drug Help

Tel: 1300 660 068

www.familydrughelp.org.au

Support, information, education, inspiration and encouragement for family members of people who use drugs.

Family Drug Support

Tel: 1300 368 186

www.fds.org

Support for families faced with problematic drug use.

Lifeline

Tel: 13 11 14

www.lifeline.org.au

If you are feeling suicidal or that you just can't cope then call Lifeline.

MATES in Construction

24 hour Helpline: 1300 MIC 111 (1300 642 111)

Mend Services

Tel: 1800 300 011

Narcotics Anonymous

National Phone line 1300 652 820

www.na.org.au

Construction Industry Drug and Alcohol Foundation (CIDAF)

Tel: 02 9810 3117
Drugs & Alcohol: info@foundationhouse.net.au

Appendix 3 – Test Target Concentrations for Oral Fluid

Test cut off concentrations in accordance with Australian Standard AS3547:1997 Breath alcohol devices for personal use, AS 4760:2006 Processes for specimen collection and the detection and quantitation of drugs in oral fluid.

ALCOHOL TESTING THRESHOLD

Alcohol	BAC
Alcohol	0.00%

ORAL DRUG TEST THRESHOLDS

From Table 3.1, AS 4760:2006, On-site Initial Test Target Concentrations

Class of Drug	Target Concentration (ng/mL)
Opiates	50
Amphetamine-type stimulants	50
9-tetrahydrocannabinol (THC)	25
Cocaine and metabolites	50

Note: These targets represent the undiluted oral fluid concentration.

From Table 4.1, AS 4760:2006, Laboratory Immunoassay Initial Test Target Concentrations

Class of Drug	Target Concentration (ng/mL)
Opiates	50
Amphetamine-type stimulants	50
Delta-9-tetrahydrocannabinol (THC)	25
Cocaine and metabolites	50

Note: These targets represent the undiluted oral fluid concentration.

(Noting that AS4760 does not provide benzodiazepine target concentrations for on-site initial testing).

The Oral Fluid Standard AS4760:2006 does not allow for a cut off level for Benzodiazepines. Our testing provider can record a result for Benzodiazepines but under AS 4760:2006 this sample is not covered to be sent to a laboratory for confirmation testing.

.

From Table 5.1, AS 4760:2006, Non-Immunoassay Initial Test and Confirmatory Target Concentrations

Compound	Cut - off (ug/L)
Morphine	25
Codeine	25
6-Acetyl morphine	10
Amphetamine	25
Methylamphetamine	25
Methylenedioxymethlamphetamine	25
Methylenedioxyamphetamine	25
Delta-9-tetrahydrocannabinal (THC)	10
Cocaine	25
Benzoylecgonine	25
Ecgonine methyl ester	25

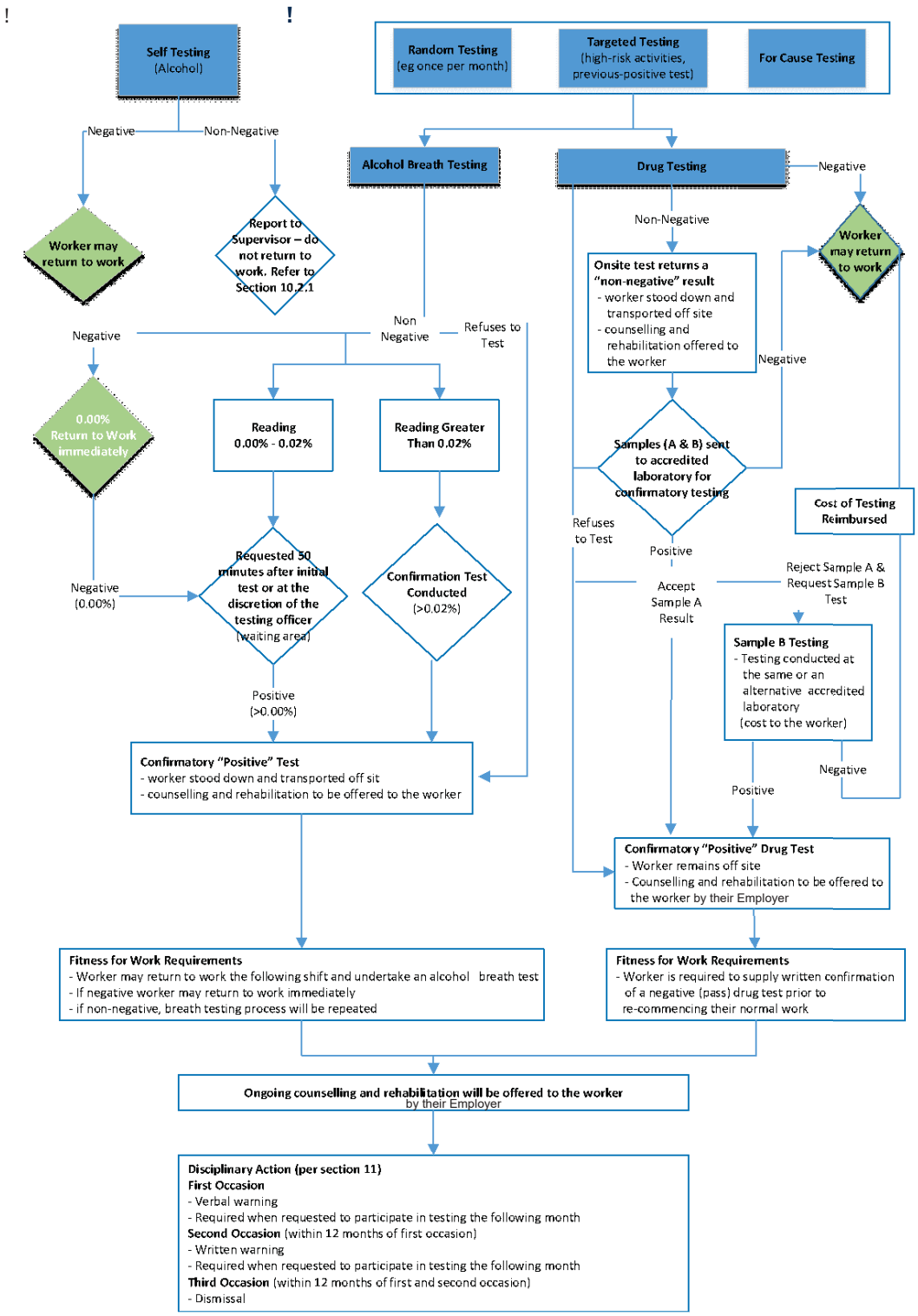
Notes:

1) These targets represent the undiluted oral fluid concentration.
2) For analytes not included in this Table, the laboratory should select a target concentration as appropriate for oral fluid.

Note: Benzodiazepine target concentrations to be confirmed with the laboratory used.

Appendix 4 – Fitness for Work – Drug and Alcohol Management Policy Workflow

Appendix 4 – Fitness for Work - Drug and Alcohol Management Policy Workflow

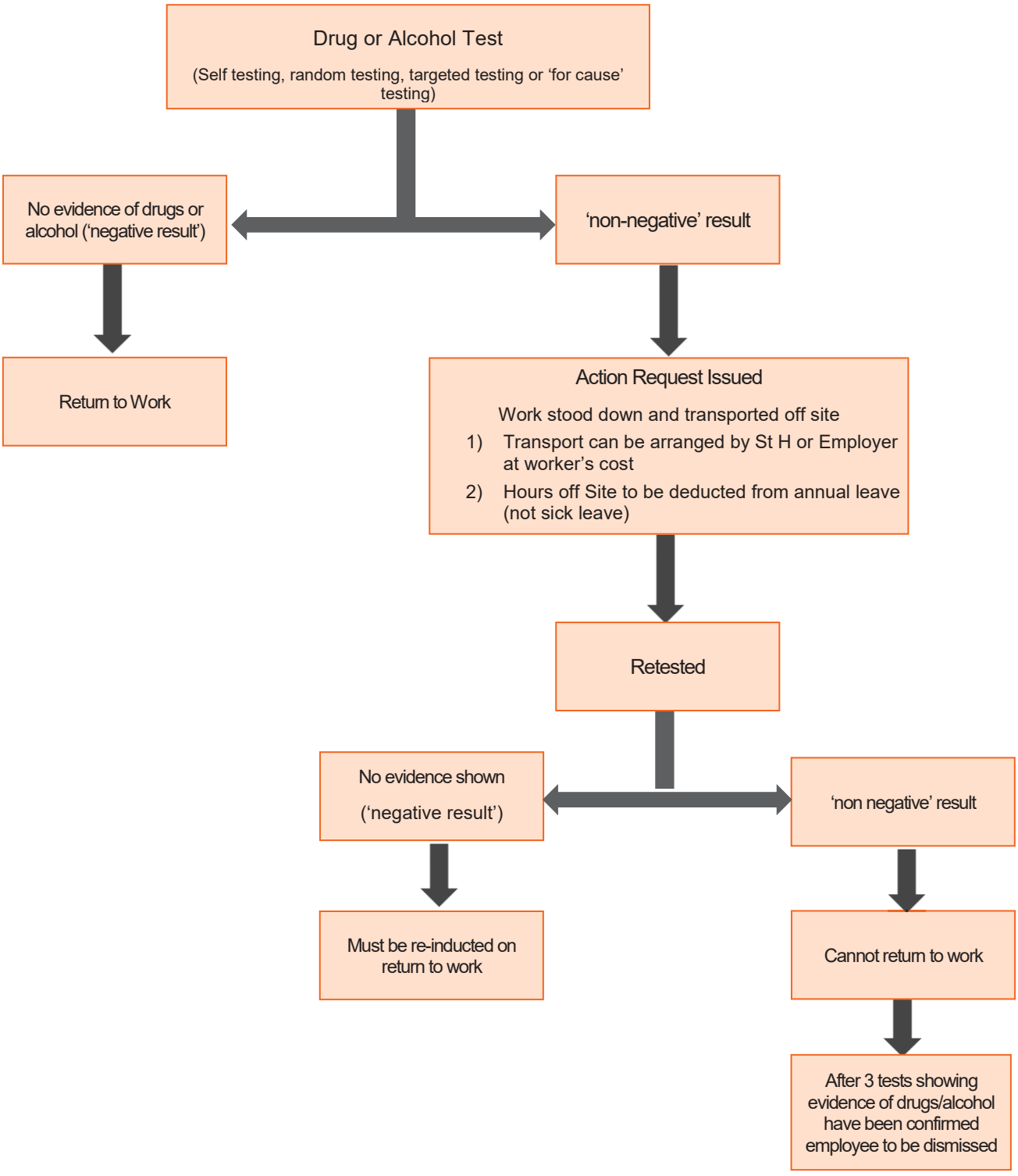


Note that a different process is followed in the case where medication is involved. See section 10 of the Policy document for details.

Appendix 5 – Drug Testing Consent and Chain of Custody Forms

See independent test provider documents

Appendix 6 – Return to Work Procedures and related issues – St Hilliers and Subcontractors



St Hilliers Group

Emergency Procedures in St Hilliers offices

Date last reviewed 25 September 2018

Next review due by September 2019

Status Final

Table of Contents

TABLE OF CONTENTS 2
PART A - GENERAL 3
1 INTRODUCTION 3
2 REPORTING EMERGENCIES 3
3 EMERGENCY CONTACT NUMBER 4
4 OTHER GENERAL POLICE NUMBERS 4
5 LOCAL POLICE AND MEDICAL NUMBERS 5
6 BEING PREPARED 5
7 TO GO OR TO STAY? 6
7.1 CHOOSING TO GO - BUILDING EVACUATION 6
7.2 CHOOSING TO STAY AND SEEK SHELTER (SHELTER-IN-PLACE) 7
8 CRIMES OR ATTACKS 7
PART B - SPECIFIC 9
9 FIRE 9
10 EXPLOSION 10
11 HAZARDOUS MATERIAL SPILL/RELEASE 10
12 CYCLONE 11
13 SEVERE THUNDERSTORMS 12
14 EARTHQUAKE 12
15 PSYCHOLOGICAL CRISIS 13
16 SHOOTINGS 13
17 BOMB THREATS 13
18 UTILITY FAILURE 14
19 LIFT MALFUNCTION 16
20 MEDICAL EMERGENCY 16
APPENDIX 1 17
APPENDIX 2 19
APPENDIX 3 22

PART A - GENERAL

1 Introduction

This Emergency Procedures Handbook is prepared by St Hilliers to assist office staff to deal appropriately with emergencies. Emergencies on site are covered by Project-specific Emergency Management Plans.

This publication addresses the most common emergencies and those that are most likely to occur in the future.

Preparation for emergencies is critical for effectiveness.

All St Hilliers personnel should become familiar with the Handbook's contents.

If you are unsure of what you need to do in your building or have any questions, contact your Safety Officer.

EMERGENCY PREPAREDNESS

STAY CALM = STAY SAFE

BE PREPARED

REMEMBER, WHEN YOU HEAR:

- THE STANDARD EMERGENCY WARNING SIGNAL - immediately seek shelter (Shelter-In-Place) in a safe location within closest facility

  The Standard Emergency Warning Signal (SEWS) is a warning siren used in Australia to alert the public of danger. The siren is played over radio, television or public address systems in public places to warn of bushfire, flood, cyclone, tsunami, earthquake or terrorist attack.
- FIRE ALARMS - immediately evacuate the building and move to a safe location

In both cases, you should seek additional clarifying information by all possible means…phone, TV, radio, email, etc.

2 Reporting Emergencies

WHEN TO CALL 000: or 121 from Mobiles

You should call 000 in ALL emergencies

WHAT IS AN EMERGENCY?

An emergency is any immediate threat to life and/or property that requires immediate response from police, fire or ambulance personnel. Your judgment often determines whether an incident is an emergency.

If in doubt, err on the side of safety!

WHEN REPORTING AN EMERGENCY:

- Stay on line with the dispatcher.
- Provide the address, location and a description of the emergency.
- Provide the phone number at your location.

- Provide a thorough description of the incident to ensure the appropriate resources are dispatched.

3 Emergency contact number

Situation	Details	Phone
Emergency (all states)	Police: You or someone else is in immediate danger, the offender is still in the vicinity, or there has been a serious accident. Ambulance: medical emergency Fire Brigade: eg Fire, explosion, Hazardous chemical spill, gas leak	Ph: Triple zero (000) or 121 from mobiles and ask for police and/or Ambulance and/or Fire Brigade as appropriate, remain on the phone until police arrive.
Emergency translation	Translation service for emergency situations only.	Ph: 1300 655 010

4 Other General Police numbers

Organisation	Description	Phone number
Crime Stoppers (all states)	Report illegal activity, or provide information on unsolved crimes anywhere in Australia. You may remain anonymous.	Ph: 1800 333 000 (toll free)
Police attendance NSW / ACT only	You require police assistance, but there is no immediate danger. Report suspicious activity, theft, car accident with no serious injury.	Ph: 131 444
Police attendance at airports	You require police assistance at an airport.	Ph: 131 AFP (131 237)
Emergency translation	Translation service for emergency situations only.	Ph: 1300 655 010

5 Local police and medical numbers

Office	Nearest Police Station	Nearest Doctor
Brisbane	City Police Station 46 Charlotte ST, Brisbane Phone Number: (07) 3258 2582	Brisbane Central Station Medical Practice- Anzac Square 198-202 Adelaide Street, Brisbane, QLD 4000 Telephone: 07 3236 3409
Sydney	132 George St THE ROCKS 2000 Phone: 02 8220 6399 Fax: 02 8220 6303 Open 24 hours	City Medical Practice 2 York Street (Entry via Corner of York and Jamison Streets) Portico Heritage Building Sydney NSW 2000 Telephone : 02 9291 9111 Gateway Quayside Medical Centre 6/1 Macquarie Place, Circular Quay 2000, Sydney NSW 2000 (02) 9241 1577

6 Being prepared

Emergency Alert

Familiarise yourself with the general emergency information at: www.emergencyalert.gov.au

Receiving telephone-based warnings

As described on the Emergency Alert website, the phone number 0444 444 444 has information about a potential emergencies and you may be sent SMS messages about any emergency through this number.

When you call 000 on your mobile, or when you are sent an SMS about an emergency, the emergency system presumes you are at your billing address unless you have given it a different ‘service’ address which is more likely to be your usual physical location.

If you have a mobile phone supplied by St Hilliers, the system will presume you are at your St Hilliers office.

Otherwise, you may wish to notify your telephone provider of the best ‘service’ address for you.

If you are disabled

It is suggested that people with disabilities prepare for emergencies by learning the locations of exit corridors and enclosed stairwells and by informing co-workers of best methods of assistance during an emergency.

There should be one or more ‘buddies’ appointed for every staff member who may need assistance in leaving the building in an emergency.

7 To Go or to Stay?

Different events will result in different decisions. Follow the directions of:

1) Emergency personnel,
2) Your Fire Wardens, or
3) St Hilliers management.

Generally the following will apply:

Leave the Building when you hear the Fire Alarm and for earthquake	***Shelter in the Building when you hear the State Emergency Warning Service (except for earthquake)***
This might be in the case of: Fire Bomb Threat Earthquake Flooding that could restrict exit from building Explosion within the building Hazardous spill within the building Shooting within the building	This might be in the case of: cyclone tsunami external danger or terrorist attack eg: • Explosion outside the building • Hazardous spill outside the building • Shooting outside the building

7.1 Choosing To Go - Building Evacuation

What to do

Evacuate your office or site:

1) When a fire alarm sounds continuously
2) And/or upon notification by emergency personnel, your Fire Wardens or St Hilliers management.

How to do it

1) When the alarm sounds, or when told to leave by a designated emergency official, take only your most important belongings (phone, handbag) walk quickly to the nearest marked exit and ask others to do the same.
2) Alert others to the emergency and ask if they need help in evacuating.
3) DO NOT USE LIFTS during an emergency evacuation. Emergency personnel may use a lift for evacuation or instruct you to do so after review of the circumstances.
4) Be aware of people with disabilities in your area who might require assistance. Be prepared to render assistance if necessary.
5) Leave the building quickly.
6) Once outside, MOVE CLEAR OF THE BUILDING ALLOWING OTHERS TO EXIT.
7) DO NOT return to an evacuated building until advised you may do so by emergency personnel.

IF YOU HAVE A DISABILITY WHICH CAUSES YOU TO BE UNABLE TO EVACUATE

Stay calm, and take steps to protect yourself. If there is a working telephone, call 000 and tell the emergency dispatcher where you are or where you will be moving.

If you must move:

1) Move to an exterior enclosed stairwell.
2) Request persons exiting by way of the stairway to notify the Fire Department of your location.
3) As soon as practical, move onto the stairway and await emergency personnel.

7.2 Choosing to stay and seek shelter (Shelter-In-Place)

You may be required to Shelter In Place for events such as a Cyclone, other Severe Weather, Building Intruder, or external Hazardous Materials release.

What to do

When notified, you should seek immediate shelter inside a building (preferably in a room with no windows). Seek inside shelter if outside.

Do not leave the building until you are told that it is safe to leave (unless instructed by emergency service personnel). Call 000 if appropriate (eg location-specific problem rather than a general emergency).

How to do it

1) Proceed to the basement of your building or (depending on distance and time from arrival of emergency event) the nearest concrete building that has a basement. Occupants of wood-frame or brick buildings with wood floors should leave the building and go directly to a more substantial concrete building, preferably with a basement.
2) In high-rise (four stories or more) buildings, vacate the top floor and move to the basement or if this is not possible to a lower floor.
3) Close all doors and windows to the outside.
4) Position yourself in an interior corridor away from glass, preferably near the building core eg lift shafts. Be prepared to kneel facing the wall and cover your head.
5) If a HAZMAT event occurs or is feared,

a) seal off openings to your room if possible, including vents & ducts

b) Do not use lifts as they may pump air into or out of the building

6) Do not go outside or attempt to drive unless you are specifically instructed to evacuate.

Remain in place until Police, Fire, or other Emergency Response officials tell you it is safe to leave or until information is announced through radio or television broadcasts alerting you that it is safe to leave.

8 Crimes or Attacks

HOW TO REPORT A CRIME

If the crime is an emergency that would require immediate police and/or medical response, dial “000.”

REPORTING CRIMES IN PROGRESS

If you are a victim or a witness to any in-progress criminal offence:

1) Protect yourself first.
2) Call 000.

Give your name and location. The dispatcher should be told that the incident is in progress. You should attempt to provide as much of the following information as possible:

1) Nature of the incident. MAKE SURE the dispatcher understands that the incident is in progress!
2) Location of the incident.
3) Description of suspects involved.
4) Injuries that have occurred.
5) Description of any weapons involved.
6) Description of property involved.

Stay on the line with the dispatcher until help arrives. Keep the dispatcher updated on any changes so responding units can be updated. Even if you cannot communicate, keep the line open. The dispatcher may be able to learn more about what is happening.

REPORTING CRIMES NOT IN PROGRESS

If you have become a victim of a crime and it is not an emergency or life-threatening situation, telephone the local jurisdictional Police Department; be prepared to provide at least the following information:

1) Your name.
2) Your address.
3) Your telephone number.
4) A brief synopsis of what occurred.
5) Your exact location at the time of the call

PART B - SPECIFIC

9 FIRE

KNOW THE LOCATIONS OF FIRE ALARMS.

KNOW WHERE THE FIRE EXITS ARE LOCATED AND ENSURE THEY ARE FREE OF OBSTRUCTIONS!

In all cases when a staff member becomes aware of fire and or smoke, the fire wardens MUST be notified immediately.

If they cannot be contacted immediately, go to the nearest safe location and activate the fire alarm system, or shout the alarm as you evacuate the building. If possible, telephone 000 after you exit the building.

Give them the following information:

1) Name of the building or Site
2) Location of the fire within the building or Site.
3) A description of the fire and (if known) how it started.

Evacuate the building following the established building evacuation procedures (see above).

Know the location of fire exits and alarm systems in your area, and know how to use them.

If you become trapped in a building during a fire:

1) Stay calm, and take steps to protect yourself.
2) If possible, move to a room with an outside window.
3) If there is a telephone, call 000 and tell the dispatcher where you are. Do this even if you can see fire department personnel from the window.
4) Stay where rescuers can see you through the window, and wave a light-coloured item to attract their attention.
5) Stuff clothing, towels or paper around the cracks in the door to your area to help keep smoke out.
6) Be patient. Rescue of occupants within large structures will take time.

If any sprinkler, heat detector, or pull station is activated, an alarm will sound throughout the building. Some smoke detectors will also activate the building alarm.

Lift Fire Control may cause the building lifts to come to a halt at the main floor upon activation of the fire alarm system. The lifts can be accessed by emergency personnel using a key override.

DO NOT attempt to use the lifts to evacuate any building.

Emergency lighting is provided in some buildings. In this case, the lighting will activate automatically in a power failure and last for a minimum of 20 minutes.

Illuminated exit signs are provided throughout the buildings.

10 EXPLOSION

In the event of an explosion or similar emergency, take the following action:

1) Immediately take cover under tables, desks, etc., which will provide protection from falling glass or debris.
2) Phone 000. Give them the following information:
   a) Location.
   b) Area where explosion occurred.
   c) Cause of explosion, if known.
   d) Injuries.

BEFORE YOU HANG UP, MAKE SURE THE 000 DISPATCHER HAS ALL THE INFORMATION NEEDED.

3) Evacuate the area as soon as it is safe to do so, following established building evacuation procedures (See (1) Choosing To Go - Building Evacuation).

11 HAZARDOUS MATERIAL SPILL/RELEASE

For spills, releases or incidents requiring special training, procedures or personal protective equipment (PPE) that is beyond the abilities of present personnel, take the following steps:

1) Immediately notify affected personnel and evacuate the spill area. Pull the fire alarm if building evacuation is required.
2) Call 000 to report the incident.
3) Give the operator the following information:
   a) Your name, telephone number, and location.
   b) Time and type of incident.
   c) Name and quantity of the material, if known.
   d) Extent of injuries or damage, if any.
4) Evacuate the affected area at once and seal it off to prevent further contamination of others until the arrival of emergency personnel.
5) Anyone who is contaminated by the spill should wash off the contamination; remain in the vicinity, and give his/her name to the emergency personnel. If needed, first aid can be started immediately.
6) No effort to contain or clean up spills and or releases should be made unless you have been trained in the proper methods to do so.
7) Take appropriate steps to make sure no one evacuates through the contaminated area.
8) If an alarm sounds, follow established building evacuation procedures (see Building Evacuation).
9) Do not re-enter the area until directed by emergency personnel.

12 Cyclone

Cyclone season in Australia is between November and May.

Cyclones are categorised according to their strength. There are 5 categories: Category 1 is the weakest and Category 5 is the strongest.

Category	Wind Gusts	Ocean Swells	Damage
1	Up to 125km/hr ***Gales***	1.2 – 1.6m	Slight damage Trees and farmland damaged.
2	126 – 169km/hr ***Destructive***	1.7 – 2.5m	Significant Damage Minor house damage. Severe damage to signs and trees. Heavy damage to crops
3	170 – 224km/hr ***Very Destructive***	2.6 – 3.7m	Structural damage House roofs and most likely power failures
4	225 – 279km/hr ***Very Destructive***	3.8 – 5.4m	Significant roofing and structural damage Airborne debris, widespread power failure
5	Winds above 280km/hr ***Very Destructive***	More than 5.5m	Almost total destruction and extremely dangerous Houses flattened, cars over turned

cyclones may occur with little or no advance warning or siren activation.

EMERGENCY ACTION

1) Avoid automobiles and open areas.
2) Move to a basement or corridor.
3) Stay away from windows.
4) Do not call 000 unless you require emergency assistance.

A. Before the Storm

1) Locate a basement or corridor shelter location in your building.
2) Stay informed through local media sources on days when severe weather is expected.
3) Obtain a Radio with battery backup to receive warnings.
4) Keep a good reliable flashlight in your office/work area.

You are always advised to stay indoors during the passing of the eye of the storm, because the cyclone will continue. Always listen for the official word that the cyclone has passed and when it is safe to leave your shelter.

When going outside, be aware of fallen powerlines, debris and damage left behind after the cyclone.

A cyclone WARNING

A "cyclone Warning" indicates that a cyclone has been sighted and poses a definite threat to a given area. If the warning is for your area you should take shelter immediately!

ALL HAZARDS WARNING SIGNALS

Outdoor sirens will sound for a period in excess of two minutes. When this occurs, tune into local radio and TV stations to determine the nature of the emergency.

A voice message will be broadcast over WBAA, the St Hilliers television antenna system, and other local radio and television stations.

The ALL CLEAR signal is announced by radio and television stations. The sirens remain silent.

13 SEVERE THUNDERSTORMS

The National Weather Service issues severe thunderstorm watches and warnings. Remember that cyclones are spawned from severe thunderstorms.

14 EARTHQUAKE

The procedures to deal with an earthquake are much less specific. Since earthquake magnitude cannot be predetermined, everyone must initiate emergency precautions within a few seconds after the initial tremor is felt, assuming the worst possible case.

The best earthquake instruction is to take precautions before the earthquake (e.g., move into an open outside area, or if inside, secure or remove objects above you that could fall during an earthquake).

EMERGENCY ACTION

1) Take cover.
2) Call 000 if emergency assistance is necessary.
3) Evacuate if alarm sounds or if told to do so by emergency personnel.

A. During the earthquake:

1) Remain calm, don't react.
2) If indoors, seek refuge under a desk or table or in a doorway and hold on. Stay away from windows, shelves, and heavy equipment.
3) If outdoors, move quickly away from buildings, utility poles, overhead wires, parking garages and other structures. CAUTION: Avoid downed power lines as they may be live. Do not attempt to enter buildings until you are advised to do so by the proper authorities.
4) If in an automobile, stop in the safest place available, preferably an open area away from power lines and trees. Stop as quickly as safety permits and stay in the vehicle for the shelter it provides.

B. After the initial shock:

1) Be prepared for aftershocks. Aftershocks are usually less intense than the main quake, but can cause further structural damage.
2) Protect yourself at all times.
3) Evaluate the situation and call 000 for emergency assistance, if necessary.
4) Do not use lanterns, torches, lighted cigarettes, or open flames, since gas leaks could be present.
5) Open windows, etc., to ventilate the building. Watch out for broken glass.
6) If a fire is caused by the earthquake, implement the FIRE PROCEDURES.
7) Determine whether anyone has been caught in the lifts or was trapped by falling objects. If so, call 000.
8) If the structural integrity appears to be deteriorating rapidly, evacuate the building.

DO NOT USE THE TELEPHONE UNLESS IT IS NECESSARY FOR EMERGENCIES.

Heavy use of the telephone will tie up the lines and prevent emergency calls from going out.

C. Damaged facilities should be reported to Emergency Dispatch. (NOTE: Gas leaks and power failures create special hazards. Please refer to the section of the handbook on UTILITY/LIFT MALFUNCTION.)

D. If an emergency exists, call 000.

E. If the evacuation alarm sounds, follow established building evacuation procedures (see BUILDING EVACUATION).

F. Should you become trapped in a building, stay calm!

1) If a window is available, place an article of clothing (shirt, coat, etc.) outside the window as a marker for rescue crews.
2) If there is no window, tap on the wall at regular intervals to alert emergency crews of your location.
3) Emergency Personnel will check buildings after a major quake.

15 PSYCHOLOGICAL CRISIS

A psychological crisis exists when an individual is threatening harm to himself/herself, or is agitated and disruptive.

If a psychological crisis occurs, contact Police at 000.

In an unusual or potentially dangerous situation, remember the following:

1) Never try to handle a situation that you feel might be dangerous. Call the Police.
2) Give your name, location, and state the nature of the problem.

16 SHOOTINGS

If notified of an “active shooter,” take the following steps:

1) Protect yourself. Take cover immediately – lock or barricade yourself and others inside a secure area, if possible.
2) Call 000. Remain out of sight from the suspects if possible. Report the suspect(s) movement to 000 Dispatcher and provide description(s) if possible.
3) Evacuate if safe to do so, or if instructed to do so by emergency responders.

17 BOMB THREATS

All bomb threats must be treated as a serious matter. To ensure the safety of staff and the general public, bomb threats must be considered real until proven otherwise. In most cases, bomb threats are meant to disrupt normal activities. The procedures described below should be implemented regardless of whether the bomb threat appears real or not.

EMERGENCY ACTION

All personnel should acquaint themselves with the following procedures:

STAY CALM.

If a phone call bomb threat is received:

1) DO NOT put the caller on hold.
2) DO NOT attempt to transfer the call.
3) DO NOT HANG UP THE PHONE THAT THE CALL CAME IN ON. If possible have someone else use another phone to call 000.

4) Pay particular attention to background noises, such as running motors, music, or any other noises that may indicate the location from which the call is being made.
5) Listen closely to the voice to determine voice quality, accents, speech impediments, gender, or any unusual characteristics.
6) Complete the BOMB THREAT CHECKLIST. Checklist is located at Appendix 2.

and/or

If a suspicious object or potential bomb, is observed:

1) Don't touch it!
2) Evacuate the area AND CALL 000. Be sure to include the location and appearance of the object when reporting.

It is highly recommended that all St Hilliers personnel become familiar with the Bomb Threat Checklist. Keep the checklist close to the phone.

If an evacuation alarm sounds, follow established building evacuation procedures

18 UTILITY FAILURE

If you discover a major water leak, gas leak, or other major utility failure, call 000. Do not attempt to correct the problem on your own.

The Emergency Dispatcher will notify the necessary maintenance personnel, clean up, and insurance representatives.

Please do not call the Police Department for information concerning a utility failure unless you have an emergency.

Electrical/Light Failure

EMERGENCY ACTION

1) Remain calm.
2) Do not call 000 for information concerning utility failures unless you have an emergency.
3) Call 000 if you are injured or require emergency assistance.

Some buildings may not be equipped with emergency lighting or the emergency lighting may not provide sufficient illumination for safe exiting. It is recommended that you consider keeping a flashlight and a portable radio in your office/work area.

Plumbing Failure/Flood/Water Leak

Cease using all electrical equipment.

Natural Gas Leak

Cease all operations, exit the area immediately, and call 000. Do not attempt to correct the problem yourself. Do not concern yourself with appliances or equipment. Leave the area immediately.

Electricity

Emergency Lines – see Gas and Electricity below

Check by postcode for local energy distributor: see

http://www.energyaustralia.com.au/about-us/help-centre/contact-us/faults-emergencies

1) Head Office in Sydney

   Ausgrid emergency services – Ph 13 13 88

2) Queensland Office

   Either Citipower Ph: 13 12 80 www.citipower.com.au

Or Energex : 136 262 www.energex.com.au

Gas and Electricity

For major incidents where there is risk to life or property, call 000.

Call Energy Australia on 133 466 Monday - Friday, 8am - 6pm (AEST) Outside these hours, call the following 24-hour emergency services:

Queensland			
Gas	Envestra	1800 808 526	www.natural-gas.com.au
Gas	APT Allgas	1300 763 106	www.apa.com.au
Electricity - Loss of supply	Energex	13 62 62	www.energex.com.au
Electricity - Loss of supply	Ergon	13 22 96	www.ergon.com.au
Electricity - Emergencies	Energex	13 19 62	www.energex.com.au
Electricity - Emergencies	Ergon	13 16 70	www.ergon.com.au
Natural Gas - Gas leak or emergency	AGL Smarter Living (formerly AGL Assist)	1300 763 106	
LPG - Emergencies / faults	AGL Smarter Living (formerly AGL Assist)	1300 763 342	

New South Wales			
Gas	Envestra	1800 676 300	www.natural-gas.com.au
Gas	Jemena Gas Networks	131 909	www.jemena.com.au
Electricity	Endeavour Energy	131 003	www.endeavourenergy.com.au
Electricity	Ausgrid	131 388	www.ausgrid.com.au
Electricity	Essential Energy	132 080	www.essentialenergy.com.au
Hot water emergency	AGL Smarter Living (formerly AGL Assist)	131 404	

19 LIFT MALFUNCTION

If you become trapped in a lift, remain calm. Use the emergency telephone or activate the lift emergency bell within the lift car.

1) Give building location
2) Tell where car is stopped
3) Tell if medical emergency exists

Before you hang up, make sure the dispatcher has all the information they need.

Lifts have mechanical safety brakes that will operate in all situations, even during power failures.

DO NOT ATTEMPT TO LEAVE A LIFT THAT HAS STOPPED BETWEEN FLOORS. IF IT STARTS UP AGAIN WHILE YOU ARE LEAVING IT YOU COULD BE CRUSHED.

If you are not inside the lift but hear a lift bell, please take the following actions.

See if you are able to be heard from outside the lift. Otherwise,

1) Call the lift company.
2) Give the emergency dispatcher the following information:
   a) Name of the building.
   b) Location within the building of malfunctioning lift.
   c) Whether a medical emergency exists.

Before you hang up, make sure the dispatcher has all the information they need.

3) Keep the occupants calm and wait for help to arrive.

20 MEDICAL EMERGENCY

Do not move the patient unless safety dictates.

FIRST AID

If you provide first aid, consider the following:

1) Is immediate action needed in order to save a life?
2) Will I place myself in harm or jeopardy?

FIRST AID IS MINOR CARE ONLY . . . DO NOT JEOPARDIZE YOUR HEALTH OR THE HEALTH OF THE PATIENT. WAIT FOR PROFESSIONAL HELP IF YOU ARE NOT ABLE TO PROVIDE FIRST AID SAFELY OR ARE NOT TRAINED IN FIRST AID.

1) Dial 000.
2) Provide:
   a) Your name and telephone number.
   b) Location of the emergency (Building and Room Number).
   c) The extent of the accident/injury and number of people involved.
   d) Location where someone will meet the ambulance for directing personnel to the injured.
3) Notify the supervisor in the area immediately.

The individual making the call should continue to stay on the phone with the dispatcher and answer as many questions as possible regarding the condition of the injured person so that information can be forwarded to the responding emergency personnel.

Medical emergencies should not be transported in personal or St Hilliers vehicles.

APPENDIX 1

Supplemental Evacuation Guidelines for People with Disabilities

The following guidelines have been adopted by St Hilliers to assist in planning for the evacuation of people with physical disabilities.

In all emergencies, after an evacuation has been ordered:

1) Evacuate if possible.
2) DO NOT use lifts, unless authorized to do so by emergency services personnel.
3) Check on people with special needs during an evacuation. A “buddy system,” where people with disabilities arrange for volunteers (co-workers) to alert them and assist them in an emergency, is recommended.
4) Only attempt an emergency evacuation if you have had emergency assistance training or the person is in immediate danger and cannot wait for emergency services personnel.
5) ALWAYS ASK someone with a disability how you can help before attempting any emergency evacuation assistance. Ask how he or she can best be assisted or moved, and whether there are any special considerations or items that need to come with the person.
6) If you have a physical disability and are unable to use stairways:
7) Stay calm, and take steps to protect yourself.
8) If there is a working phone, call 000 and tell the police dispatcher where you are or where you will be moving to.

If you must move, we recommend the following:

a) Move to an enclosed exit stairway, while taking care not to block the exit of building personnel.
b) Request persons exiting by way of the stairway to notify the Fire Department of your location.
c) Await Emergency Responders.

Power Outages:

1) If an outage occurs during the day and people with disabilities choose to wait in the building for electricity to be restored, they can move near a window where there is natural light and access to a working telephone. During regular business hours, Building Deputies should be notified so they can advise emergency personnel.
2) If people would like to leave and an evacuation has been ordered, or if the outage occurs at night, call 000 and request evacuation assistance.
3) The following guidelines are general and may not apply in every circumstance.
4) Occupants should be invited to volunteer ahead of time to assist people with disabilities in an emergency. If a volunteer is not available, designate someone to assist who is willing to accept the responsibility.
5) Two or more trained volunteers, if available, should conduct the evacuation.
6) ALWAYS ASK people with disabilities how you can help before attempting any emergency evacuation assistance. Ask how they can best be assisted or moved, and if there are any special considerations or items that need to come with them.
7) Try to avoid evacuating people who use wheelchairs while they are still in their wheelchairs. This is standard practice to ensure the safety of people with disabilities and volunteers. Wheelchairs will be evacuated later if possible.
8) Proper lifting techniques (e.g. bending the knees, keeping the back straight, holding the person close before lifting, and using leg muscles to lift) should be used to avoid injury to rescuer’s backs. Certain lifts may need to be modified, depending on the disabilities of the people. Volunteers can obtain more emergency evacuation information regarding lifting techniques from the Affirmative Action Office.

Tips to remember when interacting with people with specific disabilities

Blindness or Visual Impairment

1) Provide verbal instructions to advise of the safest route or direction using simple directions, estimated distances, and directional terms.
2) DO NOT grasp a visually impaired person's arm. Ask if he or she would like to hold onto your arm as you exit, especially if there is debris or a crowd.
3) Give other verbal instructions or information (i.e. lifts cannot be used).

Deafness or Hearing Impairment

1) Get the attention of a person with a hearing impairment by establishing eye contact. If the person's back is toward you, tap him/her on the shoulder to get his/her attention. Clearly state the problem. Gestures and pointing are helpful, but be prepared to write a brief statement if the person does not seem to understand.
2) Offer visual instructions to advise of safest route or direction by pointing toward exits or evacuation maps.

Mobility Impairment

1) It may be necessary to help clear the exit route of debris (if possible).
2) If people with mobility impairments cannot exit, they should move to a safer area, e.g. Most enclosed stairwells.
3) An office with the door shut which is a good distance from the hazard (and away from falling debris in the case of earthquakes).
4) Call 000 or notify police or fire personnel immediately about any people remaining in the building and their locations.
5) Police or fire personnel will decide whether people are safe where they are, and will evacuate them as necessary. The Fire Department may determine that it is safe to override the rule against using lifts.
6) If people are in immediate danger and cannot be moved to a safer area to wait for assistance, it may be necessary to evacuate them using an evacuation chair or a carry technique.

Summary

Prepare occupants in your building ahead of time for emergency evacuations.

Know your building occupants. Train staff, faculty, and students to be aware of the needs of people with disabilities and to know how to offer assistance. Hold evacuation drills in which occupants participate, and evaluate drills to identify areas that need improvement. Plans must cover regular working hours, after hours, and weekends. Everyone needs to take responsibility for preparing for emergencies. People with disabilities should consider what they would do and whether they need to take additional steps to prepare.

APPENDIX 2

BOMB THREAT CHECKLIST

STAY CALM

QUESTIONS TO ASK:	RESPONSE
EXACT WORDS USED TO MAKE THE THREAT (if possible):	
Time of Call	
1) WHEN IS THE BOMB GOING TO EXPLODE?	
2) WHERE IS THE BOMB LOCATED?	
3) WHAT WILL MAKE THE BOMB EXPLODE?	
4) WHAT DOES THE BOMB LOOK LIKE?	
5) WHAT KIND OF BOMB IS IT?	
6) WHO PUT THE BOMB HERE?	

QUESTIONS TO ASK:	RESPONSE
7) WHY?	
8) WHAT IS YOUR NAME?	
9) WHERE ARE YOU CALLING FROM?	
DESCRIPTION OF CALLER'S VOICE:	
	☐ MALE ☐ FEMALE
	☐ YOUNG ☐ MIDDLE AGED ☐ OLD
	☐ CALM ☐ EXCITED
	☐ SLOW ☐ FAST
	☐ SOFT ☐ LOUD
	☐ CLEAR ☐ MUFFLED ☐ SLURRED
OTHER:	
Accent? (Describe)	

QUESTIONS TO ASK:	RESPONSE
IF THE VOICE SOUNDED FAMILIAR, WHO DID IT SOUND LIKE?	
YOUR NAME:	
YOUR TELEPHONE NUMBER:	

APPENDIX 3

Prohibition of Violence in the Workplace Policy

St Hilliers's policy prohibiting violence in the workplace and is effective immediately. This policy supersedes any prior inconsistent oral or written policy of St Hilliers.

I. General Policy Statement

St Hilliers is committed to providing staff and visitors a safe and healthy environment. Accordingly, St Hilliers prohibits acts of violence or threats of violence in the workplace. This prohibition extends to persons conducting business with St Hilliers, or visiting St Hilliers, even though such persons are not directly affiliated with St Hilliers.

II. Definitions

1) An act of violence is conduct that intentionally or recklessly causes bodily injury to another person or damage to property.
2) A threat of violence includes any behaviour that could be interpreted by a reasonable person as an intent to cause physical harm to another person or damage to property.
3) Workplace means all St Hilliers offices, sites and other locations where an employee is engaged in St Hilliers business.

III. Reporting Requirements

1) Employee involvement is essential to preventing acts or threats of violence in the workplace. Each employee is therefore responsible for immediately reporting to his or her supervisor or manager, any such act or threat.
2) St Hilliers will ensure that all reports of workplace violence are treated confidentially to the maximum extent possible.
3) Anyone who experiences, observes, or otherwise knows of an imminent act or threat of violence should immediately call the Police Department at 000.

IV. Investigations

St Hilliers will promptly and thoroughly investigate all threats or acts of violence in the workplace.

V. False Charges

Bringing a knowingly false charge under this policy is prohibited and can result in disciplinary action.

VI. Retaliation

Retaliation against anyone for reporting a violation of this policy or for cooperating in an investigation under this policy is prohibited and can result in disciplinary action.

Retaliation includes, but is not limited to, acts of reprisal, interference, restraint, penalty, discrimination, intimidation, or harassment against an individual or group.

VII. Weapons

St Hilliers will strictly enforce rules against possessing or storing weapons in the workplace. Bringing a weapon to the workplace will involve instant dismissal.

VIII. Sanctions

Any employee who violates this policy will be subject to disciplinary action, up to and including termination. Further, St Hilliers will support criminal prosecution or other remedial action against any person who violates this policy.

ENVIRONMENTAL MANGEMENT POLICY

OUR RESPONSIBILITY

St Hillers is committed to ensuring that we encourage best practice environmental management through planning, commitment and continuous improvement in line with ISO 14001, legislative, regulatory, and contractual requirements and provide a framework for the implementation of instructions and processes to ensure that all environmental requirements are met.

OUR COMMITMENT

St Hilliers aims to develop and implement best practice environmental targets and objectives to reduce our impacts on the environment through:

- identifying the potential for, and responding to, Environmental Incidents, accidents and emergency situations and take corrective action;
- identifying and controlling possible environmental hazards associated with the Works and the our Subcontractor's Activities;
- establishing procedures to ensure that hazardous substances are stored in accordance with legislative requirements;
- recognise and protect any special environmental characteristics of the Site (including cultural heritage significance);
- define roles and responsibilities for our personnel;
- ensure environmental training and awareness programmes are provided to employees and subcontractors;
- define how the management of the Environment during the Contractor's Activities is reported and performance is evaluated;
- ensure monitoring procedures are implemented to identify impacts on the Environment as a result of the Works and the Contractor's Activities;
- implement complaint reporting procedures and maintain records of complaints and response to complaints; and
- establish and maintain programs and procedures for periodic Environmental audits to be carried out;

St Hilliers will ensure consultation and cooperation with all stakeholders to meet this objective.

St Hilliers Senior management Team is committed to, and responsible for the implementation of this policy, and it will be reviewed annually.

Tim Casey

Executive Chairman
St Hilliers Property Pty Ltd

16th March 2015

COMMUNITY & STAKEHOLDER POLICY

St Hilliers understands the obligations both legislatively and morally to ensure that it's Construction activities are:

- Risk assessed to identify potential adverse influence on the community and/or stakeholders, and
- Consultative arrangements are implemented as soon as practicable after contract award
- Minimise as far as practicable any adverse effects on the Stakeholders

Stakeholders

We shall ensure we identify all relevant Stakeholders including but not limited to:

Employees, Clients (and Client representatives), the public (about our Construction sites, and those that could be affected by our activities), asset owners (eg: Essential Services providers- Power, Water, Sewer, Gas and Communications), adjacent property owners, Councils, Police, Emergency Services, property owners and their relevant stakeholders (eg; Defence EMOS, Base Management, Environmental Officers), Transit authorities or asset managers (eg: Bus companies, Department of Main Roads)

Consultation and Communication

We will ensure we maintain effective communications methods at all times, responding in an accurate and timely manner.

We will, at all times, enhance community relationships ensuring we consider a social perspective into decision making processes.

We will ensure that we support and respect local traditions, policies, history and culture obtaining relevant and competent advice at all times when these issues are identified. This will include managing indigenous, European, and/or culturally significant sites with dignity and respect, while ensuring compliance with applicable law and policy for same.

We will plan our works to ensure we ensure the Health & Safety of the Community and relevant Stakeholders, and ensuring we do not adversely affect the environment.

Tim Casey

Executive Chairman
St Hilliers Property Pty Ltd

St Hilliers Group

Fitness for Work:

Drug and Alcohol Management Policy for Building and Construction on Project Sites

Date last reviewed 25 September 2018

Next review due by September 2019

Status Final

Based on the version adopted by the Master Builders Association 8 October 2015

Warning: any amendments or alterations to this Policy may void its compliance with the Building Code 2016

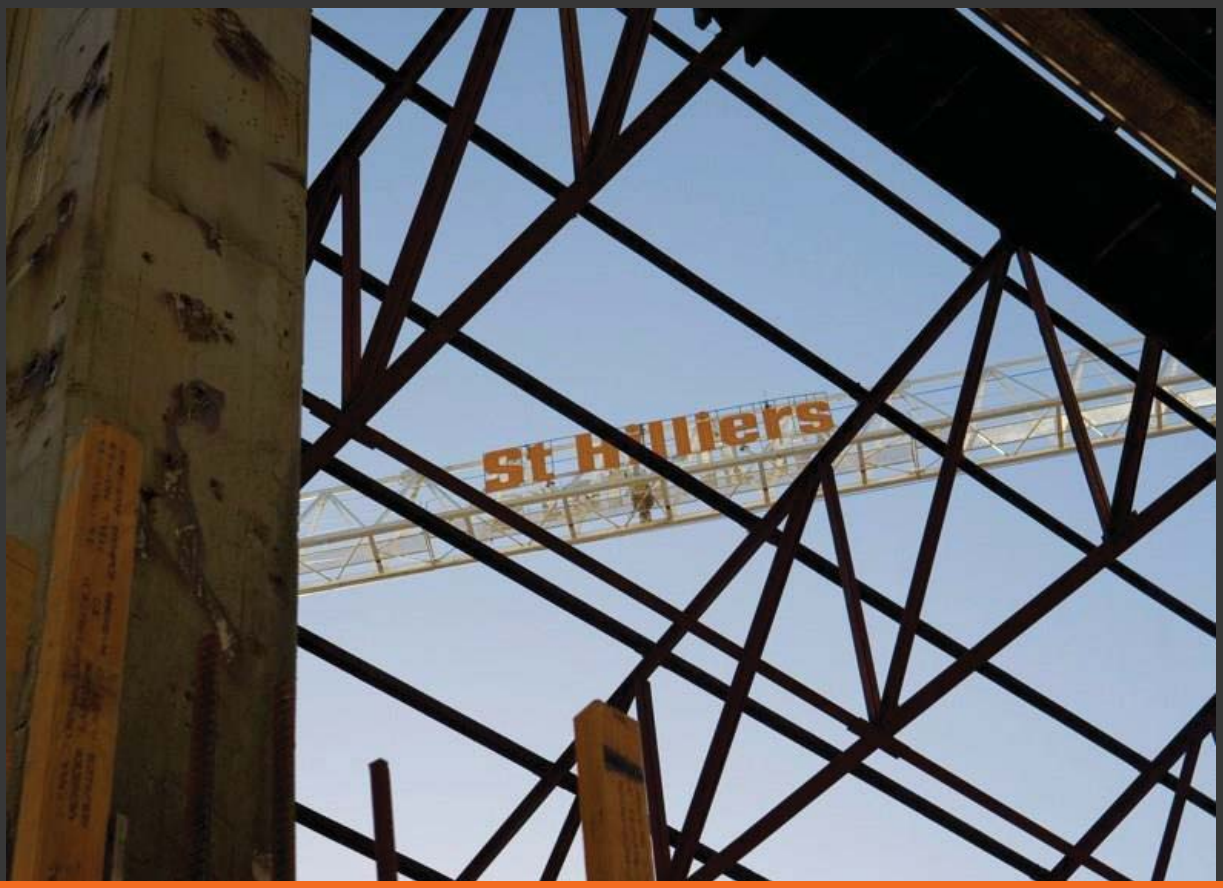


Table of Contents

TABLE OF CONTENTS **2**
1 FOREWORD **4**
2 CONTEXT **4**
3 DEFINITIONS **5**
4 CONFIDENTIALITY **8**
5 DUTY OF CARE AND RESPONSIBILITIES **8**
5.1 EMPLOYER 8
5.2 PROJECT / WORKPLACE MANAGER OR NOMINATED PERSON 9
5.3 PRINCIPAL CONTRACTOR'S HEALTH AND SAFETY MANAGER 9
5.4 SUPERVISORS 9
5.5 CONSULTATIVE ARRANGEMENTS 9
5.6 WORKERS AND OTHER PERSONS 9
5.7 NON-COMPANY PERSONNEL (SUBCONTRACTORS / CONSULTANTS) 9
6 POSSESSION **10**
7 CONSULTATION AND TRAINING **10**
8 EMPLOYEE ASSISTANCE, COUNSELLING AND REHABILITATION **10**
8.1 PERSONAL WORKPLACE SUPPORT 10
8.2 ASSISTANCE PROGRAM 11
8.3 REHABILITATION SUPPORT 11
8.3.1 Voluntary Rehabilitation 11
8.3.2 Referred Rehabilitation 11
9 DRUG AND ALCOHOL MANAGEMENT PLAN EXEMPTIONS **12**
9.1 APPROVED FUNCTIONS 12
9.2 STORAGE OF ALCOHOL 12
10 MEDICATIONS **12**
10.1 PRESCRIPTION MEDICATION 12
10.2 OVER-THE-COUNTER MEDICATION 13
10.3 COMBINING MEDICATION 13
10.4 TESTING 13
11 DRUG AND ALCOHOL TEST PROGRAM **14**
11.1 WHO CAN BE TESTED? 14
11.2 SUBSTANCES TO TEST 14
11.3 PREFERRED TESTING METHODOLOGY 14
11.4 TESTING OPTIONS 15
11.5 TESTING OFFICERS 18
11.6 TESTING REQUIREMENTS 18
11.7 SELF-DECLARATION 19
11.8 REFUSAL TO TEST 19
11.9 INVALID RESULT 20
11.10 TAMPERING 20
11.11 TEST RESULTS 20
12 DISCIPLINE **22**
12.1 FIRST OCCASION 22
12.2 SECOND OCCASION 22
12.3 THIRD OCCASION 23

13 AGGRESSIVE AND ABUSIVE BEHAVIOUR 23
14 REVIEW AND AUDIT 23
15 RETURN TO WORK REQUIREMENTS 23
APPENDIX 1 - FITNESS FOR WORK - DRUG AND ALCOHOL MANAGEMENT POLICY SUMMARY 24
APPENDIX 2 - DRUG AND ALCOHOL COUNSELLING ASSISTANCE 26
APPENDIX 3 – TEST TARGET CONCENTRATIONS FOR ORAL FLUID 28
APPENDIX 4 – FITNESS FOR WORK – DRUG AND ALCOHOL MANAGEMENT POLICY WORKFLOW 30
APPENDIX 5 – DRUG TESTING CONSENT AND CHAIN OF CUSTODY FORMS 32
APPENDIX 6 – RETURN TO WORK PROCEDURES AND RELATED ISSUES – ST HILLIERS AND SUBCONTRACTORS 33

1 Foreword

This Policy is consistent with the Building Code 2016 (**the Code**) Sections 16A, 32 (2)(a) & Schedule 4. The building work to which this Policy applies is defined in Part 2 of this Policy under "Relevant Building Work".

In this Policy, "St Hilliers" means St Hilliers Property Pty Ltd and any related entities within the meaning of the Code.

Under the Code:

1) The Principal Contractor for Relevant Building Work must have a WHS & R management plan which contains a 'Fitness for Work' Policy to manage alcohol and other drugs in accordance with Schedule 4 of the Code (and where St Hilliers is the Principal Contractor for Relevant Building Work, this Policy is such a policy); and
2) All building contractors and building industry participants for Relevant Building Work must have a WHS & R management plan that shows the way in which drug and alcohol issues in the workplace will be managed to help ensure that no person enters a site under the influence of alcohol or other drugs (and where St Hilliers is a building contractor or building industry participant for Relevant Building Work, this Policy meets that requirement).

St Hilliers has consulted appropriately with its own employees prior to implementing this Policy.

2 Context

This Policy applies to all Workers engaged by St Hilliers, its subcontractors and consultants, to perform building work on Site (including construction and site office workers) for any St Hilliers project that involves Relevant Building Work where St Hilliers is the principal contractor and the Head Contract Principal does not implement its own Fitness for Work Policy on the relevant Site. St Hilliers enforces this policy contractually with its subcontractors and consultants and requires that they include similar contractual provisions in their own secondary subcontracts.[1]

The purpose of this Policy is to deal with alcohol and drugs and their effects on a Worker's fitness for work whilst performing duties or attending any project Site.

This Policy ensures that when it is acting as the Principal Contractor and the Head Contract Principal does not implement its own Fitness for Work Policy on the relevant Site, St Hilliers has a mechanism to appropriately manage, and ensure that its subcontractors and consultants manage, the misuse of alcohol and drugs in the workplace through testing, education, counselling, rehabilitation and discipline, where required. The sharing of responsibility between Employers under this Policy is described in the following table, and the terms of this Policy should be read in the context of this Table.

1

[1] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 1: how those on site (including employees of the principal contractor, subcontractors and their employees and others) will be required to comply with the relevant fitness for work policy (i.e. through contract or some other enforceable means).

Table 1 – Responsibilities

Mechanism	St Hilliers	Other Employers (St Hilliers subcontractors and consultants)
Testing	Will undertake testing of Workers on Site who are employed by St Hilliers, its subcontractors or consultants	May also undertake testing of their own employees and the employees of any secondary sub-contractors
Education	Will conduct educative Toolbox talks prior to testing and has responsibility for education of own employees.	Have primary responsibility for education of their own employees.
Counselling	Responsible for own employees.	Responsible for own employees.
Rehabilitation	Responsible for own employees.	Responsible for own employees.
Discipline	May require any Worker to leave the Site in accordance with this Policy. Responsible for consequential discipline of own employees.	Responsible for own employee required to leave the Site returning home safely. Responsible for consequential discipline of own employees.

When acting as Principal Contractor, St Hilliers will not pass on the implementation and cost of drug and alcohol testing to its subcontractors or consultants[2], provided however that in certain situations described in this Policy the Worker is responsible for the costs of testing.

3 Definitions

Accredited Laboratory means a laboratory which meets minimum Australian performance standards set by an accrediting agency, being the National Australian Testing Authority (NATA).

Alcohol refers specifically to the chemical substance ethanol which, in this context, may occur in either a liquid or gaseous form.

Amphetamine-type stimulants may include, but are not limited to, the following: amphetamine, methylamphetamine, methylenedioxymethylamphetamine (MDMA), methylenedioxyamphetamine (MDA).

B.A.C or blood alcohol content is the measurement of alcohol in the body, in grams of alcohol per 100 millilitres of blood and recorded as a percentage i.e. 0.00%.

Chain of Custody is a series of procedures to account for the integrity of each oral fluid specimen by tracking its handling and storage from point of collection to final disposal.

Cocaine includes cocaine and its metabolites including cocaine, benzoylecgoine and ecgonine methyl ester.

Company means St Hilliers Property Pty Ltd and its related companies.

Confirmatory Test refers to a second alcohol breath test to confirm the initial reading or, in the case of drugs, an oral fluid analysis conducted at an accredited laboratory to confirm the non-negative ("fail") result obtained in the initial test. The confirmatory test results in a definitive positive (fail) or negative (pass) result.

Confirmed Positive Result (Fail) means a:

- Secondary onsite breath test for alcohol in excess of 0.00 grams per 100 millilitres (0.00%) of alcohol;

[2] Code subsection 16A (2).

- Secondary test conducted at an accredited laboratory for drugs in excess of the levels contained in AS 4760:2006, performed at an accredited laboratory. Note: Benzodiazepine level[3] to be provided by the prescribed testing laboratory.

A confirmed positive result as described above is a fail.

Drug means a substance that has a physiological effect on the body, either by itself or through its metabolite(s). The term 'drug' refers to the drug and/or its metabolite(s) for the purpose of detecting a target drug in oral fluid.

Employer should be read as having the same meaning as a 'Person Conducting a Business or Undertaking' (PCBU) and shall mean a person who employs one or more other persons under contracts of employment or contracts of training. Generally in this Policy 'Employer' will refer to St Hilliers but may, depending on the context, refer to the Head Contract Principal or to subcontractors.

False Negative is a screening test result that appears negative when it should not.

False positive result is a screening test read positive when the drug or drug metabolite is not present or its concentration is less than the cutoff level.

Fit for Work means a person who has a BAC of 0.00% and tests negative for the list of substances noted in section 11.1 of this policy.

For Cause Testing is drug and alcohol testing which may be carried out for any of these scenarios:

- An individual or group of individuals' fitness for work may have been a contributing factor in an incident, accident or near miss.
- There is a direct observation or indication of impairment or unusual behaviour or actions by the individual.
- Evidence or reason to believe the individual is involved with the use of alcohol or other drugs while at work.
- Where safety precautions or processes may have been breached by the individual.

HSE means health and safety and the environment.

HSE Manager means the St Hilliers HSE Manager or, where the context indicates, the equivalent manager of the relevant Employer.

Health and Safety Committee is defined as per Division 4 of Part 75 in the New South Wales Work Health and Safety Act 2011 (WHS Act) or, in relation to any other jurisdiction, the relevant provisions of the respective legislation

Health and Safety Representative means a Health and Safety Representative for a designated work group who has been elected in accordance with Division 3 of Part 50 in the WHS Act.

Initial Screening Test is defined as indicative testing conducted at the workplace to exclude the presence of alcohol and/or a drug or a class of drugs as provided by Australian Standards AS3547:1997, AS 4760:2006 and AS/NZ 4308:2008. The Initial Screening Test provides a "negative" or "non-negative" result. Where a "non-negative" ("fail") result is obtained, confirmatory testing must be conducted to provide a conclusive result.

NATA is the National Association of Testing Authorities, who accredit laboratories, inspection bodies and calibration services, produce certified reference materials and provide proficiency testing schemes throughout Australia.

Negative Result means a test result at or below the prescribed or nominated target concentration levels and this is therefore considered a "pass".

Non-Company Personnel refers to any worker who is not directly employed by the Principal Contractor.

Non-Negative Result has the same meaning as a Preliminary Positive Result means an initial screening test result that indicates the presence of alcohol or drugs above the prescribed or nominated target

[3] Benzodiazepine concentrations are to be confirmed with the relevant Drug & Alcohol testing provider.

concentration levels and is therefore considered a “fail”. A secondary onsite breath test for alcohol or accredited laboratory test for drugs is to be conducted to determine a confirmed positive (fail) or confirmed negative (pass) result.

Preliminary Positive means an initial screening test result that indicates the presence of alcohol or drugs above the prescribed or nominated target concentration levels and is therefore considered a “fail”. A secondary onsite breath test for alcohol or accredited laboratory test for drugs is to be conducted to determine a confirmed positive (fail) or confirmed negative (pass) result.

Opiates may include but are not limited to the following: morphine, codeine and 6-cetylmorphine.

Over-the-Counter Medication means medicines/drugs sold directly to the consumer without a prescription from a healthcare professional.

Prescription Medication means medication that is prescribed by a healthcare professional.

Random Testing refers to drug and alcohol testing completed at the workplace on a randomly selected day and time (keeping within the parameters defined in this procedure, eg testing required monthly) on a randomly selected group of individuals or teams.

Relevant Building Work means Type B Building work as set out in Schedule 2 of the Code for which the Commonwealth contributes funding that is at least:

1) $5,000,000 and where the sum is at least 50% of the total construction project value; or
2) $10,000,000 (irrespective of its proportion of the total construction project value)

Site means any St Hilliers project location.

Targeted Testing refers to testing conducted for Workers working in high risk activities or once returning to work after a confirmed positive (fail) drug or alcohol test.

Testing Officer means a suitably competent and trained provider or person approved by the H&S Manager to conduct drug and alcohol sampling of Workers at the workplace. This person may be an independent person or employed by the Employer.

THC refers to tetrahydrocannabinol, also known as marijuana or cannabis.

WHS Act means the New South Wales Work Health and Safety Act 2011 or the equivalent legislation in any other jurisdiction, as applicable.

WHS Regulation means the New South Wales Work Health and Safety Regulations 2011 or the equivalent legislation in any other jurisdiction, as applicable.

WHS&R means work health safety and rehabilitation.

Worker means:

1) an employee of St Hilliers, or
2) a contractor, consultant or subcontractor, or
3) an employee of a contractor, consultant or subcontractor, or
4) an employee of a labour hire company who has been assigned to work in the person’s business or undertaking, or
5) an outworker, or
6) an apprentice or trainee, or
7) a student gaining work experience, or
8) a volunteer, or
9) a person of prescribed class.

Workplace means a place where work is carried out for a business or undertaking and includes any place where a Worker goes, or is likely to be while at work, including all facilities provided to Workers for the purpose of conducting works for their Employer. A workplace includes, but is not limited to:

1) head office
2) plant and laydown yards

3) site/project offices
4) car parks
5) sheds and rooms
6) amenities
7) working locations
8) shipping containers and site safes
9) company vehicles

4 Confidentiality

1) All information gathered as a result of alcohol and other drug testing is collected for the purpose of implementing this Policy.
2) St Hilliers is committed to ensuring that results from all drug and alcohol testing remain confidential and use/access/dissemination of the results shall be restricted to those who have a genuine requirement to access the results of the drug and/or alcohol test.
3) St Hilliers will adhere to the following principles in implementing this Policy:

a) Testing will be conducted in a location that to all reasonable extent possible maintains the privacy and dignity of the individual.
b) Workers who record a non-negative ("fail") or confirmed positive (fail) result will be treated at all times in a respectful and non-judgmental manner by all involved in the management of the matter.
c) Alcohol and drug test records, which may include a register and results, will be retained on file. These records will be suitably secured.
d) Where the Worker tested is not an employee of St Hilliers but of a subcontractor or consultant or secondary subcontractor, St Hilliers will share all relevant information with the Worker's Employer. Otherwise, but subject to clause 4.4, St Hilliers will only release information to a third party as required by law.
e) The HSE Manager or Nominated Person is authorised under this Policy to delegate and assign authority for access and use of the information obtained under this Policy, including but not limited to authorised government agencies and insurers (for claims submissions, where applicable).

5 Duty of Care and Responsibilities

Under this Policy the duty of care, responsibilities and obligations of employers, employees, contractors and others at the workplace are derived from and reflect the respective obligations under the WHS Act and specified responsibilities detailed in this Policy.

5.1 Employer

The WHS Act states that Employers (PCBUs) must provide a safe and healthy workplace for Workers or other persons by ensuring, so far as reasonably practicable:

1) Safe systems of work
2) A safe work environment
3) Safe use of plant, structures and substances
4) Facilities for the welfare of Workers are adequate
5) Notification and recording of workplace incidents
6) Adequate information, training, instruction and supervision is given
7) Compliance with the requirements under the WHS Regulation
8) Effective systems are in place for monitoring the health of Workers and workplace conditions.

5.2 Project / Workplace Manager or Nominated Person

The Project Manager or Nominated Person is responsible for ensuring adequate resources are allocated for the implementation, education, training and support of this Policy. The Project Manager or Nominated Person must also ensure this Policy is applied fairly and consistently.

5.3 Principal Contractor's Health and Safety Manager

The HSE Manager or Nominated Person is responsible for ensuring this Policy remains current, is readily available and is applied in the way it was intended. The HSE Manager or Nominated Person must also ensure that all St Hilliers employees who work on Site know and understand the Fitness for Work – Drug and Alcohol Management Policy (the Policy).

5.4 Supervisors

Supervisors must ensure that all individuals in their area of responsibility understand and comply with the requirements of this Policy and ensure, so far as reasonably practicable, that no Worker commences or continues work on Site if the Worker appears to be affected by alcohol or other drugs or where the Worker's fitness for work could be otherwise impaired (eg appears tired, breaks between shifts less than 10 hours, night works). In this case, the matter should be referred to the Project and HSE Managers for further investigation or action, as applicable.

5.5 Consultative arrangements

Established consultative arrangements (eg civil sites with a single subcontractor) will be used to assist with consultation between St Hilliers and its employees in instigating, developing and carrying out measures designed to ensure the health and safety of the employees at work.

5.6 Workers and Other Persons

The WHS Act requires that a Worker must, while at work:

1) Take reasonable care for their own health and safety
2) Take reasonable care for the health and safety of other Workers who may be affected by the employee's acts or omissions, and
3) Cooperate with their Employer with respect to any action taken by the Employer to comply with requirements imposed by the Act, Regulations or guidelines.

It is the responsibility of the Worker to present themselves in a fit state for work and have the appropriate level of rest afforded to them between shifts. Any Worker, who believes that they may be unfit for work for any reason is expected to not commence work and to inform their Employer immediately.

Workers should notify their Supervisor if they are taking medication of any kind which may impair their ability to conduct work safely 1) at Site induction or equivalent, if they are already taking the medication or (2) if they commence taking the medication later, immediately they commence the medication. Workers should also notify their Supervisor if they have an alcohol or drug issue which may be in breach of the requirements in this Policy 1) at Site induction or equivalent, if they already have the issue or (2) if the problem commences later, as soon as they become aware of the issue.

Workers must also notify their Supervisor when they become aware of any breach or potential breach of this Policy.

5.7 Non-Company Personnel (Subcontractors / Consultants)

The Employer of non-company Workers is to provide any support, counselling, rehabilitation and disciplinary actions to a similar and suitable standard as noted within this Policy.

6 Possession

Workers must not have any alcohol or drugs in their possession or control at the workplace, except for:

1) Drugs prescribed by a medical practitioner, or
2) Non-prescribed medication (being over -the -counter medications).

7 Consultation and Training

Prior to any implementation of this Policy, St Hilliers is required to consult its workforce. Following that initial consultation, this Policy will be implemented on site.

All subcontractors will be required to ensure that their employees and those of any secondary subcontractor they engage are compliant with the requirements of this Policy, as a minimum, at any time they are present at St Hilliers controlled Sites.

All St Hilliers subcontract and consultancy agreements shall require compliance with this Policy.[4]

St Hilliers will develop tailored drug and alcohol education and awareness training which will be delivered to all St Hilliers employees at suitable intervals, and to Site Workers by Toolbox talks immediately prior to testing, the content in each case being as determined by the risks associated with the specific working environments.

The education and awareness training will generally include education and guidance on:

1) The effects of drugs and alcohol on the individual and society as a whole, including prescription and over the counter medications.
2) Medications which may affect the Worker's ability to work safely.
3) Medications and other factors which may trigger a false positive.
4) The adverse effects of drugs and alcohol on work practices in the workplace.
5) Testing methods and threshold limits to be employed.
6) Selection methods.
7) The management and safe use of legal drugs and alcohol.
8) Counselling and rehabilitation resources.

A summary of the Policy, for use during such education and training activities, may be found in Appendix 1.

8 Employee Assistance, Counselling and Rehabilitation

The respective Employers and any Work Health and Safety Committee will provide information and assistance to Workers seeking help for alcohol or drug related issues confidentially and without prejudice.

Any person who suspects they have an alcohol or drug dependency condition is encouraged to seek advice and to take appropriate treatment before their job performance is impaired.

8.1 Personal Workplace Support

Persons experiencing difficulties relating to substance use (drug and/or alcohol) may approach any of the following persons with their Employer and/or within the St Hilliers workplace for confidential advice and assistance:

[4] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 1: how those on site (including employees of the principal contractor, subcontractors and their employees and others) will be required to comply with the relevant fitness for work policy (i.e. through contract or some other enforceable means).

1) HSE Manager or Coordinator
2) Human Resources Department
3) Supervisor
4) Project Manager
5) Health and Safety Representative
6) Responsible Person
7) Union representative

8.2 Assistance Program

Assistance with rehabilitation and/or counselling relating to substance use may also be provided through an Employee Assistance Program provided by the relevant Employer, or through external service providers.

There are several options where individuals seek assistance, including referral of persons to:

1) a medical practitioner, or
2) a suitably qualified health professional, or
3) an Employee Assistance Program (EAP), where provided to employees of the relevant Employer, or
4) an industry provided program.

Further details regarding these services may be found in Appendix 2.

8.3 Rehabilitation Support

Workers identified through testing or declaration as having an issue with alcohol or drug use, misuse, abuse, or dependency are encouraged to take advantage of a rehabilitation program. Voluntary participation in these programs is encouraged.

The participation and details of the programs will be held in confidence and the Worker will not, by virtue only of their participation in such a program, be subjected to adverse judgment or treatment prior to, during or post participation in these programs.

8.3.1 Voluntary Rehabilitation

Those who voluntarily seek assistance for substance use issues may utilise their entitlement in respect of approved accrued leave to participate in a rehabilitation program without jeopardising their continued employment with their Employer.

It should be noted that voluntary participation in treatment programs will not prevent disciplinary action being applied for procedural violations that may have already occurred (or may occur in future).

Entry and participation in a rehabilitation program should not adversely affect future employment opportunities within the Employer. The program is confidential and no person is to be discriminated against solely for participating in a rehabilitation program.

8.3.2 Referred Rehabilitation

Following a confirmed positive (fail) drug and/or alcohol test (ie second of two non-negative tests), the relevant employee may be required by their Employer to participate in a rehabilitation program.

The following is to apply if referred rehabilitation is accepted by a person:

1) Failure to successfully complete a rehabilitation program may result in further action by the Employer.
2) Failure by Workers to undergo drug and/or alcohol tests as part of the rehabilitation program will result in further action by the Employer.
3) Where any drug and/or alcohol test carried out as part of a rehabilitation program returns a confirmed positive (fail) result, it will be recorded and will result in disciplinary action. The rehabilitation

professional is to liaise with the relevant Employer's HSE Manager or Nominated Person regarding the progress of the rehabilitation program.

Where an employee utilises an EAP agreed by the Employer, the Employer is to pay for counselling sessions conducted up to the agreed amounts within the terms of the EAP. Workers are expected to utilise their own time and/or agreed leave entitlements whilst participating in counselling and rehabilitation programs.

9 Drug and Alcohol Management Plan Exemptions

9.1 Approved Functions

It is recognised that from time to time an Employer may organise, endorse, sponsor or allow social functions to celebrate various achievements, successes or generally recognised events. For example, project milestones. Return to Site/workplace after an approved function is not permitted.

Under such circumstances the Employer can approve exemptions applying to the particular function and of its timing, place and health and safety arrangements.

The Employer also recognises that alcohol may be consumed at business related functions or at other working locations on an irregular and informal basis.

The Employer maintains it is an individual's responsibility to behave in an acceptable and legally responsible manner at all times, taking into account all relevant laws and cultural boundaries that may apply to the location or area.

The use of Employer vehicles for travel during or following approved functions remains subject to the Employer's vehicle policies and all relevant legislation.

9.2 Storage of Alcohol

The storage of alcohol at a workplace by employees may be allowed (if not otherwise prohibited by the Employer) under the following conditions:

1) The Employer has approved its storage for a period of time, and
2) The alcohol is stored securely and out of general view or access.

The short term storage of alcohol purchased by or gifted to individuals is allowed, provided such alcohol is removed from the workplace as soon as it is practical (i.e. at the end of the working shift).

10 Medications

10.1 Prescription Medication

Workers who are taking prescription medication which might affect their ability to undertake any kind of work safely should advise their Supervisor (1) at Site induction or equivalent, if they are already taking the medication or (2) if they commence taking the medication later, immediately they commence the medication, so the risks can be managed.

Workers taking medication should consult their medical practitioner regarding the potential effects of the medication. During this consultation Workers should explain their work duties to the medical practitioner in order to determine if their ability to work safely will be adversely affected by the medication. Any directions or warnings on the medication should also be read carefully and followed.

It is recommended that Workers obtain a medical clearance letter from their medical provider outlining this information so an accurate fitness for work assessment can be made on site.

10.2 Over-the-Counter Medication

Wherever possible, Workers should ask the pharmacist about the short and long term effects of medication and whether or not their ability to perform their work duties safely may be affected by the medication. They should also, whenever possible, select medication which will not cause side effects that may impact on their work.

Workers should always be alert to the fact that commonly taken medications, including antihistamines taken for allergies or as cold medicine, can cause drowsiness and impair the ability to work safely and may provide a positive drug test result.

10.3 Combining Medication

Workers should be aware that combining different medications may alter the intensity or the effect of the medication. It is advisable for Workers to seek advice from their medical practitioner or pharmacist about any possible side effects arising from mixing medications.

Combining medication and alcohol may also alter the side-effects of medication and affect an individual's ability to work safely

10.4 Testing

1) Any Worker required to participate in drug testing is obliged to declare any medication taken immediately prior to the test being conducted. Such information will be kept confidential (to the extent provided in this Policy) and only used in determining if such medication has contributed to or caused a non-negative ("fail") result.
2) If the Worker declares the medication prior to any testing being conducted, and
    a. the drug class declared is consistent with the drug class detected at the initial screening test, then:
        i. the Worker is NOT permitted to continue work. Neither their Employer nor St Hilliers may permit the Worker to remain on Site;
        ii. the Worker will be required to provide a sample to be sent for confirmatory testing;
        iii. an Action Request Form J07a will be issued by the St Hillier Project Manager confirming (ii) and requiring the Worker to provide a doctor's certificate as to the medication prescribed.
    b. If the levels determined in the confirmatory test match the prescribed dosage and the doctor's certificate is provided to St Hilliers, then the Worker may return to work and no disciplinary action will be taken.
    c. If the levels do not match, then the disciplinary process will be followed.
3) If the Worker did not declare the medication prior to the testing being conducted, or if the drug class declared is inconsistent with the drug class detected, then:
    a. the Worker will also be assessed as unfit for work and neither their Employer nor St Hilliers may permit the Worker to remain on Site; and
    b. an Action Request Form J07a will be issued by the St Hillier Project Manager.
    c. The Worker is NOT permitted to return to work until a confirmed negative (pass) drug test is returned or sufficient evidence is provided by an appropriately qualified provider (eg certificate from treating doctor) outlining the medication taken (consistent with the drug test result) and the effects on fitness for work.
    d. Disciplinary action may also be undertaken for breach of this Policy.

11 Drug and Alcohol Test Program

11.1 Who can be tested?

In accordance with section 16A, & Schedule 4(1) of the Building Code 2016, and, as a condition of entry to the site, any worker** who enters on to the site will be required to comply with the requirements of this Policy.

This includes any worker engaged through contract or some other enforceable means, such as:

1) Site based St Hilliers employees including both construction workers and site office workers**
2) Subcontractors, and employee workers** of those/any subcontractors
3) Others (eg: Visitors, Volunteers, or Consultants engaging in any work within the site at the time of testing)**

**Note: Meaning of worker:

A person is a worker if the person carries out work in any capacity for a person conducting a business or undertaking, including work as:

a) an employee; or
b) a contractor or subcontractor; or
c) an employee of a contractor or subcontractor; or
d) an employee of a labour hire company who has been assigned to work in the person's business or undertaking; or
e) an outworker; or
f) an apprentice or trainee; or
g) a student gaining work experience; or
h) volunteer; or
i) a person of a prescribed class.

(Ref: Model Work Health & Safety Act as at 21 March 2016)

11.2 Substances to Test

The program includes testing for those substances required to be tested in accordance with the Code. As at the date of writing of this Policy, the following substances are required to be tested:

1) Alcohol
2) Opiates
3) THC (Marijuana)
4) Cocaine
5) Benzodiazepines
6) Amphetamines
7) Methamphetamines[5]

Refer to Appendix 3 for the test target concentrations.

11.3 Preferred testing methodology

St Hilliers policy is to ensure testing methods are objective methods providing legitimate, reliable and repeatable results.

[5] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 3 the requirement that all of the following substances are tested for: [being the list as above].

St Hilliers has chosen to rely on testing procedures that are accurate, independent and deliver on-site results. As such, St Hilliers' preferred testing methods are to:

1) conduct Oral (saliva) based drug testing, and
2) use calibrated alcohol test devices for alcohol breath testing, calibrated to return a positive result in excess of 0.00.

11.4 Testing Options

The program testing options include[6]

1) Self-testing
2) Random testing and staged testing
3) Targeted testing
4) 'For cause' or 'reasonable suspicions' testing
5) Pre-employment testing (as per employee pre-employment requirements)[7]

1) Self-Testing[8]

Self-testing for alcohol will be available on Site for Workers prior to presenting for work. Breathalyzers will be suitably calibrated and meet the minimum requirements as outlined in AS 3547. A Worker undertakes self-testing on his/her behalf and therefore no documented record will be produced.

Workers who return a self-test greater than 0.00% must report to their supervisor that they are deemed unfit for work, and not permitted to perform work on site until they can supply a 0.00% BAC result. If the reading is greater than 0.00% the Worker must leave the workplace immediately. All reasonable assistance is to be offered by the relevant Employer to ensure the Worker can make their way from the workplace to a safe location without harm (i.e. taxi, lift from a friend or Supervisor). An agreed leave of absence arrangement with their Employer or loss of pay is to apply.

If the reading was 0.02% or less, the Worker may be retested as per section 11.11 of this Policy.

If an individual has repeated occurrences with self-test results >0.00%, section 12 (Discipline) may apply.

2) Random and Staged Testing[9]

For random testing, Workers will be selected for testing using a random selection process nominated by management following consultation in accordance with established consultative arrangements (eg civil sites with a single subcontractor). For this project, the selection method to be employed will be coloured marble selection in accordance with the minimum requirements as follows:

- where there are less than 30 workers on site – at least 10% of the workforce per month;
- where there are 30 to 100 workers on site – a minimum of 5 workers per month; and
- where there are greater than 100 workers on site – a minimum of 10 workers per month.

Random selection of Workers to complete the testing will be conducted in a clear and transparent manner in the presence of the Testing Officer, PCBU representative and a Health and Safety Representative/Committee member where appointed.

Refer to Appendix 4 for Policy Workflow Diagram.

[6] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 2 -the use of an objective medical testing method/s to detect the presence of drugs or alcohol in a worker's system and outline the detection method/s to be used on the project.

[7] Per the Employer's specific requirements.

[8] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 7 - procedures for the selection of personnel to be tested (including staged selection across a worksite or random selection for testing if the entire workforce is not to be tested in a testing round).

[9] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 7 - procedures for the selection of personnel to be tested (including staged selection across a worksite or random selection for testing if the entire workforce is not to be tested in a testing round).

3) Frequency of Random testing[10]

Drug and alcohol testing will be conducted periodically (at least once per month), involving all Workers on the project, as defined. Testing will be conducted based on the following scales:

a) Where there are less than 30 Workers on site, a minimum of 10% of the workforce will be tested.
b) Where there are 30 to 100 Workers on site, a minimum of 5 Workers will be tested.
c) Where there are greater than 100 Workers on site, a minimum of 10 Workers will be tested.

4) Targeted Testing[11]

Workers may be required to participate in targeted testing when working in high risk construction activities or once returning to work after a confirmed positive (fail) drug or alcohol test.

Testing may be conducted for high risk activities, as defined by the project, in addition to the random drug testing program.

High risk construction work is defined in clause 291 of the WHS Regulations. The following are deemed high risk construction work activities:

a) Involves a risk of a person falling more than 2 metres, or
b) Is carried out on a telecommunication tower, or
c) Involves demolition of an element of a structure that is load-bearing or otherwise related to the physical integrity of the structure, or
d) Involves, or is likely to involve, the disturbance of asbestos, or
e) Involves structural alterations or repairs that require temporary support to prevent collapse, or
f) Is carried out in or near a confined space, or
g) Is carried out in or near:
    i. A shaft or trench with an excavated depth greater than 1.5 metres, or
    ii. A tunnel, or
h) Involves the use of explosives, or
i) Is carried out on or near pressurised gas distribution mains or piping, or
j) Is carried out on or near chemical, fuel or refrigerant lines, or
k) Is carried out on or near energised electrical installations or services, or
l) Is carried out in an area that may have a contaminated or flammable atmosphere, or
m) Involves tilt-up or precast concrete, or
n) Is carried out on, in or adjacent to a road, railway, shipping lane or other traffic corridor that is in use by traffic other than pedestrians, or
o) Is carried out in an area at a workplace in which there is any movement of powered mobile plant, or
p) Is carried out in an area in which there are artificial extremes of temperature, or
q) Is carried out in or near water or other liquid that involves a risk of drowning, or
r) Involves diving work.

Workers will be randomly or stage selected in accordance with the random and stage selection process outlined above or alternatively the group completing the high risk construction work will be selected to participate in the test program.

Workers who return to work after a confirmed positive (fail) drug or alcohol test may be subjected to testing in the following month; this will assist in ongoing management and to identify individuals who may require further assistance.

[10] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address 6: the requirement that, as a minimum, frequent and periodic testing (at least once per month) of the workforce (both construction workers and site office workers) will be as follows:

[11] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address:8 - procedures for the targeted testing of higher-risk activities

5) 'For Cause' Testing[12]

'For cause' testing may be conducted where:

a) The individual was involved in a Notifiable Incident or Serious injury occurrence;
b) An individual's lack of fitness for work may have been a contributing factor in an incident, accident or near miss;
c) There is a direct observation or indication of impairment or unusual behaviour or actions by the individual – that is, a responsible person has formed a reasonable suspicion (see 11.3(6)) that drugs or alcohol have been taken;
d) There is evidence or reason to believe the individual is involved with the use of alcohol or other drugs while at work; or
e) Where safety precautions or processes may have otherwise been breached by the individual.

The privacy of the Worker is a priority at all times and any discussion will be held away from other Workers. The Worker may request the presence of a witness which may be the elected project Health and Safety Representative, provided that the witness must be immediately available and must not in any way affect or delay the testing process.

Workers should be given an opportunity to explain their behaviour. A person may appear to be impaired from alcohol or prohibited drugs but not necessarily have taken any such substances. For example, the Worker may be suffering the side effects of medication prescribed by their treating medical practitioner or suffering from sleep deprivation.

'For cause' testing is to be applied fairly, objectively and equitably. Testing Officers must act in an ethical and professional manner and with consistency for all Workers on each occasion they are required to conduct an assessment.

6) Forming 'Reasonable Suspicions'

The Reasonable Suspicion process involves 3 steps –

- Observation and identification of issues
- gathering and documenting evidence, and
- testing.

The identification phase includes the observation of work performance, behaviours or appearance for identification of issues. For example, the employee may have aggressive behaviour, has difficulty walking or is now unable to perform job duties that were properly handled in the past.

The **evidence must then be documented**. The documentation is the written record that explains what was witnessed and/or the patterns of behaviour that indicates someone is impaired. The evidence must be specific, verifiable by independent sources, and concrete.

The documentation should include the names of any witnesses, the time and dates of the occurrences and any other observations that support the Reasonable Suspicion.

The overriding concern is the safety of the employee, their co-workers and other company stakeholders including clients.

The evidence needs to be strictly facts and not opinions, and the facts should focus on safety in the workplace, particularly with employees performing safety sensitive jobs.

Once the facts are documented and checked, the St Hilliers Site Management staff should report any "Reasonable Suspicion" circumstances to their HSE Manager for advice on process and procedure prior to asking the worker to submit to a drug and alcohol test.

The HSE Manager will (in consultation with the employee's Supervisor, Manager or HSE Representative) present the findings to the employee, with the intent of the employee being asked to submit to a drug and alcohol test.

Reasonable Suspicion Assessment Triggers:

[12]Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 8 - procedures for, for-cause testing

Based upon (but not limited to): Behaviour / actions / observations reported prior to this assessment: (this can be reported by any employee, witness or person)

Physical Indicators which might be observed:

- Strong smell of alcohol on breath
- Slurred, incoherent or disjointed speech (losing track)
- Unsteadiness on the feet
- Poor coordination / muscle control
- Drowsiness or sleeping on the job or during work breaks
- Inability to follow simple instructions
- Nausea / vomiting
- Reddened or bloodshot eyes
- Jaw clenching
- Sweating / hot and cold flushes

Assessment should not be limited to a single trigger, but reflect a combination of triggers assessed at the same time (eg reddened or bloodshot eyes may only be as a result of lack of sleep).

7) Pre-employment Testing

a) St Hilliers Employees:

St Hilliers has not identified the need to conduct Pre-employment screening (as at time of the Policy review in March 2017). Pre-employment testing, or the requirement for same, will be reviewed annually at the corporate level, and introduced if deemed required.

b) Subcontractor Employees:

St Hilliers requires that all workers attending site be “fit for work” (not under the influence of drugs or alcohol). St Hilliers does not specify a contractual requirement for Subcontractors to conduct pre-employment testing, but fully endorses and supports Subcontractors who have developed and implemented pre-employment testing programs.

11.5 Testing Officers

Drug and alcohol testing is to be undertaken by either external Testing Officers from an independent provider or suitably qualified internal Testing Officers[13].

Where the Employer’s personnel are required to deliver this testing process the HSE Manager or suitable alternate must be present to confirm the procedural accuracy and fairness of the testing process.

11.6 Testing Requirements

The following test requirements will be adhered to by the person/s conducting the testing, (whether an independent provider or suitably qualified internal Testing Officer):[14]

1) Alcohol testing equipment will be used, tested and calibrated according to the manufacturer’s instructions and certified to AS 3547:1997, Breath alcohol testing devices for personal use.
2) Oral fluid testing will be conducted for drug screening and will be used, tested and calibrated to the manufacturer’s instructions and certified to AS 4760:2006, Procedures for specimen collection and the detection and quantitation of drugs in oral fluid.
3) Testing will be conducted in a designated area which ensures privacy for the duration of testing; this room is to be determined by the HSE Manager or Project Manager.

[13] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 2 - the use of an objective medical testing method/s to detect the presence of drugs or alcohol in a worker's system and outline the detection method/s to be used on the project.

[14] ibid

4) The integrity of the sample and testing will be maintained through testing records and chain of custody paperwork.
5) When an individual is selected for testing for any reason defined within this Policy they must immediately proceed to the testing station. They may not leave the site for any reason and must cooperate fully with any reasonable instructions given by the authorised Testing Officer.
6) Unless medically required, no food or drink is to be consumed for 15 minutes prior to the initial screening test. While waiting for testing, the Worker is to be supervised at all times.
7) Testing of a worker under the age of 18 years (or a work experience person) is to be referred to the HSE Manager and an appropriate parent or guardian informed that the testing is to take place.
   a) All persons will be required to confirm their identity with photo identification.
   b) All confirmatory drug testing is to be conducted by an accredited laboratory in accordance with AS 4760:2006, regardless of location.

Refer to Appendix 3 for Test Target Concentration Levels

Refer to Appendix 4 for Policy Workflow Diagram

11.7 Self-Declaration

Where any Worker notifies that they have a drug or alcohol issue, that person shall not be subjected to immediate disciplinary action. The Worker may however be suspended from any work either by their relevant Employer or by St Hilliers with immediate effect in order for an assessment to be made of the duties they are able to perform safely.

Workers will not be disadvantaged for self-disclosure and therefore may be supported by their Employer through counselling and rehabilitation processes. In such cases the Worker may be required by the Employer to take accrued or negotiated unpaid leave and may be allowed to return to work when fit for duty.

11.8 Refusal to Test

1) The following steps should be undertaken if a Worker refuses to take an initial screening test for alcohol or drugs:[15]
   a) The Testing Officer will inform the Worker who has refused the test that the refusal will have the same consequences as a non-negative result ("fail"), i.e. that the Worker will be deemed to be unfit for work.
   b) If the Worker still refuses, the Testing Officer will notify the Worker's Supervisor or the Project Manager of the refusal to take the test. This person should consult the Worker regarding the requirements, process and consequences of refusing to test and encourage them to partake in the test. This would be the second and final request to be tested.
   c) If the Worker still refuses, the refusal will be treated as a confirmed positive (fail) result. An Action Request Form J07a will be issued by the St Hillier Project Manager, and they will be subjected to the actions noted in sections 11.9.1 Alcohol Testing, 11.9.2 Drug Testing and 12. Disciplinary Action in this policy.
   d) All reasonable assistance is to be offered by the relevant Employer to ensure the Worker can make their way from the workplace to a safe location without harm (i.e. taxi, lift from a friend or Supervisor). An agreed leave of absence arrangement with their Employer or loss of pay is to apply.
   e) The HSE Manager will ensure all documentation is retained for recording and filing.
2) In order to return to work, the Worker is required to present for a BAC test upon arrival at work, which must provide a confirmed negative (pass) BAC result prior to re-commencing work. Where the Worker is project based they are also to attend the next available induction.

[15] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 5 - how a person who returns a positive result will be prevented from performing work until they can prove they are fit to return to work, and other processes that will apply in the event of a positive result or deemed positive result (i.e. a failure to submit to a test).

3) Where a Worker has refused the testing provided by St Hilliers or the Employer, the liability for all costs associated with the provision of the confirmed negative (pass) result remains with the Employer, where the testing was provided by St Hilliers, or by the Worker, where the testing was provided by the Employer.
4) Contractors engaged by the Employer will be subjected to the conditions outlined in this section. Time spent away from work due to refusing a test will be managed by the relevant Employer.

11.9 Invalid Result

An Invalid Result will occur where a control line fails to appear. This may be caused by incorrect procedural techniques being applied or insufficient specimen volume.

Where an Invalid Result occurs the following steps shall be undertaken:

1) The Testing Officer will review the procedure and repeat the test using a new test panel.
2) If the problem persists, the Testing Officer will discontinue testing immediately and contact the supplier.

11.10 Tampering

Any attempt to tamper with samples, cheat, introduce, dilute or otherwise alter the concentration of alcohol or other drugs in their own, or another's saliva, or breath will constitute a serious breach of this Policy and may be dealt with as equivalent to Section 10.6 Refusal to Test. Wilful tampering, altering, cheating or diluting and may be dealt with by either St Hilliers or the relevant Employer including removing the Worker from the Site. Disciplinary action may be taken against any Worker found tampering with samples.

11.11 Test Results

1) Alcohol Testing

Following the completion of an Initial Screening Test, results shall be interpreted as follows:

a) Workers recording a 0.00% BAC reading [a negative (pass) result] are permitted to return to work immediately.
b) Workers recording a BAC result above 0.00% [a non-negative ("fail") result] are required to stand down and could be required to complete a Confirmatory Test 60 minutes after the Initial Screening Test or at the discretion of the Testing Officer.
    i. Where a Worker refuses to complete the Confirmatory Test and elects to leave the workplace, they are to do so in an agreed leave of absence arrangement with their Employer or loss of pay is to apply. Counselling and rehabilitation services are to be made available for the Worker by their Employer.[16]
    ii. Where a Worker completes the Confirmatory Test and a result of 0.00% is obtained [a confirmed negative (pass) result], they are permitted to return to work immediately. No loss of pay is to apply.
    iii. Where a Worker completes the Confirmatory Test and a result greater than 0.00% is obtained [a confirmed positive (fail) result] they are deemed not fit for work, are NOT permitted to return to work and will be required to leave the Site as soon as possible[17]. An agreed leave of absence arrangement with their Employer or loss of pay is to apply. Counselling and rehabilitation is to be offered to the individual by their Employer.[18]

[16] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 9 - how workers who attend for work affected by drugs or alcohol will be counselled and assisted, apart from any disciplinary process that might apply.

[17] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 4 - that a person who returns a positive result for any of the substances listed above will be deemed not to be fit for work (in respect of each substance listed above, subject to testing detectable levels, there is a zero level tolerance).

[18] Schedule 4: 9.

c) Workers recording a BAC result of above 0.00% [a non-negative ("fail") result] are NOT permitted to return to work.[19] A Confirmatory Test will be completed immediately to confirm the test result. The Worker will be required to leave the Site as soon as possible. An agreed leave of absence arrangement with their Employer or loss of pay is to apply. Counselling and rehabilitation is to be offered to the individual by their Employer.[20]

Workers who are required to leave Site or elect to leave due to an initial screening test non-negative result or a confirmed positive (fail) alcohol breath test are required to present for testing before their following shift to meet the fitness for work requirements. The Worker is not permitted to return to work until a confirmed negative (pass) result is obtained.[21]

All reasonable assistance is to be afforded by the relevant Employer to ensure an affected person can make their way from the Workplace to a safe location without harm (e.g. taxi, lift from a friend or Supervisor, etc).

Contractors engaged by the Employer will be subjected to the conditions outlined in this section. Time spent away from work due to a confirmed positive (fail) reading will be managed by the respective Employer.

2) Drug Testing

Workers selected for drug testing will be asked to disclose any use of drugs including prescription and over the counter medication prior to testing.

The allowable level of detectable prohibited substances for Workers at the Workplace is to be determined in accordance with the relevant Australian Standard.

Threshold levels for on-site initial and subsequent confirmatory testing are derived from the following:

- AS 4760:2006, Procedures for specimen collection and the detection and quantitation of drugs in oral fluid as noted at Appendix 3.

Following the completion of an Initial Screening Test, results shall be interpreted as follows:

a) Workers recording a negative result (pass) are permitted to return to work immediately.

b) Workers recording a non-negative result ("fail") will NOT be permitted to return to work[22] and are required to provide further oral fluid sample (Sample A and Sample B) immediately, under controlled conditions, for confirmatory testing at a NATA accredited laboratory. See Appendix 5 for related Chain of Custody documentation. The Worker will be required to leave the Site as soon as possible. Counselling and rehabilitation services are to be made available for the Worker by their Employer.[23]

   i. If the Worker refuses to provide secondary samples (Sample A and Sample B) for confirmatory testing then the process in section 11.6 'Refusal to Test' will apply. If the Worker refuses to cooperate with the testing, they are deemed not fit for work, are NOT permitted to return to work and will be required to leave the Site as soon as possible. An agreed leave of absence with the Employer or loss of pay is to apply. Counselling and rehabilitation is to be offered to the Worker by their Employer[24].

   ii. Where confirmatory test results provide a negative result (pass) for prohibited drugs, the Worker is permitted to return to work. No loss of pay or disciplinary action is to apply.

   iii. Where confirmatory test results verify the initial screening test positive result (fail) the Worker is NOT permitted to return to work.[25] An agreed leave of absence arrangement with their employer or loss of pay is to apply. Counselling and rehabilitation services are to be made available for the Worker by their Employer. [26]

[19] Schedule 4: 4.

[20] Schedule 4: 9.

[21] Schedule 4: The fitness for work policy referred to in subsection 32(2)(a) must address: 5 - how a person who returns a positive result will be prevented from performing work until they can prove they are fit to return to work, and other processes that will apply in the event of a positive result or deemed positive result (i.e. a failure to submit to a test).

[22] Schedule 4: 4.

[23] Schedule 4: 9

[24] Schedule 4: 9

[25] Schedule 4: 4

[26] Schedule 4: 9

iv. The Worker may dispute the confirmatory test and elect to have their Sample B tested at the same or an alternative NATA accredited laboratory at their cost. If an alternative NATA accredited laboratory is selected, the Worker must also pay for the cost of transporting the sample. If the result from testing the Sample B is negative (pass), the Worker will be reimbursed for the testing costs by their Employer and may return to work with no loss of pay or disciplinary action. If the result is confirmed positive (fail) the Worker will not be permitted to return to work and an agreed leave of absence arrangement with their Employer or loss of pay is to apply. Counselling and rehabilitation services are to be made available for the Worker by their Employer.[27]

A confirmed negative (pass) drug test result must be obtained upon return to Site, which must provide a confirmed negative (pass) result before the individual can return to work.

Workers declaring the use of particular prescribed drugs or medication prior to an Initial Screening Test are required to discuss with the Testing Officer the likely effects of the substance on the test results. In the case where a non-negative result is obtained, refer to section 10 of the Policy.

Contractors engaged by the Employer will be subject to the conditions outlined in this section. Time spent away from work due a confirmed positive reading (fail) will be managed by the relevant Employer.

All reasonable assistance is to be afforded by the relevant Employer to ensure an affected person can make their way from the Workplace to a safe location without harm (e.g. taxi, lift from a friend or Supervisor, etc).

12 Discipline

The following sets out the action which may be taken when a Worker returns a confirmed positive (fail) result to an alcohol or drug test. In circumstances where the breach is of a more serious nature or a deliberate breach, the Employer has the discretion to take action which does not conform to the process below and may result in termination.

The following steps shall be applied:

12.1 First Occasion

A Worker who has received a confirmed positive (fail) test for alcohol or drugs will be:

a) Offered support by their Employer for rehabilitation through an appropriate provider.
b) Informed by their Employer and (in its discretion) St Hilliers of the consequences of testing positive and their obligations to present, or remain in a fit state.
c) Given a verbal warning by their Employer with diary entry placed on file.
d) Required, when requested by their Employer or St Hilliers, to undertake alcohol and drug testing in the following month as a minimum, and
e) Informed by their Employer of further disciplinary action and testing requirements should they have a confirmed positive (fail) result (alcohol or drug) within the next 12 months.

12.2 Second Occasion

A Worker who has received a second confirmed positive (fail) test for alcohol or drugs within any 12 month period will be:

a) Informed by their Employer and (in its discretion) St Hilliers of the consequences of testing positive and their obligations to present, or remain in a fit state
b) Issued a written warning letter by their Employer with a copy placed on file
c) Encouraged by their Employer to attend counselling through EAP or an equivalent provider and participate in a rehabilitation program

[27] Schedule 4: 9

d) Required, when requested by their Employer, to undertake alcohol and drug testing in the following month as a minimum, and
e) Informed by their Employer of further disciplinary action and testing requirements should they have a positive result (alcohol or drug) within the next 12 months.

12.3 Third Occasion

A Worker who has received three confirmed positive (fail) test results for alcohol or drugs in a 12 month period may be dismissed under the Employer's disciplinary processes.

13 Aggressive and Abusive Behaviour

If an individual displays aggressive or violent behaviour when required to undertake an alcohol and/or drug test, those involved in the testing process should remain calm and not argue with or mirror the individual's behaviour.

Emphasis should be placed on getting the individual to calm down and discussion kept away from personal issues. The individual should be asked to comply with the direction of the Employer and/or St Hilliers as the case may be.

If the individual refuses to modify their behaviour, they should be reminded that acts of aggression or violence will not be tolerated and may result in their removal from the Site.

In the case of actual or apprehended violent behaviour, the individual is to be advised that the Police will be called. This option is to be used as a last resort.

The Project Manager, HSE Manager or Nominated Person should be consulted during this time.

14 Review and Audit

The Policy will be reviewed periodically by the HSE Manager or Nominated Person in consultation as outlined in the WHS Management Plan. As new testing technology becomes available for alcohol and other drugs testing it should be considered in any review, provided it is based upon levels of drugs and alcohol outlined in the relevant standards and best practice.

The Policy is also to be reviewed annually or as required at management level.

Records must be maintained for auditing purposes.

15 Return to Work Requirements

No person can return to work on a St Hilliers Site until they have tested negative for relevant drugs and alcohol ie received a confirmed negative (pass) drug test result on a secondary Site-based test. See generally Form J07a Action Request Drug and Alcohol Testing.

See further: clauses 10.4(c)(ii), 11.2.4, 11.5, 11.6(b), 11.9.1, 11.9.2

See flowchart at Appendix 6.

Appendix 1 - Fitness for Work - Drug and Alcohol Management Policy Summary

The purpose of this Policy is to deal with alcohol and other drugs and their effects on a Worker's fitness for work whilst performing duties or attending the workplace.

Counselling and Rehabilitation

- The Employer will provide information and assistance to Workers seeking help for alcohol or drug related issues confidentially and without prejudice.
- Refer to Appendix 2 of the Policy for a list of providers.

Medication

- Workers taking medication which might affect their ability to undertake any kind of work safely should advise their Supervisor or Health & Safety Representative, who will assist to manage the workplace arrangements.
- Workers taking medication should consult their medical practitioner regarding the potential effects of the medication. For over-the-counter medication, Workers should ask the pharmacist about the short and long term effects of medication and whether or not their ability to perform their work duties safely may be affected by the medication.

Self-Declaration and Testing

- Any person notifying that they have a drug or alcohol issue shall not be subjected to immediate disciplinary action. An assessment will be made of their fitness for work and a drug and alcohol test performed to determine what further measures will be undertaken.
- Self-testing for alcohol will be available at the project for Workers prior to presenting for work. Workers who return a BAC self-test greater than 0.00% should report it to their Supervisor and not undertake any work.

Random Testing

- Random drug and alcohol testing will be conducted periodically (at least once per month), involving all Workers (including employees, contractors and visitors) on the project, including site office staff.
- Workers will be selected for testing using a random selection process.

Targeted Testing

- Workers will be required to participate in testing when working in high risk activities or once returning to work after a confirmed positive (fail) drug or alcohol test.

'For Cause' Testing

'For cause' testing may be carried out for any of these scenarios:

- An individual's fitness for work may have been a contributing factor in an incident, accident or near miss.
- There is a direct observation or indication of impairment or unusual behaviour or actions by the individual.
- Evidence or reason to believe the individual is involved with the use of alcohol or other drugs while at work.
- Where safety precautions or processes may have been breached by the individual.

Employer Internal Procedures and Discipline

On the First Occasion a Worker receives a non-negative (fail) result, confirmed positive (fail), or refuses to test:

- The Worker must leave site immediately and is not allowed to return to work until a confirmed negative (pass) test result is provided. (If related to a drug test, return to work will involve

provision of a negative test result from a NATA accredited laboratory and an accompanying medical practitioner letter, with all costs to be paid by the Worker).

- Leave of absence is to be negotiated with Employer (ie must use your personal leave / unpaid leave).
- Offered counselling and rehabilitation by Employer.
- Required, when requested by Employer, to undertake alcohol and drug testing in the following month as a minimum.
- Given a verbal warning by Employer with diary entry placed on file.

Second Occasion (within 12 month period):

- All items noted in "First Occasion", above, plus:
- Instead of being given a verbal warning, issued a written warning letter by Employer, with a copy placed on file.
- May be required by Employer to attend a counselling and rehabilitation program.

Third Occasion (within 12 month period):

- Dismissal by Employer.

Note that a different process is followed in the case where medication is involved.

See section 10 of the Policy document for details.

Return to Work

See generally Form J07a Action Request Drug and Alcohol Testing.

No person can return to work on a St Hilliers Site after testing has revealed evidence of drugs or alcohol until they have tested negative for relevant drugs and alcohol ie received a confirmed negative (pass) drug test result on a secondary Site-based test. They must also be re-inducted on recommencing work on a St Hilliers Site.

Whether or not non -St Hilliers employees have been provided with counselling and rehabilitation by their Employer is a matter for their Employer and St Hilliers will not require evidence of such matters in relation to the return of the relevant Worker to work on St Hilliers Sites.

Appendix 2 - Drug and Alcohol Counselling Assistance

Alcoholics Anonymous (AA)

National Tel: 1300 22 22 22

24 hour Helpline: (02) 9477 9820

www.aa.org.au

Australian Drug Foundation (ADF)

Tel: 1300 858 584

www.druginfo@adf.org.au

Family Drug Help

Tel: 1300 660 068

www.familydrughelp.org.au

Support, information, education, inspiration and encouragement for family members of people who use drugs.

Family Drug Support

Tel: 1300 368 186

www.fds.org

Support for families faced with problematic drug use.

Lifeline

Tel: 13 11 14

www.lifeline.org.au

If you are feeling suicidal or that you just can't cope then call Lifeline.

MATES in Construction

24 hour Helpline: 1300 MIC 111 (1300 642 111)

Mend Services

Tel: 1800 300 011

Narcotics Anonymous

National Phone line 1300 652 820

www.na.org.au

Construction Industry Drug and Alcohol Foundation (CIDAF)

Tel: 02 9810 3117
Drugs & Alcohol: info@foundationhouse.net.au

Appendix 3 – Test Target Concentrations for Oral Fluid

Test cut off concentrations in accordance with Australian Standard AS3547:1997 Breath alcohol devices for personal use, AS 4760:2006 Processes for specimen collection and the detection and quantitation of drugs in oral fluid.

ALCOHOL TESTING THRESHOLD

Alcohol	BAC
Alcohol	0.00%

ORAL DRUG TEST THRESHOLDS

From Table 3.1, AS 4760:2006, On-site Initial Test Target Concentrations

Class of Drug	Target Concentration (ng/mL)
Opiates	50
Amphetamine-type stimulants	50
9-tetrahydrocannabinol (THC)	25
Cocaine and metabolites	50

Note: These targets represent the undiluted oral fluid concentration.

From Table 4.1, AS 4760:2006, Laboratory Immunoassay Initial Test Target Concentrations

Class of Drug	Target Concentration (ng/mL)
Opiates	50
Amphetamine-type stimulants	50
Delta-9-tetrahydrocannabinol (THC)	25
Cocaine and metabolites	50

Note: These targets represent the undiluted oral fluid concentration.

(Noting that AS4760 does not provide benzodiazepine target concentrations for on-site initial testing).

The Oral Fluid Standard AS4760:2006 does not allow for a cut off level for Benzodiazepines. Our testing provider can record a result for Benzodiazepines but under AS 4760:2006 this sample is not covered to be sent to a laboratory for confirmation testing.

.

From Table 5.1, AS 4760:2006, Non-Immunoassay Initial Test and Confirmatory Target Concentrations

Compound	Cut - off (ug/L)
Morphine	25
Codeine	25
6-Acetyl morphine	10
Amphetamine	25
Methylamphetamine	25
Methylenedioxymethlamphetamine	25
Methylenedioxyamphetamine	25
Delta-9-tetrahydrocannabinal (THC)	10
Cocaine	25
Benzoylecgonine	25
Ecgonine methyl ester	25

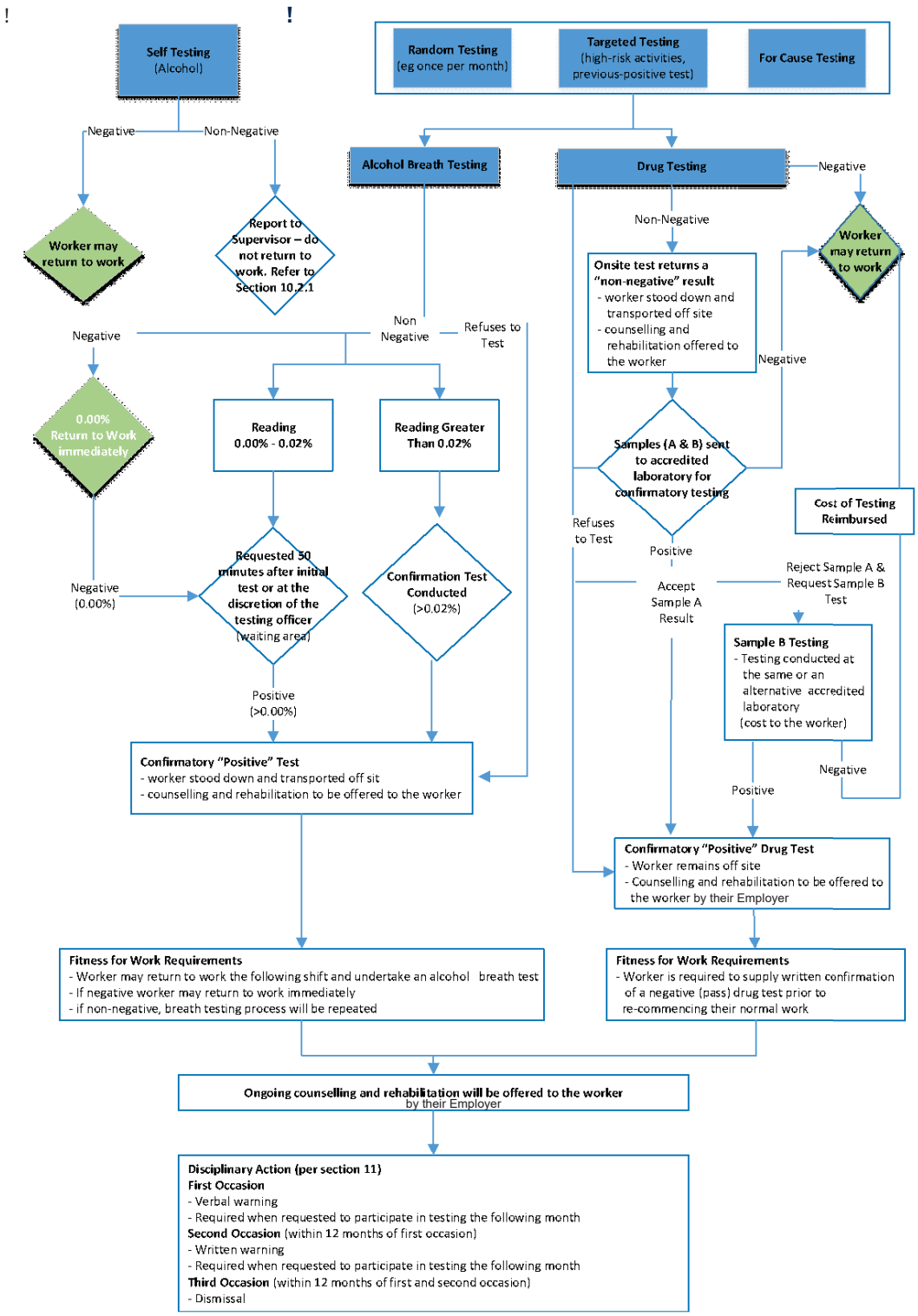
Notes:

1) These targets represent the undiluted oral fluid concentration.
2) For analytes not included in this Table, the laboratory should select a target concentration as appropriate for oral fluid.

Note: Benzodiazepine target concentrations to be confirmed with the laboratory used.

Appendix 4 – Fitness for Work – Drug and Alcohol Management Policy Workflow

Appendix 4 – Fitness for Work - Drug and Alcohol Management Policy Workflow

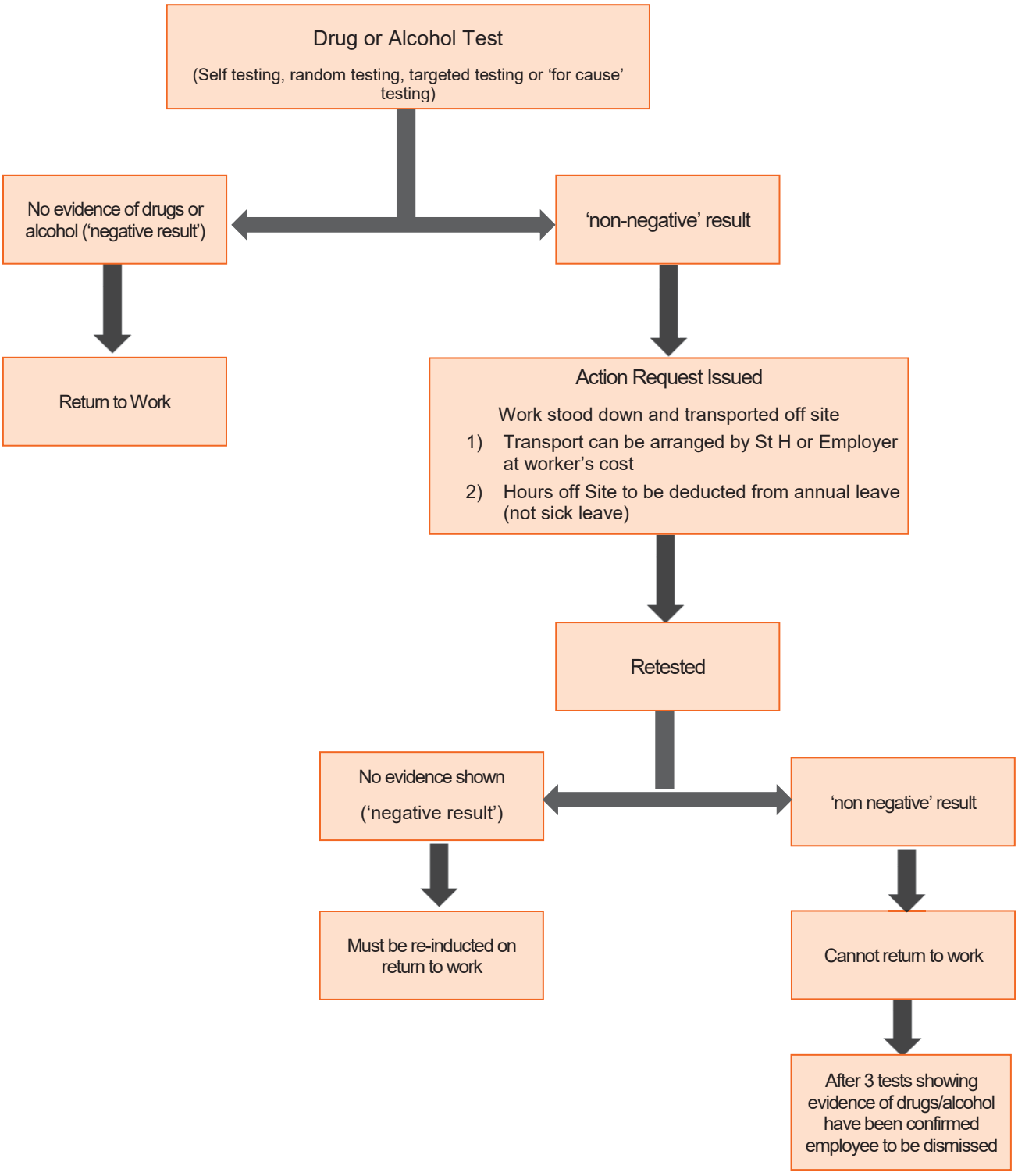


Note that a different process is followed in the case where medication is involved. See section 10 of the Policy document for details.

Appendix 5 – Drug Testing Consent and Chain of Custody Forms

See independent test provider documents

Appendix 6 – Return to Work Procedures and related issues – St Hilliers and Subcontractors



St Hilliers Group

Emergency Procedures in St Hilliers offices

Date last reviewed 25 September 2018

Next review due by September 2019

Status Final

Table of Contents

TABLE OF CONTENTS 2
PART A - GENERAL 3
1 INTRODUCTION 3
2 REPORTING EMERGENCIES 3
3 EMERGENCY CONTACT NUMBER 4
4 OTHER GENERAL POLICE NUMBERS 4
5 LOCAL POLICE AND MEDICAL NUMBERS 5
6 BEING PREPARED 5
7 TO GO OR TO STAY? 6
7.1 CHOOSING TO GO - BUILDING EVACUATION 6
7.2 CHOOSING TO STAY AND SEEK SHELTER (SHELTER-IN-PLACE) 7
8 CRIMES OR ATTACKS 7
PART B - SPECIFIC 9
9 FIRE 9
10 EXPLOSION 10
11 HAZARDOUS MATERIAL SPILL/RELEASE 10
12 CYCLONE 11
13 SEVERE THUNDERSTORMS 12
14 EARTHQUAKE 12
15 PSYCHOLOGICAL CRISIS 13
16 SHOOTINGS 13
17 BOMB THREATS 13
18 UTILITY FAILURE 14
19 LIFT MALFUNCTION 16
20 MEDICAL EMERGENCY 16
APPENDIX 1 17
APPENDIX 2 19
APPENDIX 3 22

PART A - GENERAL

1 Introduction

This Emergency Procedures Handbook is prepared by St Hilliers to assist office staff to deal appropriately with emergencies. Emergencies on site are covered by Project-specific Emergency Management Plans.

This publication addresses the most common emergencies and those that are most likely to occur in the future.

Preparation for emergencies is critical for effectiveness.

All St Hilliers personnel should become familiar with the Handbook's contents.

If you are unsure of what you need to do in your building or have any questions, contact your Safety Officer.

EMERGENCY PREPAREDNESS

STAY CALM = STAY SAFE

BE PREPARED

REMEMBER, WHEN YOU HEAR:

- THE STANDARD EMERGENCY WARNING SIGNAL - immediately seek shelter (Shelter-In-Place) in a safe location within closest facility

  The Standard Emergency Warning Signal (SEWS) is a warning siren used in Australia to alert the public of danger. The siren is played over radio, television or public address systems in public places to warn of bushfire, flood, cyclone, tsunami, earthquake or terrorist attack.
- FIRE ALARMS - immediately evacuate the building and move to a safe location

In both cases, you should seek additional clarifying information by all possible means…phone, TV, radio, email, etc.

2 Reporting Emergencies

WHEN TO CALL 000: or 121 from Mobiles

You should call 000 in ALL emergencies

WHAT IS AN EMERGENCY?

An emergency is any immediate threat to life and/or property that requires immediate response from police, fire or ambulance personnel. Your judgment often determines whether an incident is an emergency.

If in doubt, err on the side of safety!

WHEN REPORTING AN EMERGENCY:

- Stay on line with the dispatcher.
- Provide the address, location and a description of the emergency.
- Provide the phone number at your location.

- Provide a thorough description of the incident to ensure the appropriate resources are dispatched.

3 Emergency contact number

Situation	Details	Phone
Emergency (all states)	Police: You or someone else is in immediate danger, the offender is still in the vicinity, or there has been a serious accident. Ambulance: medical emergency Fire Brigade: eg Fire, explosion, Hazardous chemical spill, gas leak	Ph: Triple zero (000) or 121 from mobiles and ask for police and/or Ambulance and/or Fire Brigade as appropriate, remain on the phone until police arrive.
Emergency translation	Translation service for emergency situations only.	Ph: 1300 655 010

4 Other General Police numbers

Organisation	Description	Phone number
Crime Stoppers (all states)	Report illegal activity, or provide information on unsolved crimes anywhere in Australia. You may remain anonymous.	Ph: 1800 333 000 (toll free)
Police attendance NSW / ACT only	You require police assistance, but there is no immediate danger. Report suspicious activity, theft, car accident with no serious injury.	Ph: 131 444
Police attendance at airports	You require police assistance at an airport.	Ph: 131 AFP (131 237)
Emergency translation	Translation service for emergency situations only.	Ph: 1300 655 010

5 Local police and medical numbers

Office	Nearest Police Station	Nearest Doctor
Brisbane	City Police Station 46 Charlotte ST, Brisbane Phone Number: (07) 3258 2582	Brisbane Central Station Medical Practice- Anzac Square 198-202 Adelaide Street, Brisbane, QLD 4000 Telephone: 07 3236 3409
Sydney	132 George St THE ROCKS 2000 Phone: 02 8220 6399 Fax: 02 8220 6303 Open 24 hours	City Medical Practice 2 York Street (Entry via Corner of York and Jamison Streets) Portico Heritage Building Sydney NSW 2000 Telephone : 02 9291 9111 Gateway Quayside Medical Centre 6/1 Macquarie Place, Circular Quay 2000, Sydney NSW 2000 (02) 9241 1577

6 Being prepared

Emergency Alert

Familiarise yourself with the general emergency information at: www.emergencyalert.gov.au

Receiving telephone-based warnings

As described on the Emergency Alert website, the phone number 0444 444 444 has information about a potential emergencies and you may be sent SMS messages about any emergency through this number.

When you call 000 on your mobile, or when you are sent an SMS about an emergency, the emergency system presumes you are at your billing address unless you have given it a different ‘service’ address which is more likely to be your usual physical location.

If you have a mobile phone supplied by St Hilliers, the system will presume you are at your St Hilliers office.

Otherwise, you may wish to notify your telephone provider of the best ‘service’ address for you.

If you are disabled

It is suggested that people with disabilities prepare for emergencies by learning the locations of exit corridors and enclosed stairwells and by informing co-workers of best methods of assistance during an emergency.

There should be one or more ‘buddies’ appointed for every staff member who may need assistance in leaving the building in an emergency.

7 To Go or to Stay?

Different events will result in different decisions. Follow the directions of:

1) Emergency personnel,
2) Your Fire Wardens, or
3) St Hilliers management.

Generally the following will apply:

Leave the Building when you hear the Fire Alarm and for earthquake	***Shelter in the Building when you hear the State Emergency Warning Service (except for earthquake)***
This might be in the case of: Fire Bomb Threat Earthquake Flooding that could restrict exit from building Explosion within the building Hazardous spill within the building Shooting within the building	This might be in the case of: cyclone tsunami external danger or terrorist attack eg: • Explosion outside the building • Hazardous spill outside the building • Shooting outside the building

7.1 Choosing To Go - Building Evacuation

What to do

Evacuate your office or site:

1) When a fire alarm sounds continuously
2) And/or upon notification by emergency personnel, your Fire Wardens or St Hilliers management.

How to do it

1) When the alarm sounds, or when told to leave by a designated emergency official, take only your most important belongings (phone, handbag) walk quickly to the nearest marked exit and ask others to do the same.
2) Alert others to the emergency and ask if they need help in evacuating.
3) DO NOT USE LIFTS during an emergency evacuation. Emergency personnel may use a lift for evacuation or instruct you to do so after review of the circumstances.
4) Be aware of people with disabilities in your area who might require assistance. Be prepared to render assistance if necessary.
5) Leave the building quickly.
6) Once outside, MOVE CLEAR OF THE BUILDING ALLOWING OTHERS TO EXIT.
7) DO NOT return to an evacuated building until advised you may do so by emergency personnel.

IF YOU HAVE A DISABILITY WHICH CAUSES YOU TO BE UNABLE TO EVACUATE

Stay calm, and take steps to protect yourself. If there is a working telephone, call 000 and tell the emergency dispatcher where you are or where you will be moving.

If you must move:

1) Move to an exterior enclosed stairwell.
2) Request persons exiting by way of the stairway to notify the Fire Department of your location.
3) As soon as practical, move onto the stairway and await emergency personnel.

7.2 Choosing to stay and seek shelter (Shelter-In-Place)

You may be required to Shelter In Place for events such as a Cyclone, other Severe Weather, Building Intruder, or external Hazardous Materials release.

What to do

When notified, you should seek immediate shelter inside a building (preferably in a room with no windows). Seek inside shelter if outside.

Do not leave the building until you are told that it is safe to leave (unless instructed by emergency service personnel). Call 000 if appropriate (eg location-specific problem rather than a general emergency).

How to do it

1) Proceed to the basement of your building or (depending on distance and time from arrival of emergency event) the nearest concrete building that has a basement. Occupants of wood-frame or brick buildings with wood floors should leave the building and go directly to a more substantial concrete building, preferably with a basement.
2) In high-rise (four stories or more) buildings, vacate the top floor and move to the basement or if this is not possible to a lower floor.
3) Close all doors and windows to the outside.
4) Position yourself in an interior corridor away from glass, preferably near the building core eg lift shafts. Be prepared to kneel facing the wall and cover your head.
5) If a HAZMAT event occurs or is feared,

a) seal off openings to your room if possible, including vents & ducts

b) Do not use lifts as they may pump air into or out of the building

6) Do not go outside or attempt to drive unless you are specifically instructed to evacuate.

Remain in place until Police, Fire, or other Emergency Response officials tell you it is safe to leave or until information is announced through radio or television broadcasts alerting you that it is safe to leave.

8 Crimes or Attacks

HOW TO REPORT A CRIME

If the crime is an emergency that would require immediate police and/or medical response, dial “000.”

REPORTING CRIMES IN PROGRESS

If you are a victim or a witness to any in-progress criminal offence:

1) Protect yourself first.
2) Call 000.

Give your name and location. The dispatcher should be told that the incident is in progress. You should attempt to provide as much of the following information as possible:

1) Nature of the incident. MAKE SURE the dispatcher understands that the incident is in progress!
2) Location of the incident.
3) Description of suspects involved.
4) Injuries that have occurred.
5) Description of any weapons involved.
6) Description of property involved.

Stay on the line with the dispatcher until help arrives. Keep the dispatcher updated on any changes so responding units can be updated. Even if you cannot communicate, keep the line open. The dispatcher may be able to learn more about what is happening.

REPORTING CRIMES NOT IN PROGRESS

If you have become a victim of a crime and it is not an emergency or life-threatening situation, telephone the local jurisdictional Police Department; be prepared to provide at least the following information:

1) Your name.
2) Your address.
3) Your telephone number.
4) A brief synopsis of what occurred.
5) Your exact location at the time of the call

PART B - SPECIFIC

9 FIRE

KNOW THE LOCATIONS OF FIRE ALARMS.

KNOW WHERE THE FIRE EXITS ARE LOCATED AND ENSURE THEY ARE FREE OF OBSTRUCTIONS!

In all cases when a staff member becomes aware of fire and or smoke, the fire wardens MUST be notified immediately.

If they cannot be contacted immediately, go to the nearest safe location and activate the fire alarm system, or shout the alarm as you evacuate the building. If possible, telephone 000 after you exit the building.

Give them the following information:

1) Name of the building or Site
2) Location of the fire within the building or Site.
3) A description of the fire and (if known) how it started.

Evacuate the building following the established building evacuation procedures (see above).

Know the location of fire exits and alarm systems in your area, and know how to use them.

If you become trapped in a building during a fire:

1) Stay calm, and take steps to protect yourself.
2) If possible, move to a room with an outside window.
3) If there is a telephone, call 000 and tell the dispatcher where you are. Do this even if you can see fire department personnel from the window.
4) Stay where rescuers can see you through the window, and wave a light-coloured item to attract their attention.
5) Stuff clothing, towels or paper around the cracks in the door to your area to help keep smoke out.
6) Be patient. Rescue of occupants within large structures will take time.

If any sprinkler, heat detector, or pull station is activated, an alarm will sound throughout the building. Some smoke detectors will also activate the building alarm.

Lift Fire Control may cause the building lifts to come to a halt at the main floor upon activation of the fire alarm system. The lifts can be accessed by emergency personnel using a key override.

DO NOT attempt to use the lifts to evacuate any building.

Emergency lighting is provided in some buildings. In this case, the lighting will activate automatically in a power failure and last for a minimum of 20 minutes.

Illuminated exit signs are provided throughout the buildings.

10 EXPLOSION

In the event of an explosion or similar emergency, take the following action:

1) Immediately take cover under tables, desks, etc., which will provide protection from falling glass or debris.
2) Phone 000. Give them the following information:
   a) Location.
   b) Area where explosion occurred.
   c) Cause of explosion, if known.
   d) Injuries.

BEFORE YOU HANG UP, MAKE SURE THE 000 DISPATCHER HAS ALL THE INFORMATION NEEDED.

3) Evacuate the area as soon as it is safe to do so, following established building evacuation procedures (See (1) Choosing To Go - Building Evacuation).

11 HAZARDOUS MATERIAL SPILL/RELEASE

For spills, releases or incidents requiring special training, procedures or personal protective equipment (PPE) that is beyond the abilities of present personnel, take the following steps:

1) Immediately notify affected personnel and evacuate the spill area. Pull the fire alarm if building evacuation is required.
2) Call 000 to report the incident.
3) Give the operator the following information:
   a) Your name, telephone number, and location.
   b) Time and type of incident.
   c) Name and quantity of the material, if known.
   d) Extent of injuries or damage, if any.
4) Evacuate the affected area at once and seal it off to prevent further contamination of others until the arrival of emergency personnel.
5) Anyone who is contaminated by the spill should wash off the contamination; remain in the vicinity, and give his/her name to the emergency personnel. If needed, first aid can be started immediately.
6) No effort to contain or clean up spills and or releases should be made unless you have been trained in the proper methods to do so.
7) Take appropriate steps to make sure no one evacuates through the contaminated area.
8) If an alarm sounds, follow established building evacuation procedures (see Building Evacuation).
9) Do not re-enter the area until directed by emergency personnel.

12 Cyclone

Cyclone season in Australia is between November and May.

Cyclones are categorised according to their strength. There are 5 categories: Category 1 is the weakest and Category 5 is the strongest.

Category	Wind Gusts	Ocean Swells	Damage
1	Up to 125km/hr ***Gales***	1.2 – 1.6m	Slight damage Trees and farmland damaged.
2	126 – 169km/hr ***Destructive***	1.7 – 2.5m	Significant Damage Minor house damage. Severe damage to signs and trees. Heavy damage to crops
3	170 – 224km/hr ***Very Destructive***	2.6 – 3.7m	Structural damage House roofs and most likely power failures
4	225 – 279km/hr ***Very Destructive***	3.8 – 5.4m	Significant roofing and structural damage Airborne debris, widespread power failure
5	Winds above 280km/hr ***Very Destructive***	More than 5.5m	Almost total destruction and extremely dangerous Houses flattened, cars over turned

cyclones may occur with little or no advance warning or siren activation.

EMERGENCY ACTION

1) Avoid automobiles and open areas.
2) Move to a basement or corridor.
3) Stay away from windows.
4) Do not call 000 unless you require emergency assistance.

A. Before the Storm

1) Locate a basement or corridor shelter location in your building.
2) Stay informed through local media sources on days when severe weather is expected.
3) Obtain a Radio with battery backup to receive warnings.
4) Keep a good reliable flashlight in your office/work area.

You are always advised to stay indoors during the passing of the eye of the storm, because the cyclone will continue. Always listen for the official word that the cyclone has passed and when it is safe to leave your shelter.

When going outside, be aware of fallen powerlines, debris and damage left behind after the cyclone.

A cyclone WARNING

A "cyclone Warning" indicates that a cyclone has been sighted and poses a definite threat to a given area. If the warning is for your area you should take shelter immediately!

ALL HAZARDS WARNING SIGNALS

Outdoor sirens will sound for a period in excess of two minutes. When this occurs, tune into local radio and TV stations to determine the nature of the emergency.

A voice message will be broadcast over WBAA, the St Hilliers television antenna system, and other local radio and television stations.

The ALL CLEAR signal is announced by radio and television stations. The sirens remain silent.

13 SEVERE THUNDERSTORMS

The National Weather Service issues severe thunderstorm watches and warnings. Remember that cyclones are spawned from severe thunderstorms.

14 EARTHQUAKE

The procedures to deal with an earthquake are much less specific. Since earthquake magnitude cannot be predetermined, everyone must initiate emergency precautions within a few seconds after the initial tremor is felt, assuming the worst possible case.

The best earthquake instruction is to take precautions before the earthquake (e.g., move into an open outside area, or if inside, secure or remove objects above you that could fall during an earthquake).

EMERGENCY ACTION

1) Take cover.
2) Call 000 if emergency assistance is necessary.
3) Evacuate if alarm sounds or if told to do so by emergency personnel.

A. During the earthquake:

1) Remain calm, don't react.
2) If indoors, seek refuge under a desk or table or in a doorway and hold on. Stay away from windows, shelves, and heavy equipment.
3) If outdoors, move quickly away from buildings, utility poles, overhead wires, parking garages and other structures. CAUTION: Avoid downed power lines as they may be live. Do not attempt to enter buildings until you are advised to do so by the proper authorities.
4) If in an automobile, stop in the safest place available, preferably an open area away from power lines and trees. Stop as quickly as safety permits and stay in the vehicle for the shelter it provides.

B. After the initial shock:

1) Be prepared for aftershocks. Aftershocks are usually less intense than the main quake, but can cause further structural damage.
2) Protect yourself at all times.
3) Evaluate the situation and call 000 for emergency assistance, if necessary.
4) Do not use lanterns, torches, lighted cigarettes, or open flames, since gas leaks could be present.
5) Open windows, etc., to ventilate the building. Watch out for broken glass.
6) If a fire is caused by the earthquake, implement the FIRE PROCEDURES.
7) Determine whether anyone has been caught in the lifts or was trapped by falling objects. If so, call 000.
8) If the structural integrity appears to be deteriorating rapidly, evacuate the building.

DO NOT USE THE TELEPHONE UNLESS IT IS NECESSARY FOR EMERGENCIES.

Heavy use of the telephone will tie up the lines and prevent emergency calls from going out.

C. Damaged facilities should be reported to Emergency Dispatch. (NOTE: Gas leaks and power failures create special hazards. Please refer to the section of the handbook on UTILITY/LIFT MALFUNCTION.)

D. If an emergency exists, call 000.

E. If the evacuation alarm sounds, follow established building evacuation procedures (see BUILDING EVACUATION).

F. Should you become trapped in a building, stay calm!

1) If a window is available, place an article of clothing (shirt, coat, etc.) outside the window as a marker for rescue crews.
2) If there is no window, tap on the wall at regular intervals to alert emergency crews of your location.
3) Emergency Personnel will check buildings after a major quake.

15 PSYCHOLOGICAL CRISIS

A psychological crisis exists when an individual is threatening harm to himself/herself, or is agitated and disruptive.

If a psychological crisis occurs, contact Police at 000.

In an unusual or potentially dangerous situation, remember the following:

1) Never try to handle a situation that you feel might be dangerous. Call the Police.
2) Give your name, location, and state the nature of the problem.

16 SHOOTINGS

If notified of an “active shooter,” take the following steps:

1) Protect yourself. Take cover immediately – lock or barricade yourself and others inside a secure area, if possible.
2) Call 000. Remain out of sight from the suspects if possible. Report the suspect(s) movement to 000 Dispatcher and provide description(s) if possible.
3) Evacuate if safe to do so, or if instructed to do so by emergency responders.

17 BOMB THREATS

All bomb threats must be treated as a serious matter. To ensure the safety of staff and the general public, bomb threats must be considered real until proven otherwise. In most cases, bomb threats are meant to disrupt normal activities. The procedures described below should be implemented regardless of whether the bomb threat appears real or not.

EMERGENCY ACTION

All personnel should acquaint themselves with the following procedures:

STAY CALM.

If a phone call bomb threat is received:

1) DO NOT put the caller on hold.
2) DO NOT attempt to transfer the call.
3) DO NOT HANG UP THE PHONE THAT THE CALL CAME IN ON. If possible have someone else use another phone to call 000.

4) Pay particular attention to background noises, such as running motors, music, or any other noises that may indicate the location from which the call is being made.
5) Listen closely to the voice to determine voice quality, accents, speech impediments, gender, or any unusual characteristics.
6) Complete the BOMB THREAT CHECKLIST. Checklist is located at Appendix 2.

and/or

If a suspicious object or potential bomb, is observed:

1) Don't touch it!
2) Evacuate the area AND CALL 000. Be sure to include the location and appearance of the object when reporting.

It is highly recommended that all St Hilliers personnel become familiar with the Bomb Threat Checklist. Keep the checklist close to the phone.

If an evacuation alarm sounds, follow established building evacuation procedures

18 UTILITY FAILURE

If you discover a major water leak, gas leak, or other major utility failure, call 000. Do not attempt to correct the problem on your own.

The Emergency Dispatcher will notify the necessary maintenance personnel, clean up, and insurance representatives.

Please do not call the Police Department for information concerning a utility failure unless you have an emergency.

Electrical/Light Failure

EMERGENCY ACTION

1) Remain calm.
2) Do not call 000 for information concerning utility failures unless you have an emergency.
3) Call 000 if you are injured or require emergency assistance.

Some buildings may not be equipped with emergency lighting or the emergency lighting may not provide sufficient illumination for safe exiting. It is recommended that you consider keeping a flashlight and a portable radio in your office/work area.

Plumbing Failure/Flood/Water Leak

Cease using all electrical equipment.

Natural Gas Leak

Cease all operations, exit the area immediately, and call 000. Do not attempt to correct the problem yourself. Do not concern yourself with appliances or equipment. Leave the area immediately.

Electricity

Emergency Lines – see Gas and Electricity below

Check by postcode for local energy distributor: see

http://www.energyaustralia.com.au/about-us/help-centre/contact-us/faults-emergencies

1) Head Office in Sydney

   Ausgrid emergency services – Ph 13 13 88

2) Queensland Office

   Either Citipower Ph: 13 12 80 www.citipower.com.au

Or Energex : 136 262 www.energex.com.au

Gas and Electricity

For major incidents where there is risk to life or property, call 000.

Call Energy Australia on 133 466 Monday - Friday, 8am - 6pm (AEST) Outside these hours, call the following 24-hour emergency services:

Queensland			
Gas	Envestra	1800 808 526	www.natural-gas.com.au
Gas	APT Allgas	1300 763 106	www.apa.com.au
Electricity - Loss of supply	Energex	13 62 62	www.energex.com.au
Electricity - Loss of supply	Ergon	13 22 96	www.ergon.com.au
Electricity - Emergencies	Energex	13 19 62	www.energex.com.au
Electricity - Emergencies	Ergon	13 16 70	www.ergon.com.au
Natural Gas - Gas leak or emergency	AGL Smarter Living (formerly AGL Assist)	1300 763 106	
LPG - Emergencies / faults	AGL Smarter Living (formerly AGL Assist)	1300 763 342	

New South Wales			
Gas	Envestra	1800 676 300	www.natural-gas.com.au
Gas	Jemena Gas Networks	131 909	www.jemena.com.au
Electricity	Endeavour Energy	131 003	www.endeavourenergy.com.au
Electricity	Ausgrid	131 388	www.ausgrid.com.au
Electricity	Essential Energy	132 080	www.essentialenergy.com.au
Hot water emergency	AGL Smarter Living (formerly AGL Assist)	131 404	

19 LIFT MALFUNCTION

If you become trapped in a lift, remain calm. Use the emergency telephone or activate the lift emergency bell within the lift car.

1) Give building location
2) Tell where car is stopped
3) Tell if medical emergency exists

Before you hang up, make sure the dispatcher has all the information they need.

Lifts have mechanical safety brakes that will operate in all situations, even during power failures.

DO NOT ATTEMPT TO LEAVE A LIFT THAT HAS STOPPED BETWEEN FLOORS. IF IT STARTS UP AGAIN WHILE YOU ARE LEAVING IT YOU COULD BE CRUSHED.

If you are not inside the lift but hear a lift bell, please take the following actions.

See if you are able to be heard from outside the lift. Otherwise,

1) Call the lift company.
2) Give the emergency dispatcher the following information:
   a) Name of the building.
   b) Location within the building of malfunctioning lift.
   c) Whether a medical emergency exists.

Before you hang up, make sure the dispatcher has all the information they need.

3) Keep the occupants calm and wait for help to arrive.

20 MEDICAL EMERGENCY

Do not move the patient unless safety dictates.

FIRST AID

If you provide first aid, consider the following:

1) Is immediate action needed in order to save a life?
2) Will I place myself in harm or jeopardy?

FIRST AID IS MINOR CARE ONLY . . . DO NOT JEOPARDIZE YOUR HEALTH OR THE HEALTH OF THE PATIENT. WAIT FOR PROFESSIONAL HELP IF YOU ARE NOT ABLE TO PROVIDE FIRST AID SAFELY OR ARE NOT TRAINED IN FIRST AID.

1) Dial 000.
2) Provide:
   a) Your name and telephone number.
   b) Location of the emergency (Building and Room Number).
   c) The extent of the accident/injury and number of people involved.
   d) Location where someone will meet the ambulance for directing personnel to the injured.
3) Notify the supervisor in the area immediately.

The individual making the call should continue to stay on the phone with the dispatcher and answer as many questions as possible regarding the condition of the injured person so that information can be forwarded to the responding emergency personnel.

Medical emergencies should not be transported in personal or St Hilliers vehicles.

APPENDIX 1

Supplemental Evacuation Guidelines for People with Disabilities

The following guidelines have been adopted by St Hilliers to assist in planning for the evacuation of people with physical disabilities.

In all emergencies, after an evacuation has been ordered:

1) Evacuate if possible.
2) DO NOT use lifts, unless authorized to do so by emergency services personnel.
3) Check on people with special needs during an evacuation. A “buddy system,” where people with disabilities arrange for volunteers (co-workers) to alert them and assist them in an emergency, is recommended.
4) Only attempt an emergency evacuation if you have had emergency assistance training or the person is in immediate danger and cannot wait for emergency services personnel.
5) ALWAYS ASK someone with a disability how you can help before attempting any emergency evacuation assistance. Ask how he or she can best be assisted or moved, and whether there are any special considerations or items that need to come with the person.
6) If you have a physical disability and are unable to use stairways:
7) Stay calm, and take steps to protect yourself.
8) If there is a working phone, call 000 and tell the police dispatcher where you are or where you will be moving to.

If you must move, we recommend the following:

a) Move to an enclosed exit stairway, while taking care not to block the exit of building personnel.
b) Request persons exiting by way of the stairway to notify the Fire Department of your location.
c) Await Emergency Responders.

Power Outages:

1) If an outage occurs during the day and people with disabilities choose to wait in the building for electricity to be restored, they can move near a window where there is natural light and access to a working telephone. During regular business hours, Building Deputies should be notified so they can advise emergency personnel.
2) If people would like to leave and an evacuation has been ordered, or if the outage occurs at night, call 000 and request evacuation assistance.
3) The following guidelines are general and may not apply in every circumstance.
4) Occupants should be invited to volunteer ahead of time to assist people with disabilities in an emergency. If a volunteer is not available, designate someone to assist who is willing to accept the responsibility.
5) Two or more trained volunteers, if available, should conduct the evacuation.
6) ALWAYS ASK people with disabilities how you can help before attempting any emergency evacuation assistance. Ask how they can best be assisted or moved, and if there are any special considerations or items that need to come with them.
7) Try to avoid evacuating people who use wheelchairs while they are still in their wheelchairs. This is standard practice to ensure the safety of people with disabilities and volunteers. Wheelchairs will be evacuated later if possible.
8) Proper lifting techniques (e.g. bending the knees, keeping the back straight, holding the person close before lifting, and using leg muscles to lift) should be used to avoid injury to rescuer’s backs. Certain lifts may need to be modified, depending on the disabilities of the people. Volunteers can obtain more emergency evacuation information regarding lifting techniques from the Affirmative Action Office.

Tips to remember when interacting with people with specific disabilities

Blindness or Visual Impairment

1) Provide verbal instructions to advise of the safest route or direction using simple directions, estimated distances, and directional terms.
2) DO NOT grasp a visually impaired person's arm. Ask if he or she would like to hold onto your arm as you exit, especially if there is debris or a crowd.
3) Give other verbal instructions or information (i.e. lifts cannot be used).

Deafness or Hearing Impairment

1) Get the attention of a person with a hearing impairment by establishing eye contact. If the person's back is toward you, tap him/her on the shoulder to get his/her attention. Clearly state the problem. Gestures and pointing are helpful, but be prepared to write a brief statement if the person does not seem to understand.
2) Offer visual instructions to advise of safest route or direction by pointing toward exits or evacuation maps.

Mobility Impairment

1) It may be necessary to help clear the exit route of debris (if possible).
2) If people with mobility impairments cannot exit, they should move to a safer area, e.g. Most enclosed stairwells.
3) An office with the door shut which is a good distance from the hazard (and away from falling debris in the case of earthquakes).
4) Call 000 or notify police or fire personnel immediately about any people remaining in the building and their locations.
5) Police or fire personnel will decide whether people are safe where they are, and will evacuate them as necessary. The Fire Department may determine that it is safe to override the rule against using lifts.
6) If people are in immediate danger and cannot be moved to a safer area to wait for assistance, it may be necessary to evacuate them using an evacuation chair or a carry technique.

Summary

Prepare occupants in your building ahead of time for emergency evacuations.

Know your building occupants. Train staff, faculty, and students to be aware of the needs of people with disabilities and to know how to offer assistance. Hold evacuation drills in which occupants participate, and evaluate drills to identify areas that need improvement. Plans must cover regular working hours, after hours, and weekends. Everyone needs to take responsibility for preparing for emergencies. People with disabilities should consider what they would do and whether they need to take additional steps to prepare.

APPENDIX 2

BOMB THREAT CHECKLIST

STAY CALM

QUESTIONS TO ASK:	RESPONSE
EXACT WORDS USED TO MAKE THE THREAT (if possible):	
Time of Call	
1) WHEN IS THE BOMB GOING TO EXPLODE?	
2) WHERE IS THE BOMB LOCATED?	
3) WHAT WILL MAKE THE BOMB EXPLODE?	
4) WHAT DOES THE BOMB LOOK LIKE?	
5) WHAT KIND OF BOMB IS IT?	
6) WHO PUT THE BOMB HERE?	

QUESTIONS TO ASK:	RESPONSE
7) WHY?	
8) WHAT IS YOUR NAME?	
9) WHERE ARE YOU CALLING FROM?	
DESCRIPTION OF CALLER'S VOICE:	
	☐ MALE ☐ FEMALE
	☐ YOUNG ☐ MIDDLE AGED ☐ OLD
	☐ CALM ☐ EXCITED
	☐ SLOW ☐ FAST
	☐ SOFT ☐ LOUD
	☐ CLEAR ☐ MUFFLED ☐ SLURRED
OTHER:	
Accent? (Describe)	

QUESTIONS TO ASK:	RESPONSE
IF THE VOICE SOUNDED FAMILIAR, WHO DID IT SOUND LIKE?	
YOUR NAME:	
YOUR TELEPHONE NUMBER:	

APPENDIX 3

Prohibition of Violence in the Workplace Policy

St Hilliers's policy prohibiting violence in the workplace and is effective immediately. This policy supersedes any prior inconsistent oral or written policy of St Hilliers.

I. General Policy Statement

St Hilliers is committed to providing staff and visitors a safe and healthy environment. Accordingly, St Hilliers prohibits acts of violence or threats of violence in the workplace. This prohibition extends to persons conducting business with St Hilliers, or visiting St Hilliers, even though such persons are not directly affiliated with St Hilliers.

II. Definitions

1) An act of violence is conduct that intentionally or recklessly causes bodily injury to another person or damage to property.
2) A threat of violence includes any behaviour that could be interpreted by a reasonable person as an intent to cause physical harm to another person or damage to property.
3) Workplace means all St Hilliers offices, sites and other locations where an employee is engaged in St Hilliers business.

III. Reporting Requirements

1) Employee involvement is essential to preventing acts or threats of violence in the workplace. Each employee is therefore responsible for immediately reporting to his or her supervisor or manager, any such act or threat.
2) St Hilliers will ensure that all reports of workplace violence are treated confidentially to the maximum extent possible.
3) Anyone who experiences, observes, or otherwise knows of an imminent act or threat of violence should immediately call the Police Department at 000.

IV. Investigations

St Hilliers will promptly and thoroughly investigate all threats or acts of violence in the workplace.

V. False Charges

Bringing a knowingly false charge under this policy is prohibited and can result in disciplinary action.

VI. Retaliation

Retaliation against anyone for reporting a violation of this policy or for cooperating in an investigation under this policy is prohibited and can result in disciplinary action.

Retaliation includes, but is not limited to, acts of reprisal, interference, restraint, penalty, discrimination, intimidation, or harassment against an individual or group.

VII. Weapons

St Hilliers will strictly enforce rules against possessing or storing weapons in the workplace. Bringing a weapon to the workplace will involve instant dismissal.

VIII. Sanctions

Any employee who violates this policy will be subject to disciplinary action, up to and including termination. Further, St Hilliers will support criminal prosecution or other remedial action against any person who violates this policy.

ENVIRONMENTAL MANGEMENT POLICY

OUR RESPONSIBILITY

St Hillers is committed to ensuring that we encourage best practice environmental management through planning, commitment and continuous improvement in line with ISO 14001, legislative, regulatory, and contractual requirements and provide a framework for the implementation of instructions and processes to ensure that all environmental requirements are met.

OUR COMMITMENT

St Hilliers aims to develop and implement best practice environmental targets and objectives to reduce our impacts on the environment through:

- identifying the potential for, and responding to, Environmental Incidents, accidents and emergency situations and take corrective action;
- identifying and controlling possible environmental hazards associated with the Works and the our Subcontractor's Activities;
- establishing procedures to ensure that hazardous substances are stored in accordance with legislative requirements;
- recognise and protect any special environmental characteristics of the Site (including cultural heritage significance);
- define roles and responsibilities for our personnel;
- ensure environmental training and awareness programmes are provided to employees and subcontractors;
- define how the management of the Environment during the Contractor's Activities is reported and performance is evaluated;
- ensure monitoring procedures are implemented to identify impacts on the Environment as a result of the Works and the Contractor's Activities;
- implement complaint reporting procedures and maintain records of complaints and response to complaints; and
- establish and maintain programs and procedures for periodic Environmental audits to be carried out;

St Hilliers will ensure consultation and cooperation with all stakeholders to meet this objective.

St Hilliers Senior management Team is committed to, and responsible for the implementation of this policy, and it will be reviewed annually.

Tim Casey

Executive Chairman
St Hilliers Property Pty Ltd

16th March 2015

HOT AND COLD ENVIRONMENT POLICY

COMMITMENT

St Hilliers is committed to implementing and establishing appropriate measures to eliminate or control risks to employees who work in hot or cold environments. This commitment is made in accordance with the relevant Work Health and Safety Legislation and Codes of Practice for those States and Territories in which St Hilliers operates including from time to time New South Wales, Australian Capital Territory, Victoria, Queensland, South Australia and Western Australia.

RESPONSIBILITY

St Hilliers recognises and accepts its responsibility in ensuring that it takes a proactive and consultative approach in ensuring our obligations are met in hot and cold environments.

TEAM EFFORT

St Hilliers understands that safety is a team effort involving all employees at all levels including Subcontractor management and employees.

All employees are expected to demonstrate a willingness to participate and adhere to hot and cold safety policies and procedures so that working conditions and work practices will not give rise to more serious problems.

ST HILLIERS OHS CONSULTATION WITH EMPLOYEES

St Hilliers will respond and address any concerns about hot and cold work environments raised by employees by conducting a risk assessment of the area of concern. This will be carried out in accordance with relevant State/Territory Legislation, Codes of Practice and in consultation with employees impacted by such environments.

SUBCONTRACTOR HOT AND COLD ENVIRONMENT POLICY, JSA/ SWMS, CONSULTATION

The Subcontractor will take responsibility for ensuring that they establish a Subcontractor's Company Hot and Cold Environment Policy in consultation with their employees.

Subcontractors will include Hot and Cold Environment procedures as part of the Job Safety Analysis and/or Safe Work Method Statement applicable to State Legislation requirements.

Any concerns or issues concerning the Hot and Cold Environment may be raised through the Subcontractor's Employee Supervisor and/or OHS Representative/HSR and/or Safety Committee/DWG.

Subcontractors must provide UV protection such as appropriate PPE and sunscreen to their employees.

ST HILLIERS CONSTRUCTION PROVIDES

St Hilliers provides the following in managing hot and cold environments on its project sites:

- Air-conditioned lunch sheds and change rooms.
- Boiling and drinking water, refrigerators and food warming facilities in the lunch sheds.
- Water bubblers at various locations throughout the site.
- Sunscreen SPF+30 is available through nominated site locations as indicated in the Site Induction and/or Site Safety Management Plan.
- Appropriate Personal Protective Equipment to St Hilliers employees.

IN CONCLUSION

St Hilliers expects a personal commitment to safety from management and employees, including Subcontractors. It places highest priority on the achievement of safe workplaces, including the physical and psychological well-being of all its employees.

Tim Casey

Executive Chairman

St Hilliers Property Pty Ltd

8th February 2012

ST HILLIERS INDIGENOUS PARTICIPATION POLICY

St Hilliers acknowledges the need to increase opportunities for Indigenous employment and the involvement of Indigenous-owned businesses within our supply-chain network, in line with Commonwealth Indigenous Procurement Policy (IPP) Guidelines.

To not only achieve the minimum requirements, but to strive to exceed them, St Hilliers is committed to increasing the Indigenous skills and economic participation in our projects through the following initiatives,

Initiatives to maximise the participation of Indigenous Businesses in our projects, St Hilliers will:

- As part of our procurement plan, consult national Indigenous resource registers such as the Supply Nation and Black Business Finder for businesses that have the potential capacity and capability to meet the requirements of the procurement and invite tenders from these businesses.
- Build on existing relationships with Indigenous businesses in the regions to develop work packages around their capabilities.
- As part of project start-up activities, meet with local Indigenous groups to identify opportunities for involvement of Indigenous business.

and

Initiatives to facilitate the employment of Indigenous Australians on our projects will include:

- Consultation with the local Indigenous community to identify pathways for involvement of Indigenous people.
- Liaise with established networks promoting the employment of Indigenous resources. There are a number of local groups & businesses that place Indigenous jobseekers into businesses either as casual or permanent employees and provide ongoing support
- Encourage existing employees to identify their Indigenous Heritage.
- Provide opportunities for Indigenous employees to attain a formal qualification during their time on our projects, through funded TAFE course(s) or similar, upskilling them to increase future employment opportunities.
- Facilitate positive Indigenous employment initiatives through subcontract arrangements.
- Recruit, as appropriate, project staff who have Indigenous Heritage.

St Hilliers Indigenous Participation Policy shall be reviewed annually within the Corporate Services Group to ensure the Policy remains compliant with State legislation in regards to workplace diversity, equal opportunity and the APIC guidelines.

Tim Casey

Executive Chairman
St Hilliers Property Pty Ltd

LOCAL INDUSTRY PARTICIPATION POLICY

St Hilliers is committed to the principles of sustainable development using the St Hilliers sustainability framework as a guide.

In our procurement decision making processes we provide full, fair and reasonable opportunity for local industry to contribute to our activities subject to satisfying relevant prequalification requirements. We will actively promote initiatives to upskill the local workforce and create employment opportunities in the regions we work, this being critical in providing legacy benefits to the community.

St Hilliers is committed to early communication with the local business communities to maximise the potential for local industry participation, and to regularly audit St Hilliers' Local Industry Participation Policy outcomes.

Scope

This policy applies to all St Hilliers activities regardless of geographic location. Federal & State specific policies and strategies shall be developed in compliance with this Policy, taking into consideration all legal and regulatory requirements.

Procurement Activities

To implement and comply with this policy St Hilliers shall:

- Be proactive with local companies by providing briefings as early as possible to maximise the potential local sourcing opportunities
- Identify capable local Subcontractors & Suppliers of goods and services for projects
- Develop and implement a Local Industry Participation Plan for every Project which outlines the
- Project's specific approach to the engagement with, and use of, competitive local Subcontractors & Suppliers
- Ensure that local capabilities are considered during development of work scopes so as to enhance local content without impacting economic returns
- Provide full, fair and reasonable opportunity for local industry Consultants, Subcontractors& Suppliers to prequalify for work on each project
- Make all major prequalified tenderers aware of St Hilliers' Local Industry Participation Policy and require this policy to be appropriately reflected in the Subcontractors resourcing and purchasing strategies
- Ensure competitiveness of potential Suppliers to each project by prequalifying tenderers where qualified bidders are available
- Commercially evaluate competitive tenders inclusive of environment, health, safety, life cycle costs, quality, delivery, price, service and socio-economic factors.
- Where comparative tenders are commercially competitive and technically acceptable, give preference to those tenderers, that maximise local content in both labour and materials
- Work with government, industry representative bodies and communities to improve local industry participation, capability and competitiveness

Training & Employment

To implement and comply with this policy St Hilliers shall:

- Engage early with local training organizations, including group trainers, to identify local industry capability to meet project benchmarks for trainee and apprentice participation.
- Create initiatives to provide increased opportunities for local trainees and apprentices where possible, through both direct engagement with St Hilliers and through our subcontract partners.

Accountability for the application of this policy lies with the Executive Chairman in conjunction with Project Teams.

Tim Casey

Executive Chairman
St Hilliers Property Pty Ltd

25th September 2018

QUALITY POLICY

St Hilliers policy to is to deliver its Clients quality construction projects nationally through the following policy commitments:

St Hilliers is committed to:

- Maintaining it's quality management systems that is accredited to AS/NSZ ISO 9001,
- Ensuring on-going review and systems improvement through regular third party auditing to ensure continual improvement of the IMS and it's Quality aspects
- Providing adequate resources to implement, manage and maintain the Quality System
- Utilise the best quality products and services in the delivery of projects at a competitive cost
- Encourage Employees to integrate the Quality System into the way St Hilliers work
- Encourage Subcontractors to incorporate and adopt compliant procedures into the delivery of their materials, products and services
- Fostering positive relationships with Clients, Subcontractors and Suppliers to improve overall quality of delivery
- Ensuring as far as practicable the delivery is on time, on budget, and compliant with applicable legislation, codes, specifications, and standards
- Set achievable and consistent targets and objectives
- Strive to deliver defect free construction, first time, every time.

Management will ensure it monitors and observes the quality policy.

Management will promote all initiatives to attain and achieve genuine quality, ensuring Stakeholder consultation including Employees, Clients, Subcontractor and Suppliers throughout delivery.

Tim Casey

Executive Chairman
St Hilliers Property Pty Ltd

RISK MANAGEMENT POLICY

St Hilliers is aware of the obligation to develop, implement, maintain and improve risk and opportunity management systems. This Risk Management Policy constitutes the commitment of all management and employees to risk management.

St Hilliers will ensure that it will consult with all relevant Stakeholders (including Employees, Clients, and the public) that could be affected by our business operations to ensure informed and effective risk management.

This commitment includes:

- Understanding and managing the risks associated with meeting business objectives from a Corporate level and down through to daily site operations;
- Identifying and evaluating opportunities in the context of implementing adequate controls based around risk
- Utilising risk management to ensure better management decisions are made and implemented;
- Ensuring Employees are provided with on-going and up-to-date training on risk management policies and procedures;
- Ensuring adequate resources are provided to manage risk and reduce as far as practicable the likelihood and consequence of incidents, accidents and injuries within the organisation and the works performed both by St Hilliers employees and those employed on our sites;
- Ensuring risk management is incorporated into our everyday practices and business processes to improve our business;
- Ensuring there is a robust business appropriate risk assessment (HIRAC) and reporting system;
- Ensuring Employees are active participants in the risk management processes and procedures, and have comfort in reporting situations that require assessment and control;
- Ensure on-going and adequate monitoring, reviewing and improvements of the system within the business as a result of trends, legislative requirement changes, industry and company development, or as a result of any incident, accident or injury. This to include conducting both regular internal audits, external audits and implementing actions where required in a timely manner;
- Utilising risk management to make better company decisions
- Ensuring Hazards and risk are managed utilising the Company HIRAC (Hazard Identification, Risk Assessment & Control) methodologies in a timely and efficient manner
- Ensuring on-going and continual review at a Corporate and Site based level to ensure the effectiveness of the HIRAC methodologies.

Tim Casey

Executive Chairman
St Hilliers Property Pty Ltd

22nd November 2016

B.13 - Appendix B - Traffic & Pedestrian Management Plan

TRAFFIC MANAGEMENT PLAN

PROJECT NAME

KENT ROAD, PUBLIC SCHOOL MAIN WORKS

PRINCIPAL CONTRACTOR

ST HILLIERS

BESTPRACTICE CERTIFICATION ISO9001 QUALITY MANAGEMENT SYSTEM

BESTPRACTICE CERTIFICATION ISO14001 ENVIRONMENT MANAGEMENT SYSTEM

BESTPRACTICE CERTIFICATION AS4801 OH&S MANAGEMENT SYSTEM

BESTPRACTICE CERTIFICATION OHSAS18001 OH&S MANAGEMENT SYSTEM

TABLE OF CONTENTS

TABLE OF CONTENTS **2**

PROJECT OVERVIEW **4**

1.1.1 ABBREVIATIONS *5*
1.1.2 REFERENCES *5*
EXECUTIVE SUMMARY 6

PROJECT DETAILS **7**

1.1.3 PRINCIPALS DETAILS *7*
1.1.4 PRINCIPAL CONTRACTOR'S CONTACTS *7*
1.1.5 TRAFFIC CONTROL CONTRACTOR'S CONTACTS *7*

DESCRIPTION OF PROPOSED WORKS AND LANE/ROAD CLOSURES: **8**

1.1.6 WORKING HOURS & WORK SITE DELIVERIES *8*

IDENTIFICATION AND ASSESSMENT OF TRAFFIC IMPACTS OF PROPOSED WORKS: **9**

1.1.7 ROAD NETWORK *9*
1.1.8 IDENTIFIED IMPACTS *9*

DETAIL TRAFFIC MANAGEMENT MEASURES TO AMELIORATE THE IMPACTS OF PROPOSED WORKS: **10**

1.1.9 MINIMISING DELAY DURING IMPLEMENTATION OF ROAD OCCUPANCIES *10*
1.1.10 CLOSURE OF SHOULDERS OR AUXILARY LANES *11*

ASSESSMENT OF PUBLIC TRANSPORT SERVICES AFFECTED: **12**

CONTRACTOR CAR PARKING **13**

DRIVERS CODE OF CONDUCT **14**

IMPACT ON CYCLEWAY **15**

DETAILS OF PROVISIONS MADE FOR EMERGENCY VEHICLES, HEAVY VEHICLES, CYCLISTS AND PEDESTRIANS: **16**

1.1.11 MAINTAINING ACCESS FOR HEAVY VEHICLE *16*
1.1.12 MANAGING PEDESTRIANS *17*
1.1.13 MANAGING BICYCLES *18*

MANAGING UNPLANNED INCIDENTS **20**

1.1.14 TYPES OF INCIDENTS *20*
1.1.15 MANAGE EMERGENCIES *20*
1.1.16 ROADS & MARITIME SERVICES / LOCAL COUNCIL RESPONSIBILITIES *21*
1.1.17 MANAGE UNPLANNED INCIDENTS ON THE ROAD NETWORK *21*

PROPOSED PUBLIC/TENANT NOTIFICATION PROCESS: **22**

1.1.18 GENERAL *22*
1.1.19 CONSULTATION *22*
1.1.20 ALTERED TRAFFIC ARRANGEMENTS *22*
1.1.21 NOTIFICATIONS AND ADVERTISING *23*
1.1.22 MEDIA AND COMMUNITY EVENTS *23*
1.1.23 IDENTIFICATION OF KEY STAKEHOLDERS *23*
1.1.24 COMMUNICATION METHODS *23*
1.1.25 NOTIFICATION REQUIREMENTS TO AUTHORITIES *24*
QUALITY SYSTEM MANAGEMENT 25

1.1.26 RECORDING & MONITORING 25

SPECIFIC METHOD OF TRAFFIC CONTROL 26

1.1.27 SPEED RESTRICTIONS 26
1.1.28 TRAFFIC GUIDANCE SCHEMES 26
1.1.29 SITE ACCESS 26
1.1.30 VEHICLE MOVEMENTS 26
1.1.31 RESTRICTIONS TO TRAFFIC LANES 26
1.1.32 ROAD CLOSURES AND DETOURING TRAFFIC 27
1.1.33 ACCESS TO PRIVATE PROPERTY 27
1.1.34 NIGHT WORKS 27
1.1.35 PREVENTING END OF QUE COLLISIONS 27
1.1.36 DELINEATION OF TRAFFICED CORRIDORS 27
1.1.37 LIGHTING OF WORK SITE 27
1.1.38 DIRECTION AND STREET SIGNAGE 28
1.1.39 TEMPORARY ROAD SAFETY BARRIERS & END TREATMENTS 28
1.1.40 DUST AND SEDIMENT CONTROL 28

APPENDIX A 29

1.1.41 TRAFFIC GUIDANCE SCHEMES 29

APPENDIX B 32

1.1.42 HEAVY VEHICLE DIRECTIONS TO SITE 32

APPENDIX C 36

1.1.43 TRAFFIC GUIDANCE SCHEME RISK ASSESMENT (FORM 500) 36

APPENDIX D 39

1.1.44 TRAFFIC CONTROL CHECKLIST (FORM 501) 39

APPENDIX E 40

1.1.45 QUALITY POLICY 40

APPENDIX F 41

1.1.46 INCURANCE CERTIFICATES 41

APPENDIX G **42**

1.1.47 SAFE WORK METHOD STATEMENTS 42

APPENDIX H 65

1.1.48 THE EVOLUTION GROUP PROFILE 65

PROJECT OVERVIEW

Project Name: Kent Road Public School Main Works

TMP Produced for: St Hilliers

Job Number: 18087

Scope of Works: New Classrooms and Administration Building.

Evolution Traffic Control Job No.: 440350119

Date Prepared: 16/04/2019

Scheduled start date: 11/11/2019
(Minimum 14 days)

Revision: 03

On receipt of this revision and attached new/revised documents you shall immediately sign and return the attached document acknowledgement slip, then: -

a) Insert each new/ revised page in its correct position;
b) Remove and destroy any superseded documents;
c) Insert this revision list at the front as the new cover sheet;
d) Compare this revision list with the previous one to see that you have received all previous revisions.

Rev	Section	Details of Revision	Approved by	Date
01	Multiple	Update to current conditions	CM	31/10
02	Multiple	Parking Locations	CM	19/11
03	Multiple	Heavy Truck Routes & Turning Paths	CM	26/11

CONTROL COPY No: 001

ISSUED TO: St Hilliers

TMP DISTRIBUTION LIST:

Tiffany Kitson **Sydney/Wollongong Operations Manager**

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

1.1.1 ABBREVIATIONS

Acronym	Definition
AADT	Annual average daily traffic
AS	Australian Standard 1742.3
CEMP	Construction Environmental Management Plan
Ch	Chainage
ESCP	Erosion and Sediment Control Plan
ESD	Entering sight distance
FAS	Flashing Arrow Signs
G1	Road and Maritime "JOB Specific Requirements"
G10	Roads and Maritime QA Specification G10 Traffic Management
PMP	Pedestrian Management Plan
R141	Pavement Marking
R142	"Retro reflective raised pavement markers"
R143	Signposting
RMS	Road and Maritime Services
ROL	Road Occupancy Licence
SISD	Provide Safe Intersection Sight Distance
SZA	Speed Zone Authorisation
TCP	Traffic Control Plan
TCWS	Traffic Control at Work Sites Manual
TMP	Traffic Management Plan
TRSB	Temporary Road Safety Barrier
VMP	Vehicle Management Plan
VMS	Variable Message Signs

1.1.2 REFERENCES

- TCAWS Traffic Control at Worksites Manual
- Workplace Health and Safety Traffic Management for Construction or Maintenance Work Code of Practice 2008
- AS/NZS ISO 31000:2000 Risk Management – Principles and Guidelines
- AS/NZS ISO 9001:2008 Quality Management Systems – Requirements
- Australian Standard AS1742.3,

EXECUTIVE SUMMARY

The purpose of this Traffic Management Plan is to ensure that, St Hilliers and Evolution Traffic Control's commitment to safety, traffic management, reporting and reviewing, is met during the life of this project.

This will be accomplished with consideration given to; Traffic Plans, Traffic Demands, Traffic Routing, Traffic Control Devices, Other road users and stake holder, Special (emergency) vehicle requirements and access, Accredited Traffic Controllers

This plan aims to identify the risks to persons undertaking work on, or adjacent to, a road. It shall ensure that appropriate control measures for any identified hazard are assessed, controlled, implemented, monitored, and reviewed by elimination, substitution, engineering, administration or by using personal protective equipment.

The legislative and reference documents used in conjunction with this plan include, but are not limited to: -

- WH&S Act and Regulations (New South Wales)
- Transport Operations (Road Use Management) Act and Regulations (New South Wales)
- Risk Management Code of Practice (2007)
- Traffic Management for Construction or Maintenance Work Code of Practice (2008)
- Traffic Control at Worksites Manual (TCAWS)
- Australian Standard AS1742.3 Traffic Control Devices

All contractors, subcontractors, employers, self-employed persons, workers and other persons will be bound by the requirements set out in this plan.

This plan forms the basis of ongoing programmes in continuous improvement of traffic management and the required ongoing training and commitment of all personnel involved in this project.

Risk assessments will be conducted before Traffic Guidance Schemes are prepared and prior to erecting any traffic control device on site. This will determine a safe environment of workers and a safe route for pedestrians and on-coming vehicular traffic.

PROJECT DETAILS

Project Name	Kent Road Public School Main Works
Project Location	Cnr Herring Road and Kent Road, Marsfield

1.1.3 PRINCIPALS DETAILS

Name:	Stephen Waller
Street:	Level 9/333 Ann St
Postal:	Brisbane, QLD 4001
Phone:	0437 187 905
Fax:	N/A
Email:	swaller@sthilliers.com.au

Out of hours contacts (2):

Greg Malenstein – 0408 458 492
gmalenstein@sthilliers.com.au

Scott Steward – (07) 3212-6300
ssteward@sthilliers.com.au

1.1.4 PRINCIPAL CONTRACTOR'S CONTACTS

Pre-Construction Manager
Name: Stephen Waller
Mobile: 0437 187 905

1.1.5 TRAFFIC CONTROL CONTRACTOR'S CONTACTS

Regional Operations Manager NSW
Name: Mark Tripiciano
Mobile: 0427 873 009
Sydney/Wollongong Operations Manager
Name: Tiffany Kitson
Mobile: 0428 751 301
Sydney Project and Planning Coordinator
Name: Marko Perkovic
Mobile: 0405 548 215

DESCRIPTION OF PROPOSED WORKS AND LANE/ROAD CLOSURES:

The Traffic Management Plan has been prepared for St Hilliers specific to Kent Road Public School Construction works location as per TCPs attached. It addresses the traffic management requirements as specified in the Traffic Control at Worksites manual Provision for traffic.

Works entail Construction of new classrooms and administration building.

1.1.6 WORKING HOURS & WORK SITE DELIVERIES

Works will be conducted in daylight hours from:
0700 - 1800 Mon-Fri
0800 - 1300 Sat.

There are to be no works carried out on Sundays or Public Holidays.

Restriction on Truck Movements and Deliveries are from:
08:00am–9.30am
14.30pm–16:00pm

St Hilliers will refrain from deliveries around peek school times during morning drop off & afternoon pick-up.

It has been prepared in accordance with Include all the following elements as detailed in TCAWS.

The TCP contained herein shall show traffic control device layouts (including TRSB, temporary pavement marking and temporary islands), be fully dimensioned and shall generally agree with the construction sequence and other requirements shown elsewhere.

IDENTIFICATION AND ASSESSMENT OF TRAFFIC IMPACTS OF PROPOSED WORKS:

1.1.7 ROAD NETWORK

A description of the surrounding road network, which details the various roads and their classifications, level in road hierarchy, lane configurations, cross sections, junction types, speed zones, traffic controls etc., will be incorporated within the (TMP).

1.1.8 IDENTIFIED IMPACTS

St Hilliers will conduct the required assessments of the road network directly affected by the construction activities, which will be documented in the (TMPs). This assessment will assist in determining the need for specific mitigation measures. The facilities to be assessed will include, but are not limited to:

- Existing on-street parking (including type and associated time limits)
- Existing traffic controls
- Existing junction configurations
- Restrictions on existing traffic movements (right turn bans etc.)
- Existing road occupancies
- Public transport (buses, including bus stops, taxis)
- Traffic generating developments, (e.g. schools, shopping centres, churches, industrial areas, sporting complexes, clubs etc.)
- Temporary access arrangements or restrictions for residents, businesses, traffic generating developments, major and special events etc.
- Emergency vehicle access points
- Heavy vehicle movement restrictions, including over dimension vehicle loads
- Pedestrians, including disabled persons
- Cyclists, (general road, cycle and share way facilities).

DETAIL TRAFFIC MANAGEMENT MEASURES TO AMELIORATE THE IMPACTS OF PROPOSED WORKS:

1.1.9 MINIMISING DELAY DURING IMPLEMENTATION OF ROAD OCCUPANCIES

The delay minimization strategies to be applied by St Hilliers project team will not delay the free flow of traffic in any direction more than 500 meters in accordance to G10 through the following strategies: -

- Minimising the impacts of each work area;
- Maximising the operating performance of the individual routes;
- Eliminate the need to work adjacent to live traffic as far as possible through the construction techniques and traffic phasing;
- Undertaking an AM and PM drive through as part of the maintenance plan to ensure no debris, detritus, broken down vehicle are not impeding traffic which may lead to traffic delays;
- Aiming to maintain access;
- Over Dimensional movements to be conducted at pre-dawn or pre-duck outside of peak times and under escort; and
- Coordinating works at each work area to ensure road users do not encounter several delays in quick succession.

St Hilliers acknowledge there are various measures that can be applied to minimise road user delays, and these are generally divided into four categories:

- Design;
- Isolation of work areas (the hierarchy of controls);
- Work methods; and
- Planning road occupancies during times of low traffic volumes.

Where practical, St Hilliers will apply the measures below via St Hilliers Traffic representative/coordinator:

- Ensure road user delays are given consideration during the concept phase (i.e.; develop alignments to avoid conflicts and potential impact with the existing road network);
- Ensure that road user delay is given consideration during the construction of vehicle movement planning development;
- Develop traffic staging and temporary works; avoid conflicts with the existing road network, maximises separation between work areas and travel lanes or isolates work areas and maintain existing "LOS" of the road network;
- Isolate work areas from traffic flows (e.g.; using alternative routes, temporary side-tracks, lane deviations / widening's and temporary safety barriers);
- Develop alternative work methods to minimise impact (e.g.; utilise more efficient plant/equipment, apply different design solutions, enclosed work platforms, time of day applications);
- Plan all lane closures/road occupancies with the aim to: minimise the actual work area, limit obstructions and restrictions, maximise the road's capacity and avoid peak traffic flow periods;

- Provide road users with changed traffic condition information to enable them to plan their journey ahead and avoid the roadwork impact.

Despite the importance of minimising road user delays, St Hilliers will not pursue the minimization of delays to the extent that it will compromise the safety of workers or road users.

1.1.10 CLOSURE OF SHOULDERS OR AUXILARY LANES

Road occupancies involving closure of any shoulder or auxiliary lane, where auxiliary lane(s) exist, St Hilliers will always consider providing a minimum of one travel lane in each direction through the road occupancy.

For partial closures of any length of auxiliary lanes; it may only be implemented if the remaining open length of the auxiliary lane is equal to or greater than 600m where the posted speed is 100km/h or equal to or greater than 400m where the posted speed is 80km/hr. (According to G10.2.2.3)

ASSESSMENT OF PUBLIC TRANSPORT SERVICES AFFECTED:

Any bus routes which are affected, depending on the works and the closures of lanes and roads. Different implementation strategies will be used in order assist Public Transport services. Such as detour routes and/or Traffic controllers positioned at bus stops to assist passengers at bus stops.

CONTRACTOR CAR PARKING

Public car parking will be accessible around the site, However contractors are not to park on surrounding streets. Specific mention to Kent Rd & Herring Rd.

Contractors & Sub Contractors for this project of Kent Rd Public School will be strongly encouraged to use public transport and carpool where possible. Facilities will be provided onsite for contractors to store tools to reduce the need to bring vehicles to site each day to carry their tools.

DRIVERS CODE OF CONDUCT

For the duration for the Kent Rd Public School project a site-specific code of conduct as outlined below for construction vehicle drivers in addition to the general code of conduct (provisioned by the drivers PCBU) will be applicable to all vehicle's accessing the site whether it be on a regular or singular basis:

- Be inducted to the site and follow site specific requirements covered in the site induction, toolbox talks, SWMS and pre-start meetings.
- Drivers will strictly adhere to the speed limits both outside and within the site. Speed limits inside the site are generally limited to 5km/h unless otherwise specified and require a spotter in busy/high pedestrian activity areas.
- Drivers must follow their PCBU's fatigue management scheme and ensure this meets the arrival/departure times of St Hilliers prior to arriving to site. If timings conflict the driver must negotiate with St Hilliers to ensure a layover area is reserved for the incoming vehicles within the site.
- Compression breaking is to be kept to a minimum whilst within residential areas to minimise the creation of excessive noise that could disturb residents/neighbours.
- Vehicle noise will be kept to a minimum by turning vehicle engines off whilst stationary.
- Vehicles are not to stay in idle for long periods of time.
- All trucks are to be covered by tarpaulin or like prior to exiting the site. All vehicles leaving the site are to be free of mud or any other debris. Wheel wash facilities are to be used prior to leaving the site.
- Drivers will only use the approved access/egress routes identified within this CTMP.
- Vehicles are not to park illegally on any RMS or council roads. Whilst within the site area they will be parked wholly within the work zone or site.
- Drivers must follow the instruction of traffic controllers for access/egress movements to the site.
- Ensure vehicles are wholly contained within the work zone and vehicles come to a complete stop before exiting the vehicle or beginning and loading/unloading.

IMPACT ON CYCLEWAY

When provided with a scope of works on the cycle way specific implementation controls will be in effect. Traffic controllers to assist cyclists and pedestrians and the work crew on cycle way during investigations along the routes.

DETAILS OF PROVISIONS MADE FOR EMERGENCY VEHICLES, HEAVY VEHICLES, CYCLISTS AND PEDESTRIANS:

1.1.11 MAINTAINING ACCESS FOR HEAVY VEHICLE

The effective management of loads carried by the heavy vehicles vary considerably and over-dimension loads mays be transported on Kent Rd. These loads vary in width, height, length and mass. For St Hilliers to safely and efficiently facilitate the movement of heavy vehicles, (TMPs) will:

- Consider the movement of heavy vehicles and over-dimension loads when preparing temporary works drawings and TCPs (adopting designs which provide a minimum lane width of 3.5 m and can accommodate the turning movements of a 26 m long B-Double heavy vehicle).
- Limit obstructions and restrictions on the carriageways, and when required, provide alternatives.
- Liaise with the police, permit authority and operators, as well as provide up-to-date information of any obstructions (specify minimum dimensions) which may impact on the movement of over dimension vehicles. (To be actioned only if required)
- Keep a register of proposed over-dimension vehicle movements, determine the best opportunity to proceed through the work site and advise the transport operator accordingly. (To be actioned only if required)
- When traffic control operations are in place, traffic controllers will effectively co-ordinate the movement of over-dimension vehicles through the work site.
- Assist the Special Permits Unit and over-dimension operators by notifying the relevant authority of any obstructions which may impact on over-dimension vehicle movements.
- Where possible, arrange the removal and re-instatement of roadside furniture and traffic control devices which impede over-dimension vehicle movements.
- Regularly monitor heavy vehicle movements through the work site and when required, implement the appropriate controls to mitigate potential hazards and/or congestion.

St Hilliers will liaise with Roads and Maritime's Representatives to establish communication protocols for the passage of over-dimension heavy vehicle prior to any deliveries.

1.1.12 MANAGING PEDESTRIANS

When planning construction activities, St Hilliers will consider the following:

- Number of pedestrians.
- Type of pedestrian activity: whether commercial, retail, residential or recreational.
- Origin and destination points of the pedestrians, as well as their desired travel path.
- Needs of vulnerable pedestrians such as young children, the elderly, vision impaired, disabled people, people with prams and trolleys.
- Proximity of pedestrian generation developments such as schools, shopping centres, railway stations, bus terminals etc.

Understanding that unlike motor vehicles, pedestrian movements within and outside of the road reserve are generally unrestricted, with free access available to most areas. Because of this and to ensure provision of a safe environment to all pedestrians, St Hilliers will ensure provisions will be made for the safe ongoing access by pedestrians. Appropriate barrier or Fencing will be installed to restrict physical access to hazardous areas as well as for site security, which will be appropriately sign posted. Various types of temporary and semipermanent fencing may be installed, including plastic mesh, water filled plastic delineators, weldmesh, pool fencing, chain wire mesh and so on. All physical barriers will be maintained during the project and appropriately secured to prevent injury to the public.

To implement these requirements, all temporary footpaths will be:

- Clearly defined and revised locations of these routes will be developed in consultation with Road and Maritime and forwarded to the local council for review and acceptance if it applies to a Local Road;
- Advice of pending changes to the routes will be provided to the users, together with signage detailing the changes when implemented;
- Signposted appropriately to indicate the direction of the footpath;
- Constructed with an all-weather surface, free of trip hazards;
- Designed to accommodate the type of pedestrians to be encountered within the area;
- Where required, provided with pram ramps, hand rails and street lighting;
- The minimum width specified by the relevant authority;
- Where pedestrian and cyclist flow are in a direction that may not satisfy a clear desire line, special provisions for notification will be made; and
- Kept well maintained while in operation.

Where feasible, St Hilliers aim will be to maintain all existing pedestrian crossing facilities. Where this cannot be achieved, alternative facilities which are a similar standard to the present facility will be provided. Types of temporary crossing facilities may include pedestrian refuges, marked foot crossings, pedestrian-actuated traffic signals, temporary grade separated pedestrian bridges and so on.

1.1.13 MANAGING BICYCLES

When planning construction activities, St Hillers will consider the following:

- Number of cyclists.
- Type of cycling activity: school children, recreational, commuter, utility, touring or sport training.
- Origin and destination points of the cyclists and the connectivity of their routes.
- Needs of vulnerable cyclists, such as young children under 14 years.
- Proximity of cyclist generating developments, such as schools, universities, public transport terminals, shopping precincts and CBDs, etc.
- The travel speed of cyclists.

St Hilliers appreciate that unlike motor vehicles, bicycle movements can be either on or off road. Cyclists generally travel along footpaths, cycle ways, shared paths, road shoulders or within travel lanes. To provide a safe environment for cyclists, the boundaries of all work areas will be clearly defined and measures to mitigate any hazards will be implemented. The speed of cyclists can be high, at around 50 km/h on downhill grades, and most bicycles have no suspension. Any hazards, whether rough and loose surfaces, squeeze points, obstacles, low clearance heights and so on can be potentially dangerous.

Where possible, the introduction of hazards into the travel path of cyclists will be avoided. Where this is not feasible, appropriate physical barriers, treatments and/or warning signs will be implemented. Fencing will be installed to restrict physical access to hazardous areas and for site security, which will be appropriately sign posted. All physical barriers must be maintained during the project and appropriately secured to prevent injury to the public. Where work areas restrict access to cycle paths, alternative routes and facilities will be implemented.
Alternatives may include using the opposite side of the road, detours via other streets/cycle routes, or the provision of temporary cycle paths through the work area.

St Hilliers will ensure that all temporary cycle paths will be:

- Clearly defined.
- Signposted appropriately to indicate the direction of the cycle path.
- Constructed of an asphalt or concrete with a smooth surface, equivalent to the section of path on each approach to the temporary path.
- Free of loose materials and obstacles.
- Designed to accommodate the type of cyclists to be encountered along the route.
- Where required, provided with ramps, holding rails and street lighting.
- Kept well maintained while in operation.

The provision of on-road cycle facilities requires careful assessment and the factors below will be strictly considered by St Hilliers:

- On-street parking conditions
- Travel speed of traffic
- Traffic volumes
- Bicycle volumes

- Experience of the cyclists
- Percentage of heavy vehicles
- Carriageway, lane and parking lane widths available
- The alignment of the road.

Where feasible, St Hilliers will aim to maintain all existing cycle crossing facilities. Where this cannot be achieved, alternative facilities which are a similar standard to the present facility will be provided.

MANAGING UNPLANNED INCIDENTS

The occurrence of unexpected incidents listed below, within the project boundary or any adjacent site will potentially have a negative impact on the operation of the road network and might temporarily restrict construction activities. St Hilliers will create and plan an emergency response procedure which will incorporate standard operating procedures for managing any unexpected construction site emergencies/incident that may occur during the project delivery. St Hilliers will provide traffic control by qualified controller for emergencies and develop strategies to manage: -

- Unplanned incidents on the road network
- Construction site emergencies/unplanned incidents.

1.1.14 TYPES OF INCIDENTS

Different types of emergencies/unplanned incidents that may occur include, but are not limited to:

- Motor vehicle accidents;
- Bush fires;
- Environmental spills;
- Construction-type incidents;
- Catastrophic structural failures;
- Inclement weather conditions;
- Flooding;
- Anti-social behaviour;
- Terrorist attacks; and Bomb threats.

1.1.15 MANAGE EMERGENCIES

St Hilliers acknowledge the inevitable nature of emergencies and their potentially significant social, economic and environmental consequences. Accordingly, we are aware that the NSW Government has enacted the State Emergency & Rescue Management Act 1989 to support emergency management activities.

In NSW, the agencies primarily responsible for controlling hazards/emergencies are:

Table 7 Emergency Agencies

Unplanned incident agency responsibility	
Law Enforcement / Emergencies	NSW Police Force
Fire	Fire Brigades / Rural Fire Service
Hazardous Materials	Fire Brigades
Flood	State Emergency Service
Storm and Tempest	State Emergency Service

1.1.16 ROADS & MARITIME SERVICES / LOCAL COUNCIL RESPONSIBILITIES

In accordance with its statutory obligations, Roads and Maritime Services and the local councils are responsible for road safety and traffic management of the road network. In conjunction with emergency service agencies, this includes the management of incidents and emergencies.

St Hilliers understand the detailed management of large-scale emergencies and incidents happening within the boundary of the site shall be in accordance with the State requirements as laid out in the State Disaster Plan. St Hilliers will provide support to emergency service agencies and/or the Roads and Maritime Services/local councils when emergencies/incidents occur within or adjacent to the construction site.

1.1.17 MANAGE UNPLANNED INCIDENTS ON THE ROAD NETWORK

The occurrence of unplanned incidents within the construction site may impact on the operation of the road network. Similarly, incidents occurring on the surrounding road network may restrict construction activities. To address this issue, St Hilliers Traffic Representative will:

- Apply and maintain communication protocols.
- Inform the road authority of any incident and provide assistance.
- If resources are available, provide initial response to unplanned incidents with the aim of making the scene of the incident safe and prevent further harm to persons or property.
- Provide support to emergency services, including traffic control, near the incident.
- During major incidents, provide a senior construction representative on-site to liaise with the road authority and emergency service agencies.
- Reschedule planned works that will interfere with the incident or create additional delays to those road users already affected by the incident.
- Disseminate road condition information to Roads and Maritime Services and the local council for their distribution to road users.

PROPOSED PUBLIC/TENANT NOTIFICATION PROCESS:

1.1.18 GENERAL

A cooperative and coordinated approach among traffic and transport providers and St Hilliers will enable the public and freight transport operators to receive timely, accurate and credible information.

All information intended for release to the community in relation to the management of the roadways in the project area will be submitted to the Roads and Maritime Services for approval before it is distributed. Roads and Maritime Services will be informed immediately of any changes to information provided to the community.

Approval will be obtained from the Transport Management Centre for all communications related to changes affecting the operation of the carriageway. The St Hilliers Project Manager will submit all traffic communication via the normal approval process to the Roads and Maritime Services.

1.1.19 CONSULTATION

St Hilliers will regularly consult with relevant stakeholders directly, or through the forum provided by the community consultative committees, ahead of construction to ensure all appropriate management and mitigation measures are adopted where possible. St Hilliers Traffic Representative will regularly attend and update the local council Traffic Committees and provide regular information sessions and workshops with key stakeholders.

1.1.20 ALTERED TRAFFIC ARRANGEMENTS

The project team will be required to:

- Be available at all reasonable times to address any community questions concerning planned traffic arrangements including any traffic switches;
- Establish Stakeholder or Issues Groups to inform the community on:
  - Traffic management (including property access);
  - Cyclist needs

1.1.21 NOTIFICATIONS AND ADVERTISING

The project team will be required to:

- Notify residents and businesses about construction activities which will affect access to their properties or otherwise significantly disrupt use of their premises. Such notification shall be made at least five working days before commencing work affecting the premises and shall advise the nature of the work, why it is necessary, indicate the expected duration plus any changes to arrangements for traffic or property access. Contact details for the Project team shall also be provided;
- Advertise significant traffic management changes, detours, traffic disruptions and work outside the working hours contained in the environmental assessment documents.
- Advise (RMS) if any part of the Temporary Works that is the subject of an advertisement is to be changed or varied to make the advertisement substantially incorrect

1.1.22 MEDIA AND COMMUNITY EVENTS

The project team will be required to:

- Hold on-going discussions with RMS and respective Council regarding dates, commencing prior to the anticipated occurrence of the event, for major milestones / traffic switches and the opening of the Works or any stage of the Works and Local Road Works to traffic;
- Plan for an event of some form to mark the opening of the works to traffic; and
- Not announce the proposed opening of the Works and / or any stage of the works or Local Road Works to traffic without the approval of RMS and/or respective Council.

1.1.23 IDENTIFICATION OF KEY STAKEHOLDERS

St Hilliers recognise a critical first step is to identify the audience and key stakeholders. The following stakeholders will be consulted when preparing long term (TCPs). As required;

- (RMS);
- Emergency Services; and
- Councils: Canterbury Bankstown Council

1.1.24 COMMUNICATION METHODS

St Hilliers will consult with community members to ensure there is minimum disruption and inconvenience and alternative routes publicised and sign posted accordingly. The Traffic Representative in conjunction with the Community Relations Officer will disseminate changed traffic condition information using the methods below as required:

- Consultation with key stakeholders.
- Temporary roadwork information signage.
- Changed traffic condition advertising.
- Community letterbox notifications.
- Project information signage.

1.1.25 NOTIFICATION REQUIREMENTS TO AUTHORITIES

St Hilliers acknowledge the importance of keeping (RMS) and all stakeholders regularly informed. Therefore, during section 4 construction work, the project team will report to (RMS), community consultative committees and other relevant stakeholders on all road safety and traffic management issues that may impact the road network

Any unplanned closure of lanes or imposed restrictions in the flow of traffic occurs on the exiting Highway or adjacent local road within the project boundaries, the St Hilliers project team will immediately advise (RMS) of the nature of the closure or restriction and of the schedule for reopening of the lanes. The project team will take all the required measures to open the lane as quickly as possible.

QUALITY SYSTEM MANAGEMENT

1.1.26 RECORDING & MONITORING

Details of all changes in traffic movements shall be recorded and maintained throughout the construction period and submitted within 7 days from the date of practical completion.

Regular inspections of traffic control devices shall be carried out a minimum of twice daily and recorded in The Daily Traffic Diary – a copy contained in the appendix. These records are available for inspection during the project. These records will be held on site by Evolution Traffic Control and submitted at the end of the shift to St Hilliers works supervisor.
Traffic delays shall be assessed and recorded in the traffic diaries. St Hilliers supervisory staff shall be notified of any delays that exceed the contract requirements.
Queue lengths shall be assessed hourly and additional advance warning signs shall be erected if deemed necessary.

A Register of Complaints and subsequent actions shall be maintained and forwarded to the Superintendent on a weekly basis. St Hilliers shall be advised immediately of any traffic incident or complaint. If the issue cannot be corrected immediately and it is of a contractual nature, then it should be elevated to St Hilliers management.

Non-Conformances and Correct Actions shall be identified, controlled, and implemented in accordance with Company Quality Procedures. All non-conformances shall be acted on by Evolution Traffic Control and St Hilliers on receipt of written notice of the non-conformance.
Principal to carry out any remedial work deemed necessary under the contract guidelines. A Non-Conformance Report (NCR) shall be forwarded to the RRC's representative within 24 hours upon completion. Non-Conformances and Correct Actions shall be identified, controlled, and implemented in accordance with Company Quality Procedures BAQ-MSP-03 and BAQ-MSP-04

Reporting Form	Responsibility	When
Details of erection and removal of Regulatory Traffic Signs / Devices – Form 501 (as required)	Project Manager, assisted by Evolution Traffic Control Works Supervisor	Min 5 days prior to commencement and completion of the works
Traffic Management Audit Checklist	Evolution Traffic Control Traffic Control	Each day
Traffic Diaries	Evolution Traffic Control Traffic Control	Each day
Complaints Register	Project Manager	Each day
Non-Conformance/Corrective Action	Project Manager	As req.
Incident Report	Project Manager	As req.

In the event of a traffic related accident within the site, St Hilliers shall immediately notify the principal's representative, the Police, and any necessary emergency services of the incident.

SPECIFIC METHOD OF TRAFFIC CONTROL

1.1.27 SPEED RESTRICTIONS

Speed limit reductions shall be kept to a minimum. 40kph should only be used when personnel are working closer than 1.2 meters to the nearest edge of a traffic lane. These reductions should commence just prior to the work (area) and concluding immediately at the end of the work (area).

1.1.28 TRAFFIC GUIDANCE SCHEMES

Schedule of included Traffic Guidance Schemes;

TGS 1 (185734 REV 01) - TRUCK TURNING - KENT RD, MARSFIELD (440350119)
TGS 3 (188915 REV 01) - CRANE MOVEMENT - KENT RD, MARSFIELD (440350119)
TGS 4 (196580 REV 03) – Site Vehicle Movements- Kent Rd, Marsfield (440350119)

1.1.29 SITE ACCESS

All Site access is to be followed as set out in TGS provided. (Refer to Appendix)

1.1.30 VEHICLE MOVEMENTS

All works vehicles are to enter and exit the site under traffic control/site marshals' directions Or under signage display only (under 20 movements and forward entry /exit).

1.1.31 RESTRICTIONS TO TRAFFIC LANES

Single lane reversible flow – Where single lane reversible flow (to serve both directions) is allowed, the Contractor shall maintain traffic flow under the control of traffic controllers or portable traffic signals in such a way that no road user is unduly delayed. In all cases, the length of one-lane, two-way operation shall be limited to one kilometer.

Stopping traffic in both directions – The Contractor may stop traffic in both directions simultaneously only for purposes of construction of specific work and during the specific period. And for a period no longer than is deemed necessary.

Specific periods where lane closures are not permitted – Work not under the Contract involving lane closures, stop/slow arrangements or construction traffic entering or leaving any through traffic lanes shall not be carried out during any periods and unless otherwise stated.

Days during which lanes shall not be closed and work involving stop / slow arrangements shall not be carried out as below unless specific approval is granted by the Superintendent prior to commencement of the works.

- All Public Holidays, plus the preceding and succeeding days to the public holidays
- Other Public events not mentioned could also be deemed a special case for stopping the closure of lanes

1.1.32 ROAD CLOSURES AND DETOURING TRAFFIC

N/A

1.1.33 ACCESS TO PRIVATE PROPERTY

Existing accesses to private properties affected by the work shall be maintained in useable condition during the construction, or alternative access arrangements acceptable to the property owners/tenants shall be made. The Contractor shall always permit and provide for the free movement of traffic in and out of the properties except as otherwise agreed to by the property owners/tenants. The Contractor shall, at no expense to the Principal, make good any damage to accesses to private properties which results from the Contractor's operations during the construction of the work under the Contract.

1.1.34 NIGHT WORKS

Construction work that is likely to cause noise is to be restricted to day time operations only. City and Southwest Out of Hours Work Protocol to be followed.

1.1.35 PREVENTING END OF QUE COLLISIONS

Additional traffic controllers, or other end of queue risk control measures deemed to be adequate for the site circumstances, shall be used in high speed situations or where sight-distance is restricted, to prevent rear end collisions where vehicles are stopped or slowed by the work under the Contract. Additional traffic controllers shall also be used in other situations where described in AS 1742.3. Additional guidance is provided in TCAWS regarding supplementary devices at roadworks to reduce speed.

1.1.36 DELINEATION OF TRAFFICED CORRIDORS

Where described in Traffic Control at Worksites Manual, direction hazard markers, temporary raised reflective pavement markers, line marking, reflective mesh fencing and/or other such delineation devices shall be used in addition to the requirements of the AS1742.3 to delineate trafficked corridors. Where star pickets are used they shall be kept 1 meter or more from an adjacent traffic lane where the speed is 80kph or less.

1.1.37 LIGHTING OF WORK SITE

Where roadway lighting currently exists, lighting shall generally be provided during roadworks. Ideally, existing lighting shall not be removed until alternative temporary lighting is provided to at least the same standard as the existing lighting. If temporary lighting is not provided, the associated risk must be managed.

Temporary road lighting may include conflict points and potential hazards and it shall include two spans of lead-in lighting in advance of the conflict point, including: significant changes in carriageway width, changes from single to divided carriageway, on verging and diverging traffic streams, crests and humps, curves below 100m radius, and road sections with high night time crash rates.

The Contractor shall install, operate and maintain the temporary road lighting installations for the full period during which the relevant road is required and/or until the permanent road lighting is installed and becomes operational.

The lighting over the work area will be such as to provide a minimum intensity of 20 lux at road level. Artificial lighting shall be arranged in such a manner as to avoid creating levels of glare arising from shallow angles of incidence towards the drivers of vehicles using the adjacent traffic lanes. At no time shall artificial lighting be directed towards oncoming traffic.

1.1.38 DIRECTION AND STREET SIGNAGE

Where access to streets and side roads has been altered during the construction of the Works, the Contractor shall supply and erect all such temporary signs necessary to assist the travelling public to find their way to such streets and roads.

1.1.39 TEMPORARY ROAD SAFETY BARRIERS & END TREATMENTS

Temporary Road Safety Barriers (TRSB) shall be used to contain and redirect errant vehicles to reduce the likelihood of them entering the work site. They may also be used to separate opposing traffic. Where TRSB are shown on the TCP, the type and location of barriers shall be as shown on those TCP. Opposing flows of traffic may be separated with TRSB with enough offset provided to reduce the likelihood that TRSB deflect into opposing traffic flow in the event of impact.

When TRSB are used to protect the works site, the requirements to maintain a clearance zone behind the TRSB as specified in the TCAWS shall apply. The maximum dynamic deflection is specified by the manufacturer. Provision shall be made to treat the approach and/or departure ends of both permanent and TRSB that are exposed to on-coming traffic, including barriers that are flared to terminate outside the clear zone.

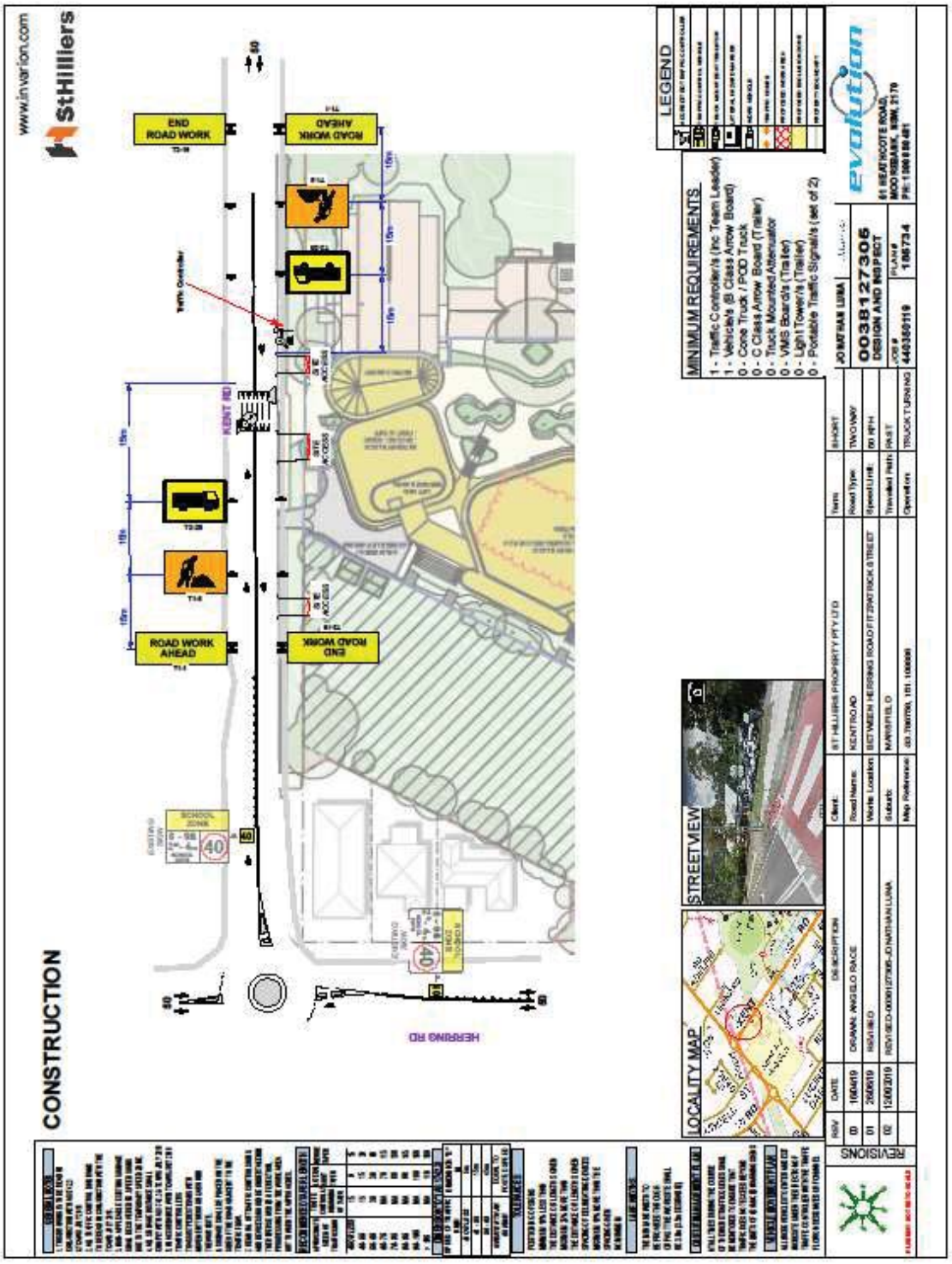
The ends of TRSB shall be protected through the use of appropriate end treatments. Only those end treatments listed in the Transport and Main Roads – Road Safety Barrier Systems and End Treatments (Assessed as compliant with AS3845:1999) and Other Related Road Safety Devices shall be used.

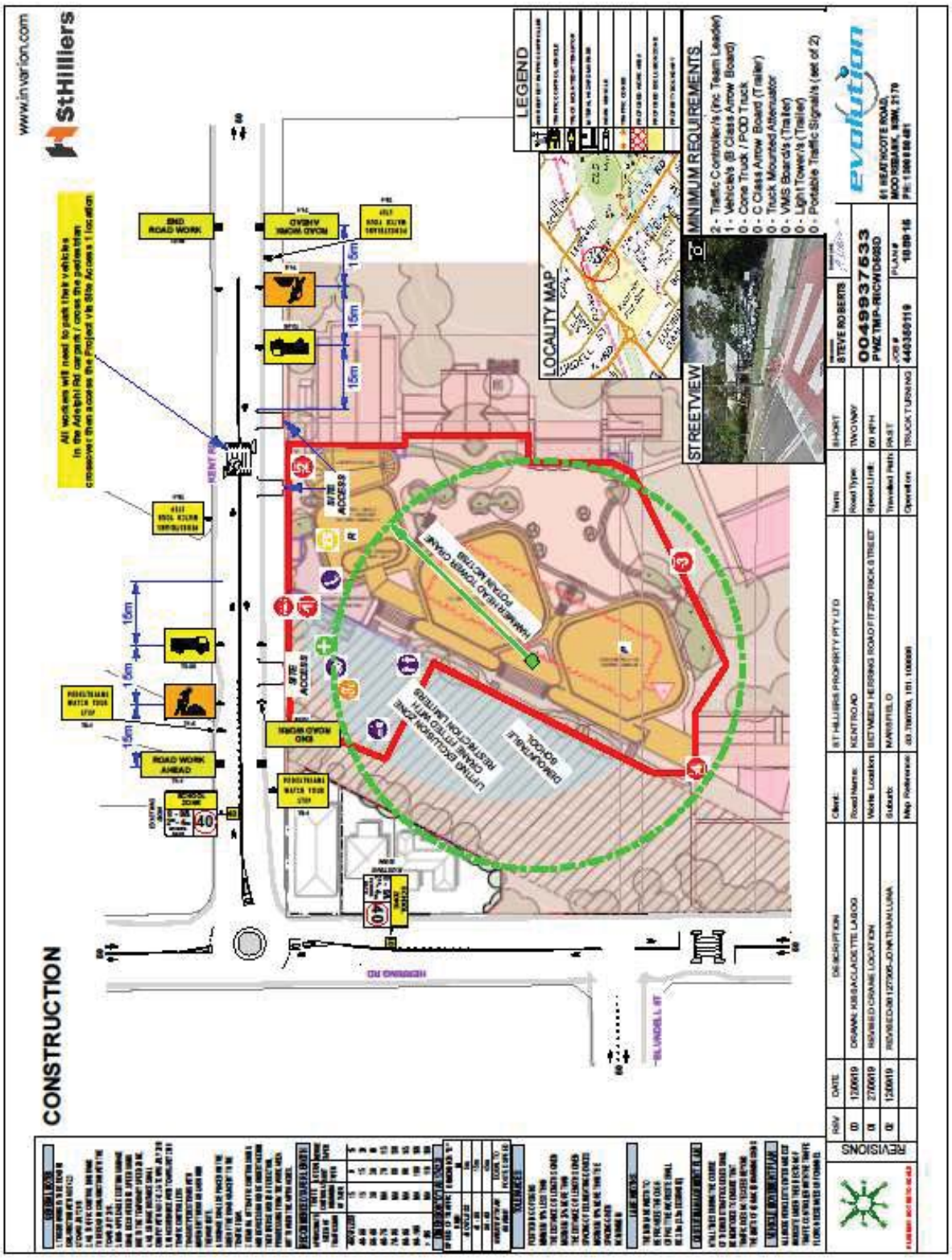
1.1.40 DUST AND SEDIMENT CONTROL

Prior to work commencing on site sediment and erosion control measures shall be installed along the contoured edges immediately down slope of any future disturbed areas.
The controls shall be maintained in an operational condition until the development activities have been completed.

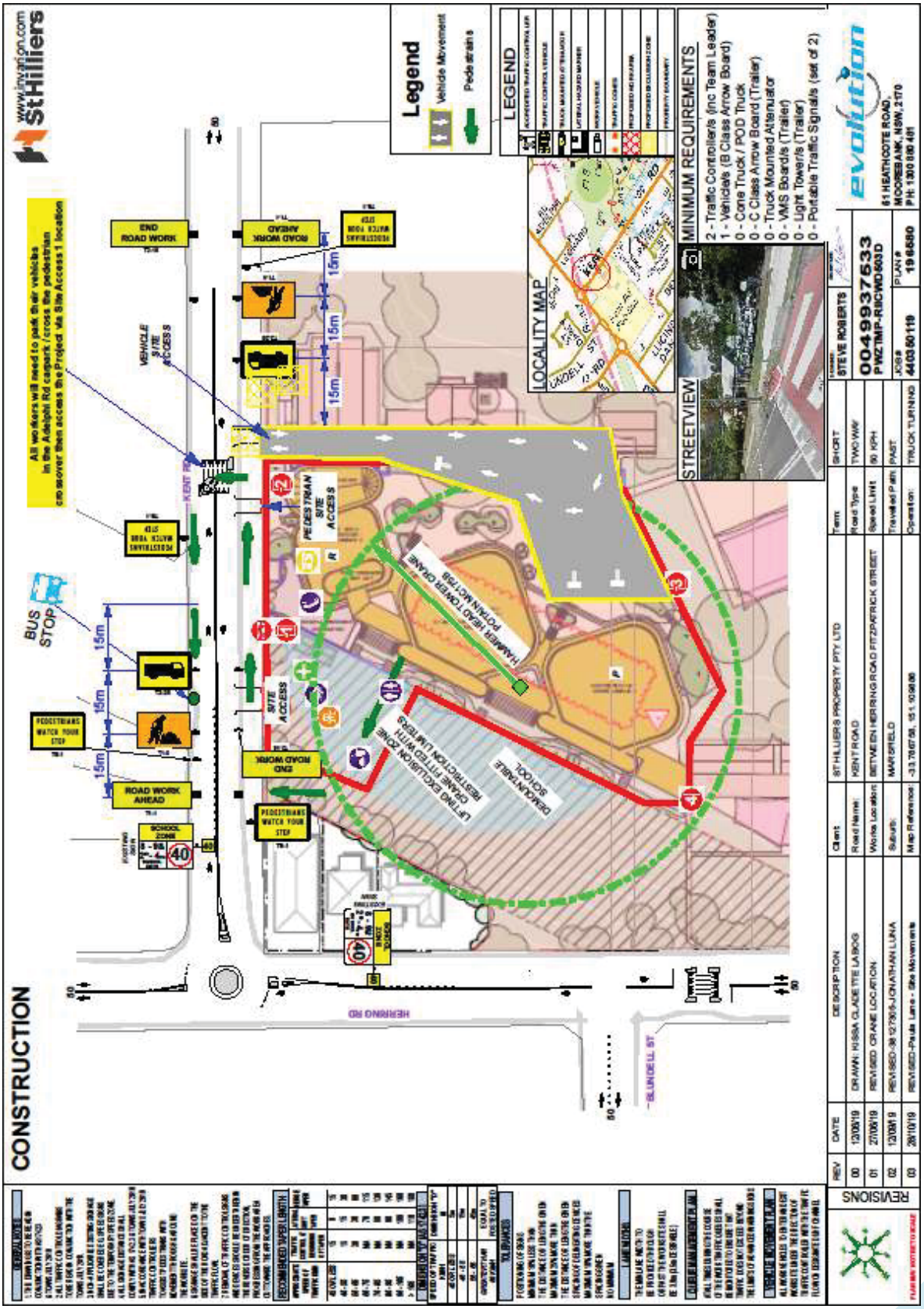
APPENDIX A

1.1.41 TRAFFIC GUIDANCE SCHEMES





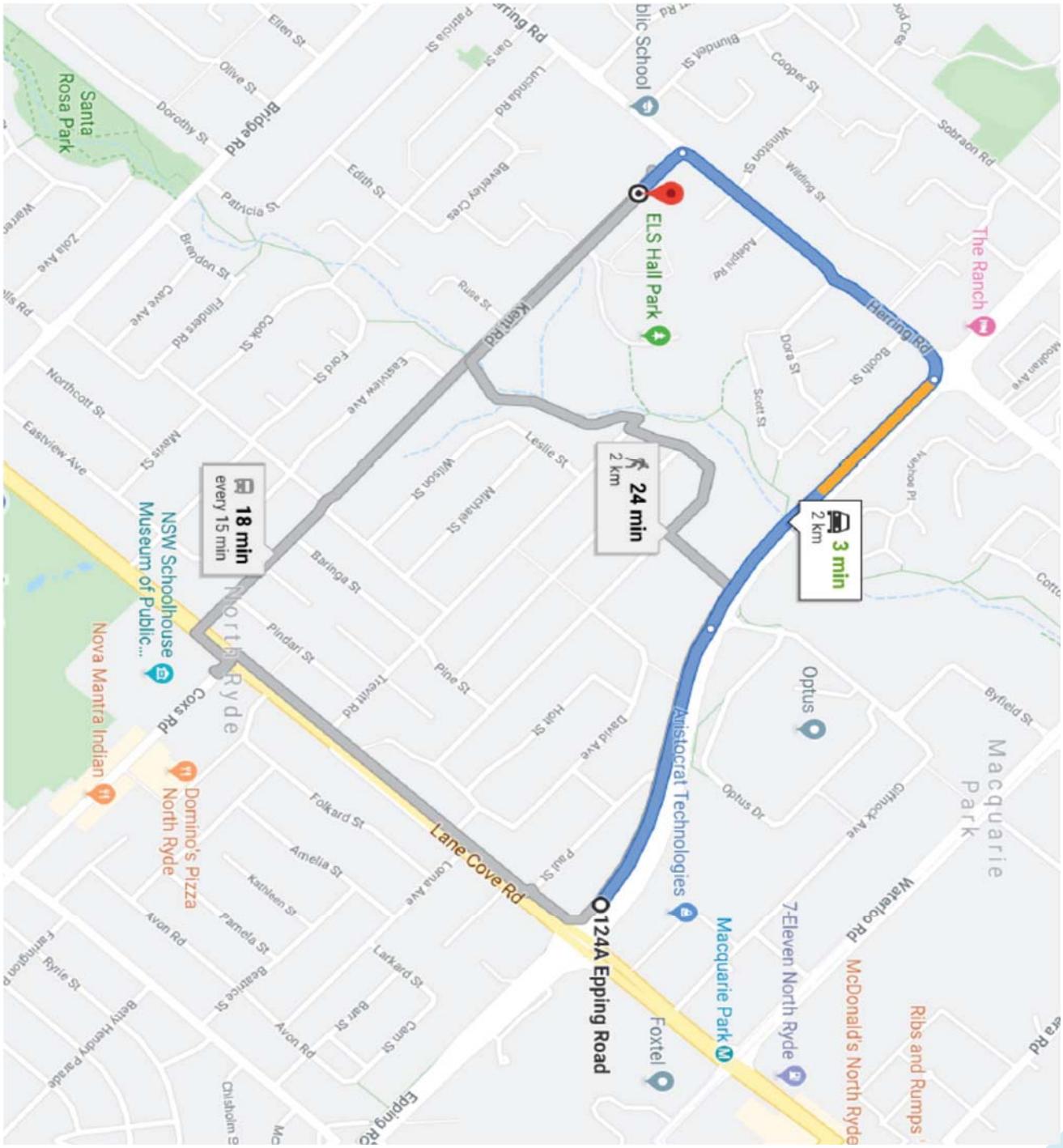
TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

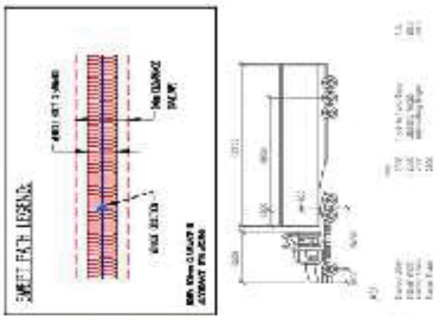


TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

APPENDIX B

1.1.42 Heavy vehicles site entry and turning path

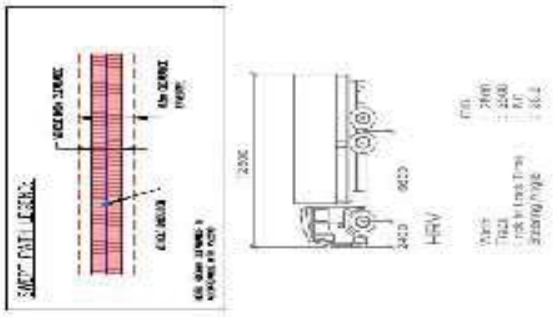


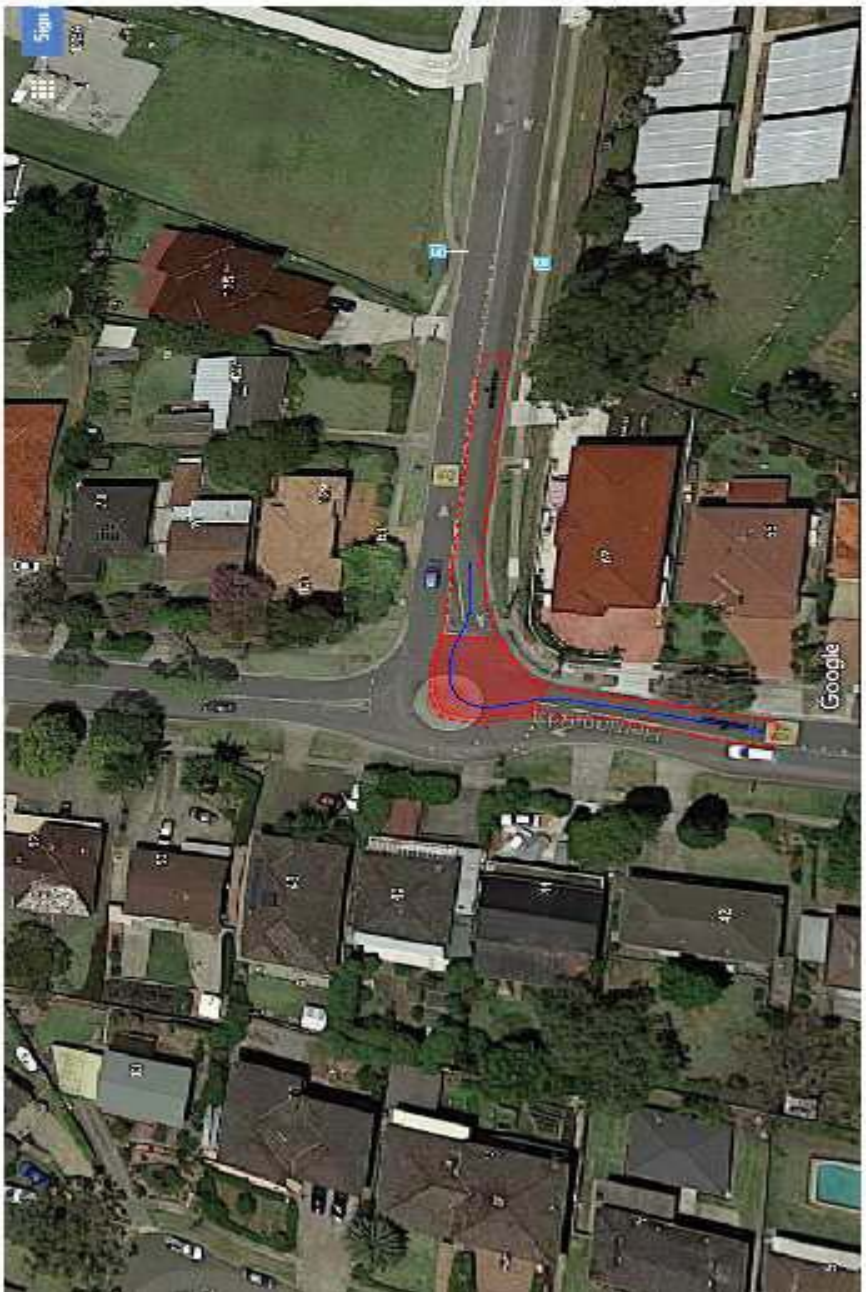


Google

Google

Google




Google

APPENDIX C

1.1.43 TRAFFIC GUIDANCE SCHEME RISK ASSESMENT (FORM 500)

Transport Roads & Maritime Services NSW

Road & Fleet Services

Traffic control

Worksite location checklist

500

This form is based on and aligns with the *Worksite location checklist* included in Appendix D of TCAWS – the Traffic Control at Work Sites manual, (vers. 4, iss. 2, July 2012)

Road number | Location

Type of work

Completed by | Date | Time

Answers to the following questions may necessitate minor modifications to the TCP. These may include the installation of additional signs or changes to the sign locations. Record any action taken in the **Actions** table below.

Item	Detail	
1	Will the location of any of the following within the worksite increase the risk to workers? intersections ☐ on-loading or off-loading ramps ☐ safety ramps ☐ truck arrestor beds ☐ vehicle cross overs ☐ rest areas ☐ truck stops ☐ driveways ☐	Yes | No
2	Will vehicles be entering or leaving the worksite from private or commercial driveways?	Yes | No
	If yes will extra safety control measures be required to cater for those vehicles?	Yes | No
3	Is there adequate sight distance for road users to signs and traffic controllers?	Yes | No
4	Are signs or traffic controllers in the shade?	Yes | No
5	Will control measures be safe for the approach speeds of traffic?	Yes | No
6	Will work be undertaken outside peak times?	Yes | No
	If not, will the control measures cater for the traffic peak?	Yes | No
7	Will bus stops (including school) be affected?	Yes | No
8	Will pedestrians be affected?	Yes | No
9	Will cyclists be affected?	Yes | No
10	Are there any overhead power lines that might be a risk to construction vehicles and plant?	Yes | No
11	Is the time of day significant (night work, low setting sun)?	Yes | No

Actions

Item number	Action taken

RFS-Form-500 Issue 1 (28 June 2013) Page 1 of 1

APPENDIX D

1.1.44 TRAFFIC CONTROL CHECKLIST (FORM 501)

RTA Road & Fleet Services

Traffic control checklist (short term works) **501**

Project		Project number	

Team	Site	1 (date)_____			2 (date)_____			3 (date)_____			4 (date)_____			5 (date)_____			6 (date)_____		
Evolution	TCP No.																		
Inspection:		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Time: (2400 Hrs)																			
Inspection: (1) – After TCP setup, (2) – mid or during shift & (3) – before TCP removal (pre-closedown of TCP) All signs and devices used during work are to be recorded below (on left), using the following codes: Y - signs and devices are in place during check, N - signs and devices are no longer required and are removed																			
Roadwork 1KM																			
Roadwork ahead																			
Workmen																			
Prepare to Stop																			
Traffic controller																			
Lane Status																			
..... Ahead Speed																			
..... Speed limit																			
Chevron (lat shift)																			
Arrow boards																			
Delineation in place																			
End Roadwork																			

DTR No						
Approved Speed (Km/hr)						
Temporary speed restriction	Time in use	Time in use	Time in use	Time in use	Time in use	Time in use
	to	to	to	to	to	to
Portable traffic signals	Time in use	Time in use	Time in use	Time in use	Time in use	Time in use
	to	to	to	to	to	to
Mode of operation *(see below)*						

Mode of operation:

MAN/1 Manual shuttle operation (One lane operating between lights)
MAN/2 Manual two-way operation (Two lanes operating between lights)
VA Vehicle-activated shuttle operation (automatic adjusted cycle)
FT Fixed-time shuttle operation (fixed cycle)
FA Flashing amber

	Location (Road No. & Segment)	Weather (Rain, fog, etc)	Any delays (Record delays greater than 10 Minutes)
Site 1			
Site 2			
Site 3			
Site 4			
Site 5			
Site 6			

Signature: _____ **Date:** _____

APPENDIX E

1.1.45 QUALITY POLICY

QUALITY POLICY

Evolution Group Holdings Limited (Evolution) provides specialist traffic control, bridge/car park maintenance services and training services.

It is our intention to maintain and build on our reputation for quality by continually achieving a standard of products and services that comply with specifications, standards, statutory regulations and contractual obligations. We encourage full employee involvement and commitment in the development, implementation and ongoing maintenance of an exceptional integrated Business Improvement System. Our procedures direct the consistent delivery of our standardised services and support the operational and strategic guidance to Evolution. This includes our businesses both in Australia and New Zealand

Through regular quarterly reviews of the Business Improvement System and our objectives, we are continually improving the effectiveness and suitability of the system. We reinforce this through an underlying commitment to minimal response times in issues regarding quality.

The training of our management and employees is fundamental to the success of our quality program. In addition we will continue to liaise closely with our suppliers to ensure that they provide similar attention to quality principles.

The Business Improvement System documents are approved by the Chief Executive Officer and these are the authoritative documents relating to the Quality, Occupational Health & Safety and Environmental aims and objectives within the Company.

Currently the scope of our certification includes: Traffic control, management services, design & development planning to building construction and civil contractors; Government Agencies including state road authorities and local councils, bridge expansion joint repairs and replacement including waterproofing membranes and barriers. Standard: ISO9001:2015 Quality Management System.

Evolution will review this policy every 12 months.

John Macnamara
Chief Operating Officer
Evolution Group Holdings Limited

DATE: 26th June 2019

APPENDIX F

1.1.46 INCURANCE CERTIFICATES

Gallagher

Insurance | Risk Management | Consulting

Certificate of Currency

29 October 2019

We have arranged insurance cover following instructions from the insured, in accordance with the following brief particulars:

Insured	Evolution Group Holdings Limited and/or Queensland Infrastructure Capital Pty Ltd and/or Evolution Traffic Control Pty Ltd and/or Evolution Civil Maintenance Pty Ltd and/or Evolution Asset Management Pty Ltd and/or Evolution Training & Safety Pty Ltd and/or Evolution Fleet Services Pty Ltd and/or Evolution Traffic Control NT Pty Ltd and/or Evolution Training and Safety NSW Pty Ltd and/or Cashcownow Pty Ltd T/As Surefleet Australia and/or Evolution Road Services Group Limited and/or Evolution Traffic Management Limited and/or Evolution Civil Limited and/or Evolution Academy Limited and/or subsidiary companies for their respective rights and interests
Type of Insurance	Public and Products Liability and Professional Indemnity
Geographical Limits	Worldwide but excluding any operations of the Insured domiciled in the United States of America or Canada
Period of Insurance	31st October 2019 to 31st October 2020 at 4:00pm Local Standard Time
Limit of Indemnity	Public Liability $50,000,000 Any one occurrence and unlimited as to the number of occurrences happening during the period of insurance Products Liability $50,000,000 Any one occurrence and in the aggregate any one policy period Professional Indemnity $20,000,000 Any one claim and in the aggregate any one policy period (with one reinstatement of Limit to be available to insured)
Insurer(s)	Liberty Specialty Markets (Lloyds Syndicate 4472) (Primary - $20,000,000) Sompo & CVS ($30,000,000 XS $20,000,000) SURA Professional Risks Pty Ltd (Security: Certain Underwriters at Lloyd's) ($10,000,000 XS $10,000,000)
Policy Numbers	Primary: TC1911303, Excess: TC1906303 & Excess Professional Indemnity: TBA

IMPORTANT NOTES: This Certificate is issued as a matter of information only and confers no rights on the holder. It does not amend, extend, replace or override the terms and conditions of the Cover Note or Policy arranged with the insurer. We require payment for the arranged insurance within the credit terms advised by us to the Insured, or to the Insured's broker where applicable. The Insured may cancel this insurance at any time and the Insurer may cancel it in accordance with law. We accept no responsibility for any inadvertent or negligent act, error or omission on our part in preparing this Certificate and we strongly recommend that the Insured should carefully read the Insurer's documentation, including terms and conditions of cover.

Signed by (Print Name): Luke Dear

on behalf of Arthur J. Gallagher Pty Ltd

Signature

Date: 29 October 2019

Direct Phone 07 3002 2228
Mobile 0481 900 816
Email luke.dear@ajg.com.au

www.ajg.com.au

Gallagher

Insurance | Risk Management | Consulting

Certificate of Currency

29 October 2019

We have arranged insurance cover following instructions from the insured, in accordance with the following brief particulars:

Insured	Evolution Group Holdings Limited and/or Queensland Infrastructure Capital Pty Ltd and/or Evolution Traffic Control Pty Ltd and/or Evolution Civil Maintenance Pty Ltd and/or Evolution Asset Management Pty Ltd and/or Evolution Training & Safety Pty Ltd and/or Evolution Fleet Services Pty Ltd and/or Evolution Traffic Control NT Pty Ltd and/or Evolution Training and Safety NSW Pty Ltd and/or Cashcownow Pty Ltd T/As Surefleet Australia and/or Evolution Road Services Group Limited and/or Evolution Traffic Management Limited and/or Evolution Civil Limited and/or Evolution Academy Limited and/or subsidiary companies for their respective rights and interests
Type of Insurance	Public and Products Liability and Professional Indemnity
Geographical Limits	Worldwide but excluding any operations of the Insured domiciled in the United States of America or Canada
Period of Insurance	31st October 2019 to 31st October 2020 at 4:00pm Local Standard Time
Limit of Indemnity	Public Liability $50,000,000 Any one occurrence and unlimited as to the number of occurrences happening during the period of insurance Products Liability $50,000,000 Any one occurrence and in the aggregate any one policy period Professional Indemnity $20,000,000 Any one claim and in the aggregate any one policy period (with one reinstatement of Limit to be available to insured)
Insurer(s)	Liberty Specialty Markets (Lloyds Syndicate 4472) (Primary - $20,000,000) Sompo & CVS ($30,000,000 XS $20,000,000) SURA Professional Risks Pty Ltd (Security: Certain Underwriters at Lloyd's) ($10,000,000 XS $10,000,000)
Policy Numbers	Primary: TC1911303, Excess: TC1906303 & Excess Professional Indemnity: TBA

IMPORTANT NOTES: This Certificate is issued as a matter of information only and confers no rights on the holder. It does not amend, extend, replace or override the terms and conditions of the Cover Note or Policy arranged with the insurer. We require payment for the arranged insurance within the credit terms advised by us to the Insured, or to the Insured's broker where applicable. The Insured may cancel this insurance at any time and the Insurer may cancel it in accordance with law. We accept no responsibility for any inadvertent or negligent act, error or omission on our part in preparing this Certificate and we strongly recommend that the Insured should carefully read the Insurer's documentation, including terms and conditions of cover.

Signed by (Print Name): Luke Dear

on behalf of Arthur J. Gallagher Pty Ltd

Signature

Date: 29 October 2019

Direct Phone 07 3002 2229
Mobile 0481 900 816
Email luke.dear@ajg.com.au

www.ajg.com.au

APPENDIX G

1.1.47 SAFE WORK METHOD STATEMENTS

Evolution Traffic Control – Safe Work Method Statement 1 – Version 14
Head Office: Evolution Group Holdings Ltd, 572 Curtain Avenue East, Eagle Farm, Qld 4009. Ph. 1300 880 481
NSW Head Office: 51 Heathcote Road, Moorebank, NSW 2170
A copy of Safe Work Method Statement 1 (SWMS 1) must be held at the worksite at all times.

Task/Process	Traffic Control (high risk activity) – Development, planning, installation and operation of Traffic Control/Management (traffic guidance schemes) for intermittent and low impact works including creating temporary speed zones at worksites and installation and operation of traffic control devices.			Safe Work Method Statement No: 1
Project	All Situations	Location	New South Wales	
SWMS Developed By	Helen Stretton HSEQ Advisor – Evolution Group Holdings Limited	Signature		Date 13/09/2019
SWMS Approved By	Michael Kurtz National HSEQ Manager – Evolution Group Holdings Limited	Signature		Date 13/09/2019
SWMS Adopted By		Signature		Date

Training & Qualifications Required	Equipment, Mobile or Static Plant	Personal Protective Equipment
1. Traffic Controller Card (Blue Card or Level 1) 2. Implement Traffic Control Plan Card (Yellow card or Level 2) 3. Prepare Work Zone Traffic Management Plan Card (Red Card/Orange card or Level 3) 4. NSW WHS General Induction for Construction Work in NSW (or recognized equivalent) 5. Evolution Induction and Safety Training 6. Site (client) induction as directed 7. Current Motor Vehicle Drivers Licence (where req'd) applicable for type of traffic vehicle used	1. Traffic Control Vehicle 2. Stop Slow Bat 3. Traffic Control Signage 4. Traffic Control Equipment (e.g. traffic cones) 5. UHF radios (charged) 6. Traffic Control Wands (Night works) 7. VMS / Arrow Board (as required)	1. Evolution Traffic Controller Vest - always worn as the outer garment - refer Appendix 1 2. Current Evolution High Visibility long sleeve shirt – sleeves rolled down and buttoned up at the wrist 3. Current Evolution High Visibility Long trousers with mobility strips 4. White overalls with mobility strips at night time - vest must be worn over overalls 5. Lace up steel cap boots with ankle support complying to Australian Standard (AS/NZS 2210) laces done up 6. Hard hat with brim and reflective strips – worn at all times – no beanies / caps to be worn under hard hat - soft hats MUST NOT be worn 7. Safety Glasses / Safety Prescription Glasses / Over glasses - (to be worn at all times - day and night) complying to Australian Standard (AS/NZ 1337.1) refer Appendix 2 8. Gloves - to be worn at all times when manual handling and to be worn on person at all other times 9. Sunscreen - to be applied and reapplied as per manufacturer's instructions – face covers can only be worn for medical reasons and only after the National HSEQ Manager has given individual approval – face covers must be high visibility 10. Red wand - times of low visibility and night 11. Personal Headlamps – to be worn at all times when working at night or in low visibility areas without adequate lighting when not controlling traffic. 12. Cold weather clothing - to be worn under current Evolution uniform unless you are wearing a bio-motion jacket in high visibility yellow the full length and full arms of the jacket 13. Wet weather clothing – bio-motion high visibility yellow the full length and full arms of the jacket and full legs of the trousers (Evolution Traffic Controller Vest always to be the outer garment)

Implementation, Monitoring and Reviewing – Site Specific Risk Assessment - Communication/Consultation – Compliance

- This SWMS is used on work sites to safely identify hazards, assess risks, develop appropriate control measures, implement control measures, monitor and review control measures to enable the safe and controlled progress of works. A Site Specific Risk Assessment shall also be undertaken and developed in conjunction with this SWMS. The Site Specific Risk Assessment shall be undertaken on the 'Daily Traffic Management Checklist & Docket / Job Docket Risk Assessment'.
- Communication/consultation – This SWMS has been developed in consultation with senior management, supervisors and various workplace health & safety committees. All persons associated with the work site shall be given the opportunity to make comment on the content of this SWMS and the Site Specific Risk Assessment completed and prior to the commencement of works. Consultation on and review of this SWMS will continue with relevant workgroups at regular training sessions.
- All traffic control guidance schemes shall be planned, implemented, maintained and removed in accordance with the NSW Roads and Maritime Services (RMS) Manual – Traffic Control at Worksites, Australian Standards Series 1742, NSW WHS Act 2011 and NSW WHS Regulations 2017.
- Work sites and traffic controllers will be audited by Evolution Traffic Control Supervisors (recorded on traffic controller assessment form), site supervisors and WHS Officers to ensure compliance for the safety of clients, members of the public and traffic controllers. Any non-compliance with the implemented control measures will be corrected on site and staff members recommended for supervision, counselling or additional training where necessary.

Page 1 of 24 Evolution Traffic Control Pty Ltd (ABN: 64 109 656 233) NSW SWMS 1 (v14) NSW Issued: 13/09/2019 Review: 13/09/2020 HSEQ-SWMS-041

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
1. PLANNING OF JOB, RESOURCING & SITE ASSESSMENT / ESTABLISHMENT	**Unlicensed / Unauthorised Traffic Controllers**	**High (3)**	• **TC's are to wear Personal Protective Equipment (PPE) as specified on page 1 of this SWMS. The correct PPE must be worn at all times.** • TC's to be site inducted (where applicable) • Supervisor to check status of TC Licenses / induction cards • Ensure relevant approvals are in place • TC's shall carry their Traffic Controller's accreditation (Blue Card or Level 1), Traffic Management Accreditation (Yellow Car or Level 2) – (Red Card/Orange Card or Level 3) General Safety Induction for Construction Industry on their person at all times	**Medium (2)**		Admin	Traffic Controllers / Site Supervisor
	Inadequate / faulty devices and signage	**High (3)**	• Vehicle drivers to check all devices and signage are in satisfactory working condition prior to arrival at job using vehicle maintenance checklist and signage checklist. • Driver to check quantity of devices and signs against Traffic Control Plan (TCP)	**Medium (2)**		Admin	Driver Implementing Traffic Management Plan / Traffic Controllers
	Additional hazards not identified in SWMS	**High (3)**	• Site assessment to be undertaken to identify potential site specific hazards • All TC's shall conduct a site specific risk assessment prior to the commencement of works to identify hazards (e.g. potholes, gravel/uneven surfaces, wheel ruts and adequacy of lighting. Additional hazards and controls to be entered into the 'Additional Hazards Identified' Section of the Daily Traffic Management Checklist and Docket Book / Job Docket Risk Assessment, Initial and Residual Risk to be assessed. **No work is to commence if the Residual Risk is 'Very High'. Supervisor / Operations Manager must be contacted.**	**Medium (2)**		Admin	Traffic Controllers / Site Supervisor

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
			• TC's to be alert to changes and potential changes throughout shift and complete a new risk assessment if necessary. • TC's are never to place any part of their body in the line of fire. • Confirm work description with clients				
	Uneven ground / potholes / slippery surfaces	**High (3)**	• TC's to ensure secure footing when moving about worksite and maintain eyes on path of travel. • Extreme care must be taken when installing, maintaining and removing traffic control equipment (including signage & traffic cones) at the work site • **TC's to ensure that personal belongings (e.g. water bottles, drink coolers) are not positioned at the traffic control station where they can be a trip hazard**	**Medium (2)**		Admin	Traffic Controllers / Site Supervisor
	Fatigue	**High (3)**	• TC's shall be relieved from their duty in controlling traffic (i.e. stop/slow only) after not more than 2hrs for a period of rest or other duties of at least 15mins • The non-receipt of rest pauses is to be recorded in additional information section of 'Daily Traffic Management Checklist & Docket Book / Job Docket Risk Assessment' • Any TC not receiving rest breaks is to advise their Supervisor / Operations Manager – Rest pauses to be coordinated and rotated, Ute drivers are to conduct traffic control duties and give regular breaks to straight to site traffic controllers. • TC's are not to sit in work vehicle on a work site • To combat fatigue, employees must notify their Operations Manager if any shift is to exceed 10hrs duration. After assessment of situation, direction will be given regarding the continuation of shift or rostering of	**Low (1)**		Admin	Traffic Controllers / Site Supervisor

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
			relief personnel in accordance with Evolutions Fitness for Work Procedure. • The effects of fatigue can have severe consequences when combined with driving of motor vehicles, particularly after night shift duties. Employees affected by fatigue are to immediately advise their Operations Manager prior to driving motor vehicles (private and company vehicles) • Meal breaks must be coordinated at the worksite. **Meal breaks must be taken clear of work area. Rest / meal breaks are not to be taken in work vehicle on a work site.**				
	Lack of Access to Amenities	**Medium (2)**	• Access to toilets is to be reasonably available • If toilet facilities are not readily accessible then TC's must identify closest amenities in site specific risk assessment and record arrangement to access in Docket Book / Job Docket Risk Assessment • Transport shall be available to TC's at the worksite so amenities can be accessed • Always be observant when accessing public toilets especially in darkened or remote areas • Notify client Supervisor / Operations Manager if no suitable amenities available • This issue needs to be communicated to, and in consultation with the client	**Low (1)**		Admin	Traffic Controllers / Site Supervisor
	Environmental Damage	**Medium (2)**	• Conduct pre start check of **ALL** vehicles prior to attending worksite. Any form of oil, fuel, fluid leak or smoking exhaust must not be taken to the worksite and the operations manager must be advised immediately for approval of required action.	**Low (1)**		Admin Isolation	Traffic Controllers / Site Supervisor

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
			• Oil, fuel and fluid leaks at worksite must be reported to site supervisor and operations manager immediately and actions taken to contain and remove spillage • **All** vehicles must be properly secured – engines turned off, keys removed, placed in gear, wheels pointed towards the curb and hand brake applied. Where possible, avoid parking on hills/steep inclines • All refuse (including litter, broken signs, cones and frame legs) must be removed from worksite and returned to depot for disposal or recycling • Vehicles must not be driven onto any flora at the worksite. Always remain on road surface or shoulder • TC's must not at any time interfere with any form of fauna at worksite • Any observed environmental impact at site must be immediately reported to Supervisor / Operations Manager and Site Supervisor (Client) and are to be noted in additional information section of the Daily Traffic Management Checklist and Docket Book.				
	Inclement weather	**High (3)**	• Obtain weather update from Bureau of Metrology (BOM). If jobsite will be affected by severe rain prepare to make jobsite safe in consultation with Client / Operations Manager	**Medium (2)**		Admin	Traffic Controllers / Site Supervisor
	Thunderstorm / Lightning / Hail Storm	**High (3)**	• Obtain weather update from BOM. If jobsite will be affected by thunderstorm / hail storm prepare to make jobsite safe in consultation with Client / Operations Manager • Conduct a risk assessment giving consideration to re-opening if traffic lanes	**Medium (2)**		Admin	Traffic Controllers / Site Supervisor

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
			• If it is not possible to re-open the traffic lanes it may be necessary to close the road. Give consideration to removing traffic control equipment that may become a projectile in severe weather conditions. • Once job has been made safe Traffic Controllers to take shelter in vehicles until thunderstorm / hail storm has passed				
	Fog	**High (3)**	• Obtain weather update from BOM. If the job site will be affected by fog for an extended period consultation with Client / Operations Manager is required • Conduct a risk assessment giving consideration to the delaying of site set up until the fog dissipates • If the site is already set up give consideration to re-opening traffic lanes • Traffic Controllers to monitor work area set up / reset up site when safe to do so in consultation with Client / Operations Manager	**Medium (2)**		Admin	Traffic Controllers / Site Supervisor
2. INSTALLATION OF SIGNS	**Traffic-struck by passing vehicle, vehicle collision Struck by item deflected by passing vehicle**	**Very High (4)**	When implementing the Traffic Management Plan/Traffic Control Plan (TCP), the signage shall be erected in accordance with the RMS – Traffic Control at Worksites manual. The use of an approved Traffic Control Plan (TCP's) a modified TCP from the TCAW manual or a generic Evolution Traffic Control Plan may be utilised. The plan showing signage set-out is to be held on site at all times. Signage must be installed as per plan and as follow: • Drive through of site must be conducted prior to installation of signage • Gloves to be worn at all times when installing, removing and handling any traffic control equipment • Extreme care to be taken during erection of advance warning signage. Ensure sufficient room for signage	**High (3)**		Isolation Admin	Traffic Controllers / Site Supervisor

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
			vehicle to be parked on shoulder or take other precautions to minimise risk of impact with vehicles (i.e. use truck mounted attenuator (TMA)) or appropriate shadow vehicle • Where possible make sure signage is easily accessible to ensure TC's exposure to live traffic is minimised • When vehicle is in motion the tail gate and side gates must be in place and secured • **If posted speed is 80kmh or higher – two TC's must be used. One to act as spotter for approaching traffic** **Setup a two lane two way road** • Activate warning lights to warn approaching traffic and road users of workers implementing signage • (Activate arrow setting when merging or diverting traffic from closed lane or detouring traffic. Activate hazard setting at other times). • Park the signage vehicle clear of the travelled path. Park the vehicle on the shoulder or verge, or where parking is permitted. • Fog lines shall never be straddled • Signs to be unloaded from kerb side of vehicle where practical • Vehicle to be positioned to provide protection To personnel installing signage and equipment (i.e. always position vehicle between TC's and approaching traffic) • Be aware of site distances especially crests/curves • Signs must always be erected in same direction as flow of traffic				

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
			• When placing signage work at least 10m to the front left of the vehicle where possible • Cover any conflicting signage throughout work site • Crossing a carriageway on foot is strictly prohibited • The Traffic Controller Ahead/Prepare to Stop sign shall be displayed prior to the worksite at a distance deemed suitable following an assessment of risk factors (e.g. visibility, weather, line of sight) and in accordance with the RMS Manual – Traffic Control at Worksites, the TCP and the Evolution Traffic Safety Manual (IF REQUIRED) • Repeat signage sequence in opposite direction • Conduct complete drive through to ensure effectiveness and compliance of signage arrangement and job set up. **Positioning of a traffic controller at the beginning of the taper** • Install advance warning signage in direction of traffic flow to give warning to motorists • One Traffic Controller is to stop traffic in the lane being effected by works • The opposite direction shall remain unaffected • Position vehicle 10m behind Traffic Controller • Second Traffic Controller to install tapper, safety buffer and lane closure • Reposition signage vehicle at the end of safety buffer (Arrow board shall remain down and not activated) **Lateral Shift Taper**				

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
			• Install advance warning signage in direction of traffic flow to give warning to motorists • Conduct complete drive around and repeat sequence in opposite direction with traffic flow • Install taper and lane closure furthest away from the work area (ensure traffic have identified the change in route) • Install lateral shift taper/delineation at work areas as per traffic control plan • Monitor traffic movement constantly to avoid errant drivers **Install Lane Closures on Multilane Roads** • Activate the vehicle mounted warning device • Raise of deploy vehicle mounted arrow board • Activate the vehicle mounted arrow to merge traffic into the non-affected lane • Determine the work area and the lane to be closed • Conduct a drive through to determine the available signage location • Install signage in the opposite lane to lane closure and work area (i.e.: slow lane closure implement signage in median first) • Ensure signage vehicle is clear of the travelled path in the median (a Truck mounted attenuator may be required due to speed and traffic volume) • Drive through to end of worksite and cover all signage that may conflict with work site signage				

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
			• Conduct complete drive around and repeat sequence to erect signage in the lane effected by the lane closure and work area **Implementing a Merge Taper and Lane Closure** • Position the signage vehicle between the approaching traffic and person implementing the taper and lane closure • Commence taper from the kerb or fog line • Implement taper to the centre line (taper lengths as per table 5.2 TCAW) • Install safety buffer and lane closure • Always face approaching traffic when installing delineation • During implementation of lane closure cover all signage which may conflict with temporary signage • Conduct drive through of work site signage to ensure traffic has adopted to temporary traffic conditions • Position signage vehicle at end of safety buffer				
	Signage positioning and security – wind-blown signage striking persons or vehicles	**Very High (4)**	• Sandbags must be applied to signage legs and traffic cones positioned beside sign where sufficient room • Signage not to be positioned obscuring other items (e.g. visibility from driveways) • Signage not to be positioned as to be a hazard to workers, pedestrians or vehicles • Signage erected must be clear of travel path • Signage and delineation to be checked every two (2) hours with times and comments (where applicable) recorded in Daily Traffic Management Checklist and Docket Book / Job Docket Risk Assessment	**Medium (2)**		Engineer Admin	Traffic Controllers / Site Supervisor

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
	Injury from Poor Manual Handling Techniques	**High (3)**	• Side of signage vehicle trays to be lowered to avoid twisting and awkward posture which may lead to back injuries • Always use the correct technique for lifting, carrying or pushing to avoid or minimise risk of physical injury • Do not attempt to lift / carry anything outside your capacity – 18.5kgs max. Use team lifts for heavy items wherever possible • Check for slippery or uneven surfaces • Stand as close to the load as possible • Get a firm grip and use the palms of your hands not just your fingers • Bend your knees and keep your back straight • Use your legs, not your back to lift the load • Keep load close to your body – lifting with load close to your body creates less stress and effort • Don't twist your body – move your feet • When using an 'A Frame' signage ute tray – **Do not lift or drag signs over the top of other signs – Always remove the outer signs first and then remove the inner signs. When repacking signage into the 'A Frame' ute trays place the signs that you will most probably require first on the next set up in the outer position** • Where possible cones to be accessed from front of vehicle to prevent crush / strike injury	**Medium (2)**		Admin PPE	Traffic Controllers / Site Supervisor
	Client requests changes to be made to the TCP before or after signage installation	**High (3)**	• Lead Traffic Controller must escalate to the Operations Manager. • Operations Manager to request approval for changes by a Traffic Management Designer (TMD) in accordance	**Medium (2)**		Admin	Traffic Controllers / Site Supervisor / Operations Manager

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
			with the OPS-008 TGS / TCP / TCD Minor Modifications Procedure FC. • Traffic Controllers are not to make any changes to the traffic control signage until the proposed changes have been approved and the approval numbers received and added to the TCP.				
3. **PROTECTION OF WORKERS, PUBLIC AND TRAFFIC CONTROLLERS**	**Traffic-struck by passing vehicle, vehicle collision Struck by item deflected by passing vehicle**	**Very High (4)**	• Conduct traffic control as per RMS Manual – Traffic Control at Worksites • Monitor traffic movement through work site to ensure safe regulation of traffic controllers, members of the public, workers and vehicles • Always allow 1.2 metres for pedestrian access • Be mindful that motorists and pedestrians may be confused by the works. Ensure hand signals are clear and concise • Ensure that traffic travelling in the incorrect lane (stop/slow operations) is directed back to correct travel lane on leaving work area • TC vehicle with warning lights or arrow board activated to be positioned at start of the transition to provide buffer zone and protection for workers / Traffic Controllers • Standing or storing equipment in taper area is prohibited once traffic control is implemented • **Always look before stepping onto road – Never turn your back to approaching traffic** • Always be aware of your surroundings and location of traffic • Ensure signage vehicles are left secured at all times – engage first gear (or park in automatics), properly	**Medium (2)**		Isolation Admin	Traffic Controllers / Site Supervisor

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
			applied hand brake, turn engine off and remove ignition key • Where possible vehicles to be parked on flat ground. If not possible, turn front wheels toward kerb or median and use wheel chocks on steep inclines / declines				
	Emergency Vehicles	**High (3)**	• Ensure emergency vehicles receive right of way as soon as possible • Ensure worksite is clear of any hazards and emergency vehicles have an unobstructed travel path through worksite • If it is unsafe for emergency vehicles to proceed, TC to stop emergency vehicle until worksite is clear	**Medium (2)**		Admin	Traffic Controllers / Site Supervisor
	Cyclist Safety	**Medium (2)**	• Ensure cyclists have a clear travel path • Do NOT place any traffic equipment over a cycle way / path where a cyclist may come into contact with traffic equipment • Treat cyclists the same as motor vehicles • Escort cyclists through the work area if required	**Low (1)**		Isolation Admin	Traffic Controllers / Site Supervisor
	Poor Visibility – Working in low light or at night time Inclement weather	**Very High (4)**	• Ensure retro-reflectivity of clothing, signage and reflective white bands attached to traffic cones • Activate vehicle headlights, rotating lights and arrow board when required • In low light and wet weather conditions allow sufficient time for drivers of vehicles to observe and follow your directions • In wet weather conditions make allowances for increased braking distances of vehicles • Ensure care is taken when walking over wet slippery surfaces due to inclement weather • Drive to weather conditions	**Medium (2)**		Admin PPE	Traffic Controllers / Site Supervisor

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
	Environmental Hazards – Dehydration, UV Exposure, Heat, Cold	**High(3)**	• Drink water prior to commencement of works and regularly throughout shift to maintain good level of hydration • TC's to take adequate supply of drinking water to all work TC's to take fatigue / meal breaks away from work area • Sunscreen to be applied and reapplied by all personnel as per manufacturer's instructions • If it is anticipated that travel through snow conditions may apply, Manager to be contacted to arrange snow chains for vehicles	**Medium (2)**		Admin PPE	Traffic Controllers / Site Supervisor
4. CONTROL TRAFFIC	**Traffic-struck by passing vehicle, vehicle collision Struck by item deflected by passing vehicle**	**Very High (4)**	• **TC's are never to enter the direct travel path of a moving vehicle at any time** • Traffic to be controlled in compliance with RMS Manual – Traffic Control at Worksites and the Australian Standards 1742 set. **This is a legislative requirement** • TC must always maintain a clear escape route (escape path) to road shoulder, footpath etc. Always have somewhere to run to in case of an emergency. The escape route MUST be clear of obstructions of any kind • TC's shall be located so they are in a position to see approaching vehicles at a distance of **1.5D** • TC only to operate where maximum speed is 60kmh. Speed of road to be reduced to 40kmh where workers or plant operating less than 1.2m to lane carrying traffic • Positioning of traffic control to consider visibility, distance, geographical features • Always face traffic. Never turn your back to approaching traffic • Give approaching vehicles sufficient distance to stop safely	**Medium (2)**		Admin	Traffic Controllers / Site Supervisor

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
			• Use clear and definite signals (stop / slow bat and hand signals) • Stand facing traffic but outside projected travel path of vehicles • Do not position yourself in close proximity to a vehicle or barrier, that if impacted by another vehicle, you could be in the line of fire • Be aware of traffic movements – LOOK BEFORE MOVING – BE ALERT **1. Stopping Traffic** • Turn bat to STOP and raise your free hand into stop signal with palm facing the traffic • Ensure you stand outside projected travel path of vehicles • Give vehicles sufficient distance to stop • Allow 2-3 vehicles to stop before moving in front of stationary lane of traffic (avoid stopping large vehicles at the front of the queue) • Keep facing stationary vehicles • Move position so you are clearly visible to approaching traffic (e.g. 10m in front of stationary lane of traffic in line with drivers side headlight) • Ensure a clear escape path is available when conducting stop / slow operations – turn side on to stationary lane of traffic to allow you to view stationary lane and traffic approaching from opposite direction • Ensure STOP sign is facing the stationary traffic • DO NOT PUT YOURSELF IN UNSAFE POSITIONS				

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
			2. Allowing Traffic to Proceed • Wait until all traffic from opposite direction is clear of work site • Check work site / traffic lane are completely clear of vehicles, mobile plant, workers, pedestrians etc. – USE YOUR EYES • Confirm (by radio) with your TC partner that work site / traffic lanes are clear and is safe to send traffic (i.e. "Am I clear to send traffic?") • Move to side of road or shoulder and stand clear of traffic • Turn side on to traffic, turn bat to SLOW and use your free hand to give the 'GO' hand signal **3. Slowing Traffic** • Stand on side of road / shoulder – outside projected travel path of traffic • SLOW sign facing traffic • Extend free arm, wave it up and down but not above shoulder height **4. Detouring Traffic** • Stand on side of road / shoulder – outside projected travel path of traffic • SLOW sign facing traffic • Extend free arm and give the 'GO' hand signal and indicate the intended direction of travel				

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
			5. Multiple Lanes of Traffic • Traffic controllers are only to control one lane of traffic at any given time. Multiple traffic lanes require one traffic controller for each lane 6. **Working in gaps of traffic while spotting** Beacon lights to be turned on Positive communications between TC and worker TC not to be positioned in live lane **Traffic Controllers are not to operate client vehicles / machinery nor participate in any construction activity including but not limited to:** • **Sweeping sites** • **Loading / unloading client vehicles** • **Digging / shovelling** • **Moving equipment (other than Evolution equipment)** • **Acting as a spotter without accreditation AND without approval from your Operations Manager** **Traffic Controllers are trained and competent to control traffic at a worksite.** **Under no circumstances are Traffic Controllers to conduct any form of construction activity at a worksite** **If a client site supervisor requests that you conduct construction activities YOU MUST IMMEDIATELY ADVISE that you are not authorised to do so and advise your Operations Manager IMMEDIATELY if the matter becomes an issue**				

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
5. RADIO PROCEDURES	**Confusion leading to unsafe situations, collisions or injury to Traffic Controller, member of the public or worker onsite**	**High (3)**	• Ensure your communications over the radio are clear and concise • Always check the safety of the work area before sending traffic or stating that it is clear to send traffic • Always ask your TC partner 'is it clear to send traffic' • Ensure radios are fully charged prior to commencing duties If at any time a Traffic Controller receives a radio message that is not clear, the Traffic Controller must clarify the message before sending traffic. At all times prior to sending / receiving traffic, Traffic Controllers must first check that the intended travel path of vehicles through the work site is clear of operating machinery and obstacles and is in a trafficable condition. The selection of a radio channel shall depend on the availability of a channel without excessive pre-existing communications. Channels 5 and 35 are dedicated emergency channels and are only to be used as such. Select a channel between 12 and 80 (Ch 22 and 23 are blocked). Channel selection must be established prior to commencing traffic control. **Traffic shall NOT be released from hold point until positive communication has been received that the travelled path is clear past the work area.** The below procedure is to be used so your traffic control operations are safe and effective. Two Traffic Controllers are conducting Stop / Slow (TC1 and TC2). TC2 has his traffic stopped and TC1 has his traffic flowing. (The vehicle	**Medium (2)**		Admin	Traffic Controllers / Site Supervisor

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
			descriptions are examples). The following procedure is to be implemented:				

T/C	Radio Transmission	Action
1		TC1 stops traffic
1	My last vehicle is a Blue Ute 123ABC (or Blue Ute, 123)	
2	Copy last vehicle 123ABC	**TC2 confirms TC1 message**
2	I have received your last vehicle, a Blue Ute 123ABC. T/C checks work site. Am I clear to send traffic?	**TC Checks Worksite**
1	**TC checks worksite. You are clear to send traffic**	TC checks if worksite is clear
2	**Sending traffic**	**TC2 moves outside the travelled path, turns stop/slow bat signal traffic to proceed**
2	My last vehicle is a Red Sedan, 456DEF	TC2 stops traffic
1	Copy last vehicle 456DEF	TC1 confirms TC2 message
1	I have received your last vehicle, a Red Sedan 456DEF. Am I clear to send traffic?	
2	You are clear to send traffic	
1	Sending traffic	TC1 sends traffic
Traffic shall NOT be released from hold point until positive communication has been received that the travelled path is clear past the work area.		

6. WORKING NEAR MOBILE PLANT AND MACHINERY	**Struck by moving plant / equipment**	**Very High (4)**	• Comply with client / contractor's standard operating procedures • Keep a safe distance from all mobile plant/machinery in case it moves unexpectedly • Keep out of radius of swinging parts of mobile plant / machinery (e.g. excavators) • Do not stand in centre of lane, stand outside of travelled path of plant if in a closed lane • Always stand on road shoulder or near delineation (line of traffic cones) • Always ensure plant operator can see you. Maintain eye contact	**Medium (2)**		Admin	Traffic Controllers / Site Supervisor

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
			• UHF radio communication to be utilised to communicate between controllers, plant operators and works personnel • Confirm radio channel with other TC's and client / contractor prior to the commencement of works • **Smoking, using mobile phones & MP3 players whilst performing traffic control duties is prohibited**				
	Noise	**Medium (2)**	• TC positions shall be rotated to negate lengthy exposure to excessive noise; hearing protection is not a desirable control measure • TC position to be as far away from noise as possible • If excessive noise is identified, consultation with Client / Contractor required to provide adequate controls which must be entered into the Daily Traffic Management Checklist and Docket Book / Job Docket Risk Assessment, Initial and Residual Risk to be assessed. No work is to commence if the Residual Risk is 'Very High'. Supervisor / Operations Manage must be contacted.	**Low (1)**		Admin	Traffic Controllers / Site Supervisor
7. RECORD KEEPTING – SIGNAGE AUDITS	**Traffic-struck by passing vehicle, vehicle collision Struck by item deflected by passing vehicle**	**High (3)**	• A site Signage Audit (inspection) to be completed for each Traffic Guidance Scheme implemented in accordance with the RMS Manual – Traffic Control at Worksites • The signage audit (inspection) shall be completed on the Evolution Daily Traffic Management Checklist and Docket and submitted to site supervisor to ensure control measures are in place in accordance with the RMS Manual – Traffic Control at Worksites • Worksite audits (inspections) will be conducted by TC Supervisors to ensure compliance, for safety of clients, public and Traffic Controllers	**Low (1)**		Admin	Traffic Controllers / Site Supervisor

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Job Step	Identified Hazards	Initial Risk Level	Current Control Measures	Residual Risk Level	Additional Controls (as required)	Level of Control	Responsibility for Control Measure
			• Any non-compliance with control measures will be corrected immediately on site and staff members recommended for training where necessary				
8. **REMOVAL OF TAPERS & ADVANCE WARNING SIGNAGE**	**Traffic-struck by passing vehicle, vehicle collision Struck by item deflected by passing vehicle**	Very High (4)	• TCP to be removed in reverse order (i.e. remove cones of work area, remove taper (last cone installed, first cone removed), remove fast lane signage and finally remove slow lane signage. Remember lane closure cones to be picked up first in reverse order to the arrow board or end of merge taper • **Forward pick up of a lane closure is only permitted when advance warning vehicles and TMAs are in place. A risk assessment must be conducted and documented before a forward pick up of a lane closure is undertaken.** • Ensure all sign covers are removed • TC vehicle to be positioned to provide protection to TC's removing equipment (i.e. always. position vehicle between TC's and approaching traffic • Vehicle mounted warning lights to be activated during removal of temporary TCP • Vehicle / TMA / Cover Vehicle to do loop around job site and park at start of merge taper. • Taper traffic cones to be picked up with cover provided by TMA / Cover Vehicle in forward motion • Never reverse up a live lane or an on / off ramp	**Medium (2)**		Admin	Traffic Controllers / Site Supervisor

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Appendix 1

Wearing of Traffic Control Vests

*Evolution Traffic Controllers **MUST** wear Evolution Traffic Control Vests at all times except when implementing or removing a Traffic Guidance Scheme OR on a break.*

- Vests MUST always be worn as the outer garment
- Vests MUST be worn on the outside of wet weather and cold weather clothing.

Only in extreme high temperatures can vests be removed and only for the period of extreme heat and only if *all of the below applies:*

- Temperatures are extreme and not in the hours of darkness ***AND***
- A risk assessment has been completed in the '***Any additional hazards identified***' section of your docket book showing the Hazard / Initial Risk Score / Control Measures Taken / and Residual Risk Score) ***AND***
- You have obtained approval from your Operations Manager to remove your vest. (This must also be noted in the 'any additional hazards' section of your docket book)

Please note:-

- **Approval to remove your vest only lasts for the hours of extreme heat. After the extreme heat has passed your vests must be re-worn.**
- **Each new day will require new approval from your Operations Manager.**

Appendix 2

Safety Glasses

*When conducting traffic control duties Evolution Traffic Controllers **MUST** wear Safety Glasses that comply with Australian and New Zealand Standard (AS/NZS) 1337.1*

- If you cannot find AS/NZS 1337.1 on the inside arm of your glasses they will not be compliant and you will need to obtain safety glasses that are compliant.
- If you wear prescription glasses to conduct traffic control you will need to wear either:-
  - Overglasses – over your prescription glasses
  - Prescription Safety Glasses (showing AS/NZS 1337.1 on the inside arm of the glasses – if your prescription safety glasses do not show the standard compliance you will need to obtain a letter from your Optometrist stating your safety glasses comply to the Standard AS/NZS 1337.1 and keep this letter with you at all times.

Safety glasses are available in tinted, amber and clear. Tinted safety glasses should not be worn at night or in times of low visibility.

Evolution Traffic Controllers cannot conduct traffic control duties without wearing safety glasses that comply with the Australian and New Zealand Standard (AS/NZS 1337.1)

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

THE RISK ASSESSMENT PROCESS

1. **Establish the hazard** – a hazard is something with the potential to cause harm. This can include substances, plant work processes or other aspects of the work environment.
2. **Identify the risk** – the risk is the likelihood that death, injury or illness might result because of the hazard.
3. **Assess the likelihood and consequences of the risk** – use the risk assessment matrix (below)
4. **Devise control measures** using the 'hierarchy of control' and implement control measures
5. **Monitor, review and evaluate** the effectiveness of control measures
6. **Communication and Consultation** must be carried out at each step of the process.

Each step in the process is of equal importance and no risk assessment is completed correctly unless you follow this process.

THE HIERARCHY OF CONTROL

To properly manage exposure to risks a person should consider the appropriateness of control measures in the following order:

- **Elimination**
  Eliminating the hazard entirely
- **Substitution**
  If not possible minimise the risk by substitution of a lesser risk.
- **Isolation**
  Isolating the hazard giving rise to the risk.
- **Engineering**
  Minimise the risk by engineering means.
- **Administration**
  Applying administrative measures.
- **Personal Protective Equipment**
  Wear appropriate PPE at the worksite.

Most Effective

Least Effective

RISK ASSESSMENT MATRIX

LIKELIHOOD How likely could it happen	Insignificant (no injuries)	Minor (first aid injuries only)	Moderate (Medical Treatment)	Major (Severe/ Multiple Injuries))	Catastrophic (Death)
Almost Certain Expected in most cases	3	3	4	4	4
Likely Probably occur in most circumstances	2	3	3	4	4
Possible Might occur at some time	1	2	3	4	4
Unlikely Could occur at some time	1	2	2	3	4
Rare May occur, only in exceptional circumstances	1	2	2	3	3

The **Hazard** is a person on the work site being struck by a vehicle. The **Risk** is likely that a person could be struck by a vehicle and the consequence of that collision would be severe (i.e. severe injury or death). Using the matrix the combination of almost certain and catastrophic means that the rating of the risk is '**Very High**'. Therefore control measures must be used to lower the risk.

4	Very High	URGENT – Stop and do something about this risk immediately – requires immediate attention.
3	High	Continue with appropriate supervision and control measures as detailed by the risk assessment process (i.e. SWMS or Site Risk Assessment)
2	Medium	Utilise control measures to ensure risk is kept "As Low as Reasonably Practical"
1	Low	Minimal risk – continue managing with routine practices and safe procedures

A site specific risk assessment shall be conducted at all worksites where Evolution traffic controllers are in attendance. The site specific risk assessment shall be completed as part of the Daily Traffic Management Checklist and Docket book. Each traffic controller at the worksite shall be given the opportunity to take part in the site specific risk assessment process - safely identify hazards, assess risks, develop appropriate control measures (using the hierarchy of control), implement control measures, monitor and review control measures. All applicable sections of the site specific risk assessment shall be completed and any deviation from SWMS 1 shall be noted. Any additional hazards identified shall be rated, control measures implemented to minimize risk and the residual risk shall be noted on the Daily Traffic Management Checklist and Docket Book.

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

Client / Project Name		**Location**	
Client Contact		**Phone**	
Depot		**Your Supervisor**	
Depot Phone Number		**Supervisor's Phone**	

DECLARATION
By signing this record, I acknowledge that I have been provided the opportunity to give comment on the formulation of work methods, the identification of hazards associated with this work and the development of control measures that will allow the work to be undertaken safely. I acknowledge I have been instructed in the work methods and understand and will comply with these instructions.
Do not sign this record if you do not understand, do not agree or do not intend to comply with the work methods prescribed.

TC Name	Signature	Date	TC Name	Signature	Date

REPORTING OF INJURIES AND ILLNESSES AT AND AWAY FROM THE WORKSITE:

- If you suffer any form of injury or illness at a worksite you MUST immediately advise the site supervisor and your operations manager
- If you suffer any form of injury or illness or are involved in a motor vehicle accident whilst travelling to or from the worksite you MUST immediately advise your operations manager
- If you suffer any injury or illness whilst NOT at the worksite (or travelling to and from the worksite) that may affect your ability to perform your traffic control duties you MUST immediately advise your operations manager
- Reports detailing the circumstances of any injury, illness or accident MUST be reported on and Evolution Incident/Accident Report Form and provided to your operations manager at the conclusion of the day/night work shift during which the event occurred

In an emergency you can also call – **1300 880 481**. This number will put you in contact with the nearest Evolution Depot

TMP PREPARED BY – MARKO PERKOVIC
PWZTMP - 0051699662

APPENDIX H

1.1.48 THE EVOLUTION GROUP PROFILE

CGI01092482SEQ1

WorkCover New South Wales

OCCUPATIONAL HEALTH AND SAFETY

GENERAL INDUCTION

FOR CONSTRUCTION WORK IN NSW

OHS Construction Induction Training Certificate

This is to certify that: CRAIG MITCHELL

has satisfactorily completed the course in Occupational Health and Safety (OHS) General Induction for Construction Work in NSW

Date of issue: 22 Jun 2007

This course in OHS General Induction for Construction Work in NSW meets the general health and safety induction requirements of the OHS Regulation 2001.

Date of Birth: 29 Apr 1991

Driver Licence

New South Wales, Australia

Craig Nathan MITCHELL

Card Number
2 045 122 268

4 WINDEYER CL
MEDOWIE NSW 2318

Licence No.
15725303

Licence Class
MR, R

Conditions
B

Date of Birth
29 APR 1991

Expiry Date
14 MAY 2020

NSW GOVERNMENT Transport Roads & Maritime Services

Implement Traffic Control Plans

Card No. 0037830419

This qualification enables you to implement Traffic Guidance Schemes/Traffic Control Plans in accordance with approved Traffic Management Plans.

CRAIG
MITCHELL

Expiry Date:
12/01/2020

This card is not a proof of identity.

NSW GOVERNMENT Transport Roads & Maritime Services

Traffic Controller

Card No. 0037830415

This qualification enables you to direct traffic with a stop/slow bat or similar control device through or past a roadwork site.

CRAIG
MITCHELL

Expiry Date:
12/01/2020

This card is not a proof of identity.

NSW GOVERNMENT Transport Roads & Maritime Services

Worker on Foot

This card verifies that: **Craig Mitchell**
has completed Worker on Foot Training to meet the requirements of Roads & Maritime Services projects & worksites.

Date issued: **18/06/2018** Trainer's name: **Scott Dews**

Signature of holder:

No: **5129**

Expiry date: **17/06/2023**

NSW GOVERNMENT Transport Roads & Maritime Services

Prepare a Work Zone Traffic Management Plan

Card No. 0041445292

This qualification enables you to prepare Traffic Management Plans and conduct inspections on Traffic Management Plans.

CRAIG
MITCHELL

Expiry Date:
24/05/2020

This card is not a proof of identity.

RTC No. 31733

Card ID: 07783/1

evolution TRAINING

CRAIG MITCHELL

Issued: 8 May 2016

RIIWHS204D - Work Safely at Heights

NATIONALLY RECOGNISED TRAINING

www.evolutiontraining.edu.au

RTO No. 31733

Card ID: 07783/1

evolution TRAINING

Craig Mitchell

DOB: 29/04/1991

RIIRTM301D Operate a Truck or Trailer Mounted Attenuator

Issued on: 04/08/2016

NATIONALLY RECOGNISED TRAINING

www.evolutiontraining.edu.au

WHS Contractor Induction

The City of Newcastle

Name: Craig Mitchell

Company: Evolution Traffic Control

Induction No: 5097

Induction Date: 16/01/2017

This card certifies that the above named person has completed The City of Newcastle (Council) Contractor Induction and is valid for three (3) years from date of induction.

NSW GOVERNMENT Transport Roads & Maritime Services

M1

~~SITE~~ INDUCTION CARD

NAME: C. Mitchell

has attended SITE SPECIFIC OHS INDUCTION

at CCD M1 - 1&2 WORKSITE

Date Inducted: 25/6/18 Inductor's Name: B. Sawyer

Signature: No:

This card is only valid for use on the worksite specified above.

Valid for 36 months from date of issue.

Greg Malenstein

From: Loretta Kung <LKung@ryde.nsw.gov.au>
Sent: Thursday, 21 November 2019 3:51 PM
To: Greg Malenstein; City of Ryde
Cc: Leighton Stock; Scott Steward; Samantha Langley; Alex Tattle; Julien Quan
Subject: RE: Kent Road Primary School - TMP
Attachments: CTMP Checklist ver 2.pdf

Hi Greg,

Apologies for the delated response.

Thank you for submitting the TMP for the project.

For council to provide comments the following information is required. Please refer to details in the CTMP checklist attached :-

Section B: - Construction Details and site Layout

- Item 3, 5, 7 (Will concrete be poured during school zone hours between 8-9:30am & 2:30-4pm?) , 11

Section D: - Management of Construction Vehicles

- Item 16 (There are currently 3 site access points), 17, 18 (disregard the note), 19 (Provide swept path for HRV & larger), 20, 23

Do not hesitate to contact me if you have any questions.

Regards

Loretta Kung
Traffic Engineer
TRANSPORT
P (02) 9952 8122
E LKung@ryde.nsw.gov.au
W www.ryde.nsw.gov.au

Customer Service Centre 1 Pope Street, Ryde (Within Top Ryde City shopping centre)
North Ryde Office Binary Centre, Building 0, Level 1, 3 Richardson Place, North Ryde

Let's Connect Facebook | Twitter | Instagram | YouTube | eNews

This email is privileged and confidential. If you are not the intended recipient please delete the message and notify the sender. The use, copying or distribution of this message or any information it contains, by anyone

other than the intended recipient is prohibited. Unless stated otherwise, this email represents only the views of the sender and not the views of the City of Ryde Council. Please note: information provided to Council in correspondence may be made publicly available, in accordance with the Government Information Public Access Act (GIPA Act) 2009.

From: Greg Malenstein [mailto:GMalenstein@sthilliers.com.au]
Sent: Thursday, 7 November 2019 1:54 PM
To: Loretta Kung; City of Ryde
Cc: Leighton Stock; Scott Steward; Samantha Langley; Alex Tattle
Subject: Kent Road Primary School - TMP

Hi Loretta,

As part of our State Significant Development approval conditions we must consult with council on our traffic management plan.

Are you able to review our attached Traffic Management Plan.

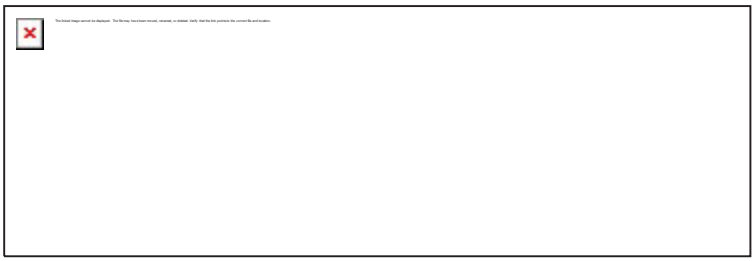
For further information refer to Condition B16 on the attached Development Approval.

Any issues please call me on the below number

Greg Malenstein
Project Manager
St Hilliers Property

+61 408 458 492
GMalenstein@sthilliers.com.au

www.sthilliers.com.au



If this Email was not addressed to you then you must not make any use of it. It may contain material that is confidential or protected by legal privilege. If you have received this message in error please advise us by reply and then delete the message, including any attachments, and destroy all copies

From: Loretta Kung <LKung@ryde.nsw.gov.au>
Sent: Monday, 4 November 2019 3:03 PM
To: Scott Steward <SSteward@sthilliers.com.au>
Cc: Greg Malenstein <GMalenstein@sthilliers.com.au>; Leighton Stock <LStock@sthilliers.com.au>; DL Regulatory <Regulatory@ryde.nsw.gov.au>; John Moujalli <JMoujalli@ryde.nsw.gov.au>
Subject: RE: Road Use Permit - Kent Road Primary School

Hi Scott,

CTMP Standard Requirements – Checklist

		Refer to: *(Indicate Section or Page No.)*
A. Background		
1. Details of the project including the development consent to which the CTMP relates, and site location *Note: Approval from Transport for NSW's Transport Management Centre shall be obtained for any road works on State Roads or within 100m of Traffic Signals. The Road Occupancy License must be provided to the City of Ryde.*	☐Yes	
2. Surrounding traffic environment showing State, Regional and Local Roads, Road Network Configuration, public transport facilities and existing parking restrictions	☐Yes	
B. Construction Details and Site Layout		
3. Details of construction activities including commencement dates and duration of works for each relevant stage of construction	☐Yes	
4. Hours of construction complying with development consent including proposed hours of truck movements	☐Yes	
5. Frequency of Truck Movements and maximum tonnage of construction vehicles	☐Yes	
6. Details of Works Zone for any area of public land to be occupied (inclusive of footpaths) including plans and duration of occupation *Note: Road Use Permit shall be obtained from the City of Ryde Council.*	☐Yes ☐N/A	
7. Locations of concrete pumps, mobile cranes, elevated work platforms, excavators or other item of plant on the road reserve and associated travel-lane closures *Note: Elevated Tower, Crane, and/or Concrete Pump Permit shall be obtained from the City of Ryde Council.*	☐Yes ☐N/A	
8. Locations of site cranes, material drop-off/pick-up and associated on-road 'WORKS ZONE' *Note: Operation of Crane over Air Space of Council Road/Footpath Permit = shall be obtained from the City of Ryde Council.*	☐Yes ☐N/A	
9. Location of storage areas for equipment, material and waste *Note: Skip Bin on Nature Strip Permission shall be obtained from the City of Ryde Council when it is physically impossible to place the skip bin on private property.*	☐Yes	
10. Location of hoardings *Note: Construction Hoarding Permit shall be obtained from the City of Ryde Council.*	☐Yes ☐N/A	
11. Location of road openings *Note: Road Opening Permit shall be obtained from the City of Ryde Council.*	☐Yes ☐N/A	

CTMP Standard Requirements – Checklist		Refer to: *(Indicate Section or Page No.)*
C. Impact of Project		
12. Details of the impact of the works on residents, businesses, pedestrians, and cyclists	☐Yes	
13. Heavy vehicle movements in adjacent council areas	☐Yes ☐N/A	
14. Description of any interruption to bus services or bus stops and corresponding mitigating measures to ensure continued access to public transport. *Note: Temporary adjustment to Bus Stops or Traffic Signals shall require approval from the State Transit Authority (STA) and RMS respectively prior to commencement of works.*	☐Yes ☐N/A	
15. Description of impedance to access to emergency vehicle access and proposed measures to ensure satisfactory access is maintained.	☐Yes ☐N/A	
D. Management of Construction Vehicles		
16. Details of routes to and from site and entry and exit points from site *Note: The approved truck route plan shall form part of the contract and must be distributed to all truck drivers.*	☐Yes	
17. Details of roads that may be excluded from use by construction traffic i.e. roads with load limits, quiet residential streets or access/turn restricted streets	☐Yes ☐N/A	
18. Details of the largest truck that will be used during the demolition, excavation and construction *Note: Dog trailers, articulated vehicles (AV) and any other oversize or over-mass vehicles are NOT allowed to travel on Local Roads (unless approval for a one-off occasion is obtained from City Works and Infrastructure). Requests to use these vehicles must be submitted 28 days prior to the vehicle's scheduled travel date. For more information please contact the National Heavy Vehicle Regulator (NHVR) on 1300 696 487 or www.nhvr.gov.au.*	☐Yes	
19. Swept Path Diagram showing forward in and forward out movement of all vehicles entering and exiting the site or Works Zone. *Note: All vehicles shall enter and exit the site in forward direction (no trucks shall reverse into the site from the road unless specific approval for a one-off occasion is obtained from City Works and Infrastructure).*	☐Yes	
20. Swept Path Diagram showing how trucks will navigate to and from the site along the nominated truck route at intersections.	☐Yes	
21. Queueing locations for arriving vehicles if not solely on site. *Notes:* *a. Queuing or marshalling of trucks shall not be permitted on any public road.* *b. Engines are to be switched off when using these queuing locations.*	☐Yes ☐N/A	
22. Management of Construction Worker Parking *Note: All vehicles associated with the development shall be parked wholly within the site. All site staff related with the works are to park in a designated off street area or be encouraged to use public transport and not park on the public road.*	☐Yes	
23. Proposed outline on how and where loading and unloading of materials of construction vehicles is to take place	☐Yes	

CTMP Standard Requirements – Checklist		Refer to: *(Indicate Section or Page No.)*
E. Traffic Control		
24. Traffic Control Plan/s complying with the Australian Standards and Roads and Maritime Services (RMS) 'Traffic Control at Work Sites' Guidelines and designed by an RMS Accredited preparer *Note: Traffic Controllers shall NOT stop traffic on the public street(s) to allow trucks to enter or leave the site. They MUST wait until a suitable gap in traffic allows them to assist trucks to enter or exit the site. The Roads Act does not give any special treatment to trucks leaving a construction site - the vehicles already on the road have right-of-way.*	☐Yes	
25. Description of physical barriers that will control pedestrian or traffic movements	☐Yes	
26. Pedestrian access that is secured from any construction activity *Note: Pedestrians shall be held only for very short periods (no longer than 90 seconds) to ensure safety when trucks are leaving or entering BUT must not be stopped when already in anticipation; i.e. at all times the pedestrians have right-of-way on the footpath not the trucks.*	☐Yes	
F. Public Consultation		
27. Contact details of a site manager to address resident complaints in relation to breaches of the CTMP	☐Yes	
28. Resident Notification Details that will ensure affected residents are informed of relevant details of the CTMP	☐Yes	

General Notes:

1. *Separate items in the checklist do not imply separate plans/sections in the report; i.e. different items may appear on the same plan.*
2. *The CTMP is for the excavation, demolition and construction of building works, not for road works (if required) associated with the development. Any road works will require the Applicant or the contractor to separately seek approval from the City of Ryde and/or RMS for consideration. Also Work Cover requires that Traffic Control Plans must comply with Australian Standards 1742.3 and must be prepared by a Certified Traffic Controller (under RMS regulations).*
3. *Provision of any information in this CTMP will not exempt the Applicant from correctly fulfilling all other conditions relevant to the development consent for the above site.*

By signing below, the applicant confirms that all applicable items checked above are properly presented in the report, that all non-applicable items will not be changed without approval from City of Ryde Council, and that all items including notes will be complied with prior to/during implementation of the CTMP.

Prepared by: _____ _____ _____

Name and Signature | Organisation | Date

Greg Malenstein

From: Greg Malenstein
Sent: Monday, 11 November 2019 2:08 PM
To: 'RMS Customer Relations'; 'development.sydney@rms.nsw.gov.au'
Subject: RE: RMS Ref: 00915013 - Kent Rd Public School
Attachments: TGS (185734 REV 02) - TRUCK TURNING - KENT RD, MARSFIELD (440350119).pdf; TGS (188915 REV 02) - TRUCK TURNING - KENT RD, MARSFIELD (440350119).pdf; TGS (188917 REV 01) - TRUCK TURNING - KENT RD, MARSFIELD (440350119).pdf; SSD 9344 Kent Road Public School Signed Consent.pdf; TMP (185755 REV 01).pdf; DUMP IT BINS to Kent Road Public School.docx

Hi,

As part of our State Significant Development approval conditions we must consult with council on our traffic management plan and our truck routes.

Are you able to review the attached Traffic Management Plan and truck routes for waste

For further information refer to Condition B16 & B30 on the attached Development Approval.

Any issues please call me on the below number

From: RMS Customer Relations <customer@rms.nsw.gov.au>
Sent: Tuesday, 5 November 2019 3:29 PM
To: Greg Malenstein <GMalenstein@sthilliers.com.au>
Subject: RMS Ref: 00915013 [ref:_00D28HSVA._5000K1x5njz:ref]

Dear Greg

Thank you for your enquiry to Roads and Maritime Services about Removal of waste.

Please forward your enquiry to development.sydney@rms.nsw.gov.au with all the relevant plans your have available for your site.

I hope this has been of assistance.

Regards,
Roads and Maritime Services
www.rms.nsw.gov.au
Every journey matters

Greg Malenstein

From: Internet_Mail_Gateway@rms.nsw.gov.au
Sent: Monday, 11 November 2019 2:12 PM
To: Greg Malenstein
Subject: Acknowledgement from development.sydney@rms.nsw.gov.au, customer@rms.nsw.gov.au: RE: RMS Ref: 00915013 - Kent Rd Public School

THIS IS A SYSTEM GENERATED EMAIL.
PLEASE DO NOT REPLY TO THIS EMAIL.

Roads and Maritime Services (Roads and Maritime) Land Use unit has received your email, it will be forwarded to the appropriate officer for attention. Roads and Maritime is committed to responding to your inquiry within 21 days. If you have not received a response within 21 days, please contact (02) 8849 2490 in the first instance, or (02) 8849 2070 or (02) 8849 2382

Before printing, please consider the environment

IMPORTANT NOTICE: This e-mail and any attachment to it are intended only to be read or used by the named addressee. It is confidential and may contain legally privileged information. No confidentiality or privilege is waived or lost by any mistaken transmission to you. Roads and Maritime Services (RMS) is not responsible for any unauthorised alterations to this e-mail or attachment to it. Views expressed in this message are those of the individual sender, and are not necessarily the views of RMS. If you receive this e-mail in error, please immediately delete it from your system and notify the sender. You must not disclose, copy or use any part of this e-mail if you are not the intended recipient.

B.14 - Appendix C - Construction Soil & Water Management Plan

TTW Structural Civil Traffic Façade

Construction Soil and Water Management Plan

Kent Rd Public School

Prepared for St Hilliers / 19 November 2019

171518

Taylor Thomson Whitting (NSW) Pty Ltd (ACN 113 578 377)
as trustee for the Taylor Thomson Whitting NSW Trust
(ABN 59 514 956 558) I Consulting Engineers
Level 3, 48 Chandos Street, St Leonards NSW 2065

Your Partner in Engineering

Contents

1.0 Introduction 3
1.1 Proposed Works 3
2.0 Acid Sulphate and Contamination 3
3.0 Erosion and Sediment Control 3
3.1 Diversion Drains and Control of Overland Flows 3
3.2 Control of Earthworks Operation 4
3.3 Erosion and Sediment Control Devices 4
3.4 Sediment Capture Basins 4
4.0 Site Operations, Wet Weather Procedures and Maintenance 5
Appendix A 6
Appendix B 7
Appendix C 8
Appendix D 9

© 2019 Taylor Thomson Whitting

1.0 Introduction

TTW have been engaged by St Hilliers to prepare a Construction Soil and Water Management Plan(CSWMP) for the works at Kent Rd Public School addressing the following State Significant Development Application (SSDA) B19 condition, which states as follows:

B19. The Applicant must prepare a Construction Soil and Water Management Plan (CSWMSP) and the plan must address, but not be limited to the following:

(a) be prepared by a suitably qualified expert, in consultation with Council;

(b) describe all erosion and sediment controls to be implemented during construction;

(c) include an Acid Sulfate Soils Management Plan, if required, including measures for the management, handling, treatment and disposal of acid sulfate soils, including monitoring of water quality at acid sulfate soils treatment areas.

(d) provide a plan of how all construction works will be managed in a wet-weather events (i.e. storage of equipment, stabilisation of the Site);

(e) detail all off-Site flows from the Site; and

(f) describe the measures that must be implemented to manage stormwater and flood flows for small and large sized events, including, but not limited to 1 in 1-year ARI, 1 in 5-year ARI and 1 in 100-year ARI).

1.1 Proposed Works

The proposed works on site include the construction of 3 new multi purpose building along with related civil construction works including earthworks, services installation, landscaping, roads, pavement, and driveways.

The extent of proposed works on site are as shown on the site works plan included as **Appendix A**

2.0 Acid Sulphate and Contamination

Contamination related measures such as Asbestos are outside the scope of this CSWMP. The Geotechnical report undertaken by Asset Geo Ref:4862-R1 dated 23 April 2018 stated that based on their investigation they consider that there are no acid sulphate soils present on site and no further testing or preparation of a soil management plan is required.

3.0 Erosion and Sediment Control

This construction soil and water management plan (CSWMP) is based on the principals of controlling water flows through and around the site, limiting potential erosion, and then management of sediment loss for areas of the immediate construction zone.

The CSWMP has been prepared in accordance with the NSW Department of Housing Managing Urban Stormwater – Soils and Construction (referred to as the Blue Book). The following principals of erosion and sediment control are included in this plan.

3.1 Diversion Drains and Control of Overland Flows

Diversion drains shall wherever possible be installed above the site to divert upstream flows of clean water around the site, and prevent scour of soils with excess sheet flows of water. Division drains shall be vegetated

© 2019 Taylor Thomson Whitting

or lined with erosion control material such as jute mat or geofabric to prevent erosion. Discharge points for diversion drains to existing drainages systems shall be done is such a way to prevent erosion, and the use of level spreaders or the like employed as required. Stormwater captured above the main building construction site will be diverted through the site via the built stormwater pipe network and will prevent overland flows typically flowing through the site.

3.2 Control of Earthworks Operation

Earthworks operations shall be programmed to limit the areas of disturbed surfaces to the minimum required for the immediate construction activities. Following earthworks operations, disturbed areas shall be covered by final pavements, or top-soiled and vegetated as soon as is practicable.

Earthworks operations should be undertaken and completed with consideration of upcoming weather events. This includes such operations as programming stormwater works during dry forecasts, utilising smooth drum rollers to seal of areas of earthworks prior to forecast rain, early placement of topsoil and vegetation/stabilisation, and use of water carts on roads and disturbed surfaces to limit dust generation. Consideration shall be given to limiting earthworks and site operations in events of both high wind to limit wind erosion and dust control issues, and restriction of traffic and works during wet weather to prevent disturbing sediments.

Hardstand areas utilised for construction parking and material/equipment storage should utilise tightly bound road base and consideration of surface treatments to assist in preventing dust and erosion.

All stockpiles shall be placed in areas away from concentrated overland flows, and protected upstream from overland flows, with sediment capture devices placed downslope to control sediment. Heights of stockpiles to be limited to allow for ready application dust suppression sprays and limit wind erosion. Wherever possible, stockpiles that will be onsite for extended periods of time shall be covered or vegetated.

3.3 Erosion and Sediment Control Devices

The attached Erosion and Sediment Control Plan (ESCP) in **Appendix B** shows proposed erosion and sediment control devices for the anticipated works. It should be noted that depending upon the current stages of the construction, changes to layout and location of controls such as sediment fences, and stormwater pit protection may need to be altered, and the plans should be used as a guide and minimum requirements only.

Stabilised site entrances to be provided at all site entrances to ensure soil is not transported off site on vehicle tyres.

3.4 Sediment Capture Basins

An analysis of the site condition and the appropriate Erosion Hazard has been undertaken based on the Blue Book. Calculation summary is attached as **Appendix C** to this report. The site will discharge to the southwest corner of the proposed building works which is the lowest point of the site. Erosion Hazard calculation shows that site will exceed 150 m^3 of sediment loss which is the threshold for the inclusion of sediment basins, as such, stormwater runoff from the site will be diverted through sediment basins prior to discharge.

A review of the geotechnical report by Asset geo suggest that the expected soil will be silty clay and is considered high erosion hazard and are made up of dispersive sediments, Type D sediment basins will be utilised.

The size of the calculated sediment basin is 255m^3 and be constructed as shown on the drawings. An overflow weir with erosion control matting shall be provided to ensure that flows that exceed the capacity will not erode or destabilise the bank and maintain stability in up to the 1 in 100 year ARI local stormwater event.

The sediment basin has been sized based on the anticipated 5 day rainfall event as these basins are readily

© 2019 Taylor Thomson Whitting

accessible and will be accessible in the short term after rainfall events, to allow for treatment of captured water and discharge to external stormwater systems. Treatment of captured sediment laden stormwater will include flocculation of the water to remove dispersive sediments with the use of flocculating agents such as Gypsum or other materials approved for local use. Captured water shall be treated as soon as possible after rainfall events and shall not be discharged until the turbidity of the water is lowered to 50mg/L or lower and pH matches the receiving water (typically between the ranges of pH 5.5 to 8.0)

4.0 Site Operations, Wet Weather Procedures and Maintenance

At all times, operations on site shall be cognisant of inclement weather, and be able to respond to these events. St Hilliers have implemented an Inclement Weather Procedure for the project, and this is included as **Appendix D** to this report.

After rainfall events and on a regular basis, all erosion and sediment control devices shall be inspected and all accumulated sediment removed and controls repaired to ensure correct operation. All water captured in sediment basins shall be treated in accordance with Section 2.4 of this plan and discharged only after confirmation of required water quality targets being met.

Controls put in place for this CSWMP have been designed to capture rainfall normally anticipated in 85% of 5 day rainfall events and prevent sediment laden water discharging from site, as per the industry accepted standards laid out in the Blue Book. In larger rainfall events than this rainfall depth, control measures such as sediment fences and sediment basins are likely to be overtopped with overflows to the receiving waterways. In these larger rainfall events, the provision of diversion drains with appropriate erosion/scour protection, and overflow protection to sediment basins will prevent additional erosion or catastrophic failures in all but extreme rainfall events.

As noted, in up to 85% of anticipated 5 day long rainfall events, the CWSMP will be able to cater for these flows. In rainfall events greater than this, including the 1 in 5 year rainfall events, it is likely that there will be overtopping of sediment basins, however stormwater flows will be controlled to prevent unplanned release of large volumes of water from site in an uncontrolled manner

The ongoing functionality of this CSWMP is dependent upon ensuring that controls are implemented as described, and modifications made as required to meet any specific construction staging. It is also imperative that regular inspection and maintenance is undertaken on a regular basis and after each rainfall event.

Prepared by
TAYLOR THOMSON WHITTING (NSW) PTY LTD
in its capacity as trustee for the
TAYLOR THOMSON WHITTING NSW TRUST

Nemesio Biason
ASSOCIATE DIRECTOR

Authorised By
TAYLOR THOMSON WHITTING (NSW) PTY LTD
in its capacity as trustee for the
TAYLOR THOMSON WHITTING NSW TRUST

Stephen Brain
TECHNICAL DIRECTOR

© 2019 Taylor Thomson Whitting

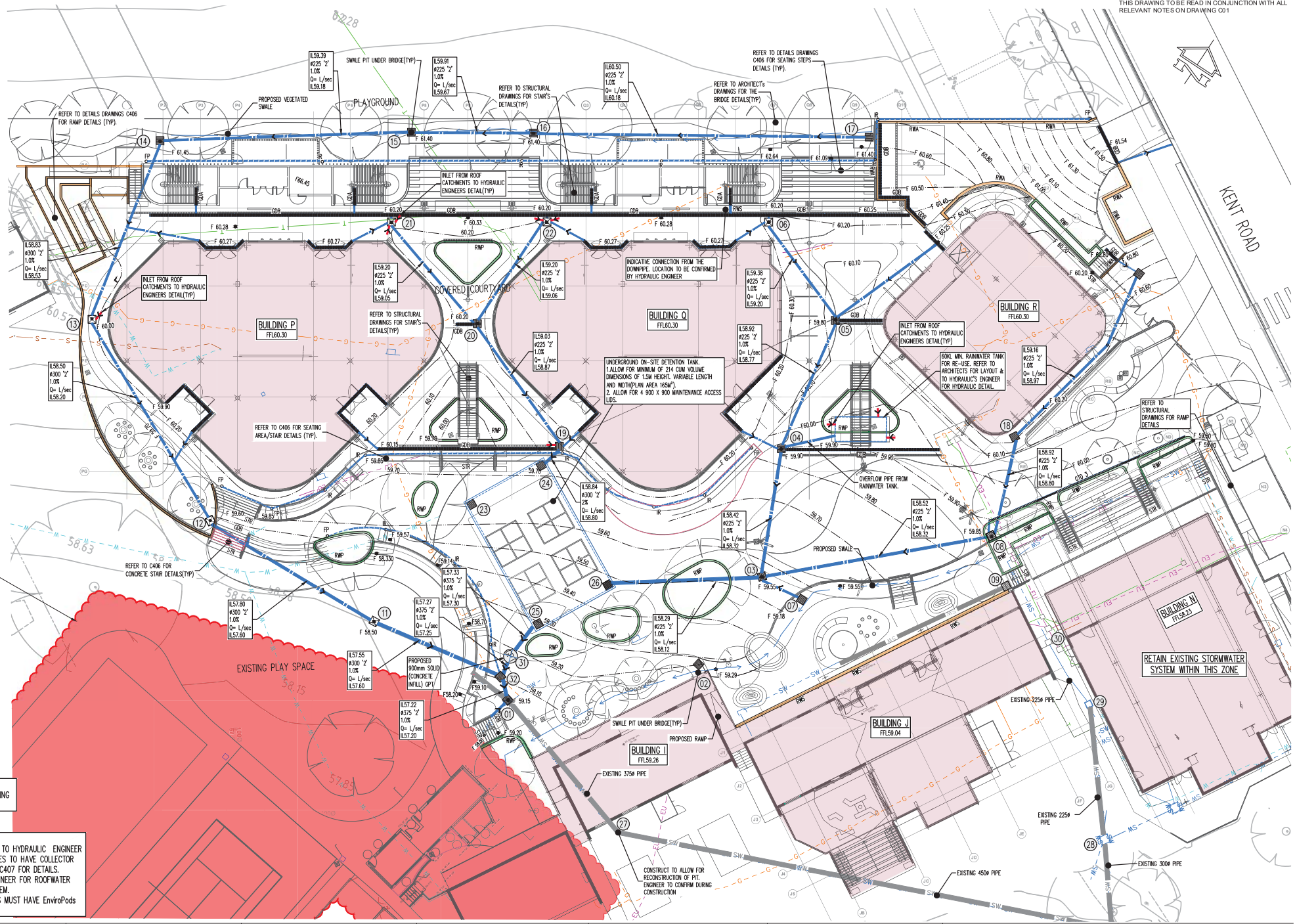
Appendix A

Site Works Plan

© 2019 Taylor Thomson Whitting

This drawing is copyright and is the property of TAYLOR THOMSON WHITTING (NSW) Pty Ltd and must not be used without authorisation.

THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES ON DRAWING C01



Rev	Description	Eng	Draft	Date
P6	ISSUE FOR DAC TENDER	NB	LS	06.05.19
P5	ISSUE FOR DAC TENDER	NB	LS	12.04.19
P4	ISSUE FOR DAC TENDER	NB	RG	13.09.18
P3	ISSUE FOR DAC TENDER REVIEW	NB	RG	11.09.18
P2	ISSUE FOR REVIEW	NB	RG	07.09.18
P1	ISSUE FOR SDR	NB	RG	26.07.18
P12	ISSUE FOR 90% EFSG DD SUBMISSION	NB	KH	26.07.19
P11	ISSUE FOR IFC	NB	KH	05.07.19
P10	ISSUE FOR 90% EFSG DD SUBMISSION	NB	KH	28.06.19
P9	ISSUE FOR 95% DD	NB	KH	12.06.19
P8	ISSUE FOR 95% DD	NB	KH	07.06.19
P7	ISSUE FOR 80% DD	NB	LS	10.05.19
P13	ISSUE FOR CONSTRUCTION CERTIFICATE	NB	KH	13.09.19

Architect: GARDNER WETHERILL ASSOCIATES

Civil Engineer: Taylor Thomson Whitting
612 9439 7288 | 48 Chandos Street St Leonards NSW 2065

Project: KENT ROAD PUBLIC SCHOOL

Sheet Subject: SITEWORKS PLAN

Scale : A1 1:200 | Drawn RG | Authorised

Job No 171518 | Drawing No C402 | Revision P13

Plot File Created: Sep 13, 2019 - 5:27pm

FileName: C402.dwg - USER: tessa - Plot File Created: Sep 13, 2019 - 5:27pm

Appendix B

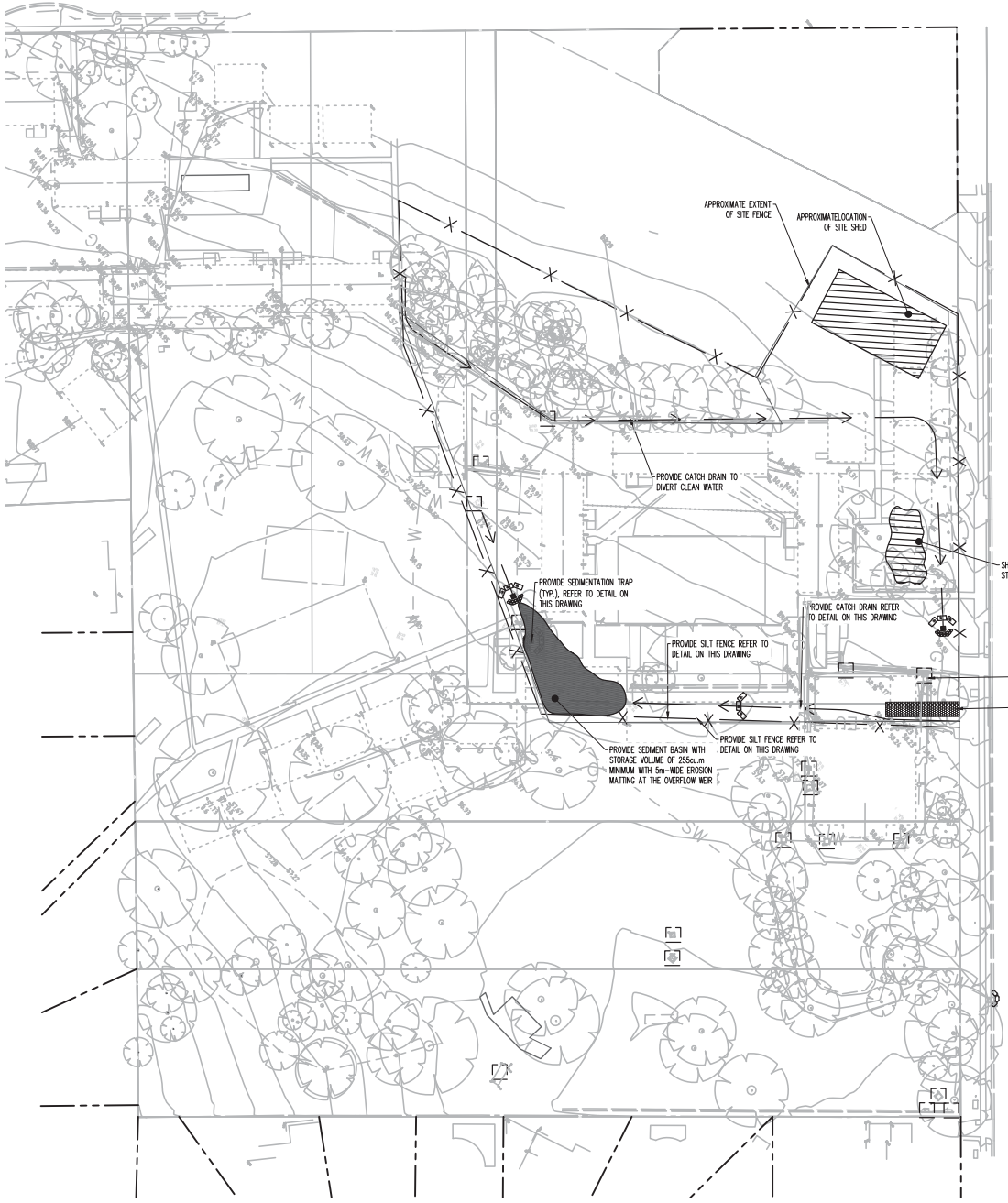
Erosion and Sediment Control Plan (ESCP)

© 2019 Taylor Thomson Whitting

This drawing is copyright and is the property of TAYLOR THOMSON WHITTING (NSW) Pty Ltd and must not be used without authorisation.

THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES ON DRAWING C01

HERRING ROAD



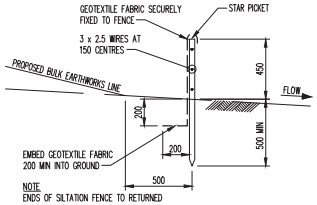
KENT ROAD

EROSION AND SEDIMENT CONTROL NOTES

1. All work shall be generally carried out in accordance with
   (A) Local authority requirements,
   (B) EPA – Pollution control manual for urban stormwater,
   (C) LANDCOM NSW – Managing Urban Stormwater: Soils and Construction ("Blue Book").
2. Erosion and sediment control drawings and notes are provided for the whole of the works. Should the Contractor stage these works then the design may be required to be modified. Variation to these details may require approval by the relevant authorities.
   The erosion and sediment control plan shall be implemented and adapted to meet the varying situations as work on site progresses.
3. Maintain all erosion and sediment control devices to the satisfaction of the superintendent and the local authority.
4. When stormwater pits are constructed prevent site runoff entering the pits unless silt fences are erected around pits.
5. Minimise the area of site being disturbed at any one time.
6. Protect all stockpiles of materials from scour and erosion. Do not stockpile loose material in roadways, near drainage pits or in watercourses.
7. All soil and water control measures are to be put back in place at the end of each working day, and modified to best suit site conditions.
8. Control water from upstream of the site such that it does not enter the disturbed site.
9. All construction vehicles shall enter and exit the site via the temporary construction entry/exit.
10. All vehicles leaving the site shall be cleaned and inspected before leaving.
11. Maintain all stormwater pipes and pits clear of debris and sediment. Inspect stormwater system and clean out after each storm event.
12. Clean out all erosion and sediment control devices after each storm event.

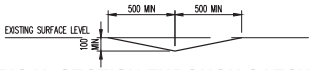
Sequence Of Works

1. Prior to commencement of excavation the following soil management devices must be installed.
1.1. Construct silt fences below the site and across all potential runoff sites.
1.2. Construct temporary construction entry/exit and divert runoff to suitable control systems.
1.3. Construct measures to divert upstream flows into existing stormwater system.
1.4. Construct sedimentation traps/basin including outlet control and overflow.
1.5. Construct turf lined swales.
2. Construct geotextile filter pit surround around all proposed pits as they are constructed.

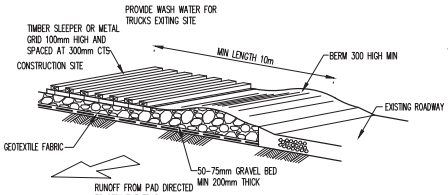


SILTATION FENCE DETAIL
SCALE 1: 20

SANDBAG SEDIMENT TRAP
NTS



TYPICAL SECTION THROUGH CATCH DRAIN
SCALE 1: 20



TEMPORARY CONSTRUCTION VEHICLE EXIT
NTS

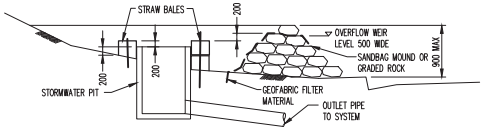
WATER QUALITY TESTING REQUIREMENTS

Prior to discharge of site stormwater, groundwater and seepage water into council's stormwater system, contractors must undertake water quality tests in conjunction with a suitably qualified environment consultant outlining the following:

- Compliance with the criteria of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)
- If required subject to the environmental consultants advice, provide remedial measures to improve the quality of water that is to be discharged into Councils storm water drainage system.This should include comments from a suitably qualified environmental consultant confirming the suitability of these remedial measures to manage the water discharged from the site into Councils storm water drainage system. Outlining the proposed, ongoing monitoring, contingency plans and validation program that will be in place to continually monitor the quality of water discharged from this site. This should outline the frequency of water quality testing that will be undertaken by a suitably qualified environmental consultant.

EROSION AND SEDIMENT CONTROL LEGEND

- Siltation fence
- Sandbag sediment trap
- Catch drain
- Filter pit surround
- Hay bale



SEDIMENTATION TRAP
NTS

Rev	Description	Eng	Draft	Date
P6	ISSUE FOR D&C TENDER	NB	LS	06.05.19
P5	ISSUE FOR D&C TENDER	NB	LS	12.04.19
P4	ISSUE FOR D&C TENDER	NB	RG	12.09.18
P3	ISSUE FOR D&C TENDER REVIEW	NB	RG	11.09.18
P2	ISSUE FOR REVIEW	NB	RG	07.09.18
P1	ISSUE FOR SDR	NB	RG	26.07.18
P13	ISSUE FOR CONSTRUCTION CERTIFICATE	NB	KH	19.11.19
P12	ISSUE FOR CONSTRUCTION CERTIFICATE	NB	KH	13.09.19
P11	ISSUE FOR 90% EFSG DD SUBMISSION	NB	KH	26.07.19
P10	ISSUE FOR IFC	NB	KH	05.07.19
P9	ISSUE FOR 90% EFSG DD SUBMISSION	NB	KH	28.06.19
P7	ISSUE FOR 80% DD	NB	LS	10.05.19

Architect: GARDNER WETHERILL ASSOCIATES

Civil Engineer: Taylor Thomson Whitting
612 9439 7288 | 48 Chandos Street St Leonards NSW 2065

Project: KENT ROAD PUBLIC SCHOOL

Sheet Subject: EROSION & SEDIMENT CONTROL PLAN AND DETAILS

Scale : A1: 1:500 U.N.O
Drawn: RG
Authorised:
Job No: 171518
Drawing No: C401
Revision: P13
Plot File Created: Nov 19, 2019 - 2:34pm

File Name: C401.dwg - USER: nsmeds - Plot File Created: Nov 19, 2019 - 2:34pm

Appendix C

Erosion Hazard Calculation

© 2019 Taylor Thomson Whitting

1. Erosion Hazard and Sediment Basins

Site Name: Kent Rd Public School

Site Location: North Ryde

Precinct/Stage:

Other Details: 171518 CBAA

Site area	Sub-catchment or Name of Structure						Notes
Total catchment area (ha)	0.89						
Disturbed catchment area (ha)	0.72						

Soil analysis (enter sediment type if known, or laboratory particle size data)

Sediment Type (C, F or D) if known:	D						From Appendix C (if known)
% sand (fraction 0.02 to 2.00 mm)							Enter the percentage of each soil fraction. E.g. enter 10 for 10%
% silt (fraction 0.002 to 0.02 mm)							
% clay (fraction finer than 0.002 mm)							
Dispersion percentage							E.g. enter 10 for dispersion of 10%
% of whole soil dispersible							See Section 6.3.3(e). Auto-calculated
Soil Texture Group	D						Automatic calculation from above

Rainfall data

Design rainfall depth (no of days)	5						See Section 6.3.4 and, particularly, Table 6.3 on pages 6-24 and 6-25.
Design rainfall depth (percentile)	85						
x-day, y-percentile rainfall event (mm)	38.8						
Rainfall R-factor (if known)	4000						Only need to enter one or the other here
IFD: 2-year, 6-hour storm (if known)							

RUSLE Factors

Rainfall erosivity (*R* -factor)	4000						Auto-filled from above
Soil erodibility (*K* -factor)	0.05						RUSLE LS factor calculated for a high rill/interrill ratio.
Slope length (m)	110						
Slope gradient (%)	5						
Length/gradient (*LS* -factor)	1.42						
Erosion control practice (*P* -factor)	1.3	1.3	1.3	1.3	1.3	1.3	
Ground cover (*C* -factor)	1	1	1	1	1	1	

Sediment Basin Design Criteria (for Type D/F basins only. Leave blank for Type C basins)

Storage (soil) zone design (no of months)	2	2	2	2	2	2	Minimum is generally 2 months
Cv (Volumetric runoff coefficient)	0.64						See Table F2, page F-4 in Appendix F

Calculations and Type D/F Sediment Basin Volumes

Soil loss (t/ha/yr)	370						
Soil Loss Class	4						See Table 4.2, page 4-13
Soil loss (m^3/ha/yr)	285						Conversion to cubic metres
Sediment basin storage (soil) volume (m^3)	34						See Sections 6.3.4(i) for calculations
Sediment basin settling (water) volume (m^3)	221						See Sections 6.3.4(i) for calculations
Sediment basin total volume (m^3)	255						

NB for sizing of Type C (coarse) sediment basins, see Worksheet 3 (if required).

Appendix D

St Hilliers – Inclement Weather Procedure

© 2019 Taylor Thomson Whitting

St Hilliers Property Pty Limited
ABN 66 082 729 039
BRISBANE
Level 9
333 Ann Street
Brisbane, QLD 4000
PO Box 3315
South Brisbane, QLD 4101
T 07 3212 6300
F 07 3212 6301

KENT ROAD PUBLIC SCHOOL – INCLEMENT WEATHER PROCEDURE FOR CONSTRUCTION SOIL & WATER MANAGEMENT PLAN

In the event of impending rain, the following procedure for Inclement Weather will be followed:

1. Site stabilisation, erosion and sediment control measures to be checked for correct implementation in accordance with Erosion & Sediment Control Plans (on top of regular weekly inspections) and maintenance to be carried out immediately if required.

2. At the commencement of significant rain events, review of earthworks operations to be undertaken.

3. When conditions for operation of plant & equipment become unsafe these should be stored in a location which will not affect the operation of the Erosion & Sediment control measures.

4. Workers on foot should follow dedicated walkways to minimise the tracking of materials on boots to offsite locations.

Stephen Brain

Technical Director

BE(Civil) Hons CPEng

stephen.brain@ttw.com.au

Experience

2007 – Current
Technical Director, TTW

1999 – 2006
Associate Director, TTW

1993 – 1999
Snr Civil Engineer, TTW

1990 – 1993
Engineer,
Gutteridge Haskins and Davey Pty Ltd

Stephen Brain joined TTW in 1993 as a Senior Civil Engineer and has since been promoted through the leadership ranks to his current appointment as Technical Director in 2007.

Stephen manages the NSW civil engineering department and has spearheaded its reputation through his dedication to pragmatic engineering and open relationships with clients.

He adopts this approach irrespective of project sector and has consequently developed a folio of experience in commercial developments, industrial projects, public works projects, car parks and residential projects. His specialisation in master planning has been invaluable to TTW's success and has led to many successful projects such as the Emirates Resort in Wolgan Valley, the Royal North Shore Hospital, Macquarie University, Royal Randwick Racecourse and Macquarie Park Cemetery.

Accommodation

Peninsula Apartments development, Balmain

Interciti Development – Arncliffe

Emirates resort – Wolgan Valley

Retail

Macquarie Shopping Centre Access Ramps, Macquarie Park

Centro Bankstown

Woolworths Shopping Centre – Mt Annan

Kotara Shopping Centre expansion

Homemaker Centre – Penrith

Cessnock Shopping Centre

Eden Gardens retail landscape

Wetherill Park Shopping Centre

Greenhills Shopping Centre, East Maitland

Merrylands Shopping Centre

Parklea Homemaker Centre

Education

Knox Boarding House

Knox Great Hall

Knox Performing Arts Centre

Ravenswood Girls School

Australian International School, Jakarta

Jakarta International School

Rouse Hill Anglican College

Richmond Johnson Anglican College

Mamre Anglican College, St Lukes

Dee Why Anglican College

Sacred Heart School, Mosman

Glenmore High School

Marsden Park Anglican College

Sacred Heart Primary School, Mosman

Coffs Harbour University

Wollongbar TAFE

Commercial

Eden Gardens, Macquarie Park

Seven Hills RSL Extension

Government + Public

Kapooka Enhanced Land Force

Singleton Enhanced Land Force

Campbell Cove Promenade Redevelopment

Campbell Stores Redevelopment

CSU Wagga NaLSH

CSU Wagga Masterplan

RNSH Masterplan

Cobham Juvenile Justice Centre – Civil design

Leichardt Bus Dept.

Reiby Juvenile Justice Centre – Civil design

Macquarie Park Cemetery – Civil Design

Parklea Correctional Centre – Design review

Frazer Fountain pavement works

Royal Randwick Racecourse Redevelopment

Macquarie Park Chapels Crematorium

Energy Australia Substation – Green Square

Eden Gardens

Water Police – Balmain

Bankstown CBD Streetscape

Auburn Substation

Energy Australia

NPWS Lane Cove – Civil Design and Inspection

NPWS Botany Bay – Civil Design and Inspection

Energy Australia Substation – Macquarie Park

St Peters Waste Depot leachate well extension Stage 2

Specification for Barraba Water Treatment Plant.

Pilot Testing for Avon Dam Water Treatment.

William Dobell Sculpture Relocation, Spring Street

St Peters Waste Depot leachate pump well extension

Stephen Brain

What do you think is a primary appeal of TTW?

I think in simple terms, it's a culture that is willing to help our clients. We will find a pragmatic solution that has the balance of the innovative, economic requirements and statutory compliance that will solve almost any construction problem.

Healthcare + Research + Aged Care

Liverpool Hospital
Wagga Wagga Hospital Stage 3
Gosford Hospital
Wyong Hospital
Concord Hospital
Northern Beaches Hospital, Design review
Coffs Harbour Hospital
Campbelltown Hospital
Erina Convalescent Hospital
Maitland Hospital Redevelopment
Camden Hospital
Calvary Hospital Redevelopment
North Shore Private Hospital Siteworks Stormwater and construction inspection
Royal Prince Alfred Hospital

Sports + Leisure

Cricket NSW Centre of Excellence
Blacktown Workers Club
Olympic Multi-Use Arena and 3700 space carpark
Brookvale Oval Redevelopment

Civil

Flood Mitigation

Wolgan Valley Emirates Resort
University Creek, Macquarie University
37-57 Pitt Street Sydney, Flood Assesment
Dunmore Equestrian Centre – flood study

Subdivision + Infrastructure

Daan Mogot City Development, Jakarta, Indonesia
Endeavour Enterprises industrial subdivision, Taren Point
Berkeley Industrial Subdivision

Roads + Stormwater

Cheltenham road Burwood
Railway Parade Burwood
Centro Bankstown Intersection with Stacey Street
Abbotsbury Regional Park - Abbotsbury
Darling Street Streetscape – Balmain
Marsden Street, Boorowa
Beattie Street roadworks – Rozelle
Kevin Coombs Underpass – Sydney Olympic Park

Civil Cont'd

St Andrews Street – Balmain
Hyam Street, Balmain - reconstruction
Parsonage Road - Meadowbank
Croydon Park Streetscape Georges River Road
Botany Bay National Park – Kurnell

Roads + Stormwater (Cont'd)

Mulgoa Road Underpass, Homemaker Centre - Penrith
Darling Street Roadworks – Balmain
Homemaker Centre – Penrith
Macquarie Park cemetery roadworks
Colgate Avenue – Balmain
Rosebery Street, Balmain – reconstruction
Cessnock Shopping Centre
Minnamurra River Dunmore
JIS Fatimawati, Jakarta
Eden Gardens Stormwater reuse system
Macquarie Rivulet Flood Study, Albion Park
Centro Bankstown Flood Study
28 Doyle Avenue Unanderra Flood Study
Surf Beach drainage study for Eurobodalla Shire Council
Glenfield Estate stormwater analysis and detention design - Wagga Wagga
St Peters Waste Depot stormwater diversion
Cerebos flooding analysis, Wentworthville
Rochester Street Stormwater, Strathfield
Terrigal stormwater trunk main design for Gosford Council
Emirates, Wolgan Valley Flood Extent Definition
Berkeley Road Subdivision
Kotara Shopping Centre
Maroubra Mall concept
Railway Parade Flood Study Burwood
ACI park stormwater reuse system
Courallie Avenue, drainage study
Rouse Hill WBNM analysis.
Bourkelands Estate stormwater and detention analysis - Wagga Wagga
Bankstown square stormwater flooding analysis
Westmead Private Hospital flooding analysis
Coffs Harbour Water Supply Analysis.

Stephen Brain

Traffic

Transportation Study – Westmead Hospital Master Plan

Sydney Airport Ground Access Study and Road Link

Wagga Wagga Transportation and Traffic Study

North Sydney CBD Access Study – transport modelling and traffic policy report

Redfern Traffic Management Scheme – traffic study for City of Sydney

Ryde Traffic Management Study – traffic study for Ryde Council

Liverpool CBD – 40km / hr study

Camden Town Centre

St Vincents Research and Biotechnology Precinct

Kings Avenue Bridge, Canberra

Canada Bay Residential Parking Scheme

John Hunter Hospital ACCESS Building and Multideck Carpark

St Vincents Research and Biotechnology Precinct

Woollahra Parking Studies

Canada Bay Residential Parking Scheme

Balfour Park – new access road and stormwater system

Woolwich Function Centre – new access arrangements

La Perouse – loop road and park improvements

Olympic Overflow Park - relocation of Olympic Cauldron

Expert Witness Reports

44 Biloela St Villawood, container pavement design investigation and remediation design

17 Sutherland Street, Darling Point Subsidence

Hale Street Botany container pavement design investigation & remediationll

Industrial

Metcash, Crestmead Brisbane

Halliburton Factory – Brunei

Hills Wine Storage – Silverwater

1-6 Resolution Drive Taren Point

Woolworths distribution centre, ‘QP1’ Minchinbury

31-33 Resolution Drive Taren Point

Lakes Business Park stormwater and pavement design including large scale absorption

Halliburton Balikpapan - Indonesia

Amcor Bottling Plant – South Australia

CSIRO Redevelopment – Riverside Corporate Park

Pooraka, pavement remediation – SA

Woolworths distribution centre, ‘QP2’ Broadmeadows VIC

Project Management

CB Hotel Pitt Street, Roof works

Sewer

Beverly Hills Infiltration/Inflow Analysis

Fairfield Infiltration/Inflow Analysis.

Lalor Park submain sewer amplification

Other

Streetscape adjacent overseas passenger terminal

Green Square Substation

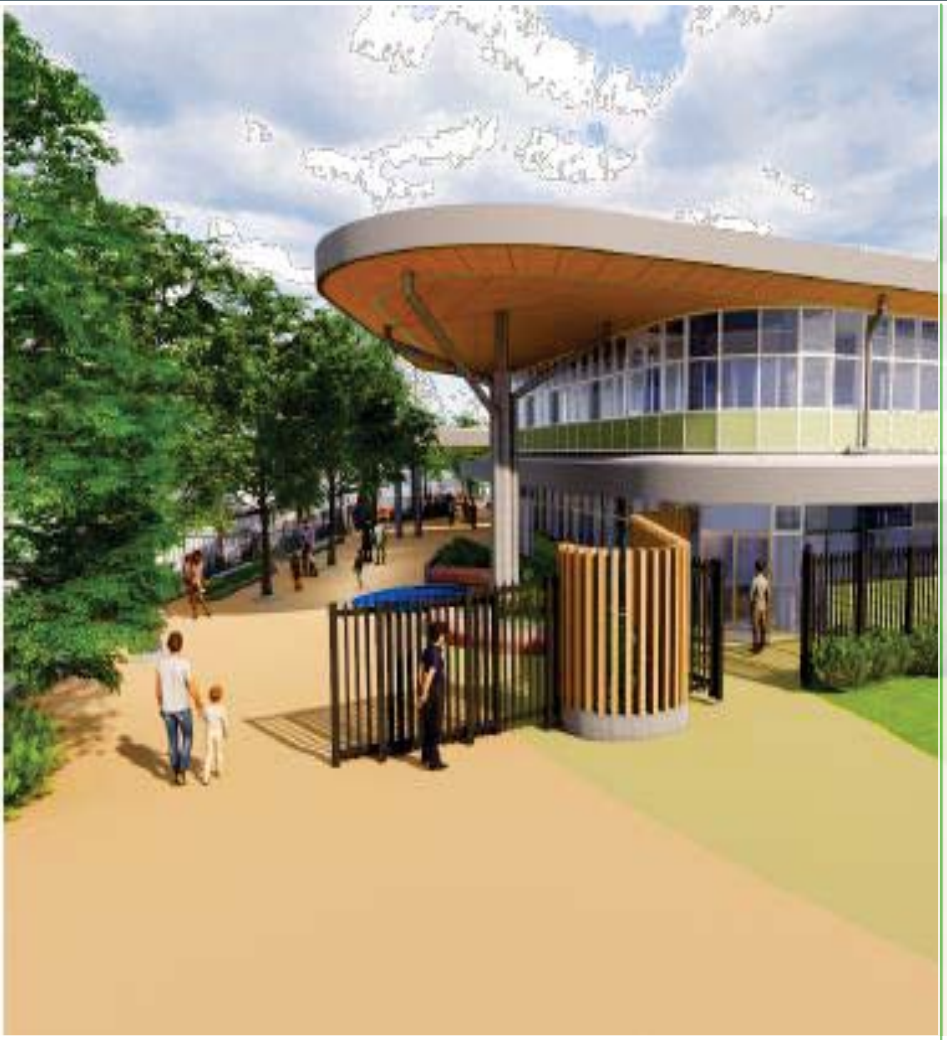
B.15 - Appendix D - Construction Waste Management Plan

St Hilliers Property

Kent Road Public School

126 Kent Road, Marsfield NSW

Construction Waste Management Plan



A.Prince Consulting
ABN 96 077 504 226
TH 4 / 28 West Street
Nth Sydney NSW 2060
P: +61 2 9907 0994
E: admin@aprince.com.au
W: www.aprince.com.au

This report was researched and prepared by

A.Prince Consulting Pty Ltd
ABN 96 077 504 226
Email: admin@aprince.com.au
Web: www.aprince.com.au
TH 4/28 West St
North Sydney NSW 2060
Phone: (02) 9907 0994
Fax: (02) 9907 0330

for:

Leighton Stock
St Hilliers Property
8 Windmill St, Millers Point NSW 2000
Direct Phone: 0431 765 253
E-mail: LStock@sthilliers.com.au

Document status

Rev. no.	Document	Author	Peer Review	Date
1	Draft	Jo Drummond	Eva Huaman Campos	13 September 2019
2	Final	Jo Drummond	Eva Huaman Campos	26 September 2019
3	Final amendments	Eva Huaman Campos		22 November 2019

© November 2019 APC

DISCLAIMER

This report is based on information provided by St Hillier's Property. Any representation, statement, opinion or advice, expressed or implied in this publication is made in good faith, but on the basis that APC is not liable (whether by reason of negligence, lack of care or otherwise) to any person for any damage or loss whatsoever, which has occurred or may occur in relation to that person taking or not taking (as the case may be) action in respect to any representation, statement or advice referred to here

TABLE OF CONTENTS

1. INTRODUCTION 5

2. PURPOSE 5

3. RESPONSE TO SEARS 6

4. OBJECTIVES & TARGETS 6

5. NSW LEGISLATIVE REQUIREMENTS AND GUIDELINES 6

6. LOCATION AND SITE LAYOUT 8

7. WASTE STREAMS AND CLASSIFICATION 9

8. ROLES AND RESPONSIBILITIES FOR WASTE MANAGEMENT ON SITE 9

9. SERVICING ARRANGEMENTS 10

10. TRAINING 10

11. WASTE MANAGEMENT STRATEGIES 10

12. MONITORING AND REPORTING 11

13. CORRECTIVE ACTIONS 12

14. COMPLAINTS HANDLING 12

15. CONSTRUCTION WASTE MANAGEMENT PLANNING REVIEW 12

16. WASTE MANAGEMENT PLAN APPLICATION 13

17. PROJECT PHASE 14

APPENDICES

APPENDIX A: CONSTRUCTION SITE WASTE RISK ASSESSMENT.....16

APPENDIX B: WASTE COLLECTION PATHWAY AND BIN MOVEMENT.....17

1. INTRODUCTION

This Construction Waste Management Plan (CWMP) has been prepared by APC on behalf of the St Hillier's (The Builder). It accompanies an Environmental Impact Statement (EIS) in support of State Significant Development Application SSD 9344.The project will include alterations & additions to the Kent Road Public School located at Herring Road, Marsfield NSW.

Project works include:

- Construction of three (3) new two (2) to three (3) storey buildings to allow for increased student population from750 to 1,000, containing;
- 34 Homebase spaces;
- Canteen;
- Administration facilities;
- Staff facilities;
- Special program/counselling rooms
- Construction of a new Covered Outdoor Learning Area (COLA);
- Reconfiguration of car drop off / pick up arrangements on Kent Road;
- Landscaping and fencing;
- Tree removal.

2. PURPOSE

The purpose of this CWMP is to meet the requirements of the Secretary's Environmental Assessment Requirements Condition 20 Section 4.12 (8) of the Environmental Planning Assessment and will:

a) Identify, quantity and classify waste streams to be generated during construction.
b) Describe measures to be implemented to manage, reuse, and recycle and safely dispose of the waste.
c) Identify servicing arrangements including but not limited to waste management loading zones.
d) Prepare a site drawing for Construction Waste Management Loading Zones.

2.1 Condition of Approval (CoA) B18 and B30

CoA Reference	CoA Detail
B18	**Construction Waste Management Plan** (a) detail the quantities of each waste type generated during construction and the proposed reuse, recycling and disposal locations; (b) removal of hazardous materials, particularly the method of containment and control of emission of fibers to the air, and disposal at an approved waste disposal facility in accordance with the requirements of the relevant legislation, codes, standards and guidelines, prior to the commencement of any building works.
B30	**Construction and Demolition Waste Management** Prior to the commencement of the removal of any waste material from the site the applicant must notify the TFNSW(RMS) Traffic Management Centre of the truck route(s) to be followed by trucks transporting waste material from the site

3. RESPONSE TO SEARS

The CWMP is required by the Secretary's Environmental Assessment Requirements (SEARs) for SSD 9344. Table 1 identifies the SEARs and relevant reference within this report.

Table 1 - SEARs and relevant report reference

SEARs Item	Report Reference
Classification of the waste.	Page 5
Estimates / details of the quantity of each classification of waste to be generated during the construction of the project, including bulk earthworks and spoil balance.	Page10/11
Handling of waste including measures to facilitate segregation and prevent cross contamination.	Page 10/11
Management of waste including estimated location and volume of stockpiles.	Page 10/11
Waste minimisation and reuse.	Page 8
Lawful disposal or recycling locations for each type of waste;	Page 10/11
Contingencies for the above, including managing unexpected waste volumes.	Page 7

4. OBJECTIVES & TARGETS

The project objectives include:

- Meeting all waste management standards while ensuring the health and safety of the workers on the project.
- Maximising the quantities of materials diverted from landfill by reusing, recycling and reprocessing off-site.
- Disposal of no more than 20% of residual waste materials to a licensed landfill in accordance with both regulatory and legal requirements.
- The diversion from landfill of 80% of construction waste by weight, to meet the criteria of the NSW State Government's waste legislation, waste policy settings and regulatory regime
- Complete the project as per the requirement of SEARS's for waste as per SSD 9344.
- Promote waste minimisation through avoiding and reducing waste generation;
- Promote the recycling of building and demolition materials;

5. NSW LEGISLATIVE REQUIREMENTS AND GUIDELINES

Relevant key legislation:

- Protection of the Environment Operations Act 1997 and Amended Act 2011
- Protection of the Environment (General) Operations Act 1998
- Waste Avoidance and Resource Recovery Act 2014
- Protection of the Environment Operations (Waste) Regulation 2014
- Environmental Planning and Assessment Act 1979
- Environmental Planning and Assessment Regulation 2000
- NSW Department of Planning and Environment, Secretary's Environmental Assessment Requirements (SEARs).
- Environmental Planning and Assessment Act 1979 Section 4.38
- Secretary's Environmental Assessment Requirements – ESD Principles

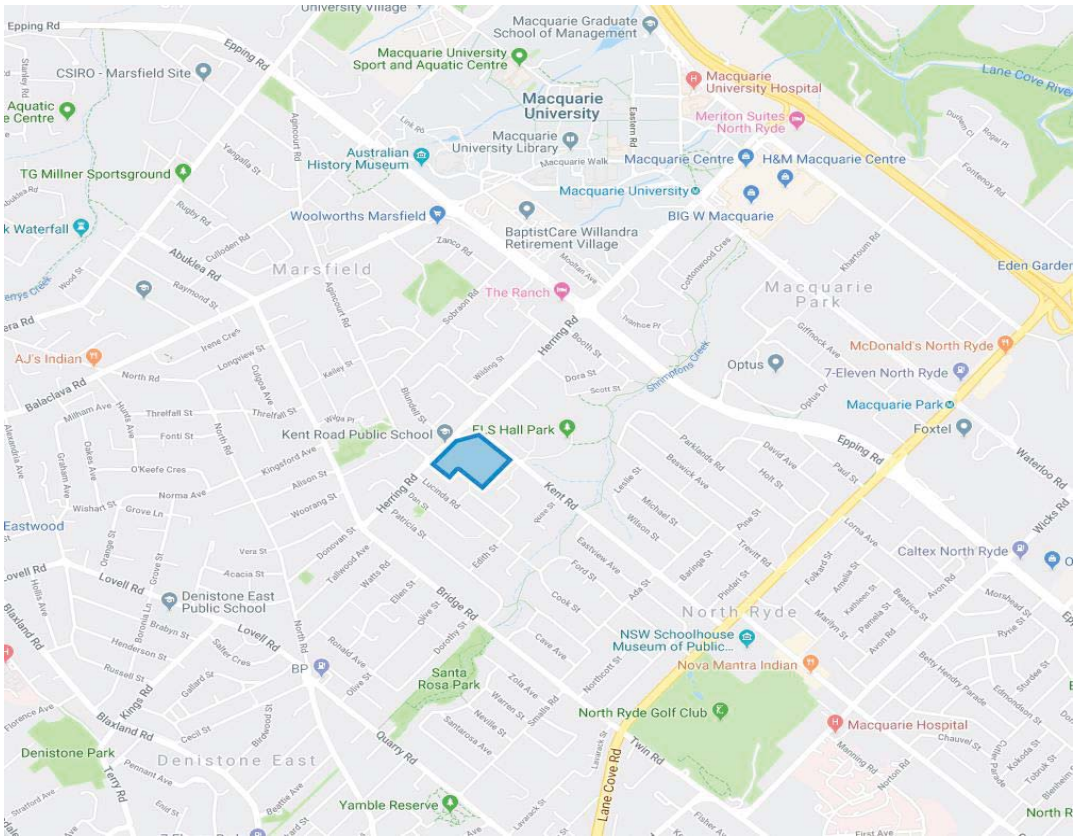
- State Environmental Planning Policy – Education Establishments & Chile Care Facilities – 2017;
- Ryde Development Control Plan 2014;
- Ryde Local Environment Plan 2014; and

Relevant key Guidelines:

- NSW Environment Protection Authority (EPA) Waste Classification Guidelines 2014 (EPA 2014b)
- NSW EPA's Waste Avoidance and Resource Recovery (WARR) Strategy 2014-21
  Australian Government Construction and Demolition Waste Guide, 2011

6. LOCATION AND SITE LAYOUT

Kent Road Public School. Kent Road Public School is located at the corner of Kent Road and Herring Road in Marsfield. It is approximately1.3km south-west of Macquarie Park and is within the City of Ryde Local Government Area.



7. WASTE STREAMS AND CLASSIFICATION

The NSW EPA Waste Classification Guidelines (EPA 2014b) provides for the classification of wastes into groups that pose similar risks to the environment and human health (NSW EPA, 2014b), which are defined in the POEO Act. Classes of waste described in the guideline are described in Table 2.

Table 2- Waste Classification Kent Road Public School

Material	EPA Classification	Disposal requirements
Excavation		
Excavated Soil	Subject to Waste Classification as per EPA 2014b following excavation	Disposed offsite
Asbestos	Hazardous Waste	Cap and contain onsite under Block R
Construction		
Concrete, Brick, Block-work & Tile	Non Putrescible General Solid Waste	Licensed Crushing and Grinding Facility
Metals	Non Putrescible General Solid Waste	Licensed Recycling Facility
Timber off-cuts	Non Putrescible General Solid Waste	Licensed Recycling Facility
Cardboard	Non Putrescible General Solid Waste	Licensed Recycling Facility
Plasterboard	Non Putrescible General Solid Waste	Licensed Recycling Facility
Containers, plastics, plastic packaging #, paint drums*,	Non Putrescible General Solid Waste	Licensed Recycling Facility
Pallets and Reels	Non Putrescible General Solid Waste	Licensed Recycling Facility
Liquid Waste	Non Putrescible General Solid Waste	Licensed Liquid Waste Facility
General Inert Waste	Non Putrescible General Solid Waste	Licensed Landfill
Putrescible Waste	Putrescible Waste	Licensed Landfill able to take putrescible waste

8. ROLES AND RESPONSIBILITIES FOR WASTE MANAGEMENT ON SITE

Responsibility	Activity	Monitoring
St Hillier's	Prepare and implement the CWMP	Daily onsite supervision by St Hillier's foreman,
St Hillier's	Induct all subcontractors into the CWMP,	Induction records
St Hillier's	Include Waste Management in weekly sub-contractors' meetings	Minutes of weekly meetings
St Hillier's	Issue Non-Conformance to subcontractors if they do not follow the CWMP	Non Conformance register
Site Manager	Audit the waste disposal data produced using Waste Contractors Tracking System	Waste Contractors Reports

9. SERVICING ARRANGEMENTS

Prior to the commencement of the removal of any waste material from the site the Applicant must notify the TFNSW(RMS) The current legislation determines that the generator of waste is the owner of the waste until the waste crosses a weighbridge into a licensed facility. Waste contractors including construction contractors are the primary transporters of waste off-site, accordingly contractors will be required to provide monthly reports on waste reused, reprocessed or recycled, thus diverted from landfill or waste sent to landfill. These reports have a direct bearing on the generator's regulations.

The CWMP will be implemented on site throughout demolition, excavation and construction.

All entries in the Waste Data File must include:

- Classification of the waste
- Time and Date of material removed
- Description and size of waste
- Waste facility used
- Vehicle registration and Waste Contractors Company name

The Waste Data File will be available for inspection to any authorized officer at any time during site works. At the conclusion of site works, the designated person will retain all waste documentation and make this validating documentation available for inspection.

Arrangements will be made with the Waste Contractor to increase bin supply if there is an unexpected increase in waste generation.

All waste generated during construction must be secured and maintained within a designated waste storage area at all times and must not leave the site onto neighboring public or private properties.

The body of any vehicle or trailer leaving the site used to transport waste or excavated spoil must be covered before leaving the premises to prevent spillage or escape of any dust, waste of spoil. Mud splatter, dust and any other material likely to fall from or be cast off the wheels, underside or body of any vehicle or motorized plant leaving the site must be removed before leaving the premises.

All concrete waste and rinse water will not be disposed of on site and will be prevented from entering any natural or artificial watercourse.

10. TRAINING

All employees and sub-contractors will attend a site specific induction that will address the CWMP In addition management staff shall be made aware of the waste hierarchy and the requirements of the CWMP including objectives and targets, commitments and procedures for waste minmisation. Work practices that minimise generation of wastes will be promoted and used on site.

11. WASTE MANAGEMENT STRATEGIES

The waste management strategy for the project will operate over the design, procurement, and construction including fit out of the project and is detailed in Table 3.

Table 3 - Breakdown of Tasks and Responsibilities

Management Strategies	Responsibilities
Design:	
Use of modular components in design	Architect & Engineer
Use of prefabricated components in design	Architect, Builder, Subcontractors.
Design for materials to standard sizes	Architect, Subcontractors
Design for operational waste minimisation	Architect & Builder
A reduction in new materials consumption and use of sustainable materials, including recycled content in concrete, sustainable timber and PVC minimization;	Architect & Builder
Procurement:	
Select recycled and reprocesses materials	Architect, Engineer, Builder & Sub Contractors
Components that can be reused after deconstruction	Architect, Engineer & Builder
Pre-construction:	
Waste management plan to be reviewed & approved prior to construction.	Builder
Contract a Waste Contractor	Waste Contractor
Construction on-site:	
Use the avoid, reuse, reduce, recycle principles	Builder & Waste Contractor
Minimisation of recurring packaging materials	Sub-contractors
Returning packaging to the supplier	Builder & Sub-contractor
Separation of recycling of materials off site	Waste Contractor
Audit & monitor the correct usage of bins	Builder & Waste Contractor
Audit and monitor the Waste Contractor	Builder

12. MONITORING AND REPORTING

Regular observations will be made by the Construction Site Manager and measures put into place to monitor the waste bins on site. The Site Manager will review any

- Incident, non-conformance and corrective action required;
- Monthly waste management reporting; including ensuring all waste quantities generated are recorded, including tracking of receipts for waste, recycling or disposal via the appointed waste contractor;
- Record waste classification and testing results;
- Update the CWMP in light of any changes to construction activities or further information, which may alter waste management practices;
- Auditing of waste management generation and practices across the site as a component of broader environmental site audits;
- Visual inspections daily to ensure waste management controls are implemented and maintained across site;
- Final review of the CWMP upon project completion to ensure information accurately reflects site activities, and to assist future waste management planning; and
- Ensure compliance with Approval, Permit and License sections that are relevant to current operations

13. CORRECTIVE ACTIONS

Where formal auditing, daily visual inspections or incident reporting identify incorrect storage or disposal procedures, or maintenance or waste management issues, observations will be promptly reported to the Construction Site Manager and recorded. The Construction Site Manager will determine appropriate measures to rectify the issues in a timely manner in consultation with the Environmental Management Representative and Health and Safety Manager where required.

14. COMPLAINTS HANDLING

Members of the general public impacted by the construction phase are able to enquire and complain about environmental impacts via the following channels:

- Information booths and information sessions held at the school or local community meeting place, advertised at least 7 days before in local newspapers, on our website and via letterbox drops
- 1300 number that is published on all communications material, including project site signage
- School Infrastructure NSW email address that is published on all communications material, including project site signage

15. CONSTRUCTION WASTE MANAGEMENT PLANNING REVIEW

St Hillier's have in place an external environmental auditing programme this will include a prestart and an annual review of site waste documentation including:

- Compliance with Approval, Permit and Licence sections that are relevant to current operations
- Compliance with the CWMP
- Compliance with waste disposal records

16. WASTE MANAGEMENT PLAN APPLICATION

PROJECT:
Kent Road Public School
ADDRESS:
Kent Road Public School located at Herring Road, Marsfield NSW.
Details of Application
St Hilliers
Description of buildings and other structures currently on the site:
No demolition of building on site however 53 native trees will be removed plus landscaping materilas including timber retaining walls .
Brief description of proposal:
• Construction of three (3) new two (2) to three (3) storey buildings to allow for increased student population from750 to 1,000, containing; • 34 Homebase spaces; • Canteen; • Administration facilities; • Staff facilities; • Special program/counselling rooms • Construction of a new Covered Outdoor Learning Area (COLA); • Reconfiguration of car drop off / pick up arrangements on Kent Road; • Landscaping and fencing; • Tree removal.
If materials / waste is reused on site or off site, how will it be re-used:
Reuse of soil and excavation material on site ,reuse of drums,pallets and rio

17. PROJECT PHASE

DEMOLITION OF LANDSCAPED AREA

Material Type on Site	Estimated Volume (m^3) or Weight (t) (Most Favourable → Least)		ON-SITE TREATMENT	OFF-SITE TREATMENT	
	Recycling	Disposal	Proposed reuse and/or recycling collection methods	Disposal / Transport Contractor	Waste Depot, Recycling Outlet or Landfill site
53 Native trees	316 cubic meters		Mulched and reused on site		
Landscape material including wooden retaining walls	35 cubic meters		Mulched and reused on site		
Narrative: No demolition of building on site however 53 native trees will be removed plus landscaping materials including timber retaining walls.This will be mulched and reused on site .					

EXCAVATION

Material Type on Site	Estimated Volume (m3) or Weight (t) (Most Favourable → Least)			ON-SITE TREATMENT	OFF-SITE TREATMENT	
	Reuse	Recycling	Disposal	Proposed reuse and/or recycling collection methods	Disposal / Transport Contractor	Waste Depot, Recycling Outlet or Landfill site
Excavated Soil		1,200 cubic meters				
Narrative: The majority of the excavated spoil will remain on site for site grading activities. The DSO report indicates that some asbestos on the site exceeds the site land use criteria .The material containing asbestos will be identified and safely removed/encapsulated, direct treatment and/or off-site						

disposal is the most appropriate option. The construction contractor will then liaise with a licensed asbestos removalist to determine a suitable disposal facility.

CONSTRUCTION

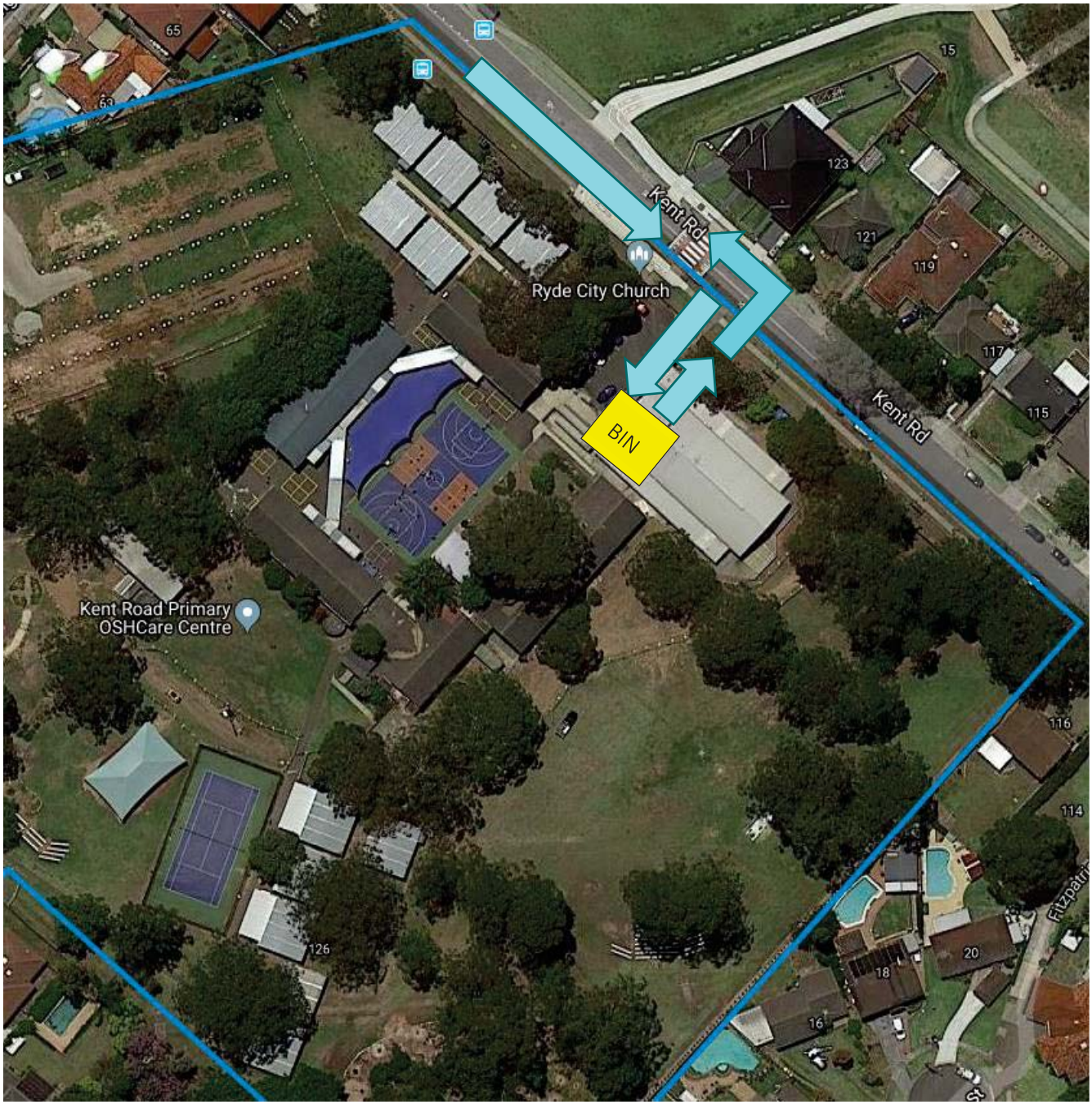
Material Type on Site	Estimated Weight (t) (Most Favourable → Least)			ON-SITE TREATMENT	OFF-SITE TREATMENT	
	Reuse	Recycling	Landfill Disposal	Proposed reuse and/or recycling collection methods	Disposal / Transport Contractor	Recycling Outlet or Landfill site
Concrete, Brick, Block-work & Tile		162m^3		Co-mingled Bins	Dumpit Handy Bins	Crushed for road base
Metals		94m^3		Co-mingled Bins	Dumpit Handy Bins	Scrap Metal Dealer for smelting
Timber off-cuts		122m^3		Co-mingled Bins	Dumpit Handy Bins	Recycled for chips and mulch
Cardboard		145m^3		Co-mingled Bins	Dumpit Handy Bins	Recycled into cardboard
Plasterboard		157m^3		Co-mingled Bins	Dumpit Handy Bins	Recycled as soil conditioner
Containers, plastics, plastic packaging, paint drums*,		96m^3	10 m^3-	Co-mingled Bins	Dumpit Handy Bins	Polystyrene and plastic to landfill
Pallets and Reels	70 units			Separated onsite	Dumpit Handy Bins	Returned to the supplier
Liquid Waste			12 m^3	Separated onsite	Cleanaway	Transferred to licenced repressor
General Waste			105 m^3		Dumpit Handy Bins	Suez Eastern Creek
Sub-total	70 units	776m^3	127m^3			
TOTAL	**916m^3**			**NB:** 70 pallets & reels (single units returned to suppliers for reuse) approx. 40 m3		

Narrative: *As the contracts for all contractors have not been let there are still those including the waste contractor To Be advised (TBA**).**
*Measures shall be taken to minimise waste generated onsite through design and minimisation activities however, all other waste will be placed in co-mingled bins and taken for off-site separation, reuse or recycling except Pallets and Reels (reused) and Liquid Waste to be sent for re-processing
*All waste will be co-mingled and taken for off-site separation and reuse or recycling except Pallets and Reels.

APPENDIX A CONSTRUCTION SITE WASTE RISK ASSESSMENT

No	Activity	Aspect Impact	Inherent Risk	Actions / Control Measure	Residual Risk Score	Action By	Legal Requirements
			Waste Management				
1.1	All waste would be assessed, classified, managed and disposed of legally	Soil Contamination	13	All waste will be assessed, classified, managed and disposed of in accordance with the Waste Classification Guidelines (DECC, 2008).	6	Environmental manager	No waste to leave the site without a waste classification.
1.2	All waste materials removed from the site will only be directed to a waste management facility lawfully permitted to accept the materials	Illegal dumping of waste	13	Waste Tracking System Provide monthly waste reports with tipping dockets indicating that waste has been taken to a licensed waste facility.	6	Waste Contractor	Withhold payment unless dockets provided and correlated.
1.3	Waste tracking reporting and auditing of waste volumes and disposal destinations	Illegal dumping of material	13	Waste Tracking System	6	Waste Contractor	Audit waste contractor to ensure they comply with current legislation.
1.4	All waste materials removed from the site shall only be directed to a waste management facility or premises lawfully permitted to accept the materials	Illegal dumping of waste material	13	Waste Tracking System provided by Waste Contractor docketing documenting waste leaving the site and crossing a weighbridge to a licenses waste facility.	6	Waste Contractor	Withhold payment unless dockets provided. Waste contractor to advise Richard Crooks if waste has been taken to un unlicensed facility
1.5	All liquid waste generated on the site shall all be assessed and classified in accordance with Waste Classification Guidelines	Incorrect classification	13	Waste Tracking System documenting liquid waste leaving the site and crossing a weighbridge to a licenses liquid waste facility.	18	Waste Contractor	Request disposal dockets for all liquid waste leaving the site.

APPENDIX B WASTE COLLECTION PATHWAY AND BIN MOVEMENT



B.16 - Appendix E – Construction Noise & Vibration Management Plan

MATTHEW PALAVIDIS
VICTOR FATTORETTO
MATTHEW SHIELDS

Kent Road Public School

Construction Noise Vibration Management Plan

SYDNEY
9 Sarah St
MASCOT NSW 2020
(02) 8339 8000

ABN 11 068 954 343
www.acousticlogic.com.au

The information in this document is the property of Acoustic Logic Consultancy Pty Ltd ABN 11 068 954 343 and shall be returned on demand. It is issued on the condition that, except with our written permission, it must not be reproduced, copied or communicated to any other party nor be used for any purpose other than that stated in particular enquiry, order or contract with which it is issued.

Project ID	20191035.1
Document Title	Construction Noise Vibration Management Plan
Attention To	St Hilliers Property Pty Limited

Revision	Date	Document Reference	Prepared By	Checked By	Approved By
0	20/09/2019	20191035.1/2009A/R0/GK	GK		
1	3/10/2019	20191035.1/0310A/R1/GK	GK		VF

TABLE OF CONTENTS

1 INTRODUCTION 4
2 SITE DESCRIPTION 5
3 RECEIVER LOCATIONS 5
4 PROPOSED CONSTRUCTION WORKS 7
5 CONSTRUCTION NOISE CODES AND GUIDELINES 8
5.1 NSW EPA INTERIM CONSTRUCTION NOISE GUIDELINE (ICNG) 2009 8
5.2 AUSTRALIAN STANDARD AS 2436:2010 "GUIDE TO NOISE CONTROL ON CONSTRUCTION, MAINTENANCE AND DEMOLITION SITES" 9
6 EXISTING BACKGROUND NOISE LEVELS 9
7 CONSTRUCTION NOISE AND VIBRATION MANAGEMENT LEVELS 10
7.1 NOISE 10
7.2 VIBRATION 10
7.2.1 Damage Criteria 10
7.2.2 Human Comfort and Amenity 11
8 PREDICTED CONSTRUCTION NOISE LEVELS 12
9 ASSESSMENT OF VIBRATION LEVELS 17
9.1 VIBRATION PRODUCING ACTIVITIES 17
9.2 RECOMMENDED VIBRATION CRITERIA 17
9.3 SAFEGUARDS TO PROTECT SENSITIVE STRUCTURES 17
10 CONTROL OF CONSTRUCTION NOISE AND VIBRATION 18
11 GENERAL NOISE AND VIBRAION CONTROL METHODS 19
11.1 SELECTION OF ALTERNATE APPLIANCE OR PROCESS 19
11.2 ACOUSTIC SCREENS 19
11.3 SILENCING DEVICES 19
11.4 MATERIAL HANDLING 19
11.5 TREATMENT OF SPECIFIC EQUIPMENT 19
11.6 ESTABLISHMENT OF SITE PRACTICES 19
11.7 COMBINATION OF METHODS 19
11.8 MAINTENANCE OF PLANT, EQUIPMENT AND MACHINERY 19
11.9 STAFF TRAINING AND REPORTING MECHANISM 19
12 PROJECT SPECIFIC RECOMMENDATIONS 20
12.1 EXCAVATOR MOUNTED HAMMER AND ROCK SAWING 20
12.2 EXCAVATOR NOISE 20
12.3 VEHICLE NOISE AND CONCRETE PUMPS 20
12.4 VIBRATION MONITORING 20
12.4.1 Downloading of Vibration Logger 21
12.4.2 Presentation of Vibration Logger Results 21
12.4.3 Persons to Receive Alarms 21
12.4.4 Other Activities 21
13 COMMUNITY INTERACTION AND COMPLAINTS HANDLING 22
13.1 CONDITION B17 OF SSD 9344 22
13.2 ESTABLISHMENT OF DIRECT COMMUNICATION WITH AFFECTED PARTIES 22
13.3 DEALING WITH COMPLAINTS 23
13.4 REPORTING REQUIREMENTS 24
13.5 CONTINGENCY PLANS 24
14 CONCLUSION 25

1 INTRODUCTION

This Construction Noise and Vibration Management Plan (CNVMP) presents the results of potential noise and vibration impacts associated with the demolition/excavation and construction of the proposed upgrades to Kent Road Public School.

This assessment has been conducted in accordance with the requirements as set out in SSD 9344 condition B17, and has been repeated below:

B17. The construction Noise and Vibration Management Sub-Plan must address, but not limited to, the following:

(a) Be prepared by a suitably qualified and experienced noise expert;
(b) Describe procedures for achieving the noise management levels in EPA's Interim Construction Noise Guideline (DECC, 2009);
(c) Describe the measures to be implemented to manage high noise generating works such as piling, in close proximity to sensitive receivers including, Kent Road Public School and the local community;
(d) Include strategies that have not been developed with the community for managing high noise generating works;
(e) Describe the community consultation undertaken to develop strategies in condition B17(d); and
(f) Include a complaints management system that would be implemented for the duration of the construction.

Noise control strategies have been formulated within this management plan to ensure that construction noise impacts from the site are minimised. In particular, a detailed outline of the community consultation procedures proposed for the site which has been included which will form the basis of the noise control strategy.

The plan should also be updated during the construction period in response to information gathered during this period

2 SITE DESCRIPTION

The subject site (Kent Road Public School) is bounded by Herring Road to the north, Kent Road to the East and Lucinda Road to the south east the project site is surrounded by residential properties along all boundaries.

For a detailed description please see the detailed figure below.

3 RECEIVER LOCATIONS

The potentially most impacted sensitive receiver locations are presented below. In addition, these have been identified in the figure below.

Receiver 1 – Residential dwellings located at 36A - 42 Herring Road, Marsfield located across herring road along the north eastern boundary of the project site;

Receiver 2 – Residential dwellings located at 63 – 67 Herring Road, Marsfield located along the north eastern boundary of the project site;

Receiver 3 – Residential dwellings located at 73 – 71 Herring road and 131 Kent Road, Marsfield located along the northern boundary of the project site;

Receiver 4 – Residential dwellings located at 111 - 123 Kent Road, Marsfield located along the eastern boundary of the project site;

Receiver 5 – Residential dwellings located at 8 - 20 Fitzpatrick Street, Marsfield located along the south eastern boundary of the project site;

Receiver 6 – Residential dwellings located at 1A – 5 Beverly Crescent, Marsfield located along the south eastern boundary of the project site;

Receiver 7 – Residential dwellings located at 13 Lucinda Road, Marsfield located along the eastern boundary of the project site;

Receiver 8 – Residential dwellings located at 1 – 11 Lucinda Road, Marsfield located along the eastern boundary of the project site; and

Receiver 9 – Residential dwellings located at 147 Agincourt Road and 32- 39 Herring Road, Marsfield located across Herring road along the norther boundary of the project site.

Figure 2-1 Site Survey and Receiver Locations Site Map Sourced from SixMaps NSW

4 PROPOSED CONSTRUCTION WORKS

The proposed construction works will include the following:

- Excavation Phase; and
- Construction Phase.

The proposed works have been divided into a number of main work phases, along with the main noise producing equipment and activities likely to occur in each phase.

Table 1 – Excavation and Construction Activities

Construction Activity	Equipment	Sound Power Level dB(A)L_{max}
Excavation Phase	Concrete Sawing	115
	Concrete Pulveriser	110
	Excavator Mounted Hydraulic Hammer	120
	Excavator with Bucket, Bobcat	110
	Builders Hoist	112
	Hand Held Scrabbling Tools	105
	Trucks	105
General Construction Works	Trucks	105
	Concrete Pumps	110
	Crane	94
	Builders Hoist	115
	Concreting – Vibrator and Helicopter Float	105
	Powered Hand Tools	94

The Noise levels presented in the above table are derived from the following sources:

1. Table D2 of Australian Standard 2436-1981
2. Data held by this office from other similar studies.

5 CONSTRUCTION NOISE CODES AND GUIDELINES

The NSW EPA *Interim Construction Noise Guideline (ICNG) 2009* details specific construction noise and vibration management levels applicable to construction sites within NSW.

Where feasible and practical measures may be applied to the construction site is to endeavour to comply with the noise management levels outlined in the guideline. A summary of the code is detailed below.

5.1 NSW EPA INTERIM CONSTRUCTION NOISE GUIDELINE (ICNG) 2009

EPA guidelines adopt differing strategies for noise control depending on the predicted noise level at the nearest residences:

- "Noise affected" level. Where construction noise is predicted to exceed the "noise effected" level at a nearby residence, the proponent should take reasonable/feasible work practices to ensure compliance with the "noise effected level". For residential properties, the "noise effected" level occurs when construction noise exceeds ambient levels by more than:
    - 10dB(A)$L_{eq(15min)}$ for work during standard construction hours (7:00am-6:00pm Monday to Friday and 8am to 1pm on Saturdays); and
    - 5dB(A)$L_{eq(15min)}$ for work outside standard construction hours (6:00pm-7:00pm Monday to Friday and 1:00pm to 4:00pm on Saturdays); and
- *"Highly noise affected level"*. Where noise emissions are such that nearby properties are "highly noise effected", noise controls such as respite periods should be considered. For residential properties, the "highly noise effected" level occurs when construction noise exceeds 75dB(A)$L_{eq(15min)}$ at nearby residences. Highly noise affected level only applies during standard construction hours.

A summary of noise management levels for standard hours of construction are presented below:

Table 2 – Construction Noise Management Level (Residents)

Receiver Type	"Noise Affected" Level dB(A) $L_{eq(15min)}$	"Highly Noise Affected" Level dB(A) $L_{eq(15min)}$
Residential Receiver	Background + 10dB(A) (Standard Construction Hours)	75
	Background + 5dB(A) (Outside Standard Construction Hours)	N/A

5.2 AUSTRALIAN STANDARD AS 2436:2010 "GUIDE TO NOISE CONTROL ON CONSTRUCTION, MAINTENANCE AND DEMOLITION SITES"

Australian Standard AS 2436 provides guidance on noise and vibration control in respect to construction and demolition sites, the preparation of noise and vibration management plans, work method statements and impact studies.

The Standard states that:

- "Some construction and demolition activities are by their very nature noisy. The authorities responsible for setting noise level criteria for essential works will take note of the constraints imposed by such activities, especially when they are of short duration."

- Construction, demolition and maintenance works pose different problems of noise and vibration control when compared with most other types of industrial activity, since (a) they are mainly carried on in the open; (b) they are often temporary in nature although they may cause considerable disturbance whilst they last; (c) the noise and vibration arise from many different activities and kinds of plant, and their intensity and character may vary greatly during different phases of the work; and (d) the sites cannot be separated by planning controls, from areas that are sensitive to noise and vibration.

The standard provides advice and guidelines for the prediction of impacts and the methods available to manage impacts. It guideline promulgates feasible and reasonable mitigation strategies and controls, and stakeholder liaison, in the effort to reach a realistic compromise between site activities and impacts on neighbouring properties.

6 EXISTING BACKGROUND NOISE LEVELS

Existing rating background noise levels (RBL) have been measured by Acoustic Logic for this project. Rating background noise levels have been determined using unattended monitoring around the site. Unattended noise monitoring was conducted using one Acoustic Research Laboratories Pty Ltd noise logger. The logger was programmed to store 15-minute statistical noise levels throughout the monitoring period. The equipment was calibrated at the beginning and the end of each measurement using a Rion NC-73 calibrator; no significant drift was detected. All measurements were taken on A-weighted fast response mode.

The results of the monitoring are summarised in the following table.

Table 3 – Measured Rating Background Noise Level

Location	Time Period	Noise Level
Kent Road Public School	7:00am-6:00pm	42

7 CONSTRUCTION NOISE AND VIBRATION MANAGEMENT LEVELS

7.1 NOISE

Resultant Noise Management Levels (NMLs) have been summarised below, these have been determined based on the information in section 5 and rating background noise levels in section 6.

Table 4 – Resultant Noise Management Levels (NML's)

Hours of Work	Receivers	Noise Management Trigger Level dB(A)$L_{eq(15min)}$
Standard Construction Hours (7:00am-5:00pm Monday to Friday; and 8:00am to 1:00pm on Saturday)	All Residential Receivers	52dB(A)$L_{eq(15min)}$ (BG + 10dB(A)) (42dB(A)$L_{90(Period)}$ + 10dB(A))

7.2 VIBRATION

Vibration caused by construction at any residence or structure outside the subject site must be limited to:

- For structural damage vibration, German Standard DIN 4150-3 Structural Vibration: Effects of Vibration on Structures; and
- For human exposure to vibration, British Standard BS 6472 – 'Guide to Evaluate Human Exposure to Vibration Buildings (1Hz to 80Hz.)

The criteria and the application of this standard are discussed in separate sections below.

7.2.1 Damage Criteria

German Standard DIN 4150-3 (1999-02) provides vibration velocity guideline levels for use in evaluating the effects of vibration on structures. The criteria presented in DIN 4150-3 (1999-02) are presented in Table 2.

It is noted that the peak velocity is the absolute value of the maximum of any of the three orthogonal component particle velocities as measured at the foundation, and the maximum levels measured in the x- and y-horizontal directions in the plane of the floor of the uppermost storey.

Table 5 – DIN 4150-3 (1999-02) Safe Limits for Building Vibration

Type of Structure		Peak Particle Velocity (mms^{-1})			
		At Foundation at a Frequency of			Plane of Floor of Uppermost Storey
		< 10Hz	10Hz to 50Hz	50Hz to 100Hz	All Frequencies
1	Buildings used in commercial purposes, industrial buildings and buildings of similar design	20	20 to 40	40 to 50	40
2	Dwellings and buildings of similar design and/or use	5	5 to 15	15 to 20	15
3	Structures that because of their particular sensitivity to vibration, do not correspond to those listed in Lines 1 or 2 and have intrinsic value (e.g. buildings that are under a preservation order)	3	3 to 8	8 to 10	8

7.2.2 Human Comfort and Amenity

The British Standard BS 6472 – 'Guide to Evaluate Human Exposure to Vibration Buildings (1Hz to 80Hz) will be used to assess construction vibration for human comfort.

This guideline provides procedures for assessing tactile vibration and regenerated noise within potentially affected buildings. The recommendations of this guideline should be adopted to assess and manage vibration from the site. Where vibration exceeds, or is likely to exceed, the recommended levels then an assessment of reasonable and feasible methods for the management of vibration should be undertaken.

Table 6 – BS 6472 Vibration Criteria

		RMS acceleration (m/s^2)		RMS velocity (mm/s)		Peak velocity (mm/s)	
Place	Time	Preferred	Maximum	Preferred	Maximum	Preferred	Maximum
Continuous Vibration							
Residences	Daytime	0.01	0.02	0.2	0.4	0.28	0.56
Offices		0.02	0.04	0.4	0.8	0.56	1.1
Workshops		0.04	0.08	0.8	1.6	1.1	2.2
Impulsive Vibration							
Residences	Daytime	0.3	0.6	6.0	12.0	8.6	17.0
Offices		0.64	1.28	13.0	26.0	18.0	36.0
Workshops		0.64	1.28	13.0	26.0	18.0	36.0

Note 1: Continuous vibration relates to vibration that continues uninterrupted for a defined period (usually throughout the daytime or night-time), e.g. continuous construction or maintenance activity. (DECC, 2006)

Note 2: Impulsive vibration relate to vibration that builds up rapidly to a peak followed by a damped decay and that may or may not involve several cycles of vibration (depending on frequency and damping), with up to three occurrences in an assessment period, e.g. occasional loading and unloading, or dropping of heavy equipment (DECC, 2006).

8 PREDICTED CONSTRUCTION NOISE LEVELS

Noise from the worst-case construction works for each phase of the development have been predicted to the nearest most affected sensitive receiver.

The following tables presents the predicted noise levels for each item of typically loudest plant

Table 7 – Noise Emission Assessment Receiver 1
(36A - 42 Herring Road, Marsfield)

Activity	Sound Power Level	Predicted Level at Receiver dB(A)$L_{eq(15min)}$
Concrete Sawing	115	71-67
Concrete Pulveriser	110	66-62
Excavator Hydraulic Hammer	120	76-72
Excavator Bucket	110	66-62
Hand Held Scrabbling Tools	112	68-64
Trucks	105	61-57
Concrete Pumps	110	66-62
Crane	105	61-57
Concreting Helicopter	105	66-62
Powered Hand Tools	94	56-52

Table 8 – Noise Emission Assessment Receiver 2
(63 – 67 Herring Road, Marsfield)

Activity	Sound Power Level	Predicted Level at Receiver dB(A)$L_{eq(15min)}$
Concrete Sawing	115	83-72
Concrete Pulveriser	110	78-67
Excavator Hydraulic Hammer	120	88-77
Excavator Bucket	110	78-67
Hand Held Scrabbling Tools	112	80-69
Trucks	105	73-62
Concrete Pumps	110	78-67
Crane	105	73-62
Concreting Helicopter	105	73-62
Powered Hand Tools	94	68-57

Table 9 – Noise Emission Assessment Receiver 3
(73 – 71 Herring road and 131 Kent Road, Marsfield)

Activity	Sound Power Level	Predicted Level at Receiver dB(A)$L_{eq(15min)}$
Concrete Sawing	115	69-67
Concrete Pulveriser	110	64-62
Excavator Hydraulic Hammer	120	74-72
Excavator Bucket	110	64-62
Hand Held Scrabbling Tools	112	66-64
Trucks	105	59-57
Concrete Pumps	110	64-62
Crane	105	59-57
Concreting Helicopter	105	59-57
Powered Hand Tools	94	55-52

Table 10 – Noise Emission Assessment Receiver 4
(111 - 123 Kent Road, Marsfield)

Activity	Sound Power Level	Predicted Level at Receiver dB(A)$L_{eq(15min)}$
Concrete Sawing	115	68-61
Concrete Pulveriser	110	63-56
Excavator Hydraulic Hammer	120	73-66
Excavator Bucket	110	63-56
Hand Held Scrabbling Tools	112	65-58
Trucks	105	58-51
Concrete Pumps	110	63-56
Crane	105	58-51
Concreting Helicopter	105	63-56
Powered Hand Tools	94	53-46

Table 11 – Noise Emission Assessment Receiver 5
(8 - 20 Fitzpatrick Street, Marsfield)

Activity	Sound Power Level	Predicted Level at Receiver dB(A)$L_{eq(15min)}$
Concrete Sawing	115	63-61
Concrete Pulveriser	110	58-56
Excavator Hydraulic Hammer	120	68-66
Excavator Bucket	110	58-56
Hand Held Scrabbling Tools	112	60-58
Trucks	105	53-51
Concrete Pumps	110	58-56
Crane	105	53-51
Concreting Helicopter	105	53-51
Powered Hand Tools	94	48-46

Table 12 – Noise Emission Assessment Receiver 6
(1A – 5 Beverly Crescent, Marsfield)

Activity	Sound Power Level	Predicted Level at Receiver dB(A)$L_{eq(15min)}$
Concrete Sawing	115	62-60
Concrete Pulveriser	110	57-55
Excavator Hydraulic Hammer	120	67-65
Excavator Bucket	110	67-65
Hand Held Scrabbling Tools	112	57-55
Trucks	105	52-50
Concrete Pumps	110	65-64
Crane	105	50-52
Concreting Helicopter	105	50-52
Powered Hand Tools	94	47-45

Table 13 – Noise Emission Assessment Receiver 7 (13 Lucinda Road, Marsfield)

Activity	Sound Power Level	Predicted Level at Receiver dB(A)$L_{eq(15min)}$
Concrete Sawing	115	65-61
Concrete Pulveriser	110	60-56
Excavator Hydraulic Hammer	120	70-66
Excavator Bucket	110	60-56
Hand Held Scrabbling Tools	112	62-58
Trucks	105	55-51
Concrete Pumps	110	60-56
Crane	105	55-51
Concreting Helicopter	105	55-51
Powered Hand Tools	94	50-46

Table 14 – Noise Emission Assessment Receiver 8 (1 – 11 Lucinda Road, Marsfield)

Activity	Sound Power Level	Predicted Level at Receiver dB(A)$L_{eq(15min)}$
Concrete Sawing	115	65-61
Concrete Pulveriser	110	60-56
Excavator Hydraulic Hammer	120	70-66
Excavator Bucket	110	60-56
Hand Held Scrabbling Tools	112	62-58
Trucks	105	55-51
Concrete Pumps	110	60-56
Crane	105	55-51
Concreting Helicopter	105	55-51
Powered Hand Tools	94	50-46

Table 15 – Noise Emission Assessment Receiver 9
(147 Agincourt Road and 32- 39 Herring Road, Marsfield)

Activity	Sound Power Level	Predicted Level at Receiver dB(A)$L_{eq(15min)}$
Concrete Sawing	115	71-65
Concrete Pulveriser	110	66-60
Excavator Hydraulic Hammer	120	76-70
Excavator Bucket	110	66-60
Hand Held Scrabbling Tools	112	68-62
Trucks	105	61-55
Concrete Pumps	110	66-60
Crane	105	61-55
Concreting Helicopter	105	61-55
Powered Hand Tools	94	66-40

9 ASSESSMENT OF VIBRATION LEVELS

9.1 VIBRATION PRODUCING ACTIVITIES

Proposed activities that have the potential to produce significant ground vibration include:

- Excavator mounted hydraulic hammer;

9.2 RECOMMENDED VIBRATION CRITERIA

It is recommended to adopt maximum 5mm/s PPV criteria to protect residential buildings adjacent to the project site based on requirements of DIN 4150.

- Alarm Level – 3mm/s PPV at vibration at receiver location, SMS alarm message will be sent to operator, project manager and acoustic engineer if magnitude of vibration events exceed this level. Project manager shall respond immediately by taking courteous work methodology.
- Stop work level -5mm/s PPV at vibration at receiver location, SMS alarm message will be sent to operator, project manager and acoustic engineer if magnitude of vibration events exceed this level. Project manager shall stop the work at amenity of geophone immediately.

9.3 SAFEGUARDS TO PROTECT SENSITIVE STRUCTURES

It is impossible to predict the vibrations induced by the excavation operations on site at potentially affected receivers. This is because the transmitted vibration level is dependent on an number of factors including the unknown sub-soil condiions, strength of rock, machinery used, etc.

If hammering of rock using excavator mounter hammers is to be undertaken then it is recommended that vibration monitoring be undertaken to establish the vibration levels produced and if necessary monitor ongoing vibration.

10 CONTROL OF CONSTRUCTION NOISE AND VIBRATION

The execution of this work will facilitate the formulation of noise control strategies for this project.

The flow chart presented in Figure 2 illustrates the process that will be followed in assessing construction activities.

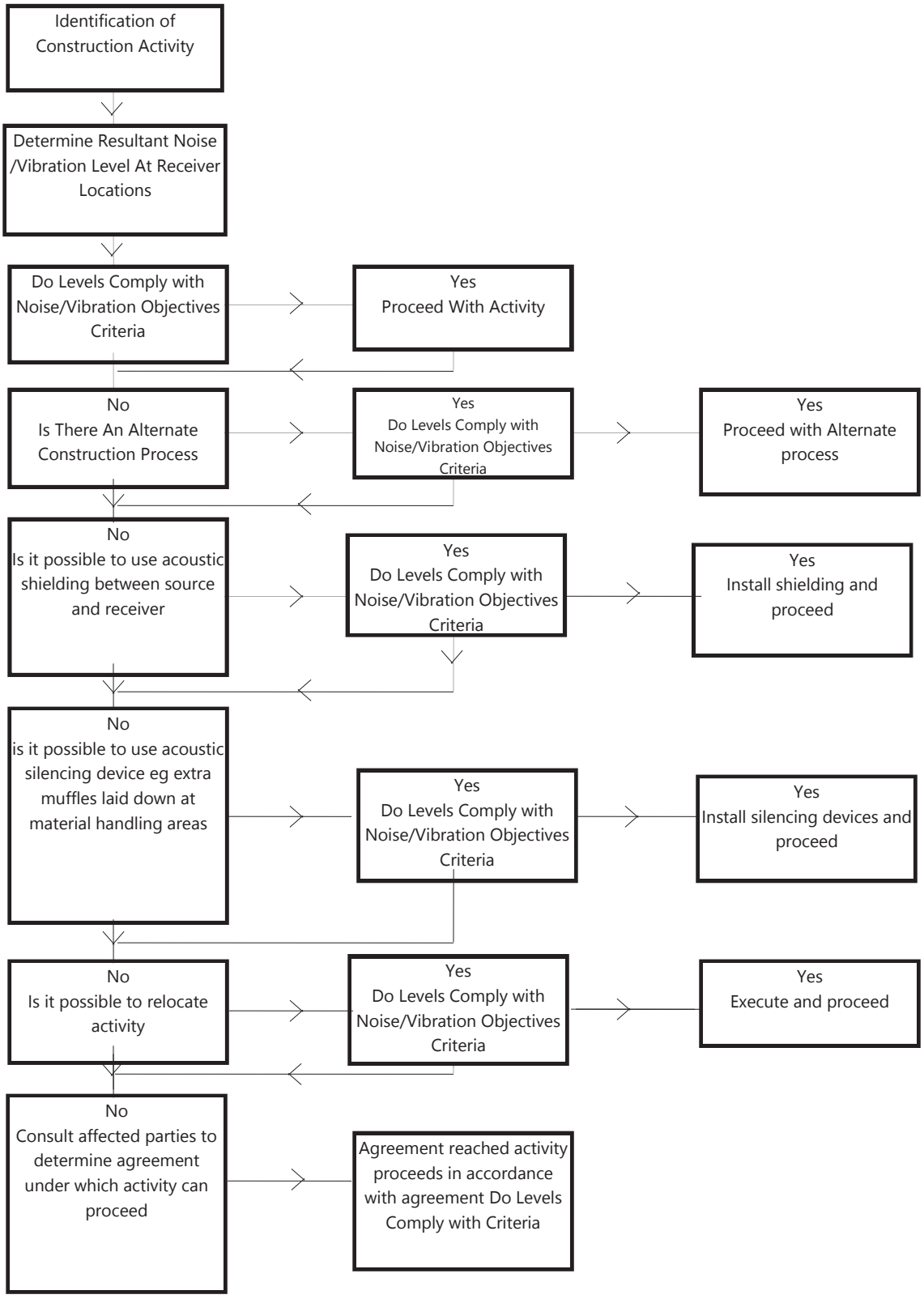


Figure 2 – Process Flowchart

11 GENERAL NOISE AND VIBRAION CONTROL METHODS

The determination of appropriate noise control measures will be dependent on the particular activities and construction appliances. This section provides an outline of available methods.

11.1 SELECTION OF ALTERNATE APPLIANCE OR PROCESS

Where a particular activity or construction appliance is found to generate excessive noise levels, it may be possible to select an alternative approach or appliance. For example; the use of a hydraulic hammer on certain areas of the site may potentially generate high levels of noise. By carrying this activity by use of pneumatic hammers, bulldozers ripping and/or milling machines lower levels of noise will result.

11.2 ACOUSTIC SCREENS

In relation to the potential for acoustic screens to be employed around the site to reduce the emission of construction noise to surrounding receivers. Acoustic screening can be used on site to help further mitigate noise to residential receivers.

11.3 SILENCING DEVICES

Where construction process or appliances are noisy, the use of silencing devices may be possible. These may take the form of engine shrouding, or special industrial silencers fitted to exhausts.

11.4 MATERIAL HANDLING

The installation of rubber matting over material handling areas can reduce the sound of impacts due to material being dropped by up to 20dB(A).

11.5 TREATMENT OF SPECIFIC EQUIPMENT

In certain cases, it may be possible to specially treat a piece of equipment to dramatically reduce the sound levels emitted.

11.6 ESTABLISHMENT OF SITE PRACTICES

This involves the formulation of work practices to reduce noise generation. It is recommended that all available and reasonable treatments and mitigation strategies presented in this management plan be adopted to minimise noise emissions from the excavation and construction activities on site.

11.7 COMBINATION OF METHODS

In some cases, it may be necessary that two or more control measures be implemented to minimise noise.

11.8 MAINTENANCE OF PLANT, EQUIPMENT AND MACHINERY

All plant, equipment and machinery should be regularly serviced and maintained at optimum operating conditions, to ensure excessive noise emissions are not generated from faulty, overused or unmaintained machinery.

11.9 STAFF TRAINING AND REPORTING MECHANISM

All construction staff (including subcontractors) on site, as part of the site induction process, will be informed of the surrounding sensitive receivers on site and the site-specific recommendations to reduce noise and vibration impacts to these receivers.

12 PROJECT SPECIFIC RECOMMENDATIONS

12.1 EXCAVATOR MOUNTED HAMMER AND ROCK SAWING

Hammering will typically produce the loudest noise levels emanating from the site and have the highest potential for noise and vibration impacts on surrounding receivers. On this basis, it is recommended that surrounding receivers are consulted on the processes of the excavation (particularly rock breaking). Management processes will include:

- To reduce the impacts from hydraulic hammering and sawing it is recommended that the following respite periods are recommended for hydraulic rock hammering and sawing:
    - Monday to Friday:
        - Respite Period 1: 7:00am to 8:00am; and
        - Respite Period 2: 12:00pm-1:00pm.
    - Saturday:
        - No respite as time is limited on this day.
- All surrounding receivers should be notified of the duration and extent of the works proposed during the excavation stage via letterbox drops, with a detailed engagement plan and contact information for all relevant personnel on site.

12.2 EXCAVATOR NOISE

Excavators are expected to be used for most of the time during the excavation period.

Where prolonged excavator use is necessary, excavators could be moved to another part of the site to offer the receiver closest to the excavator some respite. Where practical and feasible, by moving the excavator from working on one part of the site to the opposite side of the site can provide up to a 10dB(A) reduction in noise levels impacting residential receiver locations. Management processes include;

All surrounding receivers should be notified of the duration and extent of the works proposed during the excavation stage via letterbox drops, with a detailed engagement plan and contact information for all relevant personnel on site.

12.3 VEHICLE NOISE AND CONCRETE PUMPS

Trucks must turn off their engines when on site to reduce impacts on adjacent land use (unless truck ignition needs to remain on during concrete pumping).

Where feasible locate concrete pumping plant away from site boundaries.

12.4 VIBRATION MONITORING

It is recommended that attended monitoring be carried out the commencement of excavation if rock excavation using hydraulic hammers is undertaken to confirm vibration levels at sensitive receivers. If this assessment indicates that vibration levels may be exceeded then either modify work practices, or install continuous monitors with alarms so that works can cease if the trigger levels are exceeded.

It is recommended that the monitors (if required) are fitted with GSM modem for vibration exceedance. In addition, the vibration loggers will be down loaded remotely using the GSM modem and reports to be issued fortnightly.

12.4.1 Downloading of Vibration Logger

Down loading of the vibration logger will be conducted on a regular basis. In the event exceedance of vibration criteria via a SMS alert system occurs, downloading of logger should be conducted more frequently. Results obtained from the vibration monitor will be presented in a graph formant and will be forwarded t St Hillers Property Pty Limited for review. It is proposed that reports are provided fortnightly with any exceedance in the vibration criteria reported as detailed in this report.

12.4.2 Presentation of Vibration Logger Results

A fortnightly report will be submitted to St Hillers Property Pty Limited via email summarising the vibration events. The vibration exceedance of limit is recorded the report shall be submitted within 24 hours. Complete results of the continuous vibration logging will be presented in fortnight reports including graphs of collected data.

12.4.3 Persons to Receive Alarms

The following personnel will receive GSM alarms:

- Acoustic consultant/advisor (1 person)
- Excavation site foreman
- Main builder foreman (where applicable)
- St Hillers Property Pty Limited Building nominated two representatives

12.4.4 Other Activities

- In the event of non-compliances, noise management techniques identified in this management plan should be employed to minimise the level of noise impact. This may include community consultation and scheduling of loud construction processes.
- Notwithstanding above, general management techniques and acoustic treatments are included below which may be implemented on a case-by-case basis to reduce noise emissions to surrounding receivers.

13 COMMUNITY INTERACTION AND COMPLAINTS HANDLING

13.1 CONDITION B17 OF SSD 9344

The following section outlines the action taken by St Hilliers to address Condition B17, which has been repeated below:

'The Construction Noise and Vibration Management Sub-Plan must address, but not limited to, the following:

(a) Describe the community consultation undertaken to develop strategies in condition B17(d)'

St Hilliers has undertaken community consultation in the form of a letter box drop. Within the letter St Hillers addresses the following:

'Construction work is progressing on the Kent Road Public School upgrade. A noise management plan has been developed and implemented to mitigate impacts of construction noise and vibration on local residents and the school community.

Measures that are being taken to reduce noise and vibration include:

- *The use of atonal alarms and flashing lights on machinery;*
- *Trucks onsite have been instructed to turn off their engines when not in use;*
- *Rubber matting will be placed over material handling areas to reduce sound impacts when materials are being delivered*
- *During rock breaking work activities, designated respite periods will be implemented Monday to Friday between 7am and 99am, 12pm and 2pm and during Saturdays between 7am and 9am.'*

13.2 ESTABLISHMENT OF DIRECT COMMUNICATION WITH AFFECTED PARTIES

In order for any construction noise management programme to work effectively, continuous communication is required between all parties, which may be potentially impacted upon, the builder and the regulatory authority. This establishes a dynamic response process which allows for the adjustment of control methods and criteria for the benefit of all parties.

The objective in undertaking a consultation process is to:

- Inform and educate the groups about the project and the noise controls being implemented;
- Increase understanding of all acoustic issues related to the project and options available;
- Identify group concerns generated by the project, so that they can be addressed; and
- Ensure that concerned individuals or groups are aware of and have access to a Constructions Complaints Register which will be used to address any construction noise related problems should they arise.

Community consultation should be conducted prior to any works commencing on site, with letterbox notifications to all identified however not limited to surrounding sensitive receivers (refer section 3).

13.3 DEALING WITH COMPLAINTS

Should ongoing complaints of excessive noise or vibration criteria occur immediate measures shall be undertaken to investigate the complaint, the cause of the exceedances and identify the required changes to work practices. In the case of exceedances of the vibration limits all work potentially producing vibration shall cease until the exceedance is investigated.

The effectiveness of any changes shall be verified before continuing. Documentation and training of site staff shall occur to ensure the practices that produced the exceedances are not repeated.

If a noise complaint is received the complaint should be recorded on a Noise Complaint Form. The complaint form should list:

- The name and address of the complainant (if provided);
- The time and date the complaint was received;
- The nature of the complaint and the time and date the noise was heard;
- The name of the employee who received the complaint;
- Actions taken to investigate the complaint, and a summary of the results of the investigation;
- Required remedial action, if required;
- Validation of the remedial action; and
- Summary of feedback to the complainant.

A permanent register of complaints should be held. All complaints received should be fully investigated and reported to management. The complainant should also be notified of the results and actions arising from the investigation.

The investigation of a complaint shall involve where applicable;

- Noise measurements at the affected receiver;
- An investigation of the activities occurring at the time of the incident;
- Inspection of the activity to determine whether any undue noise is being emitted by equipment; and
- Whether work practices were being carried out either within established guidelines or outside these guidelines.

Where an item of plant is found to be emitting excessive noise, the cause is to be rectified as soon as possible. Where work practices within established guidelines are found to result in excessive noise being generated then the guidelines should be modified so as to reduce noise emissions to acceptable levels. Where guidelines are not being followed, the additional training and counselling of employees should be carried out.

Measurement or other methods shall validate the results of any corrective actions arising from a complaint where applicable.

13.4 REPORTING REQUIREMENTS

The following shall be kept on site:

1. A register of complaints received/communication with the local community shall be maintained and kept on site with information as detailed in section 14.2.

2. Where noise/vibration complaints require noise/vibration monitoring, results from monitoring shall be retained on site at all times.

3. Any noise exceedances occurring including, the actions taken and results of follow up monitoring.

13.5 CONTINGENCY PLANS

Where non-compliances or noise complaints are raised the following methodology will be implemented.

1. Determine the offending plant/equipment/process

2. Locate the plant/equipment/process further away from the affected receiver(s) if possible.

3. Implement additional acoustic treatment in the form of localised barriers, silencers etc where practical and reasonable.

4. Selecting alternative equipment/processes where practical

14 CONCLUSION

This management plan presents an assessment of noise impacts associated with the excavation and construction activities to be undertaken for the proposed development to be constructed at Kent Street Public School.

Noise levels associated with these works have been predicted. Management of noise emissions appropriate to the level of impact predicted is discussed in this report. The outcomes are as follows:

- There is likely to be periodic exceedances above the Highly Noise Affected Level (i.e. 75dB(A)) during the excavation/construction works with the use of excavator and relevant attachments (i.e. hammer, saw etc). To mitigate these exceedances, respite periods have been recommended during key times of the day (i.e. early morning and lunch time).

- General construction works will have significantly lower impact (and less than the Highly Noise affected Level of 75dB(A)) at surrounding receivers due to the quieter items of plant (i.e. hand tools etc). Notwithstanding, in all circumstance's construction noise levels from the site should be minimised as practically possible during the construction period using the methods outlined in the management plan.

With regards to vibration levels, predicted vibration levels as discussed above are difficult to predict. However, based on experience we and the proposed excavation methodology, vibration monitoring has been recommended in the excavation phase where percussive removal of rock is undertaken.

Yours faithfully,

Acoustic Logic Consultancy Pty Ltd
George Kinezos

Qualifications

Bachelor of Mechanical Engineering (Hons, Class1) (1982)

Member of the Australian Acoustical Society (M.A.A.S)
Member of Institution of Engineers, Australia
Member of Australian Building Codes Board External Noise Project

1994 - Current	Director, Acoustic Logic Consultancy
1992 to 1994	Associate Director, Renzo Tonin and Associates
1989 to 1992	Project Engineer, Renzo Tonin and Associates
1981 to 1989	Engineer, NSW Public Works Department

Outline of Experience

Between 1981 and 1989 Victor was employed with the NSW Public Works Department as a professional engineer. His work involved the investigation, design and construction supervision of mechanical services (air conditioning, ventilation heating, solar design) for new and existing public buildings throughout the state as well as acoustics.

Victor joined Renzo Tonin and Associates, a Sydney-based acoustics and vibration consultancy, in 1989 as a project engineer, and was made an associate director of the firm in 1992. In 1994 he became a director of Acoustic Logic Consultancy.

Victor's areas of expertise include:

Building acoustics and building services noise control
Environmental noise modelling and assessment
Vibration isolation and structural dynamics
Traffic noise prediction
Helicopter & aircraft noise
Industrial Noise Control

Project Experience

Victor has undertaken a vast number of noise assessments and designs for a variety of projects. Some of these are listed below.

Star Event Centre and Hotel
Trinity Grammar Masterplan
Sydney Olympics
Eastern Distributor
BPAC Building Richmond RAAF Base
710 George Street Residential Project
Canterbury, Liverpool, Campbelltown and Camden Hospitals
Mirvac Residential Developments Milsons Point and Rhodes
Shepherds Bay Residential precinct
AGL Site Mortlake redevelopment
Australand Residential Development Balmain, Waverton and Discovery Point

B.17 - Appendix F – Flood Emergency Response Plan

FLOOD EMERGENCY RESPONSE SUB-PLAN
CONSTRUCTION PHASE
KENT ROAD PUBLIC SCHOOL, 126 KENT RD MARSFIELD

Draft Construction Issue:- 14 November 2019 { Final Inspection Required }

This Flood Emergency Response Sub-Plan (FERSP) is prepared for 126 Kent Rd, Marsfield, further referred to as the Site. This FERSP relates to Site operations as Kent Road Public School, further referred to as the School, for Schools Infrastructure NSW during the **Construction Phase** for works approved under SSD9344 and should not be used for any other location and purpose other than for this School on this Site. This FERSP is prepared to satisfy SSD9344, Condition B20, dated 30 August 2019 and should be read in conjunction with the "Flood Risk Management Plan for Kent Road Public School, Cnr Kent & Herring Rds, Marsfield" (FRMP), prepared by Stefani Group Pty Ltd dated 6 November 2018. The Floodplain Risk Management Guidelines (OEH, 2007) have been referenced in preparing this Sub-Plan.

Contacts

NSW State Emergency Service	Flood 132 500
Ryde City Council	9952 8222 (8.00am-5.30pm) or 9952 8222 (afterhours)
Ambulance, Fire & Police	Emergency 000
Ausgrid	Emergency 13 13 88

Flood Free Buildings are considered to have a low flood risk and are illustrated with a green hatch in the Site Map below; Block N, Block J, Block I, Block H and Block 900s [new demountable buildings].

Medium Hazard Floodway is considered to have a medium to high flood risk and is illustrated with a blue hatch in the Site Map below. The area is identified as the 1% AEP flood extent in Ryde Council's Macquarie Park Flood Study Report [April 2010].

After Hours Status

The School is responsible to ensure that the Site is left in a **Flood Preparation Stage** after hours which requires the following tasks to be completed before vacating the Site each day.

a. All perishable items, portable outdoor furniture, appliances, gas cylinders and equipment are returned to permanent store within the identified **'flood free buildings'**.
b. All cleaning products and chemicals are to be returned to permanent store within the identified **'flood free buildings'**, to prevent contamination.
c. All garbage bins are to be returned to a caged service enclosure to prevent contamination.
d. All machinery, tools, portable sheds/toilets, stockpiles, bunding, fencing, mounds and equipment are to be removed from the identified **'medium hazard floodway'**.
e. No vehicles are to be parked in the identified **'medium hazard floodway'** and are to be removed.

Evacuation Procedures

Flood evacuation procedures provided below shall be implemented in the event of a flood event in order to provide sufficient time to reduce the risk of property damage and human injury. Some of these actions and protocols may be implemented earlier if the Bureau of Meteorology, NSW State Emergency Service or other emergency services provide earlier warnings of a pending significant rainfall event. These FERSP procedures are to be incorporated within the School Evacuation Procedures, Occupation Health and Safety practices and other current School policies and protocols.

All School employees, students, visitors and contractors, further referred to as stakeholders, are advised to follow instructions from the School Safety Officer who will follow the protocols outlined in this Flood Emergency Response SubPlan.

1. Flood Preparation Stage - Yellow

In any rainfall event the Site is in **Flood Preparation Stage** and the following actions must be undertaken.

1.1. School Safety Officer to activate protocols for a possible flood event and coordinate appropriate resources to prepare the Site for flood impact.
1.2. School Safety Officer is to ensure that **After Hours Status** outlined above have been completed.
1.3. If the 'medium hazard floodway' is occupied or in use, the School Safety Officer is to announce, contact and coordinate the possible evacuation of all stakeholders and the possible removal of all vehicles.
1.4. School Safety Officer is to monitor the rate of rainfall and the flood level within the Herring Rd low point upstream of the Site.
1.5. School Safety Officer is to activate the Yellow Stage Indicator Light when it is considered that continuing rainfall may cause possible evacuation.
1.6. School Safety Officer is to obtain and maintain contact, using relevant, robust and diversified formats, with Bureau of Meteorology, NSW State Emergency Service and other emergency services.

2. Flood Evacuation Stage - Orange

When flood levels begin to breach Herring Rd low point and begin to travel overland across the Site, the Site is in **Flood Evacuation Stage** and the following actions must be undertaken.

2.1. School Safety Officer to activate protocols for a flood event and coordinate appropriate resources to prepare the Site for flood impact.
2.2. School Safety Officer is to delegate/ensure that no pedestrian or vehicle access is permitted onto Herring Rd and both accessways are to be chained closed at the road boundary or gates locked shut.
2.3. School Safety Officer is to activate the Orange Stage Indicator Light and sound the alarm [a continuous siren followed by this announcement] ATTENTION PLEASE, THIS IS AN EVACUATION. MAKE YOUR WAY NOW TO BLOCK N OR BLOCK 900s.
2.4. School Safety Officer is to coordinate all stakeholders to be evacuated to the closest **Evacuation Point**, either Block N or Block 900s, in accordance with 'School Evacuation Procedures'.
2.5. Class teachers to check their classroom, storeroom, bring your evacuation sleeve and leave the room closing the classroom door. Class teachers to undertake a role call and report/sms to the School Safety Officer that all students are accounted for and what students are missing, if any.
2.6. Senior Administration Manager to notify Police/ Fire Brigade if missing persons occur then wait in an appropriate place for arrival.
2.7. Principal notifies School Director (9886 7000), Safety and Security (1300 363 778) and other authorities. Principal to delegate/check Block R.
2.8. Deputy Principals to check Block A, Block B, Block C, Block D, Block M, Block E and all nearby associated amenities, toilets, auxiliary rooms and storerooms, including carpark.
2.9. Assistant Principals to check Block H, Block I, Block J, old demountables and all nearby associated amenities, toilets, auxiliary rooms and storerooms, including the courts and wider grassed floodway.
2.10. Other teachers to take collective responsibility for Executive's classes.
2.11. Teachers on RFF/support staff to assist with moving K-2.
2.12. Clerical staff to bring spare sets of class lists to the assembly point.
2.14. School Safety Officer is to ensure all protocols in the **Flood Preparation Stage** have been executed and continue to be in place.
2.15. School Safety Officer is to obtain and maintain contact, using relevant, robust and diversified formats, with Bureau of Meteorology, NSW State Emergency Service and other emergency services.

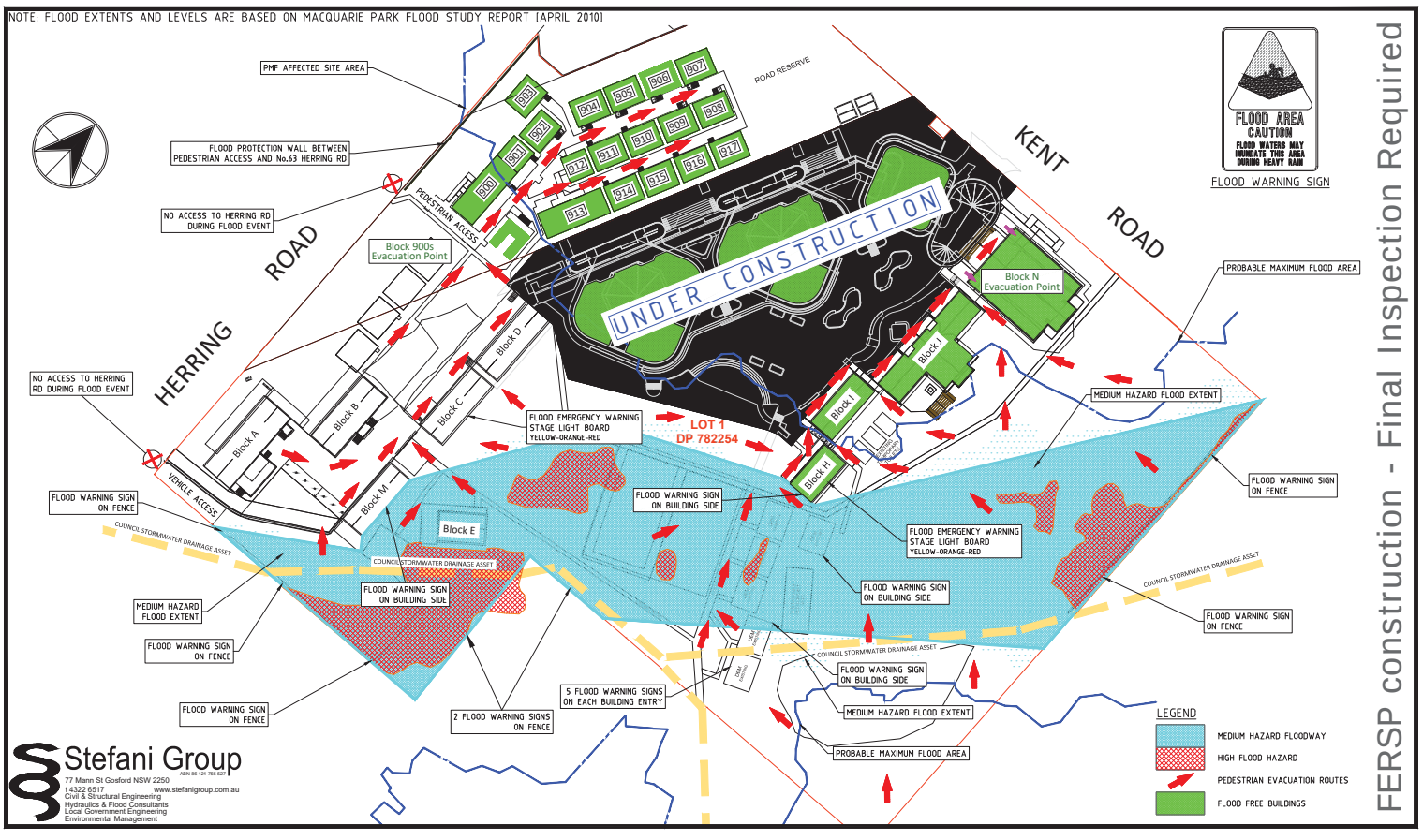
3. Flood Shutdown Stage - Red

When the overland floodway continues to operate, the forecast is for continuing rain and indications are that the overland flood risk is in continuous, the Site is in **Flood Shutdown Stage** and the following actions must be undertaken.

3.1. School Safety Officer is to activate the Red Stage Indicator Light.
3.2. School Safety Officer to delegate/ensure that electricity and gas supply to all buildings located within the PMF extent, that is, all non 'flood free buildings' is turned off.
3.3. Any remaining vehicles in the carpark are to be relocated onto the hardstand playground area when safe to do so, that is, flood depths not overtopping car door sill.
3.4. School Safety Officer to monitor Site flood levels and continue to assess flood risks.
3.5. School Safety Officer is to obtain and maintain contact, using relevant, robust and diversified formats, with Bureau of Meteorology, NSW State Emergency Service and other emergency services.
3.6. When floods are subsiding, the School Safety Officer is to coordinate necessary plant, equipment and staff to undertake a Site assessment of storages, equipment, buildings and facilities for the purpose of ensuring safe access for staff, students and visitors.

General Information

a) The Macquarie Park Flood Study Report 2010 identifies the Site as having portions of low to high flood risk hazard with 30% of the Site being affected by a 1% AEP with flood depths up to 650mm and over 60% of the Site being affected by a PMF (Probable Maximum Flood) with flood depths up to 1.55m.
b) During flood events the Site and surrounding areas may be affected by high hazard flooding, that is high flowing deep water, that increases the flood risk because safe wading depths for pedestrians are exceeded, high flood depths will make vehicles unstable and obstructions can be hidden under floodwaters.
c) Flood warnings are issued by the Bureau of Meteorology and NSW State Emergency Service during periods of heavy rainfall.
d) The **flood emergency strategy** for the Site is to reduce property damage and then evacuate the flood risk area in a safe manner.
e) The **Evacuation Point** in the event of a flood is Block N and Block 900s.
f) The **Evacuation Route** in the event of a flood for pedestrians is to follow the arrowed pathways illustrated on the Site Map below.
g) No **Site Flood Gauge** is located on the Site as the flood has a high response time in an urban street drainage network environment.
h) In a coincidence of a flood event and a medical or other life threatening emergency ring 000, as normal, but explain the flooding situation and risk.
i) This FERSP should be permanently fixed to Building exits.
j) This FERSP to be reviewed after a significant flood event. A simulation of a flood emergency will be run within 2-months of the Construction Phase and staff will be asked to evaluate and communicate any deficiencies. This will be recorded in minutes of staff meetings.



Stefani Group
77 Mann St Gosford NSW 2250
t 4322 6517
www.stefanigroup.com.au
Civil & Structural Engineering
Hydraulics & Flood Consultants
Local Government Engineering
Environmental Management

FLOOD EMERGENCY RESPONSE SUB-PLAN

KENT ROAD PUBLIC SCHOOL, 126 KENT RD MARSFIELD

Draft Construction Issue:- 14 November 2019 { Final Inspection Required }

This Flood Emergency Response Sub-Plan (FERSP) is prepared for 126 Kent Rd, Marsfield, further referred to as the Site. This FERSP relates to Site operations as Kent Road Public School, further referred to as the School, for Schools Infrastructure NSW and should not be used for any other location and purpose other than for this School on this Site. This FERSP is prepared to satisfy SSD9344, Condition B20, dated 30 August 2019 and should be read in conjunction with the "Flood Risk Management Plan for Kent Road Public School, Cnr Kent & Herring Rds, Marsfield" (FRMP), prepared by Stefani Group Pty Ltd dated 6 November 2018. The Floodplain Risk Management Guidelines (OEH, 2007) have been referenced in preparing this Sub-Plan.

Contacts

NSW State Emergency Service	Flood 132 500
Ryde City Council	9952 8222 (8.00am-5.30pm) or 9952 8222 (afterhours)
Ambulance, Fire & Police	Emergency 000
Ausgrid	Emergency 13 13 88

Flood Free Buildings are considered to have a low flood risk and are illustrated with a green hatch in the Site Map below; Block P, Block Q, Block R, Block N, Block J, Block I and Block H.

Medium Hazard Floodway is considered to have a medium to high flood risk and is illustrated with a blue hatch in the Site Map below. The area is identified as the 1% AEP flood extent in Ryde Council's Macquarie Park Flood Study Report [April 2010].

After Hours Status

The School is responsible to ensure that the Site is left in a **Flood Preparation Stage** after hours which requires the following tasks to be completed before vacating the Site each day.

a. All perishable items, portable outdoor furniture, appliances, gas cylinders and equipment are returned to permanent store within the identified '**flood free buildings**'.
b. All cleaning products and chemicals are to be returned to permanent store within the identified '**flood free buildings**', to prevent contamination.
c. All garbage bins are to be returned to a caged service enclosure to prevent contamination.
d. All machinery, tools, portable sheds/toilets, stockpiles, bunding, fencing, mounds and equipment are to be removed from the identified '**medium hazard floodway**'.
e. No vehicles are to be parked in the identified '**medium hazard floodway**' and are to be removed.

Evacuation Procedures

Flood evacuation procedures provided below shall be implemented in the event of a flood event in order to provide sufficient time to reduce the risk of property damage and human injury. Some of these actions and protocols may be implemented earlier if the Bureau of Meteorology, NSW State Emergency Service or other emergency services provide earlier warnings of a pending significant rainfall event. These FERSP procedures are to be incorporated within the School Evacuation Procedures, Occupation Health and Safety practices and other current School policies and protocols.

All School employees, students and visitors, further referred to as stakeholders, are advised to follow instructions from the School Safety Officer who will follow the protocols outlined in this Flood Emergency Response SubPlan.

1. Flood Preparation Stage - Yellow

In any rainfall event the Site is in **Flood Preparation Stage** and the following actions must be undertaken.

1.1. School Safety Officer to activate protocols for a possible flood event and coordinate appropriate resources to prepare the Site for flood impact.
1.2. School Safety Officer is to ensure that **After Hours Status** outlined above have been completed.
1.3. If the 'medium hazard floodway' is occupied or in use, the School Safety Officer is to announce, contact and coordinate the possible evacuation of all stakeholders and the possible removal of all vehicles.
1.4. School Safety Officer is to monitor the rate of rainfall and the flood level within the Herring Rd low point upstream of the Site.
1.5. School Safety Officer is to activate the Yellow Stage Indicator Light when it is considered that continuing rainfall may cause possible evacuation.
1.6. School Safety Officer is to obtain and maintain contact, using relevant, robust and diversified formats, with Bureau of Meteorology, NSW State Emergency Service and other emergency services.

2. Flood Evacuation Stage - Orange

When flood levels begin to breach Herring Rd low point and begin to travel overland across the Site, the Site is in **Flood Evacuation Stage** and the following actions must be undertaken.

2.1. School Safety Officer to activate protocols for a flood event and coordinate appropriate resources to prepare the Site for flood impact.
2.2. School Safety Officer is to delegate/ensure that no pedestrian or vehicle access is permitted onto Herring Rd and both accessways are to be chained closed at the road boundary or gates locked shut.
2.3. School Safety Officer is to activate the Orange Stage Indicator Light and sound the alarm [a continuous siren followed by this announcement] ATTENTION PLEASE, THIS IS AN EVACUATION. MAKE YOUR WAY NOW TO BLOCK P, BLOCK Q OR BLOCK N.
2.4. School Safety Officer is to coordinate all stakeholders to be evacuated to the closest **Evacuation Point**, either Block P, Block Q or Block N, in accordance with 'School Evacuation Procedures'.
2.5. Class teachers to check their classroom, storeroom, bring your evacuation sleeve and leave the room closing the classroom door. Class teachers to undertake a role call and report/sms to the School Safety Officer that all students are accounted for and what students are missing, if any.
2.6. Senior Administration Manager to notify Police/ Fire Brigade if missing persons occur then wait in an appropriate place for arrival.
2.7. Principal notifies School Director (9886 7000), Safety and Security (1300 363 778) and other authorities. Principal to delegate/check Block R.
2.8. Deputy Principals to check Block A, Block B, Block C, Block D, Block M, Block E and all nearby associated amenities, toilets, auxiliary rooms and storerooms, including carpark.
2.9. Assistant Principals to check Block H, Block I, Block J, Demountables and all nearby associated amenities, toilets, auxiliary rooms and storerooms, including the courts and wider grassed floodway.
2.10. Other teachers to take collective responsibility for Executive's classes.
2.11. Teachers on RFF/support staff to assist with moving K-2.
2.12. Clerical staff to bring spare sets of class lists to the assembly points.
2.14. School Safety Officer is to ensure all protocols in the **Flood Preparation Stage** have been executed and continue to be in place.
2.15. School Safety Officer is to obtain and maintain contact, using relevant, robust and diversified formats, with Bureau of Meteorology, NSW State Emergency Service and other emergency services.

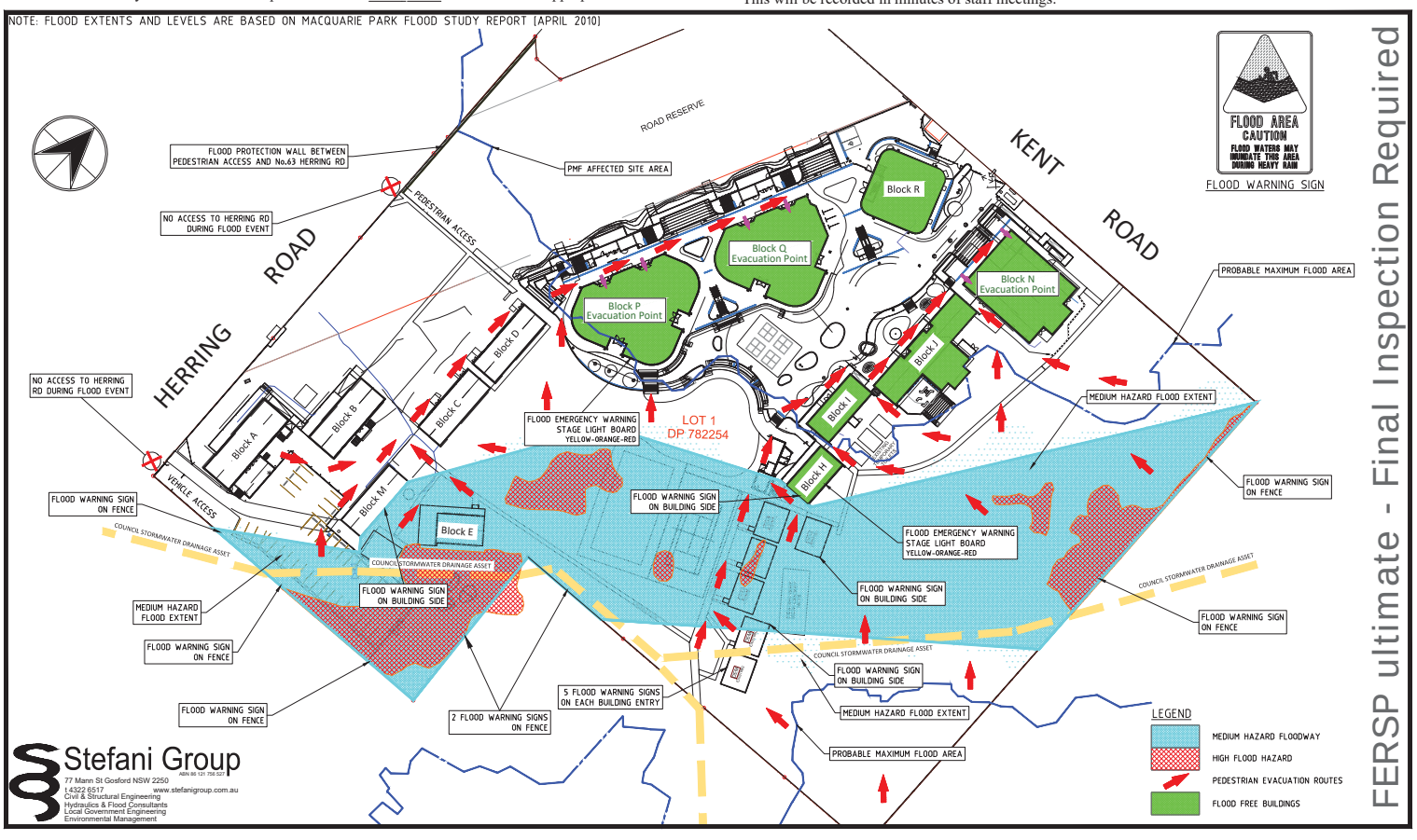
3. Flood Shutdown Stage - Red

When the overland floodway continues to operate, the forecast is for continuing rain and indications are that the overland flood risk is in continuous, the Site is in **Flood Shutdown Stage** and the following actions must be undertaken.

3.1. School Safety Officer is to activate the Red Stage Indicator Light.
3.2. School Safety Officer to delegate/ensure that electricity and gas supply to all buildings located within the PMF extent, that is, all non 'flood free buildings' is turned off.
3.3. Any remaining vehicles in the carpark are to be relocated onto the hardstand playground area when safe to do so, that is, flood depths not overtopping car door sill.
3.4. School Safety Officer to monitor Site flood levels and continue to assess flood risks.
3.5. School Safety Officer is to obtain and maintain contact, using relevant, robust and diversified formats, with Bureau of Meteorology, NSW State Emergency Service and other emergency services.
3.6. When floods are subsiding, the School Safety Officer is to coordinate necessary plant, equipment and staff to undertake a Site assessment of storages, equipment, buildings and facilities for the purpose of ensuring safe access for staff, students and visitors.

General Information

a) The Macquarie Park Flood Study Report 2010 identifies the Site as having portions of low to high flood risk hazard with 30% of the Site being affected by a 1% AEP with flood depths up to 650mm and over 60% of the Site being affected by a PMF (Probable Maximum Flood) with flood depths up to 1.55m.
b) During flood events the Site and surrounding areas may be affected by high hazard flooding, that is high flowing deep water, that increases the flood risk because safe wading depths for pedestrians are exceeded, high flood depths will make vehicles unstable and obstructions can be hidden under floodwaters.
c) Flood warnings are issued by the Bureau of Meteorology and NSW State Emergency Service during periods of heavy rainfall.
d) The **flood emergency strategy** for the Site is to reduce property damage and then evacuate the flood risk area in a safe manner.
e) The **Evacuation Point** in the event of a flood is Block P, Block Q and Block N on the Site.
f) The **Evacuation Route** in the event of a flood for pedestrians is to follow the arrowed pathways illustrated on the Site Map below.
g) No **Site Flood Gauge** is located on the Site as the flood has a high response time in an urban street drainage network environment.
h) In a coincidence of a flood event and a medical or other life threatening emergency ring 000, as normal, but explain the flooding situation and risk.
i) This FERSP should be permanently fixed to Building exits.
j) This FERSP to be reviewed every year or after a significant flood event. A simulation of a flood emergency will be run each year and staff will be asked to evaluate and communicate any deficiencies. This will be recorded in minutes of staff meetings.



Stefani Group
77 Mann St Gosford NSW 2250
t 4322 6517
www.stefanigroup.com.au
Civil & Structural Engineering
Hydraulics & Flood Consultants
Local Government Engineering
Environmental Management

FERSP ultimate - Final Inspection Required

Curriculum Vitae David Stefani CPEng NER

Qualifications:
Bachelor of Engineering (Civil) 1992
Master Environmental Engineering Management 2005

Professional Status:
Member - Engineers Australia
Chartered Professional Engineer on National Engineering Register - Civil
Member - Institute of Public Works Engineering Australia

Key Competencies:

1. I am a Civil Engineer, specialised in design and construction of road and drainage infrastructure and earthwork operations. Also competent in flood level determination, flood risk assessment and implementing flood mitigation measures for civil infrastructure and major developments.
2. I am a competent Environmental Manager, specialized in identifying land suitability and land constraints to ensure civil sustainability. These skills allow me to take a parcel of land and coordinate the implementation of services and utilities, such as water, drainage and transportation to sustain a population and land activity or restore to strategised objectives.
3. I am a competent and comfortable Leader, with proven project management skills coordinating various design and construction tasks as a Senior Manager of projects. Highly developed personal, communication skills and professional judgment.
4. I am a competent Communicator and a skilled Observer, dealing in stakeholder consultation and negotiations in complex social and environmental situations.

September 2006 to now (13-yrs) **Stefani Group Pty Ltd, Gosford**

Management, Investigation, Design and Construction
Managing Director and Principal Engineer of an engineering consultancy providing survey and engineering services to the land development and local government industries. I utilised my technical knowledge to implement civil infrastructure, such as roads and drainage, and planning controls for development incorporating land constraints and capabilities assessment, such as flood prone lands and sea level rise implications. I coordinate a team of Structural Engineers, Civil Designers and Surveyors to achieve client expectations and project objectives. This role confirms my competencies in project management, financial control and cooperation within a project team environment.

Flood Level Investigations & Determinations
⇒ Australia Ave, Umina Beach – Interpretation of flood study to encode flood affected properties.
⇒ Ropes Creek, Eastern Creek – Flood and stormwater management evidence for Land & Environment Court Compulsory Land Acquisition.
⇒ Lot 18 Barinya Ln, Springfield – Development of single dwelling within Erina Creek floodplain.
⇒ North Pearl Estate, Woy Woy - Interpretation of flood study to encode flood affected properties.
⇒ Glenning Rd, Glenning Valley – Flood level determination and scoping mitigating measures.
⇒ Heavy St, Werrington - Master planning for residential subdivision including flood determination and stormwater management for Werrington Creek.
⇒ Erina High School Oval – Determination of flood affectation for earthworks within floodplain.
⇒ Skyhawk Ave, Hamlyn Terrace – Flood level investigation of natural creek for residential subdivision.
⇒ Wyong CBD – Flood investigation and concepting stormwater infrastructure augmentation.
⇒ 381 St Andrews Rd, Varroville - Floodplain management for new large High School

Investigation & Design of Stormwater Management Plans
⇒ 3 Augustine St, Hunters Hill - Water quality, conservation, volume/flow control for single dwelling.
⇒ 12 Amiens St, Gladesville – Water conservation and disposal for single dwelling.
⇒ 273-275 Ocean View Rd, Ettalong – Stormwater management for commercial development in CBD.
⇒ Boomerang Dr, Pacific Palms – Large residential development incorporating provision of WSUD elements within dense bushland. Extensive MUSIC modeling for LEC witness conferencing.

- ⇒ Bottlebrush Cl, Green Point – 85-lot residential subdivision incorporating WSUD elements adjacent to SEPP14 wetland.
- ⇒ Kinka Rd, Terry Hills – Water conservation, flow dispersal and stormwater management.
- ⇒ Ann St, Bulahdelah – 13-lot residential subdivision incorporating WSUD elements in sensitive site.
- ⇒ Lot 222 Riverview Ave, Dangar Island – Single dwelling construction on sensitive site.
- ⇒ Central Coast Business Park, North Wyong – Commercial development incorporating flood levee, WSUD elements and detention basin with early warning system within Porters Creek floodplain.
- ⇒ Leo St Tuncurry – Commercial development incorporating WSUD elements for large carpark.

Road, Carpark & Accessway Design

- ⇒ 31-33 Annangrove Rd, Kenthurst – Design of 82-lot carpark for commercial premises with associated stormwater management treatment for water quality and conservation. Road widening and accessway upgrade for articulated vehicles and structural design walls.
- ⇒ Soma Ave, Bowral – Design of single residential dwelling driveway with associated stormwater management treatment for water quality and conservation.
- ⇒ Our Lady Star of the Sea, Terrigal Oval – Sourcing fill material and supervising the construction of a 5,000sqm oval with associated stormwater management.
- ⇒ Davistown to Kincumber Cycleway Stage 1 – Design of 540m of elevated cycleway through sensitive wetland area with associated structural design of timber structure.
- ⇒ The Rocksia Hotel Princes Hwy, Rockdale – Design and detailing of accessways into commercial development with road, pavement and traffic management alterations of adjoining intersection.
- ⇒ 24 Barralong Rd, Erina – Design of accessway and carpark for small commercial development incorporating structural and stormwater design elements.

Local Government Engineering

- ⇒ Mitchell Dr, Kariong – Augmentation of approx 405m of street drainage pipeline to remove flood affectation on adjacent properties incorporating structural design elements.
- ⇒ Tuggerah Station Industrial Estate – Review of Section 94 plans, including revising design and costs.
- ⇒ Oceano St, Copacabana – Investigation and design into creek solutions for implementation of flood improvements to tender activation, including resident consultation.
- ⇒ Kurrawa Ave Point Clare – Preparation of channel design to address side instability/subsidence incorporating structural design elements.
- ⇒ Riviera St, Terrigal – Investigation and design into pipeline solutions for implementation of flood improvements to tender activation, including resident consultation and Utility Authority approvals.
- ⇒ Henley St, Terrigal - Design and implementation of new box culvert to tender activation, including stakeholder consultation and Utility Authority approvals.
- ⇒ DCP 97 Water Sensitive Urban Design – Preparation of WSUD policy and guidelines for Wyong Shire Council as part of a policy team, including stakeholder presentations.
- ⇒ 1 Botanic Rd, Mosman – Review and development assessment of single dwelling construction adjacent to confluence of three substantial catchments.
- ⇒ Windsor Rd Flood Levee Improvements, Wamberal - Design and implementation of new flood levee in Willoughby Rd and Breakers Country Club to tender activation, incorporating structural design elements and stakeholder consultation.
- ⇒ Newell Rd, MacMasters Beach - Design and implementation of new flood levee and creek augmentation in accordance with FRMP to tender activation, including stakeholder consultation.

Environmental Assessment & Management

- ⇒ Six String Brewery, Erina – Wastewater Management Plan for commercial water reuse and discharge.
- ⇒ Mt MacKenzie Rd, Tenterfield – On-site Sewerage Management System assessment.
- ⇒ Pacific Hwy, Tintenbar to Emingsdale – Stormwater quality assessment and review of impacts from 17km of highway upgrade and peer review of designs prepared and investigations completed.
- ⇒ Myrtle Brush Wetland – Investigate and design the implementation of a wetland monitoring system to assess water quality improvements and revised design parameters.
- ⇒ Climate Change Policy – Preparation of Climate Change policy and guidelines for Wyong Shire Council as part of a policy team, including stakeholder presentations.

⇒ Wyong River & Tumbi Creek – Review and assessment of Part 5 applications for creek and river improvements works to improve bank stability, riparian regrowth, water quality and soil retention.

Project Coordination

⇒ Ettalong Beach to Sydney Fast Ships – Coordination notes for development application compliance.
⇒ Bobbin Head Rd Turramurra - Preparation of contract documentation and tendering to construct a 55-lot residential subdivision and participate as Superintendent for the contract period.
⇒ Tuggerah Lakes Stormwater Improvements Plan – Liaise with consultant on brief deliverables and assess whether strategies and tools developed can be utilized by Council with management flexibility.

Expert Witness – Supreme Court

DoP v Ray Fitzpatrick P/L (2006)sc

August 1995 till September 2006 (11-yrs) Boyden & Partners Pty Ltd, Sydney & Gosford

Management, Investigation, Design and Construction

Started as a Senior Engineer/Office Manager of a civil engineering consultancy in Sydney with a team of engineers and civil designers. In April 1999, I was appointed Central Coast Manager establishing a new office and managing, networking and growing the office to a team of 4-engineers and 2-civil designers. Undertaking projects that have generally included; Experience and knowledge include:

i. Investigation and preparation of plans for civil construction works, including structural and geometric design of roads and accessways, design of traffic control devices and associated stormwater drainage;
ii. Investigation, design and certification of stormwater management infrastructure, including on-site detention and Water Sensitive Urban Design facilities for commercial and residential properties within all NSW local government areas, incorporating structural design elements;
iii. Catchment analysis/investigation and hydraulic capacity calculations to determine design flood levels as part of Council's Capital Works Programs and development application requirements;
iv. Floodplain management modelling and interpretation, including design of mitigating measures;
v. Design of accessways, carparks and traffic improvements for developments, incorporating structural design elements;
vi. Design and specification of various sediment and erosion control facilities for construction sites;
vii. Design of trunk, major and minor stormwater systems for both developers and Council's CWP;
viii. Contract administration of subdivision construction, including tender collation and payments;
ix. Attend Courts as expert witness.
x. Project management of capital works infrastructure for local government; and
xi. Peer reviews of design and strategic documentation for stormwater management including infrastructure augmentation and water quality management.

Flood Level Investigations & Determinations

⇒ Macquarie University Research Park - Stormwater management investigation & design.
⇒ Rookwood Rd Yagoona – Sydney Water floodway treatment through multi-use development site. Stormwater investigation & development design.
⇒ Troy Gully Creek Catchment, Dubbo – Flood level analysis preamble to SMP for the catchment.

Investigation & Design of Stormwater Drainage Management Plans

⇒ Dowling Street, Nelson Bay - Subdivision development, stormwater management with flood storage.
⇒ Herbert Street, St Leonard's - Stormwater by-pass design.
⇒ Wagga Wagga Woolworths - Flooding analysis and possible stormwater management solutions such early flooding warning devices.

Design of Roads & Associated Stormwater Systems

⇒ Chandos St Extension, St Leonards – Roadway design with associated 80m bridge.
⇒ Davistown Road – Design of piped drainage system for 1.6 kilometre stretch of road.
⇒ Serpentine Rd / The Entrance Rd, Erina Heights – Roundabout.

Subdivision Design & Development – Residential

⇒ Bobbin Head Rd, Turramurra – Drainage design for Stage One of residential subdivision, including road

stormwater drainage design & detailing of detention basin and easement pipeline augmentation.

⇒ Boora Boora Rd, Kincumber – Complete drainage design for residential subdivision including utilisation of Water Sensitive Urban Design (WSUD) measures including biofiltration swales.

⇒ Southlakes Subdivision, Dubbo (144 lots) – The development of approximately 361 residential lots required the relocation of a waterway. The new waterway incorporated a low flow meandering creek, connecting series of rock ponds fringed with riparian vegetation and floodplain.

Local Government Engineering

⇒ Bungarribee Creek: Tributary 4 Drainage Improvement Works.

⇒ Camden Council's Design and Construction Specifications – Reviewing, amending and formulating Council's documentation for engineering works.

⇒ Erskine Park Employment Area, Erskine Park – DCP development for industrial land release. Investigating the stormwater issues associated with an industrial area of about 580 hectares in Erskine Park where stormwater impacts are a siginfacant issue.

Construction Supervision & Certification

⇒ Babers Rd, Cooranbong – 128 lot residential subdivision including road design and street stormwater drainage with associated detention basin / nutrient control pond and major trunk drainage works.

⇒ Pymble Golf Course, Pymble - Design and construction supervision of 500-metres of stormwater drainage lines on the second fairway.

⇒ 374 Victoria Place, Drummoyne - Repair of balcony balustrade walls for 10-storey building.

Expert Witness - Land & Environmental Court and Supreme Court

Oldfield v Kuring-gai Council (1997)lec, Alexander v Kuring-gai Council (1998)lec,
Kuring-gai Council v Iver (1999)lec, Australia Post v Warringah Council (1999)lec,
Kerr v Gosford City Council (2001)lec, Avg Pty Ltd v Baulkham Hills Shire Council (2003)lec,
Kitchen Elite v Miltonbrook Leichardt P/L (2002)sc, Pickwell v Ku-ring-gai Council (2004)sc,
Saint Columban Mission Institute v Derrin (2006)sc

January 1990 – August 1995 (6-yrs) **Ku-ring-gai Municipal Council, Sydney**

Investigation, Design and Construction

Working as a Junior Engineer and subsequently to a Professional Engineer in 1991, I formed part of a local government project team of professionals incorporating Engineers, Town Planners, Landscape Architects, Health and Environmental Officers, Building Officers, Bushfire Controllers and Ecologists working to manage land management practices within a municipality that exhibits a large urbanised population immediately adjacent to one of the largest National Parks in New South Wales. This role required professional tolerance, understanding and good communications skills to negotiate with elected members and the local community. Notable projects include;

⇒ Finchley Pl, Turramurra - Investigation of stormwater flooding problem with the design of piped trunk drainage as the solution.

⇒ Lovers Jump Creek Catchment Analysis - A hydrological analysis of 3km^2 of residential area to identify possible solutions to rectify extensive flooding problems.

⇒ Eastern Arterial Rd SR2043, Lindfield - Design of 900 metres of four lane carriageway with a design speed of 80km/h. A rigid and flexible pavement design was prepared and tendered. Tender also included rehabilitation works in the surrounding bushland.

August 1987 – December 1989 (2-yrs) **Auburn Municipal Council, Sydney**

August 1986 – January 1987 (7-mths) **Metro. Water, Sewerage and Drainage Board, Sydney**

B.18 - Appendix G – Safety Risk Assessment

The St Hillier's Project Team in consultation with Subcontractor Supervisors will take a proactive approach to risk management decisions and actions by identifying, assessing, controlling and monitoring hazards and risks on site. These measures will comply with AS/NZS 4801:2001 OHS Management Systems, St Hillier's Safety System, State Legislation, relevant Codes of Practices, Australian Standards and/or any other associated guides.

This will be communicated and acknowledged by all St Hillier's Project Team personnel and Subcontractor Supervisors and their employees. Consultative processes such as Site Inductions, Subcontractor Meetings, Safety Committees (NSW/VIC/SA/WA/QLD) or DWGs (ACT) and Toolbox Talks will be used at least once a week to review and update the schedule (as applicable) so that it is aligned to the Construction Programme.

PROJECT DETAILS

Project Name KENT ROAD PUBLIC SCHOOL **Project No** 18087

This Schedule must be signed off by the Project Manager and/or Site Manager with at least 5 years construction industry experience.

If less than 5 years' experience in the industry, the Schedule must be signed off by the Project Manager or Operations Manager.

Prepared By: Geoff O'Shea

Name	Greg Malenstein	Signature
Position	Project Manager	Date
Name	Geoff O'Shea	Signature
Position	HSE Manager	Date
Name	Scott Steward	Signature
Position	Site Manager	Date
Position	Project Administrator	Date
Name	Peter Barrett	Signature
Position	HSE Coordinator	Date
Name	Alex Tattle	Signature
Position	Foreman	Date

Site specific revision 1	Rev.2	**Date:**	15/11/2019

ST HILLIERS RISK MATRIX	LIKELIHOOD				
CONSEQUENCE	A - ALMOST CERTAIN	B - VERY LIKELY	C - POSSIBLE	D- UNLIKELY	E- RARE
1 - SEVERE	E-1	VH-3	VH-6	H-10	M-15
2 - MAJOR	VH-2	VH-5	H-9	M-14	M-19
3 - MODERATE	VH-4	H-8	M-13	M-18	L-22
4 - MINOR	H-7	M-12	M-17	L-21	VL-24
5 - VERY LOW	M-11	M-16	L-20	VL-23	VL-25

The likelihood is the chance that an event or condition will occur. The consequence is the outcome of an event or condition should it occur.

St Hilliers definition of **"Unacceptable Risk":**

- Any Hazard or activity that is defined as "High", "Very High" or "Extreme" (as numbered – 1 to 10)
- Where identified- Site Management shall control these risks through the use the control actions as detailed below:
- As a minimum- Stop work- immediately control the hazard through the use of stakeholder Consultation (eg: Worker and/or Safety Committee review); development of safe work practices (through the development and implementation of JSA or SWMS using the Hierarchy of Control measures to reduce the risk level as far as reasonably practicable), & Implementation of Permits (with attachments- plans, DWGs, inspection records)
- "Very High" & "Extreme" risk control also requires HSE Management review to ensure legislative compliance.
- Works must not commence or continue until appropriate controls are in place (eg: Legislatively compliant).

Construction Programme Potential Items	**Potential Hazards (Identify what can potentially go wrong)**	**Risk Class (1-25)**	**Hierarchy of Control Measures Identify the specific controls to be utilised to reduce the risk to as low as reasonably practicable**	**Residual Risk Class (1-25)**
Legislative compliance	Workers unaware of legislative obligations; Access to legislation; non-adherence to legislative obligations	VH6	All works will be in accordance with applicable Australian standards, legislation, and Codes of Practice inclusive of (but not limited to): Work Health & Safety Act & Regulations 2017, Relevant listed Codes of Practice such as: Construction work, Excavation, First aid in the workplace, Hazardous Manual tasks, Noise & Preventing hearing loss, Managing Electrical Risks, Managing the risks of Hazardous chemicals in the workplace, Managing the risks of Falls in the Workplace, Managing the risks of Plant in the workplace, Managing the Work Environment & facilities, Welding processes, Consultation, coordination & Cooperation, Working near Overhead Power lines, Safe Design of Structures	VL23
Construction requirements (Client, Council, regulatory authority, other Stakeholders)	Site specific requirements not adequately controlled	VH6	The Project Team (in consultation with the relevant stakeholders) shall ensure that hazards are assessed and controlled within this document. These to include (but not limited to): Adjacent structures (Damage to during construction, loadings caused by adjacent structures; Cranes; Essential services disruptions) Pedestrians, general public (access past or through the works zone) Traffic movements and/or disruptions during peak periods (eg: Concrete pours); inbound road	VL23

			surface conditions (dilapidation reports/assessments) Includes review of Risk Register- where the Risk Register does not adequately address buildability hazards, these will be controlled using St Hillier's Project Risk register (this document)	
Site specific requirements	Non-conformance Complaint Traffic/pedestrian incidents	H9	Workers are: a) Not permitted to enter into school boundaries (outside of the construction zone) without prior approval b) Not permitted to use or utilise school facilities/services (Toilets, hoses taps, etc) c) Not permitted to Speak to the Staff, parents, public or students- excuse yourself and report to St Hillier's d) Not permitted to Smoke in general view of the School or within 5m of the School boundary e) Not permitted to Swear, yell or use abusive language f) Not permitted to wear clothing with inappropriate slogans or logos g) Not permitted to wear singlet tops (sleeved shirts only permitted on site) h) Only permitted to park in designated and approved zones- do not block driveways, access routes, or footpaths i) Not to schedule deliveries during drop-off/pick-up times Monday to Friday 8:00am-9:30 am and 2:00pm -3:30pm	VL24

Emergency preparedness	Procedures inadequate, or not specific to the possible Emergency	H9	Emergency management plans should be developed to address site specific hazards. A single Emergency or Evacuation plan may not be adequate (eg: A fire on Level 3 of a tower, may not have the same Evacuation procedure as a plant incident- you may not need to Evacuate everyone). Plans MAY be the same or similar for some Emergencies, and should be noted as so (eg: A fire on Level 3 of a tower, may not have the same Evacuation procedure as a chemical spill in a greenfield site) Refer to the WI F02 Emergencies & Evacuations work instruction, and the Form F02e Site Induction Agenda form	VL24
	Workers induction requirements	VH3	Emergency Procedures Emergency or Evacuation procedures must be developed for all potential emergency situations including (but not limited to): **1) Fire (including Bushfire), Flood, and/or Serious weather events (eg: Severe thunder storms or extreme weather events)** Do not attempt to cross flooded waterways. Do not attempt to drive through areas where fires are present Contact St Hillier's immediately upon discovery of these situations. Follow the directions of the St Hillier's Management representative as they will be in consultation with School Principal on appropriate routes or evacuation measures **2) Environmental Emergencies** Notify St Hillier's immediately. Encapsulate, and/contain spills to prevent potential for substances entering waterways etc.	L21

			Ensure corrective actions (clean-up and disposal) are in accordance with local council or state requirements **3) Plant incidents** Never enter an area without assessing it is safe to do so- never put yourself at risk Ensure there are no fluids (or flammables) leaking or have the potential to cause further incident or injury Ensure safe access to plant incident areas (eg: potential roll-over situations to be avoided) **4) Excavation incidents** Never enter an area without assessing it is safe to do so- never put yourself at risk Ensure there are no fluids (or flammables) leaking or have the potential to cause further incident or injury Ensure safe access to excavations is safe (eg: Collapse of trenches, in-rush of water) Ensure trenches and excavations are made safe before entering same Extricate injured or trapped individuals as soon as practicable using safe methodologies (eg: Mechanical means where you can avoid further injuring the worker, and then/or hand digging **5) Electrocution or potential electrocution** Never move downed or damaged power lines Isolate, lock-out or disconnect any live power (by a Competent and trained electrical contractor) Never touch a person that may be in contact with live power- use a non-conductive toll (eg: Broom stick) to move the worker	

			Ensure persons with LV rescue & first aid competencies are present to assist Notify the relevant Service provider as soon as practicable **6) GENERAL PROCEDURES FOR ALL INCIDENTS** Immediately notify St Hillier's management representative of the situation Follow their directions (eg: including contacting Emergency services) Attend directly to the designated muster point Ensure all other workers are kept clear of potential hazards Ensure all other workers are directed to the muster point location **7) IF SAFE TO DO SO:** Provide life support (CPR, and/or defibrillator use) **School Facility Evacuation Procedures:** • Immediately notify the St Hillier's Management representative • Notify School Principal if you are unable to speak directly to the St Hillier's Management representative • Notify Emergency services as soon as practicable after the incident, or as directed • Advise other workers of the Evacuations • Attend to, and stay at the muster point until the "ALL CLEAR" is issued by St Hillier's	
Consultation with Subcontractors	Failure to meet consultative arrangements, inadequate or unachievable control options.	H9	Subcontractors shall be consulted in the development of the Project Risk Register to ensure that control options selected are reasonably practicable, and achievable.	VL24

			Subcontractors shall be permitted to provide additional controls that shall be incorporated into the site specific Project Risk Register Consultation should be with the workers performing the task prior to and throughout the works. SWMS shall be developed utilising the site specific Project Risk Register control options adopted	
PPE (personal Protective Equipment) inclusive of RPE (Respiratory Protective equipment) where required	Inadequate PPE	VH5	PPE shall be selected in accordance with, and in compliance with the applicable Australian standard Specific PPE to be utilized will be specified within the SWMS for the task- the use of the term "*wear appropriate PPE*" in the SWMS will not be accepted	L20
	Workers not trained in the fitting and safe use	VH5	Workers shall be trained in the safe fitting, use, and maintenance of the PPE issued by the Subcontractor	L20
	Damaged PPE	M14	Damaged PPE will be taken out of date PPE will be inspected and replaced if required (eg: Damaged or out of date- such as hard hats)	L20
	Failure to wear task specific PPE	VH5	PPE shall be fitted by a competent person where required (eg: RPE items) PPE shall be worn in accordance with the SWMS	L20
Perimeter Fencing and Gates, Signage	Entry of vehicles into site	H10	Perimeter fencing shall be installed around the work site, Warning signage shall be installed around the work site in accordance with statutory requirements Weekly inspections to ensure security is maintained, and signage is applicable to the hazards.	VL23

	Entry of unauthorised personnel into site	VH3	Perimeter fencing shall be installed around the work site, Warning signage shall be installed around the work site in accordance with statutory requirements Weekly inspections to ensure security is maintained, and signage is applicable to the hazards.	VL23
Site establishment- installation of sheds	Shared works site (coordination with Barbro)	VH6	Coordination meetings to ensure consultative and agreed arrangements implemented so as to minimise risk (eg: traffic, deliveries)	M16
	Falling objects (including sheds rolling)	VH3	Works to be in accordance with Subcontractor SWMS Sheds to be placed on flat, stable ground and/or sheds levelled and stabilized prior to use.	M17
	Manual handling injuries	VH6	Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting	L20
	Slips/trips/falls	VH6	Work zones to be clear of potential hazards for travel paths (where possible)	L20
	Unsafe use of tools, plant and/or equipment	VH6	Tools and equipment to be tested and tagged in accordance with State legislative requirements Plant to be maintained in accordance with manufacturers requirements	L20
	DBs	VH3	RCD's must be fitted to all sub-circuits, in accordance with AS3012, with a rated tripping current not exceeding 30mA. RCD's must be trip tested (calibrated) by a licensed electrician and results recorded RCD's must be located behind a lockable cover that must be manufactured from plastic or similar non-conductive material and be kept locked	M15

			during normal hours of operation. The RCD shall not be used as the isolating switch	
	Construction wiring	VH3	Construction wiring must be adequately secured, protected and marked accordingly with “Construction Wiring” sticker. Construction Wiring must not be tied, bundled or grouped with permanent wiring. Switchboards must be robust and weather proof, have a locking device, protective lids, holes provided for cord access that are bushed to prevent damage and must be securely mounted and marked where the board is being fed from. Switchboards are required to be fitted with an insulated tie bar or hanger for the safe connection of extension leads to the switchboard. Suitable clearance in front of a switchboard for safety operating is required. And switchboards must have labelling or signage that includes: warning on escutcheon panel enclosing live parts – electric shock risk symbol and danger from live parts behind panels; and Identification of isolating switches including instructions if necessary, to prevent inadvertent operation. Note: Certification by the Electrical Contractor when contractor adds, alters, disconnects, reconnects or replaces an electrical installation including temporary switchboards.	M15

	Leads, electrical tools		Leads must be approved for industrial use and be no longer than 30m and must be inspected, tested and tagged. Ensure that the leads supplying the power to the tools are inspected, tested and tagged in accordance with State based requirements. All electrical leads and tools must be on the Subcontractors register as evidence of testing and tagging; All St Hillier's electrical leads (eg: in amenities- Fridges, microwaves, computers, copies etc) must also be on the St Hillier's register (or Subcontractor supplied register for St Hillier's)	
Traffic Control (internal/external)	Public and workers exposed to plant and equipment	VH3	Where required- traffic controllers shall be used to ensure safe travel on or adjacent to the works Pedestrian travel paths shall be implemented and maintained to segregate Plant/Vehicle movements from workers/pedestrians/public Speed shall be in accordance with the site requirements. Spotters shall be used for reversing vehicles and/or reversing eliminated where possible Warning and hazard lights and beepers to be on all plant and light vehicles if used within the site	M15
	Non-compliance with applicable legislation or local road rule requirements	VH3	Traffic control plans (and/or Traffic Guidance Schemes- TGS) shall be developed by a competent person, & all works shall be in accordance with the TGS- eg: Evolution Traffic control to develop & submit Competent persons (as above) to ensure all applicable road rule requirements are addressed and controlled, and applicable permits are obtained	M15

	Lack of Consultation, or coordination	VH3	Workers shall be consulted and advised of control options within the Induction process and on-going- eg: Pre-start controls Changes or amendments shall be delivered to all workers on site as they occur	M15
	Signage & Control devices- installation and maintenance of; Incorrect or no signage	VH3	Applicable hazard signage and control devices shall be installed and maintained throughout the works in accordance with the TGS	M15
	Plant operator (vehicle) speed / General vehicle movement Lack of visibility of workers by plant operators	VH3	Spotters shall be used for reversing vehicles and/or reversing eliminated where possible Warning and hazard lights and beepers to be on all plant and light vehicles if used within the site	M15
	Materials Handling, and signage	VH3	Designated loading/unloading/laydown zones to be implemented on site Traffic routes shall be designated within the TGS	M15
Site Access	Ground level worker and plant access- personal injury, workers unaware of access/egress/emergency routes	VH3	TGS plans to be developed and incorporated into the Induction process to ensure all workers are advised of access paths for all plant and personnel. Segregation of workers and plant using approved methods is required such as Flagging and barricades (900 mm high) Exit routes to be defined and sign-posted	M15
	Establishment of 2 x Temp Crossovers into the project	VH3	Works will be conducted outside of the Drop off & Pick up Times to limit expose to the Public Pedestrian Management will be in place during the work. Council Permits and Approvals are to be in place prior to conducting the Works Public / Pedestrian access at the completion of the days works is to be maintained. Barricading of the area to be established overnight	M15

	Access to building or structure- falls from heights, personal injury, workers unaware of access/egress/emergency routes	VH3	Access/egress/emergency routes to be incorporated into the Induction process Scaffold- access to the building must include 2 points- eg: Stretcher stairs (as a minimum), and a secondary access route- this MUST be maintained to all levels throughout the works Handrails or balustrades MUST be in place for all stairwells prior to opening for use	M15
Existing / new services overhead and underground	Temporary Power	VH3	Excavation permits to be in place where required Installation of temporary services in accordance with legislative requirements, including RCD protection, sign-offs/confirmation of installation in accordance with legislative requirements (AS3012) Testing and tagging as required (monthly in NSW for electrical)	M15
	Damage to existing services, eg, electrical, gas, water, sewerage and optic fibre, compressed air, stormwater	VH3	Obtain Dial before you dig, As-cons, Employ service locators as required Excavation permits to be in place where required	M15
Health Monitoring (Asbestos, Noise, Lead Paint, Heavy Metal Dust, As required by legislation)	Workers exposed to a Hazardous Chemical or process that requires health monitoring	VH6	Hazards shall be controlled in accordance with legislative obligations inclusive of PPE (eg: Hearing protection)	L21
	Asbestos - asbestosis	VH-6	Refer to DoE Asbestos Management Plan (2015) Air monitoring to be in place at all times.	M-19
	Lead Paint – lead poisoning	VH-6	Not currently assessed as required	M-19
	Dust – heavy metal dust	VH-6	Not currently assessed as required	M-19
	Extreme Weather - heat stroke, dehydration, frost bite	H-9	Workers to be provided with applicable awareness training to ensure they adequately control the hazard- this to include (but not be limited to) task rotation, hydration procedures,	L-22

			PPE (eg: Cold weather clothing), monitoring of other workers and first aid requirements	
Environmental Monitoring of the Workplace (Noise, Dust, Lighting etc other than as above As required by legislation)	Health Monitoring requirements	N/A	Health monitoring shall be conducted in accordance with applicable legislative requirements where assessed as required.	N/A at this time
	Monitoring equipment accuracy, adequacy, and/or damage, maintenance requirements	N/A	Health monitoring equipment shall be maintained and services in accordance with the manufacturer's requirements (documented on the Form F04c Emergency Equipment register where no maintenance register is supplied by the servicing company)	N/A
	Noise	H9	Controls to be implemented and maintained throughout works STH shall ensure that workers are advised of additional PPE requirements, and are wearing additional PPE (as required) for days where aircraft movements are expected	VL23
	Lighting	N/A	No known Health monitoring requirements	N/A
	Hazardous chemicals	VH6	Competent advice on management of known Hazardous chemicals shall be sought prior to commencement of works, and adhered to during all refurbishment works (inclusive of specific PPE required within the management plan) All works to be in accordance with DoE Asbestos Management Plan (2015)	L21
~~Night / Shift Work (if applicable)~~ ~~Includes works where extended toward or beyond dust (eg: Concrete pours where finishing works required)~~	~~Entry of unauthorised personnel into site~~ ~~Entry of vehicles into site~~	~~N/A~~	~~Site to be secured against unauthorised entry at all times~~ ~~Traffic in accordance with TGS (as detailed above) including control of all access and egress points, paths to be kept clear of trip hazards, and well lit during night works~~ ~~Works to be in accordance with DA conditions~~	~~N/A~~

NOT CURRENTLY EXPECTED	~~Fatigue~~	~~N/A~~	~~Works to be in accordance with Subcontractors SWMS and fatigue management plans~~	~~N/A~~
	~~Slip, Trips and Falls~~	~~N/A~~	~~Ensure traffic and pedestrian paths are clearly defined and adequate lighting is supplied to and within the works zones~~	~~N/A~~
	~~Noise~~	~~N/A~~	~~Works to be in accordance with DA conditions~~	~~N/A~~
Hazardous Chemicals	Contact with hazardous chemicals eg: Asbestos, Lead paint, Chemicals, Contaminants in soils, Hazardous Dust or Hazardous / Industrial Waste	VH3	Hazardous chemicals determined to be present will be managed under a removal and management plan as determined by a competent person (eg: Hygienists advice) Controls to be developed if determined that other Hazard exists- eg: Stop work, segregate, and seek competent advice of management	VL23
Hazardous Chemical and Dangerous Goods Removal	Environmental contamination	H9	Hazardous chemicals and dangerous goods to be used, stored and disposed of in accordance with the SDS (Safety Data sheets), and applicable Statutory requirements	VL23
	Personal injury through contact with causing: Skin Irritations, Respiratory hazards, Cut, Abrasions, Bruises, death.	VH3	Spills to be contained as soon as practicable Decanted products/substances to be properly identified/labelled PPE to be utilized in accordance with the SDS	VL23
Work at Heights	Falls from heights Falling objects	VH3	Refer to WI F13 - Work at Heights – HIRAC of work at heights for appropriate control requirements. Trades to document controls in SWMS Emergency plans to be included Permit system in place for Harness use- including rescue plans (eg: EWP used in	M19

			conjunction to assist in a rescue of a fallen worker). Harness use currently not expected on site. HIRAC of Work at Heights for this site: Platforms in accordance with statutory requirements (400mm wide, Construction rated) Platform ladders Scaffold EWP	
Scaffold use	Falls from heights Collapse	VH3	St Hillier's is to ensure that the scaffold is not used unless the person receives written confirmation from a competent person, who has inspected the scaffold, that construction of the scaffold has been completed, and hand-over certificates issued Where incomplete- scaffold access shall be restricted by the use of signage and barricades to prevent unauthorized access Scaffolding shall be erected with adequate protection to prevent falling objects. Protection may include screens, shade cloth, mesh and/or a combination of these. St Hillier's will ensure the scaffold and its supporting structure are inspected by a competent person: • Before the scaffold is used; • before use of the scaffold is resumed after an incident occurs that may reasonably be expected to affect the stability of the scaffold; • before use of the scaffold is resumed after repairs; and • at least every 30 days Alterations to scaffold are not permitted without St Hillier's approval, and only to be conducted by	M15

			competent persons- handover certificates are required	
Tree felling/pruning/removal	Falling from heights Falling objects Plant and Equipment Dust		Works to be in accordance with Subcontractor SWMS Exclusion zones to be implemented during works Dust mitigation methods to be used if required	
Waste Removal	Statutory or St Hilliers disposal requirements		Waste to be disposed of on a regular basis (as required) to an appropriate disposal location. Waste to be recycled where possible to achieve St Hillier's targets and objectives requirements of 80% recyclable rate	
Flooring/Decking/Parquetry	Manual Handling injuries	VH6	Works to be in accordance with Subcontractor SWMS Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting Work zones to be clear of potential hazards for travel paths (where possible) Tools and equipment to be tested and tagged in accordance with State legislative requirements	M17
	Hazardous chemicals contact	VH3	Works involving hazardous chemicals to be in accordance with SDS	M17
	Falls from heights	VH3	Works to be in accordance with Subcontractor SWMS Platform ladders ONLY- no step ladder use permitted on site. Platforms used to be a minimum of 400 mm wide, and no domestic rated (must be Industrial- eg: 120 kg rated) Work at heights to be controlled using approved platforms, scaffolds, or EWPs.	M15
Painting	Falls from heights	VH3	Works to be in accordance with Subcontractor SWMS	M15

			Platform ladders ONLY- no step ladder use permitted on site. Platforms used to be a minimum of 400 mm wide, and no domestic rated (must be Industrial- eg: 120 kg rated) Work at heights to be controlled using approved platforms, scaffolds, or EWPs.	
	Manual Handling injuries	VH3	Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting Work zones to be clear of potential hazards for travel paths (where possible)	M16
	Electrocution	VH3	Tools and equipment to be tested and tagged in accordance with State legislative requirements	M17
	Hazardous chemicals- contact with	VH3	Works involving hazardous chemicals to be in accordance with SDS	M17
Waterproofing (internal/external)	Toxic fumes	VH6	Works to be in accordance with Subcontractor SWMS. Appropriate use in accordance with the SDS inclusive of PPE as specified Tools and equipment to be tested and tagged in accordance with State legislative requirements	M17
	Hazardous chemicals- spills, or inadvertent contact with	VH6	Exclusion zones to be implemented if there is a risk of inadvertent contact by others Appropriate use in accordance with the SDS inclusive of PPE as specified	M17
	Environmental contamination	VH6	Hazardous chemicals to be used, stored and disposed of in accordance with the SDS (Safety Data sheets), and applicable Statutory requirements Spills must be contained (eg: Spill kits)	L20

Demolition	Not meeting legislative requirements (eg: Comcare or Defence notifications)	VH3	Demolition works will only be conducted by a licenced Demolition contractor Works to be in accordance with Subcontractor SWMS and applicable statutory requirements Applicable notifications to be submitted in accordance with requirements	M15
	Contact with services- electrical, water, gas, fire services Contact with overhead power / services Contact with in-ground power / services	VH3	Essential Services shall be isolated by a competent person where risks of inadvertent contact exist, and/or in areas where Demolition works may damage services are noted Isolations verification to be provided by the applicable subcontractors. Permit to be in place where required (eg: Structural alterations) Exclusion zones in accordance with service owners requirements to be in place where required around services not isolated (eg: Overhead power near works)	M15
	Fall from heights	VH3	Where required- appropriate work platforms or positioning systems to be utilized in accordance with HIRAC for falls from heights	M15
	Falling objects	VH6	Exclusion zones to be implemented and maintained to prevent unauthorised access Consultation with other and workers to ensure hazard zones identified- can be included in the daily pre-start	M17
	Environmental hazards- dust, noise, waste	VH6	Controls to be in accordance with the Subcontractors SWMS- inclusive of PPE Where required- additional controls may include- watering down works zones (dust suppression), exclusion zones (inclusive of isolation if required- eg: where dust may travel between rooms,	M17

			plastic sheeting may be used to segregate works zones)	
	Manual handling injuries including cuts, abrasions	H9	Work zones to be clear of potential hazards for travel paths (where possible) Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting	M17
	Plant failure/Tool failure	VH6	Plant to be maintained in accordance with manufacturer's or legislative requirements Daily pre-start inspections conducted by competent persons Competent person only to operate plant and equipment Tools and equipment to be tested and tagged in accordance with State legislative requirements If using quick-cut- PPE inclusive of hearing protection, face shield to be used	L20
	Waste management- contamination	VH6	Waste removal shall be in accordance with the controls listed above, and applicable regulatory requirements (eg: Council, or legislative obligations)	L20
Mobile Crane	Unsafe lifting operations	VH3	Works to be in accordance with Subcontractor SWMS. Only competent persons to be involved in Craneage operations (Certified Crane operator, Dogmen or Riggers) Dogman to control all loads and lifting operations	M19
	Plant failure	VH3	Plant to be maintained in accordance with the manufacturer's requirements, and/or statutory requirements (eg: Inspections- eg: NATA on lifting gear) TGS to be always adhered to - exclusion zones to be in place for lifting operations	M19

	Contact with overhead power / services Contact with in-ground power / services (eg: outrigger placements over services trenches)	VH3	Consultation with the Subcontractor inclusive of development of the lift plan to ensure exclusion zones on essential services is maintained Lift plan to include a review of in-ground services locations to ensure Plant placement (including outrigger placement) eliminates risk Overhead services exclusion zones to be implemented and maintained	M19
	Traffic control / Signage	VH3	TGS to be in place and communicated to all involved Where required- Traffic controllers to be employed (eg: working over, or adjacent to roadways)	M19
	Falling objects	VH3	Dogman to control all loads and lifting operations Lift plan to include review and acceptance (by Operator) of SWL or loads within capacity of the crane Exclusion zones to be in place under lifts and under direct supervision of the Dogman, and/or spotters Lifting gear maintained in accordance with the manufacturer's requirements, and/or statutory requirements (eg: Inspections- eg: NATA on chains) Register and inspection verification to be supplied prior to use on site	M19
	Collapse/Roll-over Project specific requirements-	VH6	Ground conditions are to be determined adequate for crane establishment (Geotech DCPs) Lift plans in place ensuring safe lifting (SWL) is adhered to and verified by the operator Crane to be set up where there is a 360-degree exclusion such that the boom should not enter into school areas if there was an event- where	M15

			this is not practicable- the school facilities should be empty (fully excluded from entry within the boom radius) and/or works conducted out of hours in consultation with relevant stakeholders	
Reinforcement Fixer	Manual handling injuries	VH6	Works to be in accordance with Subcontractor SWMS Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting	L21
	Materials Handling Slips/trips, falls	H9	Work zones to be clear of potential hazards for travel paths (where possible)	L21
	UV Radiation	H9	If using quick-cut- PPE inclusive of hearing protection, face shield to be used	L21
	Cuts, bruises- personal injury (including quick-cut used	H9	Tools and equipment to be tested and tagged in accordance with State legislative requirements If using quick-cut- PPE inclusive of hearing protection, face shield to be used	L21
Concrete works- including placement by Concrete pumps	Hose failure / blow-out Plant & equipment failure	VH3	Plant to be maintained in accordance with manufacturers requirements, including evidence of maintenance requirements supplied Works to be in accordance with Subcontractor SWMS Competent persons to operate Concrete pumps, and ensure plant in good working order prior to use (eg: Daily pre-start inspections)	L21
	Manual Handling	VH6	Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting Work zones to be clear of potential hazards for travel paths (where possible)	L21
	Crushed by Plant (eg: backing concrete trucks onto pumps)	VH3	TGS to be in place for concrete delivery	M15

			Exclusion zones to be implemented and controlled by Spotters (backing trucks onto pumps. Never stand directly behind pumps- ensure truck operators can see you	
	Environmental control for concrete or slurry	H9	Spill management (eg: kits, drain protection where required) to be in place Environmental controls to be in place (inclusive of concrete waste pit)	VL23
	Hazardous chemicals contact or spillage	H9	Hazardous Chemicals contact to be kept to a minimum- eg: wash and clean concrete from body parts as soon as reasonably practicable after contact Proper hygiene techniques to be employed (eg: washing, and cleaning prior to eating or drinking). Workers to ensure proper PPE is used to prevent contact (where possible).	VL23
	Traffic and pedestrian management	VH3	TGS to be adhered to (perimeter access) Internal- TGS controls to be adhered to. Designated travel paths for trucks to be included in Pre-start Trades to control truck access into/out of site Exclusion zones to be in place around moving plant Refer to LACK group TGS	M15
Concrete/Brick/Block cutting	Impacting services	VH3	Works to be in accordance with Subcontractor SWMS Permits to be in place including identification of potential services prior to commencement- Isolations may be required	M15

	Electrocution	VH3	Tools to be maintained in accordance with manufacturers requirements- includes leads etc where relevant	M15
	Cuts / Abrasions	VH6	Appropriate PPE is required- as a minimum- Gloves, long sleeves, safety boots, dust mask (or equivalent- wet cutting may not require same- eg: Road saw use), 2 levels of eye protection (face shield and safety glasses). Additional PPE as per SWMS requirements	L21
	Dust Noise Eye injury- dust/debris from saw cutting processes Blade damage- personal injury from broken blades impacting the body	H9	Appropriate PPE is required- as a minimum- Gloves, long sleeves, safety boots, dust mask (or equivalent- wet cutting may not require same- eg: Road saw use), 2 levels of eye protection (face shield and safety glasses). Additional PPE as per SWMS requirements **WET CUTTING METHODS ARE PREFERRED- AND/OR DUST MITIGATION METHODS MUST BE EMPLOYED**	VL23
	Plant/equipment misuse or failure Blade damage- personal injury from broken blades impacting the body	VH3	Persons to be competent to use equipment through training Plant/equipment used for cutting to be maintained in accordance with manufacturers requirements Only used approved blades (as per manufacturers recommendations) When saw cutting by hand- ensure cutting is in a downward motion only- never cut upward toward the body	M15
	Slurry- Environmental- entry to stormwater systems	H9	Spill management (eg: kits, drain protection where required) to be in place Environmental controls to be in place (inclusive of concrete waste/washout pit)	VL23
	Hot works	H9	Permits requirements to be in place	VL23

	Materials Handling Slips/trips/falls	VH6	Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting Work zones to be clear of potential hazards for travel paths (where possible)- including ensuring slurry/overburden/cut block/concrete/brick sections are removed from immediate work area as soon as practicable Environmental controls must be in place to prevent inadvertent entry into stormwater systems	L21
Automatic Doors/Roller Shutters/Operable walls	Manual Handing Injuries	VH6	Works to be in accordance with Subcontractor SWMS by Competent and trained persons Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting Work zones to be clear of potential hazards for travel paths (where possible)	L21
	Hazardous chemicals contact		Works involving hazardous chemicals to be in accordance with SDS- eg: Welding equipment- inclusive of safe storage on site (designated cages and segregation as required by SDS) Workers to ensure proper PPE is used to prevent contact (where possible). Proper hygiene techniques to be employed (eg: washing, and cleaning prior to eating or drinking). Hazardous Chemicals contact to be kept to a minimum- eg: wash and clean concrete from body parts as soon as reasonably practicable after contact	
	Electrocution	VH3	Essential services to be isolated (if possible), and/or exclusion zones to be implemented (in accordance with statutory requirements)	M16

			Lifting devices only to be used if fit for purpose, and within SWL of device (eg: No lifting elements on handrails of EWPs) Tools and equipment to be tested and tagged in accordance with State legislative requirements	
	Falling objects Falls from heights	VH3	Plant to be maintained in accordance with manufacturers requirements Craneage (if required) to be in accordance with requirements listed above- or approved lifting devices maintained in accordance with manufacturers requirements Platform ladders ONLY- no step ladder use permitted on site. Platforms used to be a minimum of 400 mm wide, and no domestic rated (must be Industrial- eg: 120 kg rated) Work at heights to be controlled using approved platforms, scaffolds, or EWPs. EWPs only to be operated by competent persons	M16
Piling/Auguring/Drilling	Excavation hazards- collapse of trenches/holes, falling into trenches/holes, potential inrush of water into trenches/holes (rain or groundwater)	VH3	Excavation permit system in place to mitigate potential contact with services. Excavation works to be in accordance with Excavation permit requirements- see Excavation section below for detailed control requirements Works to be in accordance with Subcontractor SWMS	M15
	Damage to existing services, eg, gas, water, sewerage and optic fibre.	VH3	Excavation permit system in place to mitigate potential contact with services. Excavation works to be in accordance with Excavation permit requirements- see Excavation section below for detailed control requirements	M15
	Slip trips and falls	VH6	Work zones to be clear of potential hazards for travel paths (where possible)	L21

	Materials Handling	VH6	Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting	L21
	Plant failure- damage	VH6	Verification of Competency to operate equipment required Plant to be maintained in accordance with manufacturers requirements	L21
	Cuts / Abrasions	H9	Works to be in accordance with Subcontractor SWMS Exclusion zones to be in place around works Guards and/or protective devices in good working order and undamaged Pre-commencement (daily pre-start) inspections to be done	L21
	Geotechnical advice requirements	H9	Reference: 27th Feb 2017 SQS Report Stability assessment Daily inspection by SQS representatives Exclusion zone of 0.5m around pier holes at all times Spotters must be present during works to monitor ground conditions- any ground distress such a tension cracking or subsidence- stop work- notify SQS for re-inspection No works during rain or wet weather No water is to be permitted into pier holes- utilise sand bags and/or earth bunding to prevent same 20m exclusion for vibratory plant operations during works Cast piers within 24 hours where practicable- seek SQS advice where not possible Hard controls such a barricades and hole covers required	M16

Door and door hardware installations	Manual handling injuries	H9	Works to be in accordance with Subcontractor SWMS Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting Work zones to be clear of potential hazards for travel paths (where possible) Works involving hazardous chemicals to be in accordance with SDS	L20
	Electrocution	VH3	Tools and equipment to be tested and tagged in accordance with State legislative requirements	M16
	Falls from heights	H9	Platform ladders ONLY- no step ladder use permitted on site. Platforms used to be a minimum of 400 mm wide, and no domestic rated (must be Industrial- eg: 120 kg rated)	L20
Roof sheeting	Falls from heights Falling objects	VH3	Works to be in accordance with Subcontractor SWMS by Competent and trained persons eg: Possessing “Safe work at Heights” accreditation or equivalent (as per State requirements) Work at Heights will not be permitted unless approved fall prevention systems have been installed and signed off by a Competent person in accordance with the manufacturers and/or suppliers, and legislative requirements (eg: Scaffold, safety mesh installation, edge protection systems) Roof access to be in accordance with statutory requirements eg: Extension ladder secured top and bottom, extending 1m above the working surface, edge protection in place. Rescue procedure to be in place No person shall work on an incomplete rooftop unless approved fall prevention systems are installed and signed off by the Competent person	M16

			Harness use is not permitted unless the Harness Permit conditions have been met and approved by the State HSE Manager Platform ladders ONLY- no step ladder use permitted on site. Platforms used to be a minimum of 400 mm wide, and no domestic rated (must be Industrial- eg: 120 kg rated)- eg: Working from below Work at heights to be controlled using approved platforms, scaffolds, or EWPs. EWPs only to be operated by competent persons Workers	
	Manual handing injuries	VH3	Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting Work zones to be clear of potential hazards for travel paths (where possible) Craneage to be in accordance with SWMS Lifting devices only to be used if fit for purpose, and within SWL of device (eg: No lifting elements on handrails of EWPs)	M16
	Hazardous chemicals (eg: Silicones)	VH6	Works involving hazardous chemicals to be in accordance with SDS- eg: Welding equipment- inclusive of safe storage on site (designated cages and segregation as required by SDS) Workers to ensure proper PPE is used to prevent contact (where possible). Proper hygiene techniques to be employed (eg: washing, and cleaning prior to eating or drinking). Hazardous Chemicals contact to be kept to a minimum- eg: wash and clean concrete from body parts as soon as reasonably practicable after contact	L20
	Electrocution	VH3	Tools and equipment to be tested and tagged in accordance with State legislative requirements	M16

Plumbing Installation	Excavation hazards- collapse of trenches, falling into trenches, potential inrush of water into trenches (rain or groundwater) Electrocution Existing Hydraulics Damage to existing services, eg, gas, water, sewerage and optic fibre.	VH3	Works to be in accordance with Subcontractor SWMS Excavation works to be in accordance with Excavation permit requirements- see Excavation section below for detailed control requirements Essential services to be isolated (if possible), and/or exclusion zones to be implemented (in accordance with statutory requirements)	M15
	Plant & equipment	VH3	Plant to be maintained in accordance with manufacturers requirements Tools and equipment to be tested and tagged in accordance with State legislative requirements	M15
	Hazardous Materials	VH6	Works involving hazardous chemicals to be in accordance with SDS- eg: Oxy and acetylene inclusive of safe storage on site (designated cages and segregation as required by SDS) Workers to ensure proper PPE is used to prevent contact (where possible). Proper hygiene techniques to be employed (eg: washing, and cleaning prior to eating or drinking). Hazardous Chemicals contact to be kept to a minimum- eg: wash and clean body parts as soon as reasonably practicable after contact in accordance with SDS	M17
	Hot works	VH6	Welding/brazing works to be under Hot works permit conditions including fire-fighting equipment, competent persons, storage of oxy and acetylene. Oxy and acetylene inclusive of safe storage on site (designated cages and segregation as required by SDS)	M17
	Work at heights- falls from heights or	VH3	Platform ladders ONLY- no step ladder use permitted on site. Platforms used to be a	M15

	Dropped items resulting in personal injury		minimum of 400 mm wide, and no domestic rated (must be Industrial- eg: 120 kg rated) Work at heights to be controlled using approved platforms, scaffolds, or EWPs.	
	EWPs- use- crush hazards, impact with persons, plant or equipment (if required)	VH3	Work zones to be clear of potential hazards for travel paths (where possible)	M15
	Manual Handling Slip trips and falls Cuts / Abrasions Materials Handling	VH6	Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting Work zones to be clear of potential hazards for travel paths (where possible) Workers to ensure proper PPE is used to prevent contact (where possible). Proper hygiene techniques to be employed (eg: washing, and cleaning prior to eating or drinking). Hazardous Chemicals contact to be kept to a minimum- eg: wash and clean body parts as soon as reasonably practicable after contact in accordance with SDS	L20
Mechanical Services Installation	Electrocution	VH3	Tools and equipment to be tested and tagged in accordance with State legislative requirements Essential services to be isolated (if possible), and/or exclusion zones to be implemented (in accordance with statutory requirements)	M16
	Fall from Height Dropped items	VH3	EWPs to be utilized. Work at heights to be controlled using approved platforms, scaffolds, or EWPs. Exclusion zones to be implemented for Plant operations- consideration of moving works, and dropped items fall areas (move exclusion zone around with you)	M16

			Platform ladders ONLY- no step ladder use permitted on site. Platforms used to be a minimum of 400 mm wide, and no domestic rated (must be Industrial- eg: 120 kg rated)	
	Plant & equipment	VH3	Plant to be maintained in accordance with manufacturers requirements Work zones to be clear of potential hazards for travel paths (where possible EWPs to be maintained in accordance with suppliers/manufacturers requirements Daily pre-start inspections required- lock-out if damaged Only competent persons to operate EWPs Tools and equipment to be tested and tagged in accordance with State legislative requirements	L20
	Hazardous Materials or substances	VH6	Works involving hazardous chemicals to be in accordance with SDS	L20
	Hot works- burns, fire		Welding/brazing works to be under Hot works permit conditions including fire-fighting equipment, competent persons, storage of oxy and acetylene	
	Hazardous manual tasks	VH6	Works to be in accordance with Subcontractor SWMS Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting	L20
	EWP use- overhead works- underslung services install- personal injury, dropped items	VH3	EWPs to be utilized. Work at heights to be controlled using approved platforms, scaffolds, or EWPs. Exclusion zones to be implemented for Plant operations- consideration of moving works, and dropped items fall areas (move exclusion zone around with you)	M16

			EWPs to be maintained in accordance with suppliers/manufacturers requirements Daily pre-start inspections required- lock-out if damaged Only competent persons to operate EWPs	
	Contact or damage to existing services	VH3	Essential services to be isolated (if possible), and/or exclusion zones to be implemented (in accordance with statutory requirements)	M16
Window Installation and Glazing	Falling objects	VH6	Works to be in accordance with Subcontractor SWMS Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting Work zones to be clear of potential hazards for travel paths (where possible) Exclusion zones to be implemented if working over or adjacent to other workers where potential for glass cuts/injury present If using plant or equipment (eg: Lifting devices for glass panels)- all to be maintained in accordance with the manufacturers requirements Tools and equipment to be tested and tagged in accordance with State legislative requirements	L20
	Materials Handling- Hazardous Materials	VH6	Works involving hazardous chemicals to be in accordance with SDS Appropriate PPE as per SWMS to be worn (eg: Leather gloves)	L20
	Work at heights	VH3	Platform ladders ONLY- no step ladder use permitted on site. Platforms used to be a minimum of 400 mm wide, and no domestic rated (must be Industrial- eg: 120 kg rated)	M16

			Work at heights to be controlled using approved platforms, scaffolds, or EWPs.	
	Broken glass- personal injury, Slip trips and falls	H9	Appropriate PPE as per SWMS to be worn (eg: Leather gloves) Broken glass to be immediately contained and removed	L20
	Manual Handling	H9	Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting Work zones to be clear of potential hazards for travel paths (where possible) Exclusion zones to be implemented if working over or adjacent to other workers where potential for glass cuts/injury present	L20
Fire Services installation	Fall from Height	VH3	Works to be in accordance with Subcontractor SWMS Platform ladders ONLY- no step ladder use permitted on site. Platforms used to be a minimum of 400 mm wide, and no domestic rated (must be Industrial- eg: 120 kg rated) Work at heights to be controlled using approved platforms, scaffolds, or EWPs.	M15
	Manual Handling	VH6	Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting Work zones to be clear of potential hazards for travel paths (where possible)	L21

	Hazardous chemicals	VH6	Welding/brazing works to be under Hot works permit conditions including fire-fighting equipment, competent persons, storage of oxy and acetylene Works involving hazardous chemicals to be in accordance with SDS Appropriate PPE to be worn where required as defined within the SWMS and SDS	L21
	Damage to existing services, eg, gas, water, sewerage and optic fibre.	VH6	Plant to be maintained in accordance with manufacturers requirements Essential services to be isolated (if possible), and/or exclusion zones to be implemented (in accordance with statutory requirements) Tools and equipment to be tested and tagged in accordance with State legislative requirements	L21
	Plant & equipment use- EWPs falls from heights and Falling objects	VH3	EWPs to be utilized. Work at heights to be controlled using approved platforms, scaffolds, or EWPs. Exclusion zones to be implemented for Plant operations- consideration of moving works, and dropped items fall areas (move exclusion zone around with you) EWPs to be maintained in accordance with suppliers/manufacturers requirements Daily pre-start inspections required- lock-out if damaged Only competent persons to operate EWPs	M16
Brick &/or Blockwork	Manual Handling	VH6	Works to be in accordance with Subcontractor SWMS Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting	L21

			Work zones to be clear of potential hazards for travel paths (where possible)	
	Environmental damage	VH6	Work to ECC and EMP requirements Washout, clean up and excess materials (eg: mortar) shall be cleaned and cleared in accordance with the SDS. Works are not complete for the day unless the trade work area has been cleaned	L21
	Falling from heights	VH3	Mostly ground level works- where work above ground is required- Scaffold, trestle works or EWP (HIRAC) to be used in accordance with manufacturers' requirements Platform ladders ONLY- no step ladder use permitted on site. Platforms used to be a minimum of 400 mm wide, and no domestic rated (must be Industrial- eg: 120 kg rated) Scaffold or Bricklayers trestles to be fully boarded out with handrail and kickboards Trestles and bricklayers scaffolding will be set up, used and maintained in accordance with the manufacturers or suppliers' requirements this to included SWL on bays	M15
	Hazardous Material	VH6	Works involving hazardous chemicals to be in accordance with SDS Workers to ensure proper PPE is used to prevent contact (where possible). Proper hygiene techniques to be employed (eg: washing, and cleaning prior to eating or drinking). Hazardous Chemicals contact to be kept to a minimum- eg: wash and clean concrete from body parts as soon as reasonably practicable after contact	L21
	Brick saws, Mixers and electrical equipment- electrocution, personal injury	VH3	Plant and equipment (eg: Mixers or brick saws) to be maintained in accordance with manufacturers requirements	L21

			Only competent persons to use brick saws PPE must include hearing protection and face shield Guards must be in good working order and undamaged SWMS controls for brick saws required Tools and equipment to be tested and tagged in accordance with State legislative requirements	
	Core-filling concrete walls- Plant use	VH3	Concrete placement plant (Booms or line pumps) to be maintained in accordance with manufacturers requirements SWMS required for mobile plant use Works to be in accordance with SWMS Maintenance and inspection records required for pumps (boom or line) in accordance with statutory requirements (eg: registerable plant)	M16
Dry Wall and Ceiling Installation	Falling from heights Falling objects Electrical Plant & equipment Manual Handling Hazardous Material Slip trips and falls Materials Handling Dust	VH6	Works to be in accordance with Subcontractor SWMS Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting Work zones to be clear of potential hazards for travel paths (where possible) Plant to be maintained in accordance with manufacturers requirements (eg: Forklift or lifting devices) Works involving hazardous chemicals to be in accordance with SDS Tools and equipment to be tested and tagged in accordance with State legislative requirements Platform ladders ONLY- no step ladder use permitted on site. Platforms used to be a	L20

			minimum of 400 mm wide, and no domestic rated (must be Industrial- eg: 120 kg rated) Work at heights to be controlled using approved platforms, scaffolds, or EWPs.	
Formwork/Scaffolds/Guard rails/false works/temporary weight bearing systems	Materials Handling	VH3	Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting	M15
	Cuts/Abrasions	VH6	Works to be in accordance with Subcontractor SWMS Exclusion zones to be in place around works Guards and/or protective devices in good working order and undamaged Pre-commencement (daily pre-start) inspections to be done De-nail timbers progressively	M15
	Collapse Injuries Failure to meet legislative requirements Falls from heights	VH3	All formwork and scaffold erections require a drawing to be submitted detailing set out / install plan. The plan shall be designed and signed as approved for use by a suitably competent person (engineer). Details should show or described specific sections that are braces & techniques, ties to other structures as supports, heights and lengths, ground bearing capacity required for the system, outriggers, fall protections for workers that are part of the system. A design plant registration certificate shall be sought for the systems used. Ground bearing pressures shall be known if on materials other than designed concrete slabs. Competent persons must sign off on handover certificates post erection and prior to any other person or items bearing weight upon the installed system.	M15

			Any edge protection on live edges or scaffold systems requires hand rail or fall protection to be a minimum of 900mm above any finish floor level. Formwork decks require two access points for emergency situations. A stretcher stair is to be installed and a single access stair to be installed as a minimum- unless complying with other references from the formwork code of practice 2016. QLD. (Best Practice controls- for use Nationally by STH regardless of state jurisdiction) Non competent persons are not to alter any system. If using EWP's as access for any system erection a worker/operator is to utilise the item of plant as per manufacturers recommendations. - no over loading or incorrectly loading the EWP/Boom lift with materials or personnel. Monthly inspections to installs to ensure compliance, must be conducted by a competent person. A SWMS to be provided by the subcontractor includes an emergency plan/response to the high risk works.	
	Emergency Procedures	VH3	Collapse of Structure (Formwork or Scaffold) Immediately notify St Hilliers and emergency services Leave the incident location by the nearest safe exit point, muster other workers to exit as well Never enter into an area of collapse plant (scaffold, formwork components)	M15

			Never move collapsed items unless safe to do so (potential further collapse risk)- wait for Emergency services directions on same Follow “General Procedures” protocols- attend and remain at the emergency muster point	
	Falls from heights	VH3	Compliant edge protection to be in place at all times	M15
Structural Steel installation and associated Metalwork	Fall from Height	VH3	Platform ladders ONLY- no step ladder use permitted on site. Platforms used to be a minimum of 400 mm wide, and no domestic rated (must be Industrial- eg: 120 kg rated) Work at heights to be controlled using approved platforms, scaffolds, or EWPs. EWPs only to be operated by competent persons	M16
	Plant & equipment- failure, damage	VH6	Work zones to be clear of potential hazards for travel paths, exclusion zones for lift zones. Dogman to control exclusions. Plant to be maintained in accordance with manufacturers requirements Craneage to be in accordance with requirements listed above	L20
	Lifts Dropped items	VH6	Lifting devices only to be used if fit for purpose, and within SWL of device (eg: No lifting elements on handrails of EWPs) Crane company to provide SWMS (HRCW-Mobile Plant) for lifting operations	L20

			Chains, slings, shackles, lifting gear to be tested and tagged in accordance with requirements (eg: NATA tested- register verification supplied) Dogman to assess, and control all lifts (includes selection of lifting gear) Crane operator to provide lift plan (verification of SWL) Crane maintenance and servicing in accordance with Plant Checklist requirements (induction) Lifts zones to be excluded to prevent persons under loads- ensure overhead obstructions are assessed and adequate exclusions in place where required	
	Hot works- Fire, burns	H9	Permit system in place Welding/brazing works to be under Hot works permit conditions including areas clear of potential sources of ignition/fire, fire-fighting equipment adjacent to works zones, competent persons, exclusion zones, welding curtains/shields, appropriate PPE, fire watch implementation. Appropriate PPE in accordance with SWMS to be in place at all times (eg: Welders mask and leathers, gloves, Face shield- refer SWMS controls)	L20
	Hazardous chemicals- contact with	H9	Workers to ensure proper PPE is used to prevent contact (where possible). Proper hygiene techniques to be employed (eg: washing, and cleaning prior to eating or drinking). Hazardous Chemicals contact to be kept to a minimum- eg: wash and clean concrete from body parts as soon as reasonably practicable after contact Works involving hazardous chemicals to be in accordance with SDS- eg: Welding equipment- inclusive of safe storage on site (designated cages and segregation as required by SDS)	L20

	Sharps- cuts, personal injury	H9	PPE in accordance with SWMS-eg: Gloves for handling as required	L20
	Electrocution	VH6	Essential services to be isolated (if possible), and/or exclusion zones to be implemented (in accordance with statutory requirements) Tools and equipment to be tested and tagged in accordance with State legislative requirements	M16
	Manual Handling	VH6	Works to be in accordance with Subcontractor SWMS Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting	L20
Excavation	Excavation over 1.5m deep (HRCW)	VH3	Works to be in accordance with Subcontractor SWMS Excavation permits required for all excavation works Geotechnical assessments and controls to be developed and incorporated into works procedure (Refer to Permits). Bench, batters or shoring as detailed Where not affected by tree roots (within the drip line), excavations will be battered/benched at 1H:1V for all further works unless otherwise dictated by competent persons advice (eg: Geotechnical Engineer advice where groundwater influence is present) Inspection frequency to be identified by the Geotech Re-inspection if conditions change, water influence on excavation, slumping of materials	M16

			Shoring- Supplier Engineering verification for loadings (eg: Plant operating adjacent to excavations) required Shoring to be installed as per supplier instructions Engineering documentation on shoring devices to be supplied Approved access to be in place at all times (every 9m). Shoring boxes to have access to/from (supplied). Additional access as required (eg: Ladder-secured) No-one in the excavation outside of the Shoring box- all works restricted to inside shoring Plant operating locations (loadings) to be in accordance with Geotechnical advice	
	Collapse of excavation	VH3	Emergency procedure: Contact St Hilliers Do not enter excavation unless safe Mechanical digging where safe and no risk to trapped worker, or hand digging to extricate worker as soon as practicable	M16
	Falls into excavations	VH6	Barricades and signage to be in place at all times to prevent inadvertent entry by other Workers to stay back from excavation edges	L20
	Damage to existing services, eg, gas, water, sewerage and optic fibre.	VH3	Excavation permit system in place- no Excavation work to commence without an approved Excavation permit current for the works being performed, location and dates indicated Trades to obtain up-to-date “As-Con” drawings or equivalent services marked up drawings issued by the relevant Service trades (eg: Plumber. Electrician)	L20

			Ensure the relevant trade Supervisor has attended to the location and identified the service locations (eg: Spray paint the ground showing installed service locations) Ensure all Supervisors that have services sign off on the relevant cross section, drawings, or As-cons confirming locations and depths of services Vacuum dig to identify services if excavating within 3 m of services shown on drawings, OR/AND, if there is suspected services (eg: Dial before you digs show possible services, but no depths etc..) Ensure the Trade supervisor has reviewed and approved the relevant SWMS for the works (there may be more than 1- eg: Trenching works, and use of an excavator) If unsure, or unable to locate services than a Service locator must be employed to identify exact locations of services	
	Materials placement (spoil locations) influencing excavations	VH6	Ground stability to be reviewed to reduce risk of collapse, in-rush of potential water sources, plant operating over/adjacent to excavation works. Stockpiles or excavated materials to be located so as not to influence ground stability or potentially fall into trenches/excavations where workers are located (eg: depth of the excavation 1H:1W back from excavation)	M16
	Personal injury- persons entering trenches	VH6	Persons require to enter the trench must ensure they have contact with Plant operators, and or Spotters to ensure clearance from Plant operating zones Excavations to be 1H:1W bench or batter over 1.2m deep	L20

	Plant operations- plant failure,	VH6	Plant to be maintained in accordance with manufacturer's requirements Daily pre-start inspections conducted to identify damage, maintenance requirements- Lock out if damaged or maintenance items required	L20
	Plant operations- rollover, falling into excavations,	VH6	Plant to be located as per Geotechnical requirements Workers not to be in excavations while plant operating (unless outside operating zone/reach)	L20
	Environmental- Dust, mud,	H9	Dust mitigation methods (water truck) to be employed as required Shaker or equivalent at entry points	VL23
	Plant hitting other plant or persons	VH3	Exclusion zones to be in place Spotters to control plant movements where operators vision may be impaired (eg: reversing)	M17
	Manual handling injuries	VH6	Workers to be trained in safe handling procedures (refer to SWMS controls) Use mechanical means where possible	M17
	Plant operating as a lifting device- dropped objects (Pipes into trenches)	VH3	Burst protective devices to be in place Only use certified lifting points Operate within SWL of plant Dogman to sling, control loads Keep hands clear when placing objects (fitting pipes together) Do not stand under loads	L20
~~Lightning protection installation~~	Falls from heights Falling objects	VH3	Works to be in accordance with Subcontractor SWMS EWPs to be used Work zones to be clear of potential hazards for travel paths (where possible) for EWPs	M16

For this site- Include bird netting installation- Controls to be the same			Exclusion zones to be implemented and maintained under works Operators of EWPs to be competent to operate Plant/equipment to be maintained in accordance with manufacturers requirements- inclusive of test and tag requirements for electrical tools	
	|Manual handling		Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting	
Electrical Installation Refer to WI F16 Electrical work for further information	Electrocution	VH3	Works to be in accordance with Subcontractor SWMS by Competent and trained persons NO "LIVE" Works to be permitted. Essential services to be isolated (if possible), and/or exclusion zones to be implemented (in accordance with statutory requirements)	M16
	Fall from Height	VH3	EWPs to be used for high level works EWPs only to be operated by competent persons Platform ladders ONLY- no step ladder use permitted on site. Platforms used to be a minimum of 400 mm wide, and no domestic rated (must be Industrial- eg: 120 kg rated) Work at heights to be controlled using approved platforms, scaffolds, or EWPs.	M16
	Slip, trip and falls Manual Handling	H9	Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting	L20
	Excavation: Personal injury	VH3	Excavation works to be in accordance with Excavation permit requirements (and Excavation section control requirements detailed in this document) Work zones to be clear of potential hazards for travel paths	M16

			Plant to be maintained in accordance with manufacturers requirements Excavations to be protected (barricades) to prevent inadvertent entry Bench/batter or shore in accordance with Geotechnical requirements	
	Damage to existing services, eg, gas, water, sewerage and optic fibre.		Excavation works to be in accordance with Excavation permit requirements (and Excavation section control requirements detailed above)	
	Materials Handling	H9	Lifting devices only to be used if fit for purpose, and within SWL of device (eg: No lifting elements on handrails of EWPs) Workers to be trained in safe manual handling techniques Craneage to be in accordance with requirements listed above (if required- eg: rooftop works)	L20
	Hazardous Chemicals use	H9	Works involving hazardous chemicals to be in accordance with SDS- eg: Welding equipment- inclusive of safe storage on site (designated cages and segregation as required by SDS) Workers to ensure proper PPE is used to prevent contact (where possible). Proper hygiene techniques to be employed (eg: washing, and cleaning prior to eating or drinking). Hazardous Chemicals contact to be kept to a minimum- eg: wash and clean concrete from body parts as soon as reasonably practicable after contact	L20
	Electrocution	VH3	Isolation & lockout procedures to be employed if working on switch-boards. Tools and equipment to be tested and tagged in accordance with State legislative requirements	M15
LV/HV Installations- re-energisations works	Electrocution	VH3	Works to be in accordance with Subcontractor SWMS	M15

			Ensure consultation with relevant Stakeholders. Documented verification of isolations and re-energisations procedures to be supplied Only competent persons to perform these works Verification prior to commencing works include (where relevant): appropriately terminating all conductors carrying out appropriate testing on any new, altered or repaired electrical equipment, for example tests for insulation resistance, earth continuity, polarity, correct connection and function testing removing safeguards, including temporary bonds and short-circuiting devices notifying all workers working on the electrical equipment and other affected workers at the workplace that electricity is to be restored taking precautions as appropriate to ensure that other electrical equipment is not inadvertently energised following procedures for removing any locks (or other control mechanisms), tags, notices and safety signs • carrying out a visual inspection to ensure that all tools, surplus material and waste has been removed from the workplace.	
External Wall Cladding and louvre install	Falls from heights	VH3	Works to be in accordance with Subcontractor SWMS by Competent and trained persons Work at heights to be controlled using approved platforms, scaffolds, or EWPs. EWPs only to be operated by competent persons If required: Platform ladders ONLY- no step ladder use permitted on site. Platforms used to	M16

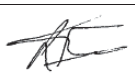
			be a minimum of 400 mm wide, and no domestic rated (must be Industrial- eg: 120 kg rated)	
	Manual handling injury	H9	Workers to be trained in proper manual handling techniques inclusive of use of mechanical means where possible, and/or trained team lifting	L20
	Lifting (craneage if required) Dropped items	VH3	Plant to be maintained in accordance with manufacturers requirements Lifting devices only to be used if fit for purpose, and within SWL of device (eg: No lifting elements on handrails of EWPs) Crane company to provide SWMS (HRCW-Mobile Plant) for lifting operations Chains, slings, shackles, lifting gear to be tested and tagged in accordance with requirements (eg: NATA tested- register verification supplied) Dogman to assess, and control all lifts (includes selection of lifting gear) Crane operator to provide lift plan (verification of SWL) Crane maintenance and servicing in accordance with Plant Checklist requirements (induction) Lifts zones to be excluded to prevent persons under loads- ensure overhead obstructions are assessed and adequate exclusions in place where required	M16
	Plant operations -Impact with persons Dropped items	VH3	Exclusion zones to be implemented and maintained- barricades and signage Work zones to be clear of potential hazards for travel paths (where possible)	M16
	Hazardous chemicals use	VH6	Works involving hazardous chemicals to be in accordance with SDS- eg: Welding equipment- inclusive of safe storage on site (designated cages and segregation as required by SDS)	L20

			Workers to ensure proper PPE is used to prevent contact (where possible). Proper hygiene techniques to be employed (eg: washing, and cleaning prior to eating or drinking). Hazardous Chemicals contact to be kept to a minimum- eg: wash and clean concrete from body parts as soon as reasonably practicable after contact	
	Electrical equipment	VH6	Tools and equipment to be tested and tagged in accordance with State legislative requirements	M16
Traffic Management	Impact with persons (personal injury) Impact with Plant	VH3	Traffic controllers will be in place (full time) during construction works Traffic control devices to be installed and maintained by the traffic control company Traffic plans to detail specific delineation to prevent as far as practicable any chance of inadvertent contact	M16
	Workers/visitors not aware of requirements	VH3	Workers and visitors will be briefed on specific control requirements Trades (deliveries) will be alerted to site specific requirements- eg: delivery schedules, prohibition on deliveries during drop off/pick up times	M16
Early works consultation (Barbro)	Failure to coordinate	VH6	Stakeholder meetings to be undertaken to determine scope of works and potential “zones of influence”. These meetings to be conducted prior to works being undertaken	M16
	Incomplete works information	VH6	Coordination meetings to include services terminations/connections; demolition works; contaminations find (if any); materials/waste disposal (eg: potential contaminated waste); and any relevant works.	M16
Tower Crane	Installation- collapse	VH1	Installation as per design.	M16

			Installed by competent persons to be involved in Craneage operations (Certified Crane operator, Dogmen or Riggers) Installation verification by competent persons (sign-off)	
	Contact with overhead power / services	VH3	Overhead services exclusion zones to be implemented and maintained (limits on crane where possible) All lifting operations to be under direct control of qualified and competent Dogman	M16
	Crane or crane equipment failure	VH6	Dogmen to conduct “regular” inspection of chains/slings/lifting equipment- tag out of use if damaged. Maintenance to be conducted in accordance with manufacturer’s requirements	M19
	Falling objects	VH3	Loads not to be lifted over “LIVE” school areas at any time- conduct these works when not within school operating hours Dogman to ‘control’ all loads and lifting operations Lifting to include review and acceptance (by Operator) of SWL or loads within capacity of the crane Exclusion zones to be in place under lifts and under direct supervision of the Dogman Lifting gear maintained in accordance with the manufacturer’s requirements, and/or statutory requirements (eg: Inspections- eg: NATA accredited company inspection on chains) Register and inspection verification to be supplied prior to use on site Dogmen to conduct “regular” inspection of chains/slings/lifting equipment- tag out of use if damaged.	M19

			Maintenance to be conducted in accordance with manufacturer's requirements	
	Slip/trips/falls	VH6	Travel paths about site to be clear of obstructions, penetrations covered, exclusion zones implemented (where required) Edge protection (or equivalent- eg- mobile scaffold) for trucks being unloaded to prevent falls by Dogmen slinging loads	M19
	Personal injury-	VH6	Communications, trunked radio use- positive communications at all times under direction of Dogmen to prevent impact with persons on site Keep lift zones clear when landing loads near workers- ensure communication and coordination	M19

RISK ASSESSMENT

PROJECT:	Kent Rd Public School Upgrade – Civil Works		
TASK/ACTIVITY:	Civil Works – Bulk Excavation		
BUILDING/AREA:	Project Wide		
COMPLETED BY:	Jake Fitch	SIGN: 	DATE: 04/11/2019

DESCRIPTION OF WORKS

List a step-by-step method as to how the works will be completed

1. Inspect Work Area and determine suitability of plant required for works.
2. Setup exclusions for access and egress for personnel entering and exiting the work zone.
3. Each machine to have a spotter at all times.
4. Excavate to required levels as per project documentation.

HAZARD IDENTIFICATION

Tick the categories in which the identified hazard relates to so that appropriate controls can be implemented from the SWMS

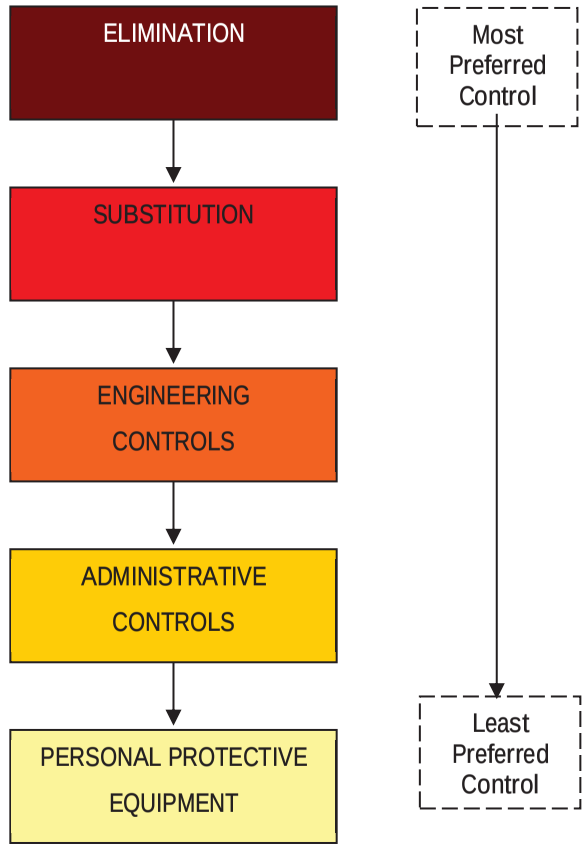
Work Health & Safety			
☑	Access, egress & safe working areas	☐	Lighting
☐	Communication (failure/incorrect)	☐	Machine/equipment guarding
☐	Confined/enclosed spaces	☐	Manual Handling (physical lifting/twisting)
☐	Coring/chasing	☐	Materials handling (crane/forklift/other)
☐	Dangerous Goods	☑	Moving plant/traffic
☐	Electricity (power tools/other)	☐	Noise
☐	Excavation	☐	Plant & equipment operation
☐	Explosive power tools	☑	Public & other trades (pedestrians/other)
☐	Falling objects/debris	☐	Services (underground/overhead)
☐	Fatigue (hours of work)	☐	Structural alterations
☐	Fire/explosion	☐	Uncontrolled movement
☐	Formwork	☐	Weather (sunlight/rain/wind)
☐	Fumes/gases	☐	Young workers/unskilled labour
☐	Hazardous substances/unexpected finds	☐	Stability & integrity of the structure
☐	Height & falls	☐	The effect of the demolition sequence on stability
☐	Hot works (cutting/welding/grinding)	☐	The effect of wind speed on partially demolished structures
☐	Hot/cold working environment	☐	The proximity of adjacent & adjoining buildings
☐	Lighting	☐	Provision of safe access & safe working areas
☐	Other:	☐	Other:
Environment			
☐	Air quality (dust/emissions)	☐	Heritage & archaeology
☐	Concrete/paint waste	☑	Noise & vibration
☐	Contaminated materials (soil/water)	☐	Spills & response

☐	Dangerous goods/hazardous substances	☐	Traffic & parking
☐	Dewatering/pump out/discharge	☐	Waste disposal
☐	Excavation/spoil	☐	Other:
☐	Habitats (flora/fauna)	☐	Other:

RISK ASSESSMENT MATRIX & HIERARCHY OF CONTROLS

Level	Class	Description of Consequence/Impact	Consequence	Likelihood/Probability		
				L *Likely*	M *Moderate*	U *Unlikely*
H *High level of harm*	1	Potential death, permanent disability or major structural failure/damage. Off-site environmental discharge/release not contained and significant long-term environmental harm.	H (1)	1	1	2
M *Medium level of harm*	2	Potential temporary disability or minor structural failure/damage. On-site environmental discharge/release contained, minor remediation required, short-term environmental harm.	M (2)	1	2	3
L *Low level of harm*	3	Incident that has the potential to cause persons to require first aid. On-site environmental discharge/release immediately contained, minor level clean up with no short-term environmental harm.	L (3)	2	3	3

Level	Likelihood
Likely	Could happen frequently (i.e. daily or weekly)
Moderate	Could happen occasionally (e.g. once a month)
Unlikely	May occur only in exceptional circumstances (e.g. once a year or never)



How to complete the following form

1) List the step-by-step sequence of tasks required to carry out the activity from start to finish
2) List the potential hazards associated with each step, and the related OHS risks
3) Use the risk assessment matrix table (above) to rate the identified risks
4) List what controls you will implement to reduce the risks to the lowest possible level
5) Revise the risk rating once the controls have been implemented (must be 3 before work can start)
6) List the positions responsible for ensuring that the controls are implemented & maintained
7) A separate SWMS is required for each work activity

RISK ASSESSMENT & CONTROLS

Hazard	Risk	Initial Risk Rating	Controls	Revised Risk Rating
Moving plant/traffic	Crush of persons by plant causing death or serious injury	1	- Where practicable, persons and plant should be separated to eliminate the risk of persons being crushed by plant - Separate persons and plant through delineated & signposted exclusion zones (e.g. fencing, barricades, flagging, bunting, danger tape, signage) - Persons working in the vicinity of plant must maintain a safe working distance outside of the swing zone of plant or a minimum distance of at least 6m from the plant - Persons working in the vicinity of plant must stay in clear sight of the plant operator at all times - Plant operators must constantly monitor and survey their surrounding when operating, particularly when reversing or swinging - When approaching or passing plant, persons must signal operator, attract attention, and ensure plant has stopped before passing - **Plant must be fitted with audible reversing alarms** and flashing lights to ensure they are easily identifiable when in operation - All persons must wear high visibility clothing to ensure they are easily recognizable by plant operators - Operator competency (qualification, training, experience) to be verified prior to operating plant	3
Noise & Vibration	Community and Stakeholder disruption due to loud and high frequency reversing alarms from moving plant (Beeper)	1	- **Plant must be fitted with audible reversing alarms** and flashing lights to ensure they are easily identifiable when in operation - Audible reversing alarms are to be ATONAL BROADBAND (WHITE NOISE) rather than high frequency TONAL (BEEPER) alarm where applicable to reduce the noise impact on both the communities and wider stakeholders (school etc)	3

COMMENTS

Name	Signature	Date

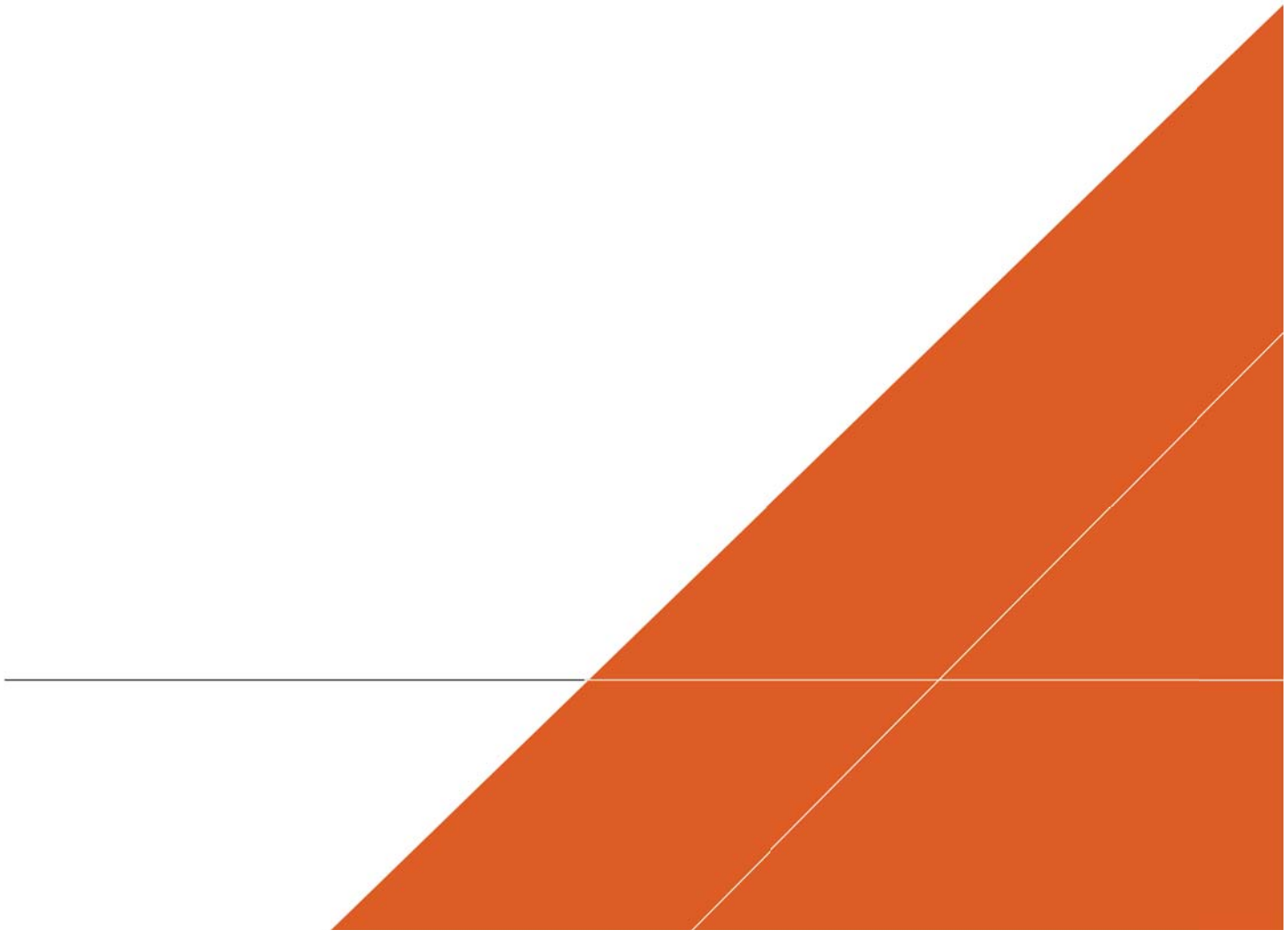
B.19 - Appendix H – Asbestos Remediation Action Plan

ARCADIS Design & Consultancy for natural and built assets

REMEDIATION ACTION PLAN

126 Kent Road, Marsfield NSW 2122

21 NOVEMBER 2019



CONTACT

LOEK MUNNICHS
Principal Environmental Consultant (CEnvP – CL)

T (02) 8907 3912
M +61 423 633 440
E loek.munnichs@arcadis.com

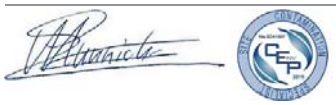
Arcadis
Level 16, 580 George Street
Sydney NSW 2000

Copyright © 2015 Arcadis. All rights reserved. arcadis.com

ST HILLIERS (NSW) PTY LTD 10035770

Remediation Action Plan

126 Kent Road, Marsfield NSW 2122

Author	Pragya Mathema, Environmental Engineer	
Checker/ Approver	Loek Munnichs, Principal Environmental Scientist (CEnvP - CL)	

Report No	10035770_RAP
Date	21/11/2019
Revision Text	V1

This report has been prepared for St Hilliers (NSW) Pty Ltd in accordance with the terms and conditions of appointment for the proposal dated 12 November 2019. Arcadis Australia Pacific Pty Limited (ABN 76 104 485 289) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

REVISIONS

Revision	Date	Description	Prepared by	Approved by
V0	19/11/2019	Draft for auditor review	PM	LM
V1	21/11/2019	Finalised for client – still waiting on the auditor's comments	PM	LM

CONTENTS

ABBREVIATIONS 1

EXECUTIVE SUMMARY 4

1 INTRODUCTION 5

2 SITE DESCRIPTION AND ENVIRONMENTAL SETTING 7

3 CONTAMINATION STATUS 10

4 CONCEPTUAL SITE MODEL 13

5 DATA QUALITY OBJECTIVES 15

6 REMEDIATION OPTIONS 19

7 VALIDATION PLAN 24

8 CONTINGENCY PLAN 26

9 SITE MANAGEMENT PLAN 28

10 HEALTH AND SAFETY 34

11 REGULATORY APPROVALS / LICENCING 40

12 CONCLUSIONS 42

LIMITATIONS 43

REFERENCES 44

APPENDICES

APPENDIX A FIGURES

APPENDIX B CONCEPTUAL CONTAINMENT CELL

ABBREVIATIONS

Acronym	Definition
ACM	Asbestos-Containing Materials
AF/FA	Asbestos fines / fibrous asbestos
AHD	Australian Height Datum
ANZECC & ARMCANZ	Australian and New Zealand Environment and Conservation Council & Agriculture and Resource Management Council of Australia and New Zealand
ANGZ	Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2018)
ADWG	Australian Drinking Water Guidelines
AEI	Areas of Environmental Interest
ASLP	Australian Standard Leaching Procedure
ASS	Acid sulfate soils
B(a)P	Benzo(a)pyrene
BGS	Below Ground Surface
BH	Borehole
BTEXN	Benzene, toluene, ethylbenzene, xylene and naphthalene
CEMP	Construction environmental management plan
CLM Act	Contaminated Land Management Act (1997)
CoPC	Contaminants of potential concern
CoC	Chain of Custody
CSM	Conceptual Site Model
DDSCA	Due Diligence Soil Contamination Assessment
DO	Dissolved Oxygen
DOE	Department of Education
DQI	Data Quality Indicator(s)
DQO	Data Quality Objective(s)
DSI	Detailed site investigation
EC	Electrical Conductivity
Eh	Redox Potential
EIL	Ecologically based Investigation Level
EMP	Environmental Management Plan
ENM	Excavated Natural Material
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
ESA	Environmental Site Assessment
FB	Field Blank (quality control sample)
FSSCA	Further Supplementary Soil Contamination Assessment
GIL	Groundwater Investigation Level(s)
GPR	Ground Penetrating Radar
GSW	General Solid Waste

Acronym	Definition
GSW (Special Waste)	Asbestos Waste
Ha	Hectares
HASP	Health and safety plan
HIL	Health-based Investigation Level
HSE	Health Safety and Environment
HRA	Health Risk Assessment
HSL	Health-based Screening Level
HW	Hazardous Waste
IL	Investigation Level(s)
LCS	Laboratory Control Sample
LNAPL	Light Non-Aqueous Phase Liquid(s)
LOR	Limit of Reporting
LEP	Local Environmental Plan
LGA	Local Government Area
m	Metre
mbgs	Meters below ground surface
mg/kg	milligrams per kilogram
mg/L	milligrams per litre
MS	Matrix Spike or Mass Spectrometry or Mass Spectra
mS	milliSiemen
MSD	Matrix Spike Duplicate
MTBE	Methyl-tertiary Butyl Ether
mV	milli-Volts
MW	Monitoring Well
NATA	National Association of Testing Authorities
NEPM/NEPC	National Environment Protection Measure (2013) / National Environment Protection Council
NEMP	National Environmental Plan
NSW	New South Wales
NSW EPA	New South Wales Environment Protection Authority
°C	Degrees Celsius
OCP & OPP	Organochlorine & organophosphorus pesticides
OEH	Office of Environment and Heritage
PAH	Polycyclic aromatic hydrocarbon
PFAS	Per- and poly- fluorinated alkyl substances
POEO Act	Protection of the Environment (Operations) Act 1997
PSI	Preliminary Site Investigation
PCBs	Polycyclic Chlorinated Biphenyl
PSH	Phase-Separated Hydrocarbons (same as LNAPL)
PID	Photo-Ionisation Detector

Acronym	Definition
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA	Quality Assurance
QC	Quality Control
RAP	Remediation action plan
RB	Rinsate Blank (quality control sample)
RPD	Relative Percentage Difference
RSW	Restricted Solid Waste
SAS	Site Audit Statement
SB	Soil Bore
SDAC	Sediment Assessment Criteria
SEPP	State Environmental Planning Policy
SSD	State Significant Development
SWAC	Surface Water Assessment Criteria
SWL	Standing Water Level
SWMs	Safe Work Method Statement
TB	Trip Blank
TBA	To be advised
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TOC	Total Organic Carbon
TPH/TRH	Total petroleum hydrocarbons / total recoverable hydrocarbons
UCL	Upper Confidence Level
USCS	Unified Soil Classification System
UPSS	Underground Petroleum Storage Systems
ug/L	Micrograms per litre
UST	Underground Service Tank
VOCs/SVOCs	Volatile organic compounds / semi-volatile organic compounds
WHS	Work Health and Safety

EXECUTIVE SUMMARY

Arcadis Australia Pacific Pty Ltd (Arcadis) was commissioned by St Hilliers (NSW) Pty Ltd (St Hilliers) to complete a Remediation Action Plan (RAP) at 126 Kent Road, Marsfield NSW 2122 (herein known as 'the site').

The site is occupied by Kent Road Public School, and Schools Infrastructure currently have a State Significant Development Approval (SSDA) to undertake development and upgrade works to the school, subject to a number of planning conditions (Conditions B8, B9, B10, D26, D27 and D28 relate specifically to Site Contamination).

The site has no history of industrial or commercial use and accordingly does not have a high potential risk for extensive contamination and was used primarily for residential or educational purposes since 1960s. Prior to the 1960s, the site was used for agricultural purposes (potentially market gardens and orchards)..

Following the observation and positive identification of asbestos containing material (ACM) at three (3) locations (TP-1, TP-3 and TP-4) on site, the sampling density required to effectively characterise the site needed to be reconsidered from the original fifteen (15) investigations that were undertaken. In these circumstances, the NSW guidelines default to the Western Australia (WA) 2009 guidelines which require double the density of sampling locations to characterise a site with potential asbestos containing material (PACM) impacts. Therefore, a minimum of twenty-eight (28) test locations are required to characterise and better assess the ACM impacts at this site.

Following the Further Supplementary Soil Contamination Assessment (Arcadis, November 2019), together with the preliminary SSDA conditions issued to Schools Infrastructure, the Department of Education (DoE) decided that a RAP would have to be prepared in order to ensure that the site could be made suitable for desired land use.

Objectives of the RAP

The objective of this RAP is to provide a plan of activities, procedures and objectives to ensure the effective and controlled remediation of the site for the proposed re-development. It describes the procedures and standards to be followed throughout the project to facilitate successful remediation / management of the site and ensure protection of human health and the environment.

Conclusions and Recommendations

With consideration to NSW EPA's endorsed guideline hierarchies for soil remediation options and clean-up objectives (NSW EPA 2017), and the site-specific contaminants, proposed development and environmental setting, the preferred remediation strategy will be a combination of 'excavation and removal of all impacted fill soil' and the use of a 'Containment Cell'. This is due to there being various classifications of waste present across the site which have varying costs associated with their disposal.

Soils that have been identified as being impacted by ACM will remain on-site but will be placed within a containment cell. Other fill soils identified on-site which have been given an indicative waste classification of GSW CT1 (Recyclable) and VENM, will need to be disposed of off-site, subject to re-classification to Special Waste – GSW if any ACM is observed in the material during excavation works.

As a part of the validation of the remediation works, a visual inspection should be conducted by a suitably qualified environmental consultant. An asbestos clearance certificate must also be issued by a licensed asbestos hygienist.

A long-term Environmental Management Plan (EMP) will need to be prepared for the management of impacted soils that will remain on site. The EMP must detail the monitoring and maintenance requirements for the containment cell cap. It must also outline the administrative controls on any future activity with the capacity to potentially expose the ACM impacted soil beneath.

1 INTRODUCTION

Arcadis Australia Pacific Pty Ltd (Arcadis) was commissioned by St Hilliers (NSW) Pty Ltd (St Hilliers) to complete a Remediation Action Plan (RAP) at 126 Kent Road, Marsfield NSW 2122 (herein known as 'the site') to address the conditions within the State Significant Development Approval (SSDA). The location of the subject site is shown on **Figure 1, Appendix A**.

1.1 Background

The Site is currently occupied by Kent Road Public School, and Schools Infrastructure have a SSDA to undertake development and upgrade works to the school, subject to a number of planning conditions (Conditions B8, B9, B10, D26, D27 and D28 relate specifically to Site Contamination). Arcadis understands that building alterations and additions are currently proposed to be made on the area of interest on the site as part of ongoing school upgrades.

The site has no history of industrial or commercial use and accordingly does not have a high potential risk for extensive contamination and was used primarily for residential or educational purposes since 1960s. Prior to the 1960s, the site was used for agricultural purposes (potentially market gardens and orchards).

Based on the development site area of 0.55 ha, a total of thirteen (13) soil sample locations was recommended to meet the required minimum number of sampling points to characterise a site in accordance with the relevant industry NSW EPA (1995) Sampling Design Guidelines. Eight (8) sampling locations were completed by hand auger during the Due Diligence Assessment to a depth of 0.3 m, and Arcadis completed a further seven (7) sampling locations to the natural soil profile providing a total of fifteen (15) investigation locations.

Following the observation and positive identification of asbestos containing material (ACM) at three (3) locations (TP-1, TP-3 and TP-4) on site, the sampling density required to effectively characterise the site needed to be reconsidered. In these circumstances, the NSW guidelines default to the Western Australia (WA) 2009 guidelines which require double the density of sampling locations to characterise a site with potential asbestos containing material (PACM) impacts. Therefore, a minimum of twenty-eight (28) test locations are required to characterise and better assess the ACM impacts at this site.

During the further works kick-off meeting on 19 September 2019, the EPA Accredited Auditor advised that the eight hand augured locations to 0.3 m below ground level are not acceptable for use as part of the dataset, but test pitting undertaken on 10 August 2019 as part of the Supplementary Assessment could be used as part of the data set. In order to meet the required density, an additional twenty-one (21) test pits were required across the site.

Following the Further Supplementary Soil Contamination Assessment (Arcadis, November 2019), together with the preliminary SSDA conditions issued to Schools Infrastructure, the Department of Education (DoE) decided that a RAP would have to be prepared in order to ensure that the site could be made suitable for desired land use.

1.2 Objective

The objective of this RAP is to provide a plan of activities, procedures and objectives to ensure the effective and controlled remediation of the site for the proposed re-development. It describes the procedures and standards to be followed throughout the project to facilitate successful remediation / management of the site and ensure protection of human health and the environment.

The RAP will address condition B8(b) of the Development Application.

1.3 Scope of Works

The following scope has been included as part of the RAP Stage:

- A Remediation Options Appraisal (ROA) was undertaken to provide the rationale, and justification for selection of the preferred remediation strategy. The options assessment began with a

screening of applicable remediation technologies based on site-specific data such as contaminated volumes and previous remediation experience with similar site conditions. Effectiveness, ease of implementation, protection of human health and the environment and cost were the primary criteria;

- A conceptual design drawing for the containment cell; and
- A detailed Sampling Analysis and Quality Plan for final validation works required after fill removal which also stipulates Quality Assurance and Quality Control measurements.

2 SITE DESCRIPTION AND ENVIRONMENTAL SETTING

2.1 Site Identification

The Site is located at 126 Kent Road, Marsfield NSW 2122, and the Site Location Investigation Area is shown in **Figure 1, Appendix A**. The site details are summarised in Table 2-1 below.

Table 2-1 Site Identification

Site Characteristic	Detail
Street Address	126 Kent Road, Marsfield NSW 2122
Lot and DP Number	Lot 1 – DP1250772 (consolidated from Lot 1 – DP 8612, Lot 1, 2, 3, 4 & 5 – DP 12030, Lot 1 – DP 34283 and Lot 1 – DP 782254)
Local Government Area	Ryde City Council
Land Zoning	'SP2 – Infrastructure – Educational Establishment', 'SP2 – Infrastructure – Classified Road' and 'R2 – Low Density Residential' under the Ryde Local Environmental Plan 2014
Current Site Use	Ryde Public School (Primary School)
Site Coordinates (UTM)	Latitude: -33.787917 Longitude: 151.109105
Site Area	Approximately 5,500 m^2. Arcadis notes that during the volume calculations it appeared that the site area is approximately 7,600 m^2**. Figure 4, Appendix A** shows the boundary of the Site to which the RAP (and Audit) applies

2.2 Site Use

2.2.1 Current Site Use

At the time Arcadis completed the Further Supplementary Soil Contamination Assessment (FSSCA) (Arcadis, 11 November 2019), the site was under redevelopment with a number of the school buildings having been demolished and the debris removed from site. These buildings were still present during the PSI and Due Diligence work.

The basketball court had been partially removed and all demountable classrooms had been relocated to the RMS paper road/easement north of the site. The surface appeared clean graded over the majority of the new building footprints and some new service trenches had been excavated. Most of the raised garden beds were still present in the north of the site along with the old trees. Vegetation did not appear to be stressed or dying.

2.2.2 Proposed Site Use

Arcadis understands that building alterations and additions are currently proposed to be made on the site, as part of ongoing school upgrades. The proposed development / upgrade works footprint is approximately 5,500 m^2 (0.55 ha).

Refer to **Figure 3, Appendix A** for an outline of the proposed building footprints.

2.3 Surrounding Land Use

The land uses currently surrounding the site are as follows:

- North: There are residential properties on the northern side of the site, which are bordered by Kent Road and Herring Road;
- South: Residential properties;
- East: Residential properties and Kent Road; and
- West: Residential properties and Herring Road.

2.4 Site History

The following site history was summarised in the Preliminary Site Investigation (PSI) prepared by Arcadis (Arcadis, 27 April 2018).

- The site and immediate surrounding area have no history of industrial or commercial use and therefore does not have a high potential risk for extensive contamination.
- The site has historically been used for residential or educational purposes since 1960s. Since that time, the site configuration has changed from four small buildings on the north west portion of the site to its current configuration of several buildings scattered across the north west, centre and west of the site, along with a basketball and tennis court.
- The surrounding land was observed to be agriculture in nature or undeveloped before residential development began to the south and west of the site in 1961. A large cylindrical tower existed north west of the site from 1961 to 1982 and appears to be a water tower.
- Prior to the 1960s, historical agricultural use of the site (potentially including market gardens and orchards) may have involved use of OCPs, OPPs and herbicides.

2.5 Environmental Setting

2.5.1 Topography

The site slopes slightly south/south east toward Shrimptons Creek and has an elevation of approximately 60 m Australian Height Datum (AHD). Additional information regarding the elevation contours around the site can be found in the PSI prepared by Arcadis (Arcadis, 27 April 2018).

2.5.2 Geology

Arcadis PSI (Arcadis, 27 April 2018) reported the site geology as follows:

The 1:100,000 Geological Survey of NSW map of Sydney indicates that the site is underlain by the following geological unit;

- Triassic aged Ashfield Shale from the Wianamatta Group described as black to dark grey shale and laminate.

The 1:100,000 Geological Survey of NSW map of Sydney indicates that directly south east of the site, the following geological unit underlays the site;

- Triassic aged medium to coarse grained quartz sandstone, very minor shale and laminate lenses.

The Soil Conservation Service of NSW Sydney 1:100,000 Soil Landscapes Series Sheet 9310 (2nd Edition) indicates that the landscape of the region of the site comprises of Glenorie Soil Landscapes.

2.5.3 Hydrogeology

A review of NSW Department of Primary Industries Office of Water records for groundwater bores within a 2000 m radius of the site indicated the presence of twenty-six (26) water monitoring bores. A list of registered groundwater bores within 1500 m from the site are provided in Table 2-2 below. For the full list of registered groundwater bores within the 2000 m dataset buffer, refer to the Lotsearch report provided within the PSI (Arcadis, 27 April 2018).

Table 2-2 Registered Groundwater Bore Details within a 1500 m Buffer Zone

Bore ID	Use	SWL	Distance from the Site (m)	Direction
GW108110	Recreation	7.30	849	North West
GW112640	Monitoring	-	867	North
GW112641	Monitoring	-	883	North
GW112642	Monitoring	-	891	North
GW011296	Irrigation	-	934	North
GW016863	Irrigation	-	935	North
GW109694	Monitoring	-	1357	North East

Based on the above, the inferred groundwater flow direction is towards the west / southwest following the natural topography.

2.5.4 Hydrology

The nearest surface water receptor is an unnamed water course that branches off Shrimptons creek and is located approximately 73 m south east of the site.

2.5.5 Acid Sulfate Soil Risk

Review of the ‘Standard Local Environmental Plan Acid Sulfate Soils’ indicated that there is no known occurrence of acid sulfate soils (ASS) at the site.

Review of the ‘Atlas of Australian Acid Sulfate Soils’ indicated that the site was in a Class B category with a low probability of occurrence (6 – 70 % chance of occurrence). ASS is not known or expected to occur in these environments, and land management activities are not likely to be affected by acid sulfate materials.

3 CONTAMINATION STATUS

A summary of the previous environmental investigation work conducted at the site is presented in the following sections. The sampling locations discussed in this section are presented in **Figures 2 and 3, Appendix A**.

3.1 Preliminary Site Investigation (Arcadis, 27 April 2018)

Based on the scope of work conducted for the PSI at Kent Road Public School within the proposed development area located at 126 Kent Road, Marsfield NSW 2122, the following conclusions and recommendations were provided:

- The site and immediate surrounding area have no history of industrial or commercial use and therefore does not have a high potential risk for extensive contamination.
- The site has historically been used for residential or educational purposes since 1960s.
- Prior to the 1960s, historical agricultural use of the site (potentially including market gardens and orchards) may have involved use of OCPs, OPPs and herbicides.
- Within the proposed development area of interest, potential indicators of contamination observed at the site included the presence of fill material and building materials containing asbestos and/or lead paint.

Based on the observations made during the site walkover and following analysis of site history, Arcadis is of the opinion that there is a low risk of gross contamination present onsite within the proposed development area.

Whilst there is a low risk of gross contamination, given that several potential sources of contamination have been identified (i.e. former market gardens, fill, asbestos materials and lead paint) and minor disturbance works are proposed during development, Arcadis recommended conducting a targeted assessment of the site soils to confirm that there is no risk to human health or the environmental within the proposed development.

3.2 Due Diligence Soil Contamination Assessment (Arcadis, 30 July 2018)

Arcadis conducted a Due Diligence Soil Contamination Assessment (DDSCA) on the site in July 2018, where eight (8) soil bores were excavated by hand auger to 0.3 m bgl. These locations are presented in **Figure 2, Appendix A**. This work was commissioned to provide an indicative soil quality report and in-situ indicative waste classification of soils within the proposed development footprint, and the likelihood of potential risk to human health (both workers and occupants/students) and ecological receptors. The locations were selected to provide general coverage of the site, although were targeted to include the indicative area for proposed buildings.

The targeted soil assessment included the collection of surface soils and natural soils to a maximum depth of 0.3 m below ground level. The reported total recoverable hydrocarbons (TRH) F2 (>C_{10}-C_{16} minus naphthalene) Tier 1 NEPC (2013) NEPM HSL A&B exceedances in soil samples SB03-0.2 and SB07-0.2 indicated that there could be a potential risk to human health via the vapour intrusion pathway if buildings were located over these locations. No ACM was reported from the 2018 sampling.

Arcadis recommended that a supplementary soil contamination assessment was required to close out the data gaps identified during the Due Diligence Soil Assessment, and to characterise the nature and depth of the fill in the proposed development area to determine whether the soils meet the required land use criteria of Low Density Residential based on the use as a primary school in accordance with NEPM.

3.3 Further Supplementary Soil Contamination Assessment (Arcadis, 11 November 2019)

Based on the development site area of 0.55 ha, a total of thirteen (13) soil sample locations was recommended to meet the required minimum number of sampling points to characterise a site in accordance with the relevant industry NSW EPA (1995) Sampling Design Guidelines. Eight (8) sampling locations were completed by hand auger during the Due Diligence Assessment to a depth of 0.3 m, and Arcadis completed a further seven (7) sampling locations as a part of the Supplementary Assessment to the natural soil profile providing a total of fifteen (15) investigation locations. These locations are presented in **Figure 2, Appendix A**.

Following the observation and positive identification of asbestos containing material (ACM) at three (3) locations (TP-1, TP-3 and TP-4) on site, the sampling density required to effectively characterise the site needed to be reconsidered. In these circumstances, the NSW guidelines default to the Western Australia (WA) 2009 guidelines which require double the density of sampling locations to characterise a site with potential asbestos containing material (PACM) impacts. Therefore, a minimum of twenty-eight (28) test locations are required to characterise and better assess the ACM impacts at this site. These new locations are presented in **Figure 3, Appendix A**.

During the further works kick-off meeting on 19 September 2019, the EPA Accredited Auditor advised that the eight hand augured locations to 0.3 m below ground level are not acceptable for use as part of the dataset, but test pitting undertaken on 10 August 2019 as part of the Supplementary Assessment could be used as part of the data set. In order to meet the required density, an additional twenty-one (21) test pits were required across the site.

Based on the findings of the assessments and the objectives of the supplementary assessment, the following conclusions were made by Arcadis:

- Gross contamination in soils at the site was not identified during both investigations, with the exception of bonded ACM observed on the surface and top 100 mm at two test pit locations (TP3 and TP12), scattered surface locations near the garden beds and also other locations observed Arcadis, and within the uncontrolled fill at three (3) test pit locations (TP1, TP4, and GB2).
- The presence of bonded ACM at the surface and in the top 10 cm of soil profile (TP3 and TP12) exceeds the land use criteria of ‘no visible asbestos’ within the top 10 cm and therefore needs to be removed and validated. Arcadis believe that that asbestos fragment reported at TP12 is likely to have been worked into the surface soil as a result of vehicle movements on site as the natural was observed at 0.1 m bgl and the fill material was primarily road base gravels with no suspicious anthropogenic materials.
- ACM was identified and confirmed by laboratory analysis within the fill profile below 10 cm at three (3) of the thirty two (32) locations (TP1, TP4, and GB2) , and exceeded the land use criteria of 0.01% (Residential with access to soils) with the results showing TP1 (0.054%) and TP4 (0.019%). ACM concentration in GB2 is 0.008 w/w%.
- Arcadis understands that approximately 2,500 m^3 of materials require offsite disposal to reach required building levels. Based on the test pit descriptions, Arcadis estimated the total volume of fill across the site to be approximately 2,275 m^3 +/- 10% (7,600 m2 x 0.30 m) not allowing for an ex-situ bulking factor.
- Arcadis have assessed the available data in detail and note that:
  - the asbestos fragments reported in the fill material are primarily located in the west of the site and localised to the raised garden beds. Arcadis have taken a conservative buffer around the asbestos impacted test pits and consider these materials to be preliminary classified as Special Waste with a General Solid Waste (GSW) matrix. This area is outlined in red in **Appendix A, Figure 4**, and the estimated volume requiring disposal as Special Waste with GSW is 1,050 m3.
  - anthropogenic materials (with no apparent ACM) were observed in the fill material in the southern portion of the site. This area is outlined in blue in **Figure 4, Appendix A**. The chemical analysis for the fill material from test pits in this section returned concentrations below

the GSW CT1 (Recyclable) criteria Arcadis suggest a preliminary waste classification for this material as GSW-R assuming no ACM and minimal building rubble (to be guided by an experienced contaminated land consultant or hygienist during the excavation work).

- the remaining fill material observed on site, to the centre, east and north of the site can be preliminary classified as a combination of GSW-R and virgin excavated natural material (VENM), with the exception of the total recoverable hydrocarbons (TRH) hotspot outlined in yellow in **Figure 4, Appendix A** which would need to be disposed of as GSW (or included with the general solid waste with asbestos fragments). This 'hotspot' represents SB03.
- Arcadis estimate the volume of GSW-R and VENM to be approximately 1,400 m^3 and the "hotspot" volume to be approximately 50 m^3.

Based on the findings of the assessments and the objectives of the supplementary assessment, the following recommendations were made by Arcadis:

- An Asbestos Management Plan (AMP) needs to be prepared for the site.
- The ACM impacted fill material could be capped on site or disposed offsite as part of the required bulk excavation works. A Remediation Action Plan will need to be prepared if onsite management of the asbestos contaminated fill is a viable option. An Environmental Management Plan (EMP), which will go on title, will have to be prepared.
- If disposal of asbestos contaminated materials will be the preferred option, the following items should then be included in the AMP negating the requirement for a RAP:
- An Unexpected Find Protocol (UFP) should be included in the Construction Environmental Management Plan (CEMP) to address any additional contamination not identified during assessment (the UFP and AMP could form an Appendix to the CEMP).

Upon completion of the supplementary assessment it was decided by the DoE that some of the asbestos impacted fill material would be retained onsite by a 'cap and contain' strategy.

4 CONCEPTUAL SITE MODEL

Schedule B(2) of the NEPM (NEPC, 2013) describes a conceptual site model as

"A conceptual site model (CSM) is a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The development of a CSM is an essential part of all site assessments and provides the framework for identifying how the site became contaminated and how potential receptors may be exposed to contamination either in the present or the future".

Based on the site history, site setting, and contamination identified above, the following CSM has been developed.

4.1 Source

Potential sources of contamination at the site (specifically within the proposed development area) and the associated contaminants of potential concern (CoPC) are listed in Table 4-1 below.

Table 4-1 - Potential Contaminant Sources

Source	Associated Chemicals	CoPC
Potential Onsite Sources		
Fill materials of unknown origin	Asbestos, ash, slag, foundry waste	Asbestos, PAH, heavy metals, TRH, OCPs/OPPs, PCBs
Market Garden/Orchards	Pesticides & Herbicides	Organochlorine Pesticides (OCPs) and Organophosphate Pesticides (OPPs)

In addition to the above, pesticides and herbicides may have been used at the site for vermin and weed control in more recent times.

In the Supplementary Assessment, the collected samples were analysed for OCPs and OPPs and no exceedances were observed. Pesticides and herbicides are no longer considered to be a CoPC.

4.2 Potentially Affected Media

Potentially affected media at the site include:

- Soil
- Groundwater

4.3 Pathways

Pathways or transport mechanisms by which receptors may be exposed to contamination on and offsite include:

- Direct contact with contaminated soil/groundwater
- Vertical migration of spills/leaks to groundwater
- Ingestion of dust/abstracted groundwater
- Inhalation of asbestos fibres

4.4 Receptors

Potential receptors to contamination include:

- School attendants
- Site workers
- Intrusive maintenance workers
- Demolition/construction workers
- Surrounding residents
- Groundwater users (off-site)

4.5 Exposure Assessment

Based on the preliminary CSM discussed in Section 4.1 to Section 4.4, the potential for contamination to be present at the site is considered to be Low.

5 DATA QUALITY OBJECTIVES

According to NSW Environment Protection Agency (NSW EPA) 2017 Guidelines for the NSW Site Auditor Scheme (3rd edition), Data Quality Objectives (DQOs) are qualitative and quantitative criteria that clarify the objectives of an investigation, define the amount and type of data to be collected, and specify the tolerable levels of decision making errors. DQOs ensure that the data collected is of the appropriate quantity (sampling frequency) and quality to allow for sound decisions to be made about the nature and extent of subsurface impacts.

It is recognised as the most efficient way to accomplish these goals is to establish criteria for defensible decision making before data collection begins and develop a data collection design based on these criteria. The DQO process consists of seven steps, which are designed to clarify the study objectives, define the appropriate type of data and specify tolerable levels of potential decision errors. DQO process, was established by the United States Environmental Protection Agency (US EPA) and is endorsed in AS4482.1-2005, will ensure that appropriate DQOs are established for the Site.

The DQOs derived for this RAP have been developed in general accordance with:

- National Environment Protection (Assessment of Site Contamination) Measure 1999 as amended in 2013 (NEPM 2013);
- Sampling Design Guidelines (NSW EPA, 1995); and
- Guidelines for Consultants Reporting on Contaminated Sites (OEH, 2011).

The seven steps are outlined as follows:

- **Step 1:** State the Problem – concisely describe the problem to be studied. Review prior studies and existing information to gain a sufficient understanding to define the problem;
- **Step 2:** Identify the Decision – identify what questions the study will attempt to resolve, and what actions may result;
- **Step 3:** Identify the Inputs to the Decision – identify the information that needs to be obtained and the measurements that need to be taken to resolve the decision statement;
- **Step 4:** Define the Study Boundaries – specify the time periods and spatial area to which decisions will apply. Determine when and where data should be collected;
- **Step 5:** Develop a Decision Rule – define the statistical parameter of interest, specify the action level, and integrate the previous DQO outputs into a single statement that describes the logical basis for choosing among alternative actions;
- **Step 6:** Specify Tolerable Limits on Decision Errors – define the decision maker's tolerable decision error rates1 based on a consideration of the consequences of making an incorrect decision; and
- **Step 7:** Optimise the Design –evaluate information from the previous steps and generate alternative data collection designs. Choose the most resource-effective design that meets all DQOs.

The DQOs for the site are provided in Table 5-1 below.

Table 5-1 Project DQOs

Step	Detail
State the Problem	Arcadis understands that the site is currently occupied by Kent Road Public School, and Schools Infrastructure currently have a SSDA to undertake development and upgrade works to the school, subject to a number of planning conditions (Conditions B8, B9, B10, D26, D27 and D28 relate specifically to Site Contamination). Gross contamination in soils was not identified in the investigations undertaken at the site, with the exception of bonded ACM observed on top 100 mm at two test pits locations (TP3 and TP12), scattered surface locations near the garden

Step	Detail
	bed and also other locations, and within the uncontrolled fill at three test pit locations (TP1, TP4 and GB2). Following laboratory analysis, where ACM was identified and confirmed at three of the thirty-two total locations (TP1, TP4 and GB2), an exceedance of the land use criteria of 0.01% (residential with access to soils). TRH C_{10}-C_{16} less naphthalene were detected in excess of the Health Screening Level (HSL) A/B at a depth range of 0-1 m bgl at SB03 and SB07 during the 2018 sampling. However, these exceedances of TRH were unable to be repeated in the 2019 sampling, prompting the use of a 95% UCL statistical calculation which brought the concentration below the HSL criteria. The impacted soil must be remediated appropriately and validated in order to reduce the exposure risk and allow the development and upgrade works to be undertaken at the site.
Identify the Decision	Site contamination arising from bonded ACM in the fill soils on the site could potentially be resolved through remediation via a combined 'cap and contain' and excavation method, which would limit exposure risk. Arcadis have assessed the available data and provided preliminary waste classifications for the soil on various sections of the site. These indicative classifications are presented in **Figure 4, Appendix A**. The impacted soil within the area pre-classified as 'Special Waste - General Solid Waste (GSW)' (outlined in red in **Figure 4, Appendix A)** will be appropriately 'capped and contained' on-site. A long-term Environmental Management Plan (EMP) will need to be prepared and be notified with Ryde City Council. The fill soil containing anthropogenic materials within the area pre-classified as 'GSW (Recyclable)' (outlined in blue in **Figure 4, Appendix A)** will be excavated, re-sampled to confirm the indicative classification, and taken off-site to an appropriately licensed facility. If ACM is observed within this material, the waste classification should be reclassified to 'Special Waste – GSW'. The TRH hotspot (outlined in yellow in **Figure 4, Appendix A)** may be disposed of with the 'GSW (recyclable)' soils. The remaining soil observed on-site was pre-classified as a combination of 'GSW (Recyclable)' and 'VENM' and should be appropriately dealt with if being moved off-site. All materials to be disposed off-site will need to be properly classified in accordance with the NSW EPA (2014) Waste Classification Guidelines. The site will be declared validated and suitable for the proposed land use once fill is removed or contained onsite and natural material is visually observed. An asbestos clearance certificate will also need to be issued by a licenced asbestos hygienist post- cap installation and after excavation works have been completed. More detail on the validation requirements are provided in Section 7.
Identify the Inputs to the Decision	The inputs to the decisions include: • Site history; • Available analytical data; • Physical observations, including visual, olfactory and PID screening results during site activities; • Delineation and validation data; • Waste classification data; and

Step	Detail
	• NSW EPA endorsed guidelines.
Define the Study Boundaries	This RAP applies to the site boundary as shown in **Figure 4, Appendix A**. The temporal boundaries of the study include the previous environmental site assessments and future remediation and validation works.
Develop a Decision Rule	The following decision rule for residual contamination present following excavation of fill soils: • If the fill is still visible or further ACM is uncovered, then further excavation and removal or cap and contain is required; • If fill is removed/contained and natural soils exposed, and an asbestos clearance certificate is issued by a licenced asbestos hygienist, then the site will be considered to be suitable for the proposed land use. Impacted soil classified and disposed off-site to a facility licensed to accept the classified waste. • Soil analytical data will be compared against EPA endorsed criteria for waste classification and the available landfill/recycling facility acceptance criteria. Statistical analyses of the data in accordance with relevant guidance documents will be undertaken, if appropriate, to facilitate the decisions (as detailed above). • The waste will be classified based on either the total concentrations of CoPC or a combination of total and leachable concentrations. Import of fill suitable for use at the site. • Fill will be considered to be suitable for use on site only if it is accompanied by documentation certifying it as clean fill e.g. virgin excavated natural material (VENM) and excavated natural material (ENM). Onsite encapsulation of waste where there are potential unacceptable risks to human health or the environment from residual contamination. • Where soil encapsulation is proposed, the containment must be appropriately designed / engineered to eliminate, as far as practicable, ongoing risks to human health and/or the environment. Monitoring and management of encapsulated material must be specified in the EMP prepared for the site. Long term management of residual contamination underneath the cap. • A site EMP may be required to inform the long-term maintenance, monitoring, reporting, roles & responsibilities, operational constraints, etc.
Specify Tolerable Limits on Decision Errors	**Capping Design and Implementation Errors** For errors relating to the capping design and implementation, relevant suitably qualified personnel are to ensure that: • A suitably constructed capping layer is installed, to industry standard; and • That the capping layer constructed, to industry standard, results in a long-term stable barrier. **Soil Waste Classification Sample Analytical Errors** The acceptable limits for field and laboratory QA/QA results are as follows: • Relative percent difference (%RPD) for field duplicates is less than 50% for all analytes.

Step	Detail
	• Recovery of matrix spikes and surrogate spikes between 70 and 130% or 50% RPD for matrix spike duplicate RPDs for organics only; and • 70 to 130% recovery on trip spike samples. Where acceptable limits for field duplicates are not met, a discussion on low biased error will be provided.
Optimise the Design	The remediation design has been optimised by using the methodologies described in the following industry best practice guidelines: • Sampling Design Guidelines (EPA 1995); • Guidelines for the NSW Site Auditor Scheme 3rd Edition, October 2017; • National Environment Protection (Assessment of Site Contamination) Measure, National Environment Protection Council, revised 2013 (NEPM 2013); • Waste Classification Guidelines. Part 1: Classifying Waste, NSW Environment Protection Authority (EPA) 2014; • Addendum to the Part 1 Waste Classification Guidelines (EPA 2016) ; and • Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, WA Department of Health (DOH) 2009.

6 REMEDIATION OPTIONS

6.1 Remediation Objectives

The objective of the RAP is to provide a detailed plan of activities, procedures, contingency measures and objectives to ensure the effective and controlled remediation of the site for the proposed upgrades and development. It describes the procedures and standards to be followed throughout the project to facilitate successful remediation / management of the site and ensure protection of human health and the environment.

The remediation objectives are outlined as follows:

- Remediate the site to a level enabling the proposed upgrades and development suitable for continued land use as a primary school;
- Prevent or minimise to the extent practicable further migration of contaminants from source areas that pose an unacceptable risk to either future site occupants or environmental receptors;
- Validate the soil remedial/assessment works by demonstrating:
  - The ACM impacted soils have been capped and contained within a suitable cap/containment cell;
  - A long-term Environmental Management Plan (EMP) has been implemented for the ongoing monitoring and maintenance of the cap;
  - That fill is removed/contained, and natural soils exposed; and
  - An asbestos clearance certificate can be issued by a licenced asbestos hygienist.
- Validate the remedial works in accordance with the relevant NSW EPA guidelines;
- Document the validation/assessment process; and
- Prepare a long-term Environmental Management Plan for ongoing monitoring and maintenance purposes of the cap.

6.2 Extent of Remediation Required

The extent of remediation required on-site is presented within **Figure 4, Appendix A**.

The areas requiring remediation have been summarised in the following table.

Table 6-1 Description of Remediation Areas

Identifier	Soil (Colour Code in Figure 4, Appendix A)	Location	Indicative Waste Classification	Estimated Volume of Soil (m^3)	Comments
A	Fill material containing ACM (Shown as red)	To the west of the site, localised to the raised garden beds	Special Waste - GSW	1,050	This material requires remediation under the NEPM guidelines.
B	Fill material containing anthropogenic materials, no apparent ACM (Shown as blue)	Towards the southern portion of the site	GSW CT1 (Recyclable)	1,100	This material does not require remediation under the NEPM guidelines, unless ACM is discovered.

Identifier	Soil (Colour Code in Figure 4, Appendix A)	Location	Indicative Waste Classification	Estimated Volume of Soil (m^3)	Comments
C	Hotspot location, TRH exceedance of HSL A/B (shown as yellow)	To the north of the site	GSW CT1 (Recyclable)	50	This material requires remediation under the NEPM guidelines.
D	Remainder of fill on-site	To the centre, east and north of the site	A combination of GSW CT1 (Recyclable) and VENM	1,400	This material does not require remediation under the NEPM guidelines, unless ACM is discovered.

6.3 Possible Remediation Options

The Contaminated Sites Guidelines for the NSW Auditor Scheme 3rd Edition (NSW EPA 2017) states that a site auditor must be satisfied that any proposed or completed remediation is technically feasible, environmentally justifiable and consistent with relevant laws, policies and guidelines. The Auditor Guideline (NSW EPA 2017) state the Auditors must have regards to:

- National and NSW remediation policies.
- The Protection of the Environment Operations Act 1997 (POEO Act) and Regulations.
- Other legislation such as the Environmentally Hazardous Chemicals Act 1985 (EHC Act) and the Environmental Planning and Assessment Act.
- Relevant technical guidance documents issued by the EPA.

In addition, the guidelines state the preferred hierarchy of options for site remediation and/or management is set out in s.6(16) Assessment of Site Contamination Policy Framework of Schedules A and B of the NEPM, which is followed in NSW.

This means that soil remediation and management is implemented in the following preferred order:

- *On-site treatment of the soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level; and*
- *Off-site treatment of excavated soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level, after which the soil is returned to the site; or*

  if the above are not applicable
- *Consolidation and isolation of the soil on-site by containment within a properly designed barrier; and*
- *Removal of contaminated soil to an approved site or facility, followed, where necessary, by replacement with clean fill; and*

A summary of the viable remediation options that may be practically implemented at the site are listed in Table 6-2 below.

Table 6-2 Soil Remediation Options Screening Matrix

	Discussion	Conclusion
Option 1 Excavation and removal of all impacted fill soil.	Offsite disposal off all impacted fill material is one of the fastest ways of remediating soils impacted at the site and will eliminate all exposure risks. Additionally, if all impacted material is exported	Due to the lack of efficiency and cost of excavating and removing all impacted fill soil on the site, this option is **not suitable**.

	Discussion	Conclusion
	off-site, there will be no requirement for an EMP to be prepared and implemented. There are currently suitably licensed waste facilities in the Sydney region capable of receiving ACM impacted wastes (following waste classification). However, to remove this volume of fill material offsite and to a waste facility would involve a significant volume of truck movement to and from the site. This option would also generate the highest quantity of waste, since materials are disposed to landfill rather than treated and/or reused. The various soils requiring remediation (as specified in Table 6-1) have different pre-classifications and so will be required to be disposed of accordingly. The cost of disposing Special Wastes – GSW (ACM impacted soils) to a landfill is greatly steeper than the cost of disposing soils with a GSW CT1 (Recyclable) classification.	
Option 2 Do nothing.	To leave the site as it is currently would not be feasible due to the risk of harm to occupants of the site from the ACM impacted fill soils.	**Not a suitable option.**
Option 3 Placing the ACM impacted soils within a 'containment cell'.	Containment of impacted soils is a viable option where ACM impacted soils will be removed and placed in a 'containment cell' underneath one of the new buildings to be constructed on-site, effectively 'capping' the impacted soils. This option produces less waste than Option 1, as no or minimal amounts of impacted soil will be sent as waste to a landfill. This option is also the most favourable under the NSW EPA Waste minimisation hierarchy. Option 3 removes the exposure pathway for human health risks, rendering the site soil suitable for the proposed development.	**This is the preferred option.**

6.3.1 Preferred Remediation Option

With consideration to NSW EPA's endorsed guideline hierarchies for soil remediation options and clean-up objectives (NSW EPA 2017), and the site-specific contaminants, proposed development and environmental setting, the preferred remediation strategy will be a combination of 'Option 1 – excavation and removal of all impacted fill soil' and 'Option 3 – Containment Cell'. This is due to there being various classifications of waste present across the site which have varying costs associated with their disposal.

Soils that have been identified as being impacted by ACM (identified as 'A' in Table 6-2) will remain on-site but will be placed within a containment cell. Other fill soils identified on-site (identified as 'B', 'C' and 'D' in Table 6-2) will need to be disposed of off-site, subject to re-classification to Special Waste – GSW if any ACM is observed in the material during excavation/validation works.

The details of this remediation option are provided in Section 6.4.

6.4 On-site Soil Remediation Plan

A summary of the remediation schedule for soil is provided as follows:

- Remove the ACM impacted material (Emu bob) from the surface and if possible, the top 10 cm across the site and document the subsequent clearance certificate.
- Air monitoring is advised during the removal of all fill material as a conservative measure, and to ensure that if further ACM is identified, the appropriate management and monitoring controls are in place. See Section 9.11 for more detail on air monitoring requirements.
- Fill soils that have been identified as being impacted by ACM (identified as 'A' in Table 6-2) will be retained on-site within a containment cell. It has been proposed that the containment cell will be located underneath the proposed Block R structure, which will be located on the north-east portion of the site. The location and a conceptual design of the containment cell is provided in **Appendix B**.
  - In order to account for the containment cell, the existing soil beneath Block R must be over-excavated. The existing soil underneath Block R has been pre-classified to be a combination of GSW CT1 (Recyclable) and VENM.
  - The containment cell will comprise a marker layer at the base of the excavation underneath Block R. This marker layer will act as a barrier between the ACM impacted soils and the existing natural soils.
  - The containment cell will be 'capped' by an aggregate/sand layer and the concrete foundation slab of Block R.
- Soils that have been identified as fill soils containing anthropogenic material (identified as 'B' in Table 6-2) have been given a GSW CT1 (Recyclable) pre-classification. The soils in this area must be appropriately managed during excavation with a suitably qualified environmental consultant present during the works to observe the material and provide expert opinion, and possibly conduct additional sampling to confirm the preliminary classification of the material. If ACM will be observed within this material, the waste classification should be reclassified to Special Waste – GSW and can be retained on-site underneath another building block within a containment cell.
- Soils that have been identified within the hotspot location (TRH exceedance of HSL A/B) (identified as 'C' in Table 6-2) have been given a GSW CT1 (Recyclable) pre-classification, and may be disposed of along with the GSW CT1 (Recyclable) waste. Additional sampling of this material may be required in order to confirm the preliminary classification of this material.
- The remainder of the soils on the site have been given a combination of GSW CT1 (Recyclable) and VENM (below the fill material in area's 'A', 'B', 'C' and 'D') pre-classification and should be disposed of off-site appropriately. Additional sampling of this material may be required in order to confirm the preliminary classification of this material.

6.5 Validation

Validation of the remedial works is an integral part of the remediation process. Validation inspections will be used to demonstrate that the remediation objectives have been achieved. Details of the validation program are provided in Section 7 below.

6.6 Environmental Management Plan (EMP)

As the remedial strategy to be adopted at the site will involve the placement and containment of the impacted fill material within a containment cell on-site, a long-term Environmental Management Plan (EMP) will need to be prepared for the management of impacted soils that will remain on site. A conceptual design of the containment cell that will be located underneath Block R, has been provided in **Appendix B**.

The EMP must detail the monitoring and maintenance requirements for the containment cell cap. It must outline the administrative controls on any future activity with the capacity to potentially expose

the ACM impacted soil beneath. In addition to this, the EMP must also include a surveyed drawing to present where the impacted material has been placed.

The requirement for the development of the EMP will occur once validation of the site has been completed and any engineering controls are installed.

In order to ensure the legal enforceability of the EMP in this case, a public positive covenant (such as s.88D of the Conveyancing Act 1919) is to be set in place for the site, to ensure all future development complies with the requirements of this EMP. A public positive covenant is created under either s.88D or s.88E Conveyancing Act 1919 by a prescribed authority and imposes obligations on the new owner of the land burdened. These obligations include:

- carrying out specified development on or with respect to the land, or
- the provision of services on or to the land or other land in its vicinity, or
- the maintenance, repair and/or insurance of any structure or work on the land.

It may also impose any term or condition with respect to the performance (or failure to perform) of any such obligation. A Prescribed Authority includes a public or local authority constituted by an Act.

Before approval of the EMP, the auditor should seek views of the relevant authority (Department of Planning and City of Ryde) as required per the NSW EPA Site Auditor Guidelines.

6.7 Residual Exposure Risk

The residual exposure risk to contaminants within the soils will be low through the capping and containment of the ACM impacted soils, and the excavation and offsite disposal of hotspots and fill material.

7 VALIDATION PLAN

7.1 Visual Inspection and Clearance Certificate

Visual inspections should be performed during excavation to identify any inconsistencies and evidence of contamination and unexpected finds.

Visual inspection during excavation of soils that have been identified as 'B' in Table 6-2 must especially be observed by a suitably qualified environmental consultant to note if any ACM will be observed within this material. If ACM is observed, the waste classification of this material should be reclassified from GSW CT1 (Recyclable) to Special Waste – GSW, alternatively an additional containment cell can be created underneath one of the other new school buildings.

Post-excavation and remediation work, another visual inspection must be undertaken by a suitably qualified environmental consultant to assess if all fill materials have been removed, and that natural materials are exposed. From previous investigations it was concluded by Arcadis that the natural materials on-site meet Residential A criteria, therefore, exposed natural material will indicate that the site is suitable for the proposed upgrades and redevelopment.

A clearance certificate should be provided by a licenced asbestos hygienist after all excavation works are completed.

At locations where not all fill material will be removed, soil validation sampling and testing will be required. Soil samples should be collected on a 10m grid and tested for heavy metals, TRH, BTEX, PAH, OP/OC and Asbestos. If soil sampling will be undertaken, a sampling and analysis methodology will have to be agreed upon between the Consultant and the Auditor prior to the sampling being undertaken.

7.2 Validation Reporting

At the completion of the remediation works a Validation Report must be prepared in general accordance with the NSW OEH Guidelines for Consultants Reporting on Contaminated Sites (OEH 2011), documenting the works as completed. This report will contain information including:

- Details of the remediation works conducted;
- Details of the landfill and recycling sites where material has been disposed of (i.e. weighbridge dockets, EPL licence number)
- Details of the air monitoring program implemented during the removal and excavation of fill material across the site;
- Information demonstrating that the objectives of the RAP have been achieved, in particular the sample results of any waste classification, along with assessment of the data against both the pre-defined DQOs and to the remediation acceptance criteria;
- Information demonstrating compliance with appropriate regulations and guidelines;
- Any variations to the strategy undertaken during the implementation of the remedial works;
- Details of any environmental incidents occurring during the course of the remedial works and the actions undertaken in response to these incidents; and
- Other information as appropriate, including requirements (if any) for ongoing monitoring / management.

The report will serve to document the remediation works for future reference.

The following records will be maintained by the civil contractor during remediation work and will be made available for inclusion into the Validation Report:

- Any complaints made towards the remedial works, the date and time that the complaint was made, and corrective actions taken;

- Records of approvals to remove or dispose soil from the site;
- Suspicious soil material encountered in the materials brought onto site;
- Source of material being brought onto site for the sub-grade layer or for backfilling; and
- Dockets for the quantities of material being brought onto site as well as the EPA approvals.
- Any amendments to works which negate from this RAP, Auditor comments to these amendments, as well as any comments and/or endorsements;
- Site visits and activities performed; and
- Photographic records of the stockpiled materials (if any) as well as stockpile management, and site establishment.

The validation report must assess the results of the post-remediation testing against the clean-up criteria stated in the RAP. Where targets have not been achieved, reasons must be stated, and additional site work proposed to achieve the original RAP objectives.

8 CONTINGENCY PLAN

A review of remediation works has been undertaken to identify potential risks to meeting the specified site validation criteria. A number of potential risks have been identified. These are listed following with contingencies that will be implemented to ensure that validation criteria are met.

8.1 Unexpected Finds

An Unexpected Finds Protocol (UFP) will be prepared to address any undiscovered hazards that may be present at the site. The strategy for dealing with any potentially hazardous unexpected sources is discussed in detail within the UFP and has only been briefly discussed in this section.

The nature of any undiscovered hazards which may be present at the site are generally detectable through visual or olfactory means, for example:

- Petroleum contaminated soils (staining / discoloration visible);
- Hydrocarbon Organic Compound contaminated soils (odorous).
- Fragments of asbestos-containing materials (visible);
- Significant ash and / or slag contaminated soils / fill materials (visible); and
- USTs that have not been previously identified.

As a precautionary measure, to ensure the protection of the workforce and surrounding community, should any unexpected potentially hazardous substance be encountered the works should cease immediately before being assessed by a suitably qualified and experienced environmental professional.

Should material be encountered (outside the area identified as 'A' in Table 6-2 (marked red on **Figure 4, Appendix A**) that is suspected of containing ACM, the following actions are to be undertaken:

- Material that is suspected of containing asbestos must be isolated and the area barricaded to prevent the possible exposure of workers to asbestos. Signs notifying site workers of the presence of asbestos must be placed on the barricades;
- All suspicious material must be assumed to contain asbestos until it has been proven otherwise by laboratory analysis; and
- All suspicious material and other unexpected finds are to be logged on the Unexpected Finds Register.
- If, after confirmation, that ACM is present within the material, the material pre-classification will need to be changed to Special Waste – GSW and can be retained on-site underneath another building block within a containment cell.

The sampling strategy for each "unexpected find" shall be designed by a suitably qualified and experienced environmental professional. The strategy will, however, be aimed at determining the nature of the substance – that is, is it hazardous and, if so, at concentrations which pose an unacceptable risk to human health or the environment.

The sampling frequency of the identified substance / materials shall meet the minimum requirements the NSW EPA Sampling Design Guidelines (1995).

8.2 Excessive Odours from Works

Based on the nature of the identified contaminants, off-site odour complaints will not be likely. Where complaints do occur, the following will be undertaken:

- Transport and handling of soils during favourable weather conditions only;
- Covering of impacted soils; and/or
- Consider installing an odour screening / masking system at the site boundaries.

8.3 Remediation Strategy Unsuccessful

Should validation be deemed not suitable for the sites intended land uses, the RAP will be required to be revised to manage exposure pathways and potential risks to site users. In this case, other remediation options may need to be considered (see option in Section 6).

9 SITE MANAGEMENT PLAN

The following section contains appropriate details to eliminate / manage potential environmental emissions which may be generated by or during the site remediation works.

9.1 Hours of Operation

Remediation works shall only be permitted during the following hours:

- Monday to Friday: 7:00 am to 6:00 pm;
- Saturdays: 8:00 am to 1:00 pm;
- Sundays and Public Holidays: No work permitted.

9.2 Site Establishment

All safety and environmental controls are to be implemented as the first stage of remediation works. These controls will include:

- Locate and isolate all required utilities in proximity of the works;
- Install work area security fencing;
- Site signage and contact numbers with the contact details of the remediation contractor and project manager;
- Assess the requirements of dust and odour control measures;
- Sediment erosion controls; and
- Stormwater runoff sediment controls.

9.3 Site Access

During remediation works, perimeter fencing will be maintained to restrict access to the works area. Only authorised persons will be able to enter the works area.

Vehicle access to the site shall be stabilised to prevent the tracking of soil around the site and the adjoining driveway/access point to the road will be swept or cleaned on an as-needed basis. Any collected materials shall be treated as potentially contaminated and will be suitably managed.

9.4 Material Tracking

A Stockpile and Waste Tracking Register should be used to record all soil material sent offsite for disposal and other materials brought onto site as part of the remediation work.

An accredited surveyor may be required to monitor earthworks and validate of each phase of the remediation works regarding material removed and / or reinstated.

9.5 Material Transport

Trucks will be loaded in a designated area away from the contaminated material excavations. The transporting contractor shall ensure that there is no material tracked out onto the street and that the load is securely covered. In addition, all site vehicles must leave the site in a forward direction.

All appropriate road rules shall be observed, and state roads will be selected as far as practicable over local roads when deciding on the transport route to the off-site material disposal location.

Under the NSW EPA Asbestos and Waste Tyre Guidelines 2015 the legal requirements that consignors, transporters and occupiers of premises must meet in addition to the Waste Regulations for ACM transportation the following requirements are noted:

- A transporter of Asbestos Waste must be registered as a transporter of Asbestos Waste on WasteLocate before any transport of Asbestos Waste is to occur.

  https://wastelocate.epa.nsw.gov.au/

The transporter of Asbestos Waste must provide the following information to the NSW EPA upon registration on WasteLocate no later than on delivery of its first load of Asbestos Waste to the receiving facility:

- Name and address of the transporter;
- Mobile telephone number of the transporter's registered driver;
- Email address of the transporter;
- Trading name or agency name of the transporter;
- Drivers licence number of the transporter's registered driver;
- Postal address of the transporter, if different from address;
- Primary telephone number of transporters;
- The Australian Business Number (ABN) for the transporting company (if the entity has an ABN); and
- WorkCover licence number of the transporter, if held.

The transporter of a load of Asbestos Waste must provide the following information to the NSW EPA by using WasteLocate before the transportation of any load of Asbestos Waste:

- Type of Asbestos Waste in the load;
- Vehicle registration; and
- Number of the vehicle driven by the transporter's registered driver for the specific consignment.

A transporter of a load of Asbestos Waste to any premises must scan the EPA Fixed Plate at the premises through their mobile device for each load. Scanning of the EPA Fixed Plate by the transporter for a load enables the occupier to meet its obligations under clause 76(7) or 79(6) (as applicable) of the Waste Regulation for that load.

If the EPA Fixed Plate at an occupier's premises is not scanned by the transporter, the occupier must provide the EPA in writing the date and time of delivery of the load of Asbestos Waste, the vehicle registration number of the vehicle driven by or on behalf of the transporter for the specific consignment.

Where material is to be imported, controls are to be implemented to maintain separation between contaminated and non-contaminated materials.

It is noted that WasteLocate may not be required to be used for transport of asbestos impacted soils depending on the status of a temporary directive issued by NSW EPA. The status of WasteLocate requirements in relation to asbestos impacted soil is to be confirmed at the time of disposal.

9.6 Backfilling Excavations

If any imported fill is required to be brought on-site for back-filling purposes, it is required to be certified as ENM or VENM and accompanied by a waste classification certificate or be sampled in accordance with the ENM Order (NSW EPA 2014).

9.7 Soil and Water Management

All works shall be conducted in strict accordance with the soil and water management measures outlined in this section.

To prevent the migration of impacted soil / sediment off site, silt fences shall be constructed at the down-gradient works area boundaries, as per the specifications contained in Managing Urban

Stormwater – Soil and Construction Volume 1, 4th Edition, NSW Government, March 2004. Any material which is collected behind the sediment controls shall be treated as potentially contaminated and will be suitably managed.

In a storm event, the sediment controls located on-site will need to be monitored and replaced or altered if necessary. Collected material will need to be suitably managed in accordance with remediation works.

Prior to exposing and/or disturbing the known or potential ACM impacted soils by intrusive earthworks or excavation works, the following activities should be carried out and implemented by the party responsible for the disturbance to soil in the affected areas:

- Notification to the responsible party (Owner, Principal Contractor etc.) to discuss the scope of works to be undertaken, the likelihood of generating dust, excess spoil or waste and the management of this material;
- Ensure contractors / workers are aware of the potential for asbestos contaminated materials to be encountered;
- Setup of work area, and exclusion zone including appropriate signage and barriers;
- Assess proposed scope of works to minimise the requirement to expose and / or excavate asbestos contaminated materials;
- Ensure contractors / workers, where any works involving asbestos contaminated materials is expected or identified, are supervised by an appropriately qualified person as required by the relevant legislation (i.e. Class-A or Class-B licensed contractor);
- Preparation of a specific occupational health and safety plan that caters for the proposed activities / works including the provision of PPE (refer to Section 7.1);
- Consideration and / or preparation of a Dust Management Plan / Procedure to mitigate / minimise dust generation and identify controls;
- Consideration of the equipment used to minimise potential soil exposure and dust generation;
- Preparation of a specific environmental protection plan including soil, water and air management protocols;
- Preparation of a methodology for managing excavated soil; and
- Contingency planning to include encountering other suspected asbestos impacted material other than that expected.
- Additional information pertaining to the transportation of ACM (Section 9.12) should also be consulted.

9.8 Stockpiles

In the event that stockpiling of materials is required, the following procedures will be implemented:

- Contaminated soil stockpiles should be placed on an impermeable or sealed surface with controls for dust, runoff and seepage to minimise further impact to surrounding areas;
- No stockpiles or other materials shall be placed on footpaths or roadways and will be away from all stormwater infrastructure (including drainage lines, stormwater pits, gutters, etc.) where possible. Where this is not possible, sediment controls will be placed over stormwater grates to prevent ingress of sediment to stormwater drainage lines;
- Stockpiles shall be formed with sediment control structures placed immediately down slope to protect other lands and waters from sediment pollution;
- Placement of material on a sealed or plastic lined surface;
- Covering of all excavated / stockpiled contaminated material; and

- Fill material sourced onsite or imported (ENM or VENM) should segregated and placed in an area where there is no risk of the material becoming contaminated during remediation works.

9.9 Noise

The remediation works shall comply with the NSW EPA's Environmental Noise Control Manual for the control of noise from construction sites.

All machinery and equipment used on site will be in good working order and with the fitted with appropriate silencers when necessary.

9.10 Vibration

The use of plant and machinery shall not cause vibrations to be felt or capable to be measured at the neighbouring premises.

9.11 Air Quality

Health and air monitoring must be undertaken when a worker is at risk of exposure to asbestos while performing work that is not licensed asbestos removal work. The need for health and air monitoring of these workers should be determined on the basis of the potential for exposure, frequency of potential exposure and duration of the work being undertaken.

Consideration must be given to the worker's demographic, medical and occupational history and records of the worker's personal exposure. The health and air monitoring must include a physical examination of the worker with emphasis on the respiratory system, including standardised respiratory function tests, unless another form of health and air monitoring is recommended by a registered medical practitioner.

Workers must be informed of any health and air monitoring requirements before the worker carries out work that may expose them to asbestos.

Air monitoring for asbestos exposure may be required as result of the assessment and should be conducted by a competent person in accordance with the following;

- Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)].

Exposure standards set out the airborne concentrations of asbestos, which should not damage the health of workers. The exposure standards for asbestos are:

- Amosite (brown asbestos) 0.1 f/mL (Fibres per millilitre of air);
- Crocidolite (blue asbestos) 0.1 f/mL; and
- Chrysotile (white asbestos) 0.1 f/mL.

All areas or equipment with asbestos or ACM in situ should be assessed by a competent person to determine the appropriate inspection periods to ensure risk controls are effective. Inspection periods are to be identified by the person responsible for the area.

9.12 Dust Control

During the remediation of the ACM impacted areas, dust levels will be monitored and minimised by using mist sprays as necessary on all excavation, stockpiles and loadout.

Dust shall also be controlled by ensuring vehicles leave via the designated (stabilised) site access points.

Any situations or areas which exceed the asbestos exposure standard are to be controlled to eliminate or minimise risk of exposure.

Any vehicle used to transport asbestos waste should be cleaned before leaving the site and the vehicles load should be covered prior to dispatch.

9.13 Odour

Where odour may be an issue and/or if complaints should occur, the contingency measures associated with odour control outlined in Section 8.2 will be implemented. Additional odour suppression actions will be taken to reduce the odours as necessary, which may include:

- increasing the amount of covering of excavations / stockpiles;
- mist sprays;
- odour suppressants; and
- maintenance of equipment.

9.14 Hazardous Waste

Hazardous waste is subject to strict controls regarding its movement and methods for management. If hazardous waste is present onsite storage, haulage and disposal methods will be developed and will be based on the particular contaminants and concentrations identified.

Any excess excavation soils from the fill material at the site will be stockpiled and classified separately for waste disposal as they may result in a higher level of waste classification (special, hazardous or restricted waste) due to chemical or other anthropogenic impacts.

Adoption of any strategy for the management of hazardous waste will require close management by a suitably qualified environmental consultant and will increase the time required to complete the remedial works. Liaison with relevant authorities, contractors and landfill disposal or storage sites will be required.

9.15 Disposal of Contaminated Soil

All soil will be classified, managed and disposed in accordance with the Waste Classification Guidelines Part 1: Classifying Waste (NSW EPA 2014).

Asbestos waste must also be disposed (in case onsite retainment is not possible) in accordance with the regulatory requirements under clause 42 of the Protection of the Operations (Waste) Regulation 2014 which apply to asbestos waste and includes:

- Waste stored onsite prior to disposal must be done so in an environmentally safe manner;
- Non-friable asbestos must be securely packaged at all times;
- Friable asbestos (if encountered) must be kept in a sealed container;
- Asbestos contaminated soil must be wetted down;
- All asbestos waste must be transported in a covered, leak-proof vehicle (applicable to asbestos impacted soil);
- Asbestos waste can be disposed at a landfill site that can lawfully receive this waste. It is recommended that the landfill is contacted beforehand to find out if the facility can receive the waste and whether there may be any special requirements or delivery constraints;
- It is illegal to dispose of asbestos waste in domestic garbage bags;
- It is illegal to re-use, recycle or dump asbestos waste.

If friable waste requires disposal, then only a person with a Class A removal license is permitted to remove the waste material and air monitoring will be required to be undertaken by a licensed asbestos hygienist.

If more than 100 kg of asbestos waste or 10 m^2 (in total) of asbestos sheeting is proposed to be removed from the Site, then information is to be provided to the EPA.

9.16 Site Signage and Contact Numbers

Throughout the duration of the works appropriate signage shall be erected around the remediation area with the contact details of the remediation contractor and project manager.

9.17 Complaint Reporting and Resolution

Complaints from adjoining site occupants or workers on site will be directed initially to the responsible person onsite (owner, principal contractor, civil contractor). Following that, discussion with the environmental consultant and the complainant will investigate the issue and remedy it as required or applicable.

9.18 Site Dis-establishment

On completion of the remediation works all plant, equipment and safety and environmental controls shall be removed from the site unless contracted for ongoing redevelopment or construction works.

10 HEALTH AND SAFETY

The principal remedial contractor should prepare a separate construction and environmental management Plan (CEMP) prior to the remediation works beginning. The information presented below is not exhaustive and is to be included along with additional relevant information in the CEMP.

The objectives of the health and safety plan (HASP) are:

- To apply standard procedures that reduce risks resulting from the above works;
- To ensure all employees are provided with appropriate training, equipment and support to consistently perform their duties in a safe manner; and
- To have procedures to protect other site workers and the general public. These objectives will be achieved by:
  - Assignment of responsibilities;
  - An evaluation of hazards;
  - Establishment of personal protection standards and mandatory safety practices and procedures; and
  - Provision for contingencies that may arise while operations are being conducted at the site.

This health and safety section does not provide safety information specific to construction and other demolition or excavation activities carried out by contractors, such as the safe operation, maintenance and inspection of plant, etc. Contractors will be required to prepare their own e.g. Safe Work Method Statements (SWMS), Job Hazard Analysis (JHA), Standard Operating Procedures (SOP) and task-based Risk Assessments (RA) for their work activities. All parties working on the site shall comply with all applicable Health and Safety legislation, regulations, codes and guidelines.

10.1 Responsibilities

Client Site Supervisor / Manager

The client supervisor/manager is responsible for:

- Advice on obtaining development approval;
- Helping to ensure all works are compliant with the development approval;
- Assisting with community consultation; and
- The client supervisor/manager contact details will be provided prior to the works.

Remediation Contractor

The remediation contractor is responsible for:

- Ensuring all works are undertaken as per the RAP;
- Ensure all works involving the disturbance of the ACM contaminated soils are conducted under the supervision of a suitably qualified Class A or Class B asbestos licensed contractor;
- Ensure all ACM impacted soils are wetted to reduce the potential generation of dust;
- Minimise erosion at the site, including erosion of soils exposed during excavation and demolition works;
- Protect nearby receiving environments from potential contamination;
- Ensure contaminated site plant and equipment are decontaminated prior to commencing work in soil that meets Residential A criteria;
- Signs and record keeping should indicate the origin and location of contaminated materials;
- No stockpiling of impacted soils (where possible) to prevent cross contamination of soil that meets Residential A criteria.

- Direct transport from contaminated area to burial site;
- Validated areas should be isolated to prevent cross contamination;
- Routine site inspections.
- Ensuring all works are undertaken in accordance appropriate regulations and standards;
- Ensuring all works are undertaken as per the health and safety plan;
- Ensuring a copy of the health and safety plan is available at the site during the remediation/validation activities;
- Confirming individuals are competent in performing allotted tasks;
- Liaison with the client supervisor/manager and contractor representatives, as appropriate, regarding safety matters; and
- Investigation and reporting of incidents and accidents.

The remediation contractor contact details will be provided prior to commencement of works.

Environmental Consultant

The environmental consultant is responsible for:

- Undertake remediation and validation sampling as per the RAP;
- Ensuring consultant works are undertaken as per the health and safety plan;
- Liaison with the contractor representatives, as appropriate, regarding safety matters; and
- Undertake validation and reporting as per the RAP.

The contact details of the responsible parties are provided in Table 10-1.

Table 10-1 Contact Details

Client's Supervisor / Manager	Details
Name	To be advised (TBA)
Company	TBA
Address	TBA
Contact Phone	TBA
Remediation Contractor	**Details**
Name	TBA
Company	TBA
Address	TBA
Contact Phone	TBA
Environmental Consultant	**Details**
Name	TBA
Company	TBA
Address	TBA
Contact Phone	TBA

10.2 Other Members of the Site Workforce

Every individual worker is responsible for conducting their allocated tasks in a safe manner and in accordance with their training and experience. They must give due consideration to the safety of all others in their proximity and cooperate in matters of health and safety. All workers must leave their work areas in such a condition that the location will not be hazardous to others at any time.

10.3 Hazards

The known or potential hazards associated with the work activities are listed below:

- Chemical hazards associated with the presence of contaminated soil;
- Physical hazards, including;
- Work in or near excavations;
- Operating machinery;
- Heat stress and UV exposure;
- Underground or overhead services;
- Manual handling; and
- Noise.

In the event of the discovery of any condition that would suggest the existence of a situation more hazardous than anticipated, or of any new hazard that could potentially cause serious harm to personnel or the environment, work will be suspended until the Project Manager has been notified and appropriate instructions have been provided to field personnel.

10.4 Chemical Hazards

The main chemical hazards associated with the remediation/validation works are ACM based products. SafeWork Australia has published 'How to safely remove asbestos code of practice' (October 2018) which provides additional information on safety standards when removing asbestos. The AMP (currently being prepared by Arcadis) will address asbestos hazards in more detail.

Workers involved in disturbing the known impacted soil, and surrounding stakeholders, could be exposed by:

- Respiration of dust or potential fibres generated from the soil;
- Dermal contact with asbestos contaminated soils;
- Ingestion of asbestos contaminated soils; and
- Possible secondary exposure from contaminated equipment or clothing.

Planning of the earthworks involving exposure and / or disturbance of ACM impacted soils, and implementation of appropriate health and safety measures, will minimise the potential for contact with contaminated materials through the above listed pathways.

All machinery (i.e. excavators and / or trucks) that are required to conduct work on or pass over the site will need to be enclosed (windows wound to the full up position) with re-circulatory air functioning. Movement outside of the vehicle should be conducted with the required PPE. Equipment and PPE must be handled as outlined in Section 10.3 unless done in a designated clean area of the site.

When working with contaminated materials in general, care must be taken to ensure that the contamination is not introduced to the worker via ingestion, inhalation or absorption. Personal Protective Equipment (PPE) and decontamination requirements related to the remedial works are summarised in Sections 10.6 and 10.7.

10.5 Physical Hazards

10.5.1 Operating Machinery

Heavy plant and equipment operating in the vicinity of field personnel presents a risk of physical injury. Personnel should be cognisant of their position in relation to operating machinery at all times. Personnel must wear high visibility clothing when onsite.

Never walk behind or to the side of any operating equipment without the operator's knowledge. Do not assume that the operator knows your position. Personnel should stay at least 1 m from the operational area of heavy equipment and should not stand directly below any load or piece of equipment (e.g. backhoes, excavators, vehicles).

10.5.2 Work in or Near Excavations

No site personnel are to stand closer than 0.5 m to the edge of an excavation. No site personnel are to enter excavation greater than 1 m deep. Additionally, at the end of each day excavations are to be barricaded to prevent access.

10.5.3 Cuts and Abrasions

The manual work associated with the remediation works gives rise to the risk of cuts and abrasions to personnel working in the area. As well as the direct consequences of any cut or abrasion, such injuries can lead to the possibility of exposure to contaminants through the wound as well as diseases such as tetanus. To minimise the risk of direct or indirect injury, personnel will wear the personal protective equipment described.

10.5.4 Heat Stress and UV Exposure

Site personnel may experience heat stress due to a combination of elevated ambient temperatures and the concurrent use of personal protection equipment; this depends in part on the type of work and the time of year.

In addition to heat stress, overexposure to UV radiation in sunlight can result in sunburn to exposed skin. The use of a high protection sunscreen (SPF15 or greater) on all exposed skin is recommended. Hats (including hard hats in specified areas) will also provide additional sun protection during the peak (i.e. 10:00 am to 3:00 pm) sun period. Sunglasses should be worn (where appropriate) to protect eyes from effects of UV exposure.

10.5.5 Underground Services

There is the potential for underground services (electricity, natural gas lines, water, telephone, optic fibre, sewer, and stormwater) to be present beneath the work area. The remediation contractor shall ensure that appropriate procedures will be taken to minimise the risk associated with excavation near services.

10.5.6 Aboveground Electrical Hazards

All electrical plant and equipment must comply with the requirements of Australian Standard AS 3000. Handheld portable tools shall comply with AS/NZS 3160 "hand-held portable electric tools" and shall be double insulated.

Cord connected Portable hand lamps shall comply with AS/NZS 3118. A Residual Current Device (RCD) shall protect plug-in Portable equipment, which is connected to a supply above Extra Low Voltage - 12-24volts (including equipment supplied from a generator or welding set). RCD protection shall be provided during maintenance of Portable electrical equipment at all times while the equipment is connected to a power supply above Extra Low Voltage, irrespective of whether power is

switched ON or OFF. RCD's shall comply with AS 3190 and shall be type II units, rated to trip at or below 30 milliamps within 40 milliseconds.

10.5.7 Manual Handling

When lifting or handling heavy objects, use correct lifting techniques, bending the knees not the back. If the item to be lifted is too heavy or awkward for one person to lift, seek assistance from other company employees or use mechanical help.

10.5.8 Noise

Long-term exposure to high levels of noise is unlikely. However, operating machinery may cause significant noise exposures for short periods. Earplugs or earmuffs should be worn in any situation where noise levels make normal conversation difficult.

10.6 Personal Protective Equipment (PPE)

All workers who may come into direct contact with contaminated soil will wear the following personal protective equipment for areas with no ACM exposure risks:

- overalls or long-sleeved collared shirt and long pants;
- heavy duty outer gloves (e.g. leather) where there is a risk of cuts or abrasions, otherwise PVC outer gloves if in direct contact with contaminated soil;
- steel capped boots;
- safety glasses;
- high visibility vest or jacket; and
- hard hat.

It is further noted that additional PPE may be required as part of the WorkCover permitting process. If this occurs, then the above PPE requirements will be upgraded to reflect WorkCover's requirements.

In the event that workers will be exposed to highly odorous soil conditions during remediation works, the following additional PPE should be adopted:

- Impermeable disposable overalls; and
- Half or full-face respirator with organic vapour cartridge (as per action levels identified in Table 10-2.

A PID shall be used to monitor the concentrations of VOCs within the workspace, with the following action levels at which the additional PPE mentioned above is required.

Table 10-2 - Action Levels for Respirator Use

Instrument	Airborne Levels	Level of Protection
PID	< 1 ppm	No additional protection
PID and/or Dräger or Kitagawa tubes	> 1 ppm	Half or full faced respirator*
PID and/or Dräger or Kitagawa tubes	> 10 ppm** or > 1 ppm on the site boundary	Stop work, cover excavation to minimise production of hydrocarbons

*If action levels exceed the action level following 5 minutes, the use of a respirator is required. Organic respirator cartridge to be changed daily.

**10 times the benzene exposure limit as recommended by 3M Respirator Selection Guide.

For areas where a risk of exposure to ACM is present, personal protective clothing should be made from materials that provide protection against fibre penetration and not from wool or other materials that attract fibrous dusts.

All equipment used for the removal of asbestos should be inspected before the commencement of the asbestos removal work, after any repairs and at least once every seven days when it is continually being used. A register with the details of these inspections, the state of the equipment and any repair details should be maintained.

The level of PPE would also need to address / include any other requirements relating to the nature of the activities to be undertaken. Additional PPE may be required at the request of the appropriately asbestos licensed (Class A or Class B) contractor if supervising the works.

All persons engaged in intrusive works within the vicinity of the affected area should wear respiratory protective equipment conforming to the requirements of AS/NZS1716-2003 *Respiratory Protective Devices.*

10.7 Decontamination Procedures

At the end of the asbestos removal work and upon leaving the asbestos removal work area, all PPE must be disposed of as asbestos waste or decontaminated and stored in sealed double bags before being removed from the asbestos removal site to be laundered by a laundry with facilities for laundering asbestos-contaminated materials. PPE should be thoroughly wet before being placed in bags.

The additional decontamination procedures specified below will be followed whenever personnel, plant or equipment leave the site.

Personnel

The following steps should be taken to ensure personnel do not leave the site with potentially contaminated clothing:

- wash boots in clean water;
- remove outer gloves and store for reuse;
- remove overalls (if used) and store for reuse;
- remove respirator and goggles (if used) and store clean for reuse or decontamination, as appropriate;
- thoroughly wash hands and face.

If any part of a worker's body comes into direct contact with any potentially contaminated material, the affected part(s) should be immediately washed with clean water.

Vehicle, Plant, and Equipment

All equipment, including personal protective equipment, will be washed or otherwise cleaned to ensure that contaminated soil, water or dust is removed before it leaves the Site. All plant and equipment will have their outer bodies thoroughly cleaned of soil and sediment before moving off the site.

10.8 Contamination Control Zone

The lunch shed/crib hut and office will be located outside of any contamination control zone and will be designated clean zones. Any personal and plant leaving the contamination zone must undergo appropriate decontamination procedures, in a designated area (decontamination zone) as discussed above, prior to entering the site clean zones.

11 REGULATORY APPROVALS / LICENCING

11.1 State Environment Planning Policy Number 55 (SEPP55) Remediation of Land

The SEPP 55 maintains two categories of remediation work:

- Category 1 – works that require development consent;
- Category 2 – works that may be carried out without development consent.

The proposed remediation works are considered to be classified as “Category 2” Remediation Works.

SEPP 55 requires Council to be notified 30 days before remediation works commence. The notification will provide Council with the information needed to verify the work is Category 2 but with due reference to the following criteria.

- The work is not designated development under schedule 3 of the EP & A Regulation or under a planning instrument;
- The work proposed is not on land identified as critical habitat under the Threatened Species Conservation Act 1995;
- Consideration of s.5A of the EP&A Act indicates the remediation work is not likely to have a significant effect on threatened species, populations, ecological communities or their habitats;
- The work is not proposed in an area or zone identified in a planning instrument as being an area of environmental significance such as coastal protection areas, scenic areas or wetlands;
- Work is not carried out in a manner inconsistent with Council’s policy on contaminated land.

Notice is also required to be given to council within 30 days of remediation works completion.

11.2 Protection of the Environment Operations Act 1997

In relation to the licensing requirements under the Protection of the Environment Operation Act 1997 (POEO Act):

- The works do not fall within the licensing requirements for Contaminated Soil Treatment Works (i.e. works will not incinerate more than 1,000 m^3 of contaminated soil per year, treat and store more than 30,000 m^3 of contaminated soil or disturb more than 3 hectares of contaminated soil); and
- The works do not fall within the licensing requirements for Crushing, Grinding or Separating Works (i.e. works will not process more than 150 tonnes of material per day or 30,000 tonnes of material per year).

All material to be excavated and removed from the site (including associated activities such as classification) will be undertaken in strict accordance with the requirements of the POEO Act 1997. Such requirements include:

- Ensuring waste is classified appropriately and in accordance with relevant guidelines;
- Waste materials are disposed offsite to appropriately licensed facilities; and
- Other materials are removed to facilities lawfully able to accept such materials.

11.3 Protection of the Environment Operations (Waste) Regulation 2014

The regulations make requirements relating to non-licensed waste activities and waste transporting. The proposed works on the site will not require to be licensed. Section 48 of the Regulation requires

that wastes are stored in an environmentally safe manner and that vehicles used to transport waste must be covered when loaded.

The Regulation exempts certain waste streams from the full waste tracking and record keeping requirements. Waste tracking is required only for special and restricted solid wastes.

11.4 Protection of The Environment Operations (Clean Air) Regulation 2010

Requirements in relation to emission from vehicles and general obligations that the occupiers of non-residential premises do not cause air pollution by failing to operate or maintain plant, carry out work or deal with materials in a proper and efficient manner.

11.5 Waste Classification Guidelines, Part 1: Classifying Waste

All wastes generated shall be classified and managed in accordance with the NSW EPA Waste Classification Guidelines (2014).

11.6 Work Health and Safety Act 2011

Requirements in relation to ensure work safety that are enforceable by law.

11.7 Roads and Rail Transport (Dangerous Goods) Act 1997

Transport of waste classified as Dangerous Goods in accordance with Regulations.

11.8 NSW EPA Asbestos and Waste Tyres Guidelines (2015)

Outlines the legal requirements that consignors, transporters, and occupiers of premises must meet in addition to their obligations under the Waste Regulation.

12 CONCLUSIONS

It is considered that the objectives of the onsite remediation will be achieved subject to the successful implementation of the actions contained in this RAP, which will enable the site to be suitable for the proposed upgrades and development at 126 Kent Road, Marsfield.

Validation of on-site soils will be undertaken over the remediation surface across the site by way of a visual inspection and an asbestos clearance certificate. An EMP will need to be prepared as the ACM impacted fill soils will remain on-site within a containment cell.

LIMITATIONS

The findings of this report are based on the scope of work outlined in Section 1.3. Arcadis performed its services in a manner consistent with the normal level of care and expertise exercised by members of the environmental assessment profession. No warranties expressed or implied are made.

Subject to the scope of work, Arcadis' assessment was limited strictly to identifying the environmental conditions associated with the subject property and does not include evaluation of any other issues. The absence of any identified hazardous or toxic materials should not be interpreted as a guarantee that such materials do not exist on the subject property.

Additionally, unless otherwise stated Arcadis did not conduct soil, air, wastewater or other matrix analyses including asbestos or perform contaminated sampling of any kind. Nor did Arcadis investigate any waste material from the property that may have been disposed of at the site or undertake an assessment or review of related site waste management practices.

All conclusions and recommendations regarding the property are the professional opinions of the Arcadis personnel involved with the project, subject to the qualifications made above.

While normal assessments of data reliability have been made, Arcadis assumes no responsibility or liability for errors in any data obtained from regulatory agencies, statements or sources outside of Arcadis, or developments resulting from situations outside the scope of this project.

Arcadis is not engaged in environmental assessment and reporting for the purpose of advertising sales promoting, or endorsement of any client interests, including raising investment capital, recommending investment decisions, or other publicity purposes. The client acknowledges that this report is for the exclusive use of the client.

REFERENCES

Arcadis Australia Pacific Pty Ltd (Arcadis, 27 April 2018) Preliminary Site Investigation

Arcadis Australia Pacific Pty Ltd (Arcadis, 30 July 2018) Due Diligence Soil Contamination Assessment

Arcadis Australia Pacific Pty Ltd (Arcadis, 11 November 2019) Further Supplementary Soil Contamination Assessment

Arcadis Australia Pacific Pty Ltd (Currently being prepared) Asbestos Management Plan

Arcadis Australia Pacific Pty Ltd (Currently being prepared) Unexpected Finds Protocol

AS4482.1 – 2005 Guide to the Sampling and Investigation of Potentially Contaminated Soil Part 1

AS4482.2 – 1999 Guide to the Sampling and Investigation of Potentially. Contaminated Soil Part 2: Volatile Substances

NSW Environment Protection Authority (2015) Guidelines on the Duty to Report Contamination Under the Contaminated Land Management Act 1997

NSW Environment Protection Authority (1995) Sampling Design Guidelines

National Environment Protection Council (NEPC, 10th December 1999) as amended 11th April 2013, *National Environment Protection (Assessment of Site Contamination) Measure* [NEPM]

NSW Office of Environment & Heritage (NSW OEH, August 2011) *Guidelines for Consultants Reporting on Contaminated Sites*

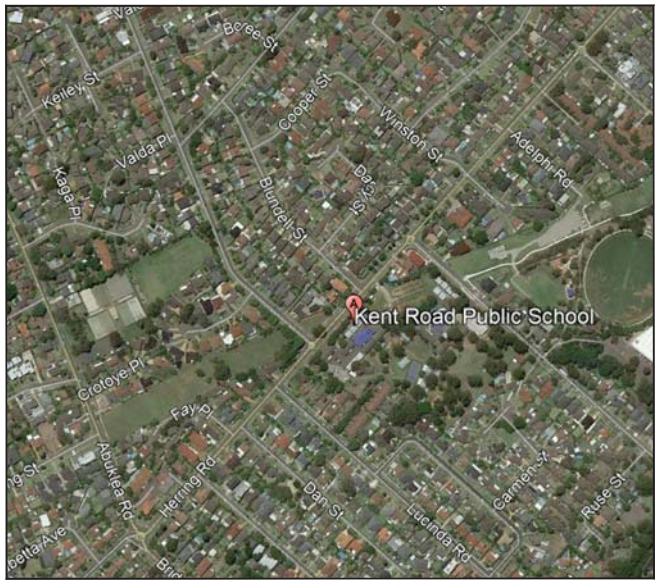
NSW EPA (2014) Waste Classification Guidelines – Part 1: Classification of Waste

WA DOH (2009) Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, WA Department of Health

APPENDIX A FIGURES

COUNTRY

REGION



SITE LOCATION

LEGEND:

Site Boundary

N

KENT ROAD PUBLIC SCHOOL- 126 KENT ROAD
MARSFIELD, NSW, AUSTRALIA

SITE LOCATION PLAN

ARCADIS

FIGURE
1

CITY:EMERYVILLE, CA DIV/GROUP:ENV/CAD DB:A.REYES
E:\OneDrive - ARCADIS\BIM 360 Docs\AUSTRALIA\10034229 Kent Rd, Marsfield\2019\10034229\01-DWG\10034229-Fig1-SLM.dwg LAYOUT: 1 SAVED: 8/30/2019 11:14 AM ACADVER: 23.0S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 8/30/2019 11:14 AM BY: NADIGERA, CHIDAMBARA
XREFS:

LEGEND:

- Site Boundary
- Test Pit Location (2019)
- Borehole Location (2018)
- Study Area Due Diligence Assessment

N

NOTE:

HISTORICAL FEATURE LOCATIONS ARE APPROXIMATE.

0 20 40

SCALE IN METRES

KENT ROAD PUBLIC SCHOOL- 126 KENT ROAD
MARSFIELD, NSW, AUSTRALIA

LOCATION OF SOIL BORES AND TEST PITS FROM PREVIOUS INVESTIGATIONS

ARCADIS

FIGURE
2

CITY:EMERYVILLE, CA DIV/GROUP:ENV/CAD DB:A.REYES
E:\OneDrive - ARCADIS\BIM 360 Docs\AUSTRALIA\10034229 Kent Rd, Marsfield\2019\10034229\01-DWG\10034229-Fig 4 LOSB .dwg LAYOUT: 4 SAVED: 8/30/2019 10:39 AM ACADVER: 23.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 8/30/2019 10:40 AM BY:
NADIGERA, CHIDAMBARA

LEGEND:

- Site Boundary
- Test Pit Location
- 14 m Grid

N

0 20 40

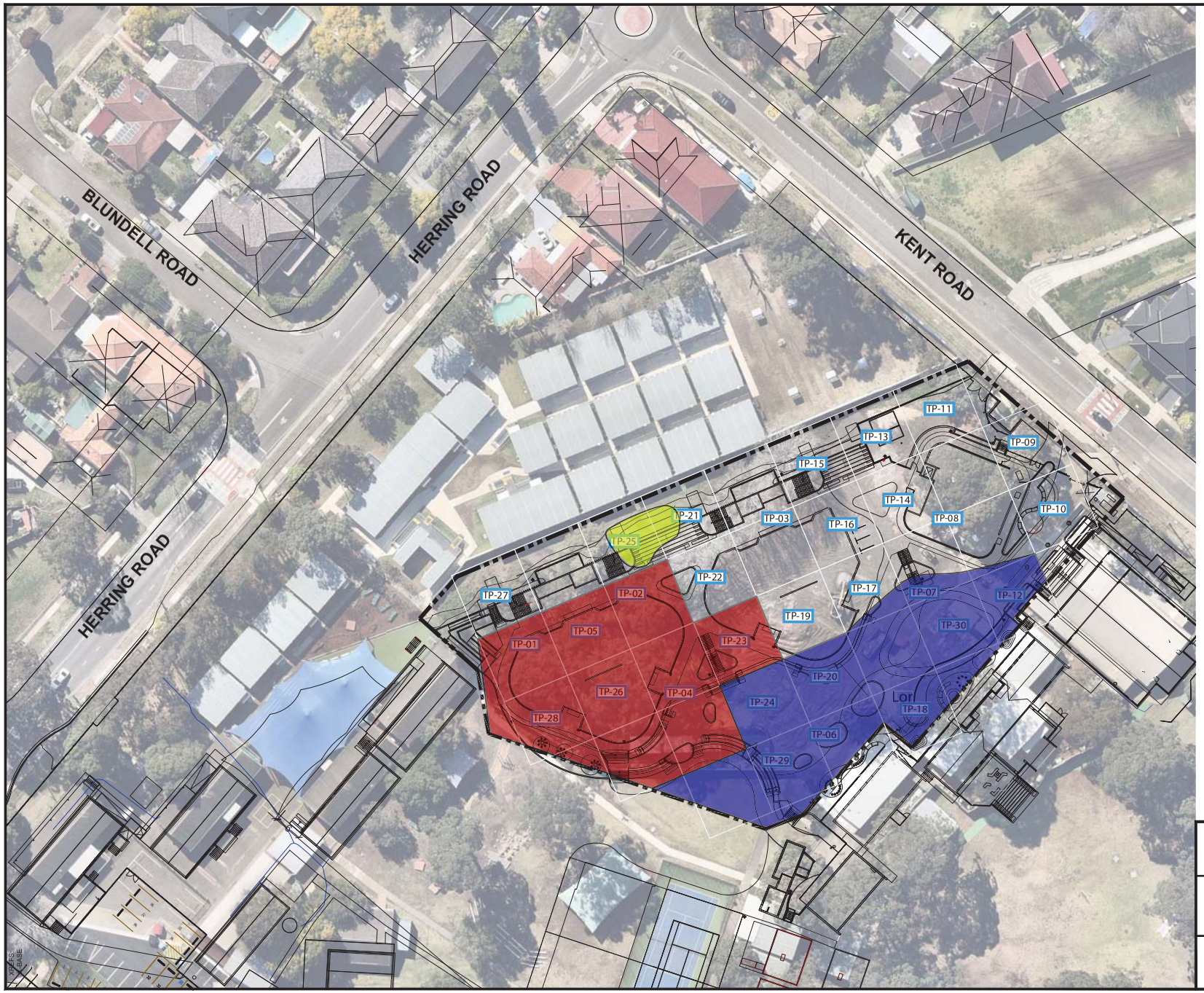
SCALE IN METRES

KENT ROAD PUBLIC SCHOOL- 126 KENT ROAD
MARSFIELD, NSW, AUSTRALIA

TEST PIT SAMPLING LOCATIONS

ARCADIS

FIGURE
3



LEGEND:

- Site Boundary
- Test Pit Location
- 14 m Grid
- GSW CT1 Recyclable
- GSW due to TRH exceedance
- GSW CT1 Recyclable. Providing no ACM is observed when excavating anthropogenic material observed in fill
- Special Waste with GSW matrix

N

0 20 40

SCALE IN METRES

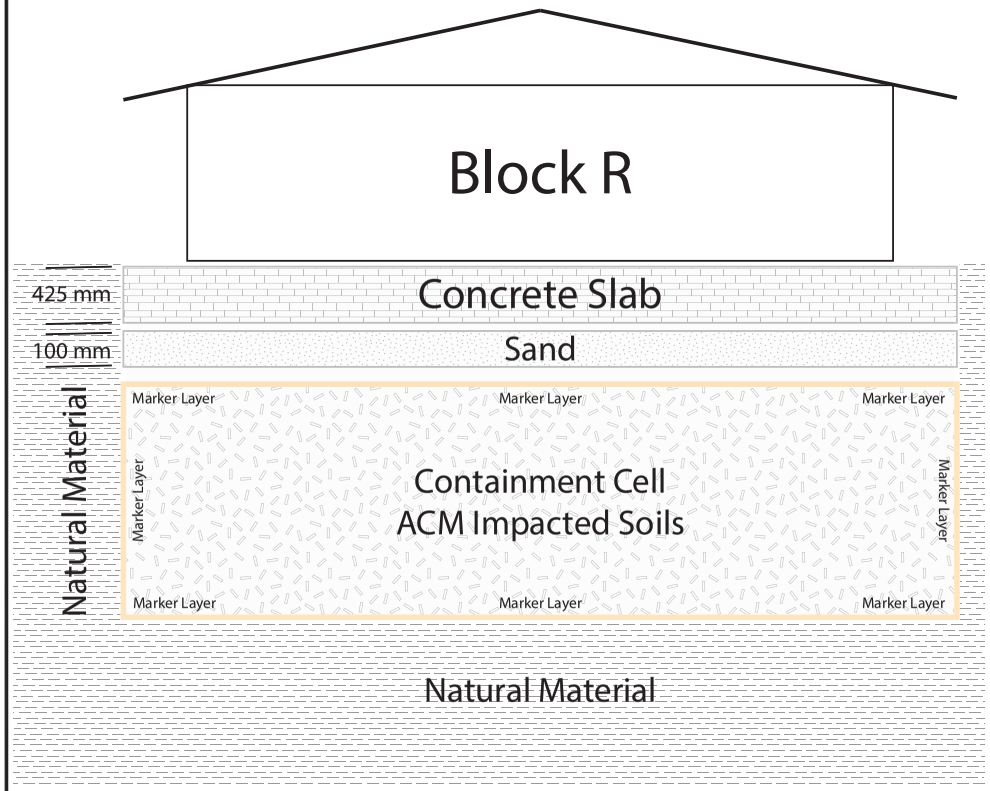
KENT ROAD PUBLIC SCHOOL- 126 KENT ROAD
MARSFIELD, NSW, AUSTRALIA

Indicative Waste Classification

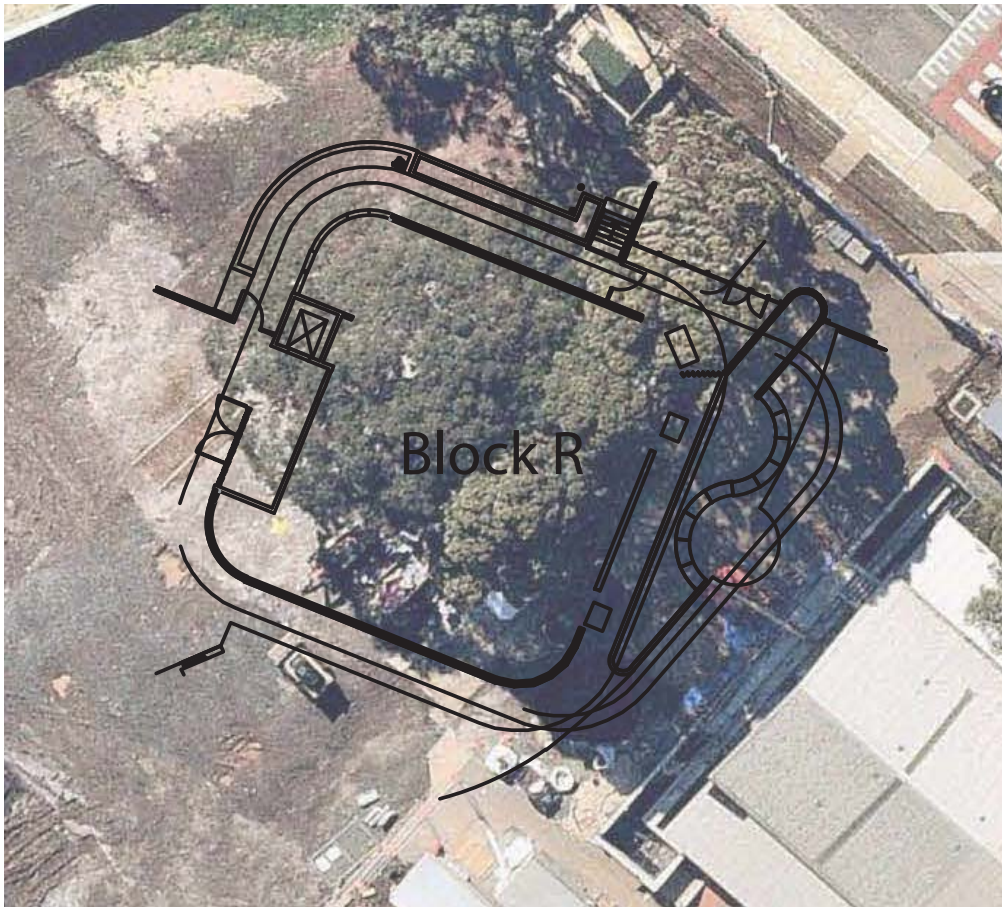
ARCADIS

FIGURE
4

APPENDIX B CONCEPTUAL CONTAINMENT CELL



Block R Containment Cell Design



Block R Containment Area

N

0 10 20

SCALE IN METRES

KENT ROAD PUBLIC SCHOOL- 126 KENT ROAD
MARSFIELD, NSW, AUSTRALIA

ACM Impacted Soil Contaminment

ARCADIS Design & Consultancy for natural and built assets

FIGURE
5

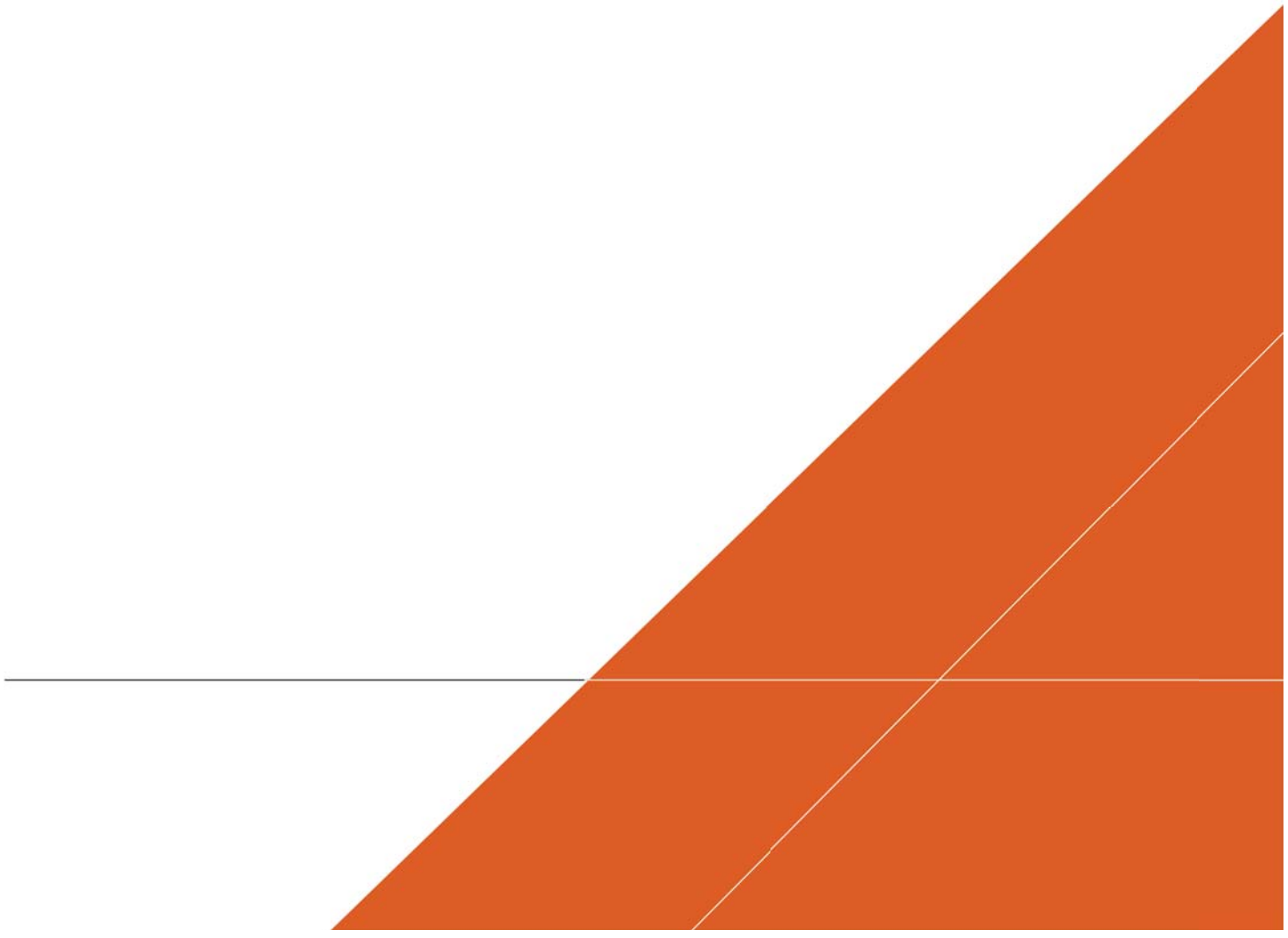
B.20 - Appendix I – Asbestos Management Plan

ARCADIS Design & Consultancy for natural and built assets

ASBESTOS MANAGEMENT PLAN

126 Kent Road, Marsfield NSW 2122

21 NOVEMBER 2019



CONTACT

LOEK MUNNICHS
Principal Environmental Consultant (CEnvP – CL)

T (02) 8907 3912
M +61 423 633 440
E loek.munnichs@arcadis.com

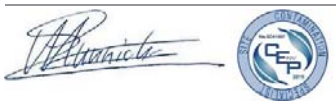
Arcadis
Level 16, 580 George Street
Sydney NSW 2000

Copyright © 2015 Arcadis. All rights reserved. arcadis.com

ST HILLIERS (NSW) PTY LTD 10035770

Asbestos Management Plan

126 Kent Road, Marsfield NSW 2122

Author	Pragya Mathema, Environmental Engineer	
Checker/ Approver	Loek Munnichs, Principal Environmental Scientist (CEnvP - CL)	

Report No	10035770_RAP
Date	21/11/2019
Revision Text	V0

This report has been prepared for St Hilliers (NSW) Pty Ltd in accordance with the terms and conditions of appointment for the proposal dated 12 November 2019. Arcadis Australia Pacific Pty Limited (ABN 76 104 485 289) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

REVISIONS

Revision	Date	Description	Prepared by	Approved by
V0	21/11/2019	Finalised for client – still waiting on the auditor's comments	PM	LM

CONTENTS

1 INTRODUCTION **1**
1.1 Project Background **1**
1.2 Asbestos Containing Material **1**

2 LEGISLATION AND GUIDELINES **3**

3 ROLES AND RESPONSIBILITIES **4**
3.1 Project Manager **4**
3.2 Site Workers / Sub-Contractors **4**
3.3 Environmental Consultant **4**
3.4 Licenced Asbestos Contractor **5**
3.5 Reviewing the Asbestos Management Plan **5**
3.6 Accessing the Asbestos Management Plan **6**

4 ENVIRONMENTAL MANAGEMENT **7**
4.1 Identification of Additional Material Suspected of Containing Asbestos **7**

5 HEALTH AND SAFETY MANAGEMENT **8**
5.1 AMP Audience and Availability **8**
5.2 AMP Induction Requirements **8**
5.3 Personal Protective Equipment (PPE) **8**
5.3.1 Using and Maintaining Respiratory Protective Equipment 9
5.4 Records **9**
5.5 Managing of Risks **10**
5.6 Procedure for Management of Bonded Asbestos **10**
5.7 Procedure for Management of Friable ACM ..... Error! Bookmark not defined.
5.8 Procedure for the Disposal of ACM Material **11**

6 HEALTH AND SAFETY (ASBESTOS MATERIAL ASSESSMENT AND REMOVAL) **14**
6.1 Potential Exposure Pathways **14**
6.2 Training Requirements **14**
6.2.1 Worker Induction 15
6.2.2 Worker Training 15
6.3 Required Preparation Works **16**
6.4 Health and Air Monitoring **16**

7 HEALTH AND SAFETY (EARTHWORKS AND EXCAVATION WORKS) **18**
7.1 Personal Protective Equipment (PPE) **18**
7.2 Safe Work **18**
7.3 On-site Management **18**
7.3.1 Soil Management 18

7.3.2 Air Quality Management 19
7.4 Decontamination 19
7.4.1 Decontamination of Tools, Equipment, or Machines 19
7.4.2 Personal Decontamination Procedures 20
8 VARIATIONS TO THE AMP 22
9 REFRENCES 23

APPENDICES

APPENDIX A FIGURES
APPENDIX B INDUCTION REGISTER
APPENDIX C ASBESTOS REGISTER

1 INTRODUCTION

Arcadis Australia Pacific Pty Ltd (Arcadis) was commissioned by St Hilliers (NSW) Pty Ltd (St Hilliers) to prepare an Asbestos Management Plan (AMP) at 126 Kent Road, Marsfield NSW 2122 (herein known as 'the site') to address the conditions within the State Significant Development Approval (SSDA). The location of the subject site is shown on **Figure 1, Appendix A**).

1.1 Project Background

The Site is currently occupied by Kent Road Public School, and Schools Infrastructure have a SSDA to undertake development and upgrade works to the school, subject to a number of planning conditions (Conditions B8, B9, B10, D26, D27 and D28 relate specifically to Site Contamination). Arcadis understands that building alterations and additions are currently proposed to be made on the area of interest on the site as part of ongoing school upgrades.

The site has no history of industrial or commercial use and accordingly does not have a high potential risk for extensive contamination and was used primarily for residential or educational purposes since 1960s. Prior to the 1960s, the site was used for agricultural purposes (potentially market gardens and orchards).

During intrusive investigations completed by Arcadis between 30 September and 2 October 2019, fragments of PACM were observed to be scattered across some of the surface of the site. Ten fragments were collected and given their similarity in appearance; three representative fragments were analysed for asbestos. Laboratory analysis confirmed the material to be ACM and therefore the NEPM criteria of no visible asbestos in surface soil has been exceeded. ACM was identified and confirmed by laboratory analysis within the fill profile below 10 cm at three (3) of the thirty two (32) locations (TP1, TP4, and GB2) which exceeded the land use criteria of 0.01% (Residential with access to soils) with the results showing the following ACM concentrations:

- TP1 (0.054 w/w%);
- TP4 (0.019 w/w%); and
- A GB2 collected from the garden bed (0.008 w/w%).

In addition to where bonded ACM has been reported, anthropogenic materials were observed within the fill material in approximately one third of the locations, comprising of tiles, brick, glass and general poor-quality fill building rubbish. The garden beds also appeared to contain poor quality fill with PACM visually observed in and around many of the raised beds.

Following the Further Supplementary Soil Contamination Assessment (Arcadis, November 2019), together with the preliminary SSDA conditions issued to Schools Infrastructure, the Department of Education (DoE) commissioned Arcadis to prepare a RAP to ensure that the site could be made suitable for desired land use. The RAP detailed a combined 'cap and containment' and 'excavation' approach to remediate the site to be suitable for the proposed upgrades and development.

1.2 Asbestos Containing Material

Asbestos is a term for a group of six naturally occurring mineral fibres belonging to two groups:

- Serpentine Group – comprised of only chrysotile (white asbestos); and
- Amphibole Group – comprised of anthophyllite, amosite (brown asbestos or grey asbestos), crocidolite (blue asbestos), tremolite, and actinolite.

Most Asbestos Containing Materials (ACM) found in the urban environment come in the form of bonded (non-Friable) or commonly referred to as 'Fibro'. When bonded materials are exposed to certain conditions, the bonding agent (usually cement) can breakdown causing the bonded ACM to become friable. Asbestos only poses a risk to human health when asbestos fibres are made airborne and inhaled or ingested. When asbestos is bound in a matrix such as a cement or resin, it is not readily made airborne except through substantial physical damage. Severe weathering or damage (including by

vehicle movements) to bonded ACM may also result in the formation of friable asbestos (comprising fibrous asbestos (FA) and asbestos fines (AF)).

The Work Health and Safety (WHS) Regulations require that, where asbestos is identified as contaminating a workplace, a register and asbestos management plan be created for the site.

The management and remediation of sites contaminated with asbestos from illegal dumping, uncontrolled filling and demolition works is a specialised task. In some instances, site remediation may entail removal of asbestos and ACM from the site; in other cases, this may not be practicable, and other management strategies should be used. Engaging specialist asbestos removalists is highly recommended for all but the most minor of non-friable contaminations. For the removal and remediation of the asbestos at the site at 126 Kent Road, Marsfield, NSW 2122, a Class B contractor should be engaged.

A person with management or control of a workplace must ensure a written asbestos management plan (AMP) is prepared for the workplace if asbestos or ACM has been identified or assumed present or is likely to be present from time to time at the workplace. The asbestos management plan must be maintained to ensure the information is up to date.

2 LEGISLATION AND GUIDELINES

All works on the site must be undertaken with all due regard to the environment and to statutory requirements. Work on site is to comply with the requirements of the following NSW legislation and guidelines:

- WorkSafe Australia; How to manage and control asbestos in the workplace - Code of Practice, 2018;
- WorkSafe Australia; How to safely remove asbestos - Code of Practice (2018);
  - The Codes of Practice are approved code of practice under section 274 of the Work Health and Safety Act (the WHS Act);
  - Adopted in full by WorkCover NSW;
- Protection of the Environment (Operations) Act 1997;
- Protection of the Environment Operations (Waste) Regulation 2014;
- NSW Environment Protection Authority (2014) Waste Classification Guidelines;
- NSW Safework (2014) 'Managing asbestos in or on soil';
- National Environment Protection (Assessment of Site Contamination) Measure 1999 amended May 2013 (ASC NEPM 2013).

According to The Work Health and Safety **Act 2011** (the **WHS** Act) Section 47 - *The WHS Act requires the person conducting a business or undertaking to consult, so far as is reasonably practicable, with workers who carry out work who are (or are likely to be) directly affected by a work health and safety matter*.

The presence of asbestos on the site and the existence of an AMP are to be explained to all site workers as part of the general site induction, and not only to those who may be completing asbestos related works. Refer to **Appendix B** for an example of an Induction Register.

Note that, discussion of asbestos issues in the induction is not to inform workers how to do work related to asbestos, as they are required to be licenced, rather it is to inform all workers that:

- Asbestos exists within the soils on the site;
- The requirements for works requiring the penetration of surfaces (E.g. drilling or cutting into existing surfaces);
- Intrusive earthworks or surface disturbance in areas of the site where asbestos has been identified;
- A copy of the AMP is to be maintained on site during the course of site works/operations.

3 ROLES AND RESPONSIBILITIES

A guide to the roles and responsibilities of the stakeholders is presented in the following sections.

3.1 Project Manager

The Project Manager (PM) nominated by St Hilliers who is responsible for the daily operations of the site, will be responsible for the implementation, maintenance and compliance with the requirements of this AMP. The PM or equivalent representative will be responsible for the following:

- Ensuring that all contractors who will undertake work on the site are inducted and understand the potential contamination issues related to this site.
- Maintaining the following records during the life of the project:
  - Details of all inducted personnel approved to undertaken work on the site. As outlined in Section 5.2;
  - Records of unexpected finds on the site. This is further detailed in the Unexpected Finds Protocol (UFP) that is currently being prepared by Arcadis;
  - Assessment reports for the classification of soil (e.g. application for the disposal of soil as waste);
  - Records of approvals to remove or dispose soil from the site; and
  - Soil tracking information for material that is either removed from the site or brought to the site for use.

3.2 Site Workers / Sub-Contractors

Any sub-contractors engaged to conduct work on the site will be required to comply with the AMP by:

- Ensuring they are inducted and where appropriate, understand the requirements of the AMP.
- Report to the PM any occurrences of material suspected of containing asbestos.
- Undertake any tasks as required by the PM.

3.3 Environmental Consultant

A suitably qualified environmental consultant should be available to provide advice and support should material considered to be potential ACM be encountered. The primary responsibilities of the environmental consultant are as follows:

- When required, undertake an assessment of risk for material suspected of being ACM or contaminated by asbestos.
- Provide advice to the PM with regards to the management or disposal of contaminated soil. This may include recommendations for further assessment or disposal of contaminated material.
- When ACM is suspected, the material is to be sampled and tested, and then treated appropriately as a result of the testing.
- In the case that offsite disposal is either required or desirable, the environmental consultant shall:
  - Undertake sampling as required for the classification of contaminated material in accordance with the relevant legislation and guidelines;
  - Prepare correspondence for submission to the consent Authority and/or the Auditor (if required) for the removal of soil from the site, or the containment of the impacted soil on the site, within a containment cell. Arcadis notes that a RAP has been prepared for the site.

3.4 Licenced Asbestos Contractor

In accordance with the WHS Regulation 458:

> *A person conducting a business or undertaking who commissions the removal of asbestos at the workplace must ensure asbestos removal work is carried out only by a licensed asbestos removalist who is appropriately licensed to carry out the work, unless specified in the WHS Regulations that a licence is not required.*

There are two types of licences: Class A and Class B, refer Table 3-1 below. The type of licence required will depend on the type and quantity of asbestos or ACM that is being removed at a workplace.

Table 3-1 Asbestos Licences

Type of Licence	What asbestos can be removed?
Class A	Can remove any amount or quantity of asbestos or ACM, including: • Any amount of friable asbestos or ACM • Any amount of Asbestos-contaminated dust or debris (ACD) • Any amount of non-friable asbestos or ACM
Class B	Can remove • Any amount of non-friable asbestos or ACM Note: A Class B licence is required for removal of more than 10 m^2 of non-friable asbestos or ACM but the licence holder can also be removed up to 10 m^2 of non-friable asbestos or ACM. • ACD associated with the removal of non-friable asbestos or ACM. Note: A Class B licence is required for removal of ACD associated with the removal of more than 10 m^2 of non-friable asbestos or ACM but the licence holder can also remove ACD associated with removal of up to 10 m^2 of non-friable asbestos or ACM.
No Licence Required	Can remove: • Up to 10 m^2 of non-friable asbestos or ACM • ACD that is: – Associated with the removal of less than 10 m^2 of non-friable asbestos or ACM – Not associated with the removal of friable or non-friable asbestos and is only a minor contamination.

For the removal and remediation of the asbestos at the site at 126 Kent Road, Marsfield, NSW 2122, a Class B contractor should be engaged.

Examples of tasks which typically do and do not require an appropriate licence are provided in Section 1.2 of the WorkSafe Australia; How to safely remove asbestos - Code of Practice, 2018.

3.5 Reviewing the Asbestos Management Plan

The PM or Construction Manager must ensure the asbestos management plan is reviewed and, if necessary, revised at least once every five years or when:

- There is a review of the asbestos register or a control measure;
- Asbestos is removed from or disturbed, sealed or enclosed at the workplace;
- The plan is no longer adequate for managing asbestos or ACM at the workplace;

- A health and safety representative requests a review if they reasonably believe that any of the matters listed in the above points affects or may affect the health and safety of a member of their work group and the asbestos management plan was not adequately reviewed.

Based on the RAP (Arcadis, 19 November 2019), ACM impacted soils will be capped and contained underneath a building. This AMP is no longer applicable after these remediation works have been completed.

3.6 Accessing the Asbestos Management Plan

According the requirements of WHS Regulation 429, the PM must ensure the AMP is readily accessible to:

- Workers who have carried out, carry out or intend to carry out work at the site;
- Health and safety representatives who represent workers that carry out or intend to carry out work at the site;
- A person conducting a business or undertaking who has carried out, carries out or intends to carry out work at the site; and
- A person conducting a business or undertaking who has required, requires or intends to require work to be carried out at the site.

The AMP should be kept at the site to ensure it is accessible.

4 ENVIRONMENTAL MANAGEMENT

4.1 Identification of Additional Material Suspected of Containing Asbestos

Asbestos or ACM have been detected in fill material at the site with the distribution being concentrated around the area to the west of the site, localised to the raised garden beds (outlined in red in **Figure 2, Appendix A**). In addition, fill materials located towards the southern portion of the site (outlined in blue in **Figure 2, Appendix A**) were observed to contain anthropogenic inclusions. The potential for additional ACM, therefore, cannot be discounted in all fill materials across the site.

Should additional material be encountered that is suspected of containing asbestos or other unexpected finds, then work must stop immediately, and the PM must be informed of the presence of the material. The following actions are to be undertaken:

- In accordance with WHS Regulation 422, a person with management or control of a workplace (in this case St Hilliers PM) must:
  - assume the material is asbestos or ACM if it cannot be identified but a competent person reasonably believes it is asbestos or ACM; and
  - assume asbestos is present if part of the workplace is inaccessible and it is likely to contain asbestos or ACM.
- It is not necessary to engage a competent person to identify asbestos if the person with management or control of the workplace assumes that asbestos is present or if that person has reasonable grounds to believe that asbestos is not present;
- Material that is suspected of containing asbestos must be labelled or signposted as contaminated with asbestos. Signs notifying site workers of the presence of asbestos must be placed on barricades around the area if uncontrolled, to limit the potential for inadvertent exposure;
- All suspicious material must be assumed to contain asbestos until it has been proven otherwise by laboratory analysis; and
- Once positively identified all suspicious material and other unexpected finds are to be surveyed and logged in an Unexpected Finds Register. Further details on unexpected finds will be provided in the Unexpected Finds Register that is currently being prepared by Arcadis.

5 HEALTH AND SAFETY MANAGEMENT

5.1 AMP Audience and Availability

This AMP provides guidance for safe work practices to protect against possible adverse exposure to occurrences of possible ACM on the site. The AMP is to be made freely available to all onsite staff and sub-contractors whose work has the potential to come into contact with ACM on the site.

5.2 AMP Induction Requirements

Prior to commencing work on the site, especially that has been pre-classified as 'Special Waste – GSW' (the red outlined area in **Figure 2, Appendix A**), all workers must be inducted into the AMP.

The initial induction for staff of the St Hillier's nominated PM and other key contractor personnel must be done prior to commencing earthworks on the site.

The induction must outline the following topics:

- Details of the project;
- Brief history of the site;
- The possibility of contamination being present;
- How to identify material suspected of containing contamination;
- Procedures in the event suspicious material is encountered;
- Requirement for approval from the appropriate regulatory authority to remove any material from the site.

Records of personnel inducted into the AMP must be maintained by the PM, until the conclusion of the project.

5.3 Personal Protective Equipment (PPE)

PPE plays a major role in the protection against exposure to asbestos. The recommended PPE that should be available to all workers whose work has the potential to result in contact with ACM includes:

- Safety glasses;
- Safety boots;
- Coveralls / long-sleeved short and long pants;
- Protective gloves;
- Dust masks to protect against inhalation of dusts and asbestos fibres (for example a Class P2 or P3 mask conforming to AS/NZS 1716:2003 'Respiratory Protection Devices'; and
- Single use disposable coverall suit for protection against asbestos fibres.

It is the responsibility of the person in control of the site (PM from St Hilliers) to ensure that workers on the site have the appropriate PPE and that it is used when necessary. PPE must be inspected for damage, correctly fitted, cleaned and maintained.

Note that additional PPE to that listed above may also be required for specific occupational tasks, and / or in the event that potential ACM is encountered. For the latter, specific task specific guidance regarding additional PPE is to be provided by a licensed asbestos assessor.

The PPE Requirements should be reviewed in consultation with the Asbestos hygienist after sufficient air monitoring data is available.

All persons engaged in intrusive works within the vicinity of the affected area should wear respiratory protective equipment conforming to the requirements of AS/NZS1716-2003 Respiratory Protective Devices.

5.3.1 Using and Maintaining Respiratory Protective Equipment

Respiratory Protective Equipment (RPE) must be worn at all times in the asbestos removal areas and until the appropriate stage of personal decontamination.

All workers undertaking any asbestos removal work must receive instruction and training in:

1. Fit testing/checking;
2. The importance of a correct facial fit;
3. The correct method of using their respirators;
4. The procedures for regular cleaning, inspection and maintenance of respirators before use; and
5. When to stop asbestos removal work and leave the area if they think their RPE is not working properly.

The respirator must be worn in accordance with the manufacturer's instructions and the coverall hood must go over the respirator straps. It should be examined in accordance with the manufacturer's instructions before use to ensure that it is not damaged and is in good working order. Respirator defects should be reported immediately to the asbestos removal supervisor. The pre-use examination should include an inspection of:

- The condition of the straps and face piece, including the seal and the nose piece;
- The condition of the exhalation valve; and
- A fit check.

Non-disposable respirators should be cleaned, disinfected and stored in a safe place away from the asbestos-contaminated removal area.

The length of time a particulate filter can be used for the asbestos removal work depends on the resistance to breathing and damage to the filter. The filter should be replaced if damaged or when resistance increases. A damaged filter must be replaced before resistance begins to increase. The replacement should be according to the manufacturer's instructions.

Certain brands of filters may not be usable after being exposed to certain conditions such as a full decontamination shower. Specific advice should be sought from the supplier regarding the effectiveness of a filter after being subjected to certain conditions.

All parts, including filters, valves and seals, should be inspected before and after each use. Respirator defects should be reported immediately to the supervisor for repair or replacement. A system of regular cleaning, inspection and maintenance of non-disposable respirators should be in place to ensure they are clean and in a safe working condition.

Records of all respirator issues, uses and maintenance should be kept up-to-date. At the end of a shift or at a break, as part of the decontamination process, ensure the respirator is taken off last.

5.4 Records

Detailed records must be kept regarding implementation of the AMP. The PM and their sub-contractors will maintain relevant records, including but not necessarily limited to the following:

- Records regarding correspondence relating to notification of site access issues including;
  - Unauthorised access to site;
  - Workers undertaking tasks without the proper induction; and/or
  - Workers undertaking tasks without the appropriate licencing;

- Records regarding AMP familiarisation including:
  - Who has been familiarised with the requirements of the AMP including their signature confirming their understanding of the AMP requirements;
  - The name of their employer / organisation;
  - When the person was trained;
  - The name, signature and employer / organisation of the Supervisor who is confirming the AMP familiarisation has taken place; and
- Copies of any training certificates applicable to the type of work to be conducted at the site, conducted by the worker as it pertains to the requirements of the AMP.
- Records regarding maintenance and / or construction workers undertaking works with the potential to disturb soil (for example, names of contractors, personnel and companies, type and date of work, locations and depths, confirmation of asbestos awareness course training);
- Details of any potential ACM observed which is not recorded on the Site Asbestos Register and associated follow-up actions;
- Details of any environmental issues / complaints associated with any works pertaining to ACM or potential ACM (irrespective of the form of the communication), including the name and contact details of the person making the complaint, date and time of the complaint, and the associated corrective measures.

The complaint register along with all records are to be maintained on the Site and be available for inspection by the Regulator.

5.5 Managing of Risks

Non-friable asbestos, previously referred to as ‘bonded asbestos’, in sound condition represents a low human health risk. However, friable asbestos materials or damaged, crumbling bonded asbestos, have the potential to generate, or be associated with, free asbestos fibres and therefore must be carefully managed to minimise the release of asbestos fibres into the air. Non-friable asbestos is asbestos that is bound in a matrix such as cement or resin. ‘Fibro’ is the most common form of non-friable asbestos. When in a sound condition, the potential for these materials to release fibres is relatively low.

Friable asbestos is usually in the form of loose asbestos that is not bound together. The most common forms of friable asbestos are thermal lagging used on steam pipes, boilers, as fire protection, ceiling insulation and the like, and raw asbestos waste from asbestos products manufacturing. Friable asbestos can usually be broken up or crumbled using hand pressure to generate free fibres. If it is disturbed, friable asbestos has the potential to generate significant quantities of airborne fibres, and because of this requires a high level of control.

Work that involves the disturbance of vegetation, soils or the movement of machinery on the site must be made aware of the potential for non-friable ACM becoming friable due to weathering, deterioration or machinery movement. This type of work will increase the risk of exposure levels.

5.6 Procedure for Management of Bonded Asbestos

Only workers who have been appropriately trained in asbestos removal techniques, that include identification, safe handling and suitable control measures, may conduct asbestos removal work or asbestos related work at a workplace. SafeWork Australia has published ‘How to safely remove asbestos code of practice’ (2018) which provides additional information on safety standards when removing asbestos.

For non-friable asbestos totaling greater than the equivalent of 10 m^2 of fibro sheet or fragments, only a class A or B asbestos removal licence holder may conduct the asbestos removal work. If there is uncertainty about the quantity of asbestos material, a licensed removalist (Class A) must be engaged. All workers involved in removing fragments of non-friable asbestos constituting a total of greater than

10 m^2 of fibro, must hold current certification showing that they have successfully completed the approved non-friable removal course.

The following procedures must be followed to effectively manage the handling and movement of asbestos impacted soils (if encountered):

- Set up of exclusion zone around asbestos impacted areas including visible signage notifying workers of the presence of asbestos within the area;
- Site inductions for workers conducting non-asbestos related work and workers handling the asbestos impacted materials or surface ACM;
- Emu bob (hand-picking) to remove ACM fragments from the surface by suitably qualified asbestos personal/contractor or personnel trained to handle ACM removal;
- All ACM should be double bagged in plastic bags identified with Asbestos labelling clearly marked on the outside;
- Suitable PPE including dust masks that conform to the Australian/New Zealand Standard 1715 Selection, Use and Maintenance of Respiratory Protective Equipment (usually a class P2 twin strap disposable respirator is appropriate for asbestos) must be worn along with cut resistant gloves. Disposable coveralls should be used to prevent the contamination of clothing and footwear. All PPE should be a 'wear once only' usage. Keep the respirator on until the work session has been completed, the cleaning is done, and contaminated clothing and PPE has been removed, bagged and sealed;
- Any machinery (i.e. excavators and / or trucks) that are required to conduct work on the site will need to be enclosed (windows wound to the full up position) with re-circulatory air functioning. Movement outside of the vehicle should be conducted with the required PPE. Equipment and PPE must be handled as outlined in Section 5.3;
- Excavation of service trenches or other earth disturbing activities should have the additional procedures undertaken;
  - Air monitoring during removal of asbestos impacted soils;
  - Excavation of asbestos impacted soils to ensure full removal of impacted soils by Class-B licensed removalists;
  - Movement of impacted materials directly from work zone via tip truck to the containment cell. No long-term stockpiling of impacted soils is permitted. Stockpiling of impacted soils, unless conducted on appropriately sealed ground requires additional sampling of the stockpile footprint to ascertain that no residual impacted soils are present onsite;
  - Wetting down of materials during excavation works, transportation, backfilling and surrounding areas while excavation of impacted soils occurs; and
  - Provide and maintain a decontamination area for workers and vehicles.

5.7 Procedure for the Disposal of ACM Material

No ACM impacted soils are planned to be disposed of off-site as the impacted soils will be relocated to a containment cell beneath one of the proposed building blocks which is located on-site. However, if there is a requirement to dispose of asbestos waste off-site the following should be undertaken.

If material is to be disposed to landfill, the assessment and classification and subsequent disposal must be in accordance with the applicable NSW EPA (2014) *Waste Classification Guidelines, Part 1: Classifying Waste*. This may involve analytical testing for the site chemicals of concern. Provisions for temporary storage of excess spoil in an environmentally responsible manner prior to disposal must be undertaken, including:

- Dust suppression;
- Placement of material on a sealed or plastic lined surface;
- Covering of all excavated/stockpiled material; and

- Construction of sediment retention features around stockpiled materials.

Asbestos waste must be disposed in accordance with the regulatory requirements under clause 42 of the Protection of the Operations (Waste) Regulation 2014 which apply to asbestos waste and includes:

- Asbestos waste stored onsite prior to disposal must be done so in an environmentally safe manner;
- Non-friable asbestos must be securely packaged at all times;
- Friable asbestos (if encountered) must be kept in a sealed container;
- Asbestos contaminated soil must be wetted down;
- All asbestos waste must be transported in a covered, leak-proof vehicle (applicable to asbestos impacted soil);
  - This requirement should be adopted for both onsite and offsite transport of asbestos waste;
- Asbestos waste can be disposed of:
  - Onsite if regulatory and development approval is secured prior to the disposal; or
  - At a landfill site that can lawfully receive this waste. It is recommended that the landfill is contacted beforehand to find out if the facility can receive the waste and whether there may be any special requirements;
- It is illegal to dispose of asbestos waste in domestic garbage bags;
- It is illegal to re-use, recycle or dump asbestos waste.

If friable asbestos waste requires disposal, then only a person with a Class A removal license is permitted to remove the waste material and air monitoring will be required to be undertaken by a licensed asbestos assessor.

If more than 100 kg of asbestos waste or 10 m^2 of asbestos sheeting is proposed to be removed from the Site, then information is to be provided to the EPA, under the NSW EPA Asbestos and Waste Tyre Guidelines 2015. This guideline contains the legal requirements that consignors, transporters and occupiers of premises must meet in addition to the Waste Regulations.

It is recommended that the requirements provided within the guidelines for the offsite transport and disposal of asbestos or other waste types are similarly adopted, as appropriate, as best practice for management of the onsite transport and disposal of asbestos and inert wastes.

From the guidelines, the following requirements for transporting Asbestos Waste are noted:

- A transporter of Asbestos Waste must be registered as a transporter of Asbestos Waste on WasteLocate before any transport of Asbestos Waste is to occur.
- The transporter of Asbestos Waste must provide the following information to the NSW EPA upon registration on WasteLocate (https://wastelocate.epa.nsw.gov.au) no later than on delivery of its first load of Asbestos Waste to the receiving facility:
  - Name and address of the transporter;
  - Mobile telephone number of the transporter's registered driver;
  - Email address of the transporter;
  - Trading name or agency name of the transporter;
  - Drivers licence number of the transporter's registered driver;
  - Postal address of the transporter, if different from address;
  - Primary telephone number of the transporter;
  - The Australian Business Number (ABN) for the transporting company (if the entity has an ABN); and
  - WorkCover licence number of the transporter, if held.

- The transporter of a load of Asbestos Waste must provide the following information to the NSW EPA by using WasteLocate before the transportation of any load of Asbestos Waste:
  - The type of Asbestos Waste in the load;
  - Vehicle registration; and
  - Number of the vehicle driven by the transporter's registered driver for the specific consignment.

6 HEALTH AND SAFETY (ASBESTOS MATERIAL ASSESSMENT AND REMOVAL)

This section describes the process that should be considered prior to undertaking any earthworks. ACM at the site requires careful management in order to mitigate potential health risks to occupants of the site.

Planning requirements for the removal of ACM can differ greatly, depending on the specific asbestos removal task, the type, location, quantity and condition of the ACM to be removed, whether there are workers or other persons nearby and many other factors. Any misunderstanding could lead to the use of unsafe removal methods, potentially endangering the health of asbestos removal workers, persons in adjoining properties and local residents.

6.1 Potential Exposure Pathways

Workers involved in disturbing the known impacted soil, and surrounding stakeholders, could be exposed by:

- Respiration of dust or potential fibres generated from the soil;
- Dermal contact with asbestos contaminated soils;
- Ingestion of asbestos contaminated soils; and
- Possible secondary exposure from contaminated equipment or clothing.

Planning of the earthworks involving exposure and / or disturbance of ACM impacted soils that has been pre-classified as 'Special Waste – GSW' (the red outlined area in **Figure 2, Appendix A**, including any unexpected finds) and implementation of appropriate health and safety measures, will minimise the potential for contact with contaminated materials through the above listed pathways.

All machinery (i.e. excavators and / or trucks) that are required to conduct work on or pass over the site will need to be enclosed (windows wound to the full up position) with re-circulatory positive pressure cab. Movement outside of the vehicle should be conducted with the required PPE. Equipment and PPE must be handled as outlined in Section 5.3 and 7.4 unless done in a designated clean area of the site.

6.2 Training Requirements

If not already covered in the general site induction the person in control of the site must ensure that information, training and instruction provided to a worker is suitable and adequate, having regard to:

- The nature of the work carried out by the worker;
- The nature of the risks associated with the work at the time the information, training or instruction is provided; and
- The control measures implemented.

The person in control of the site must, so far as is reasonably practicable, ensure the information, training and instruction is provided in a way that is readily understandable by any person to whom it is provided.

The person in control of the site must ensure workers who they reasonably believe may be involved in asbestos removal work in the workplace or the carrying out of asbestos-related work are trained in the identification, safe handling and suitable control measures for ACM, Friable Asbestos (FA) and Asbestos Fines (AF).

This training should include the following topics:

- Purpose of the training;
- Health risks of asbestos;

- Types, uses and likely presence of asbestos in the workplace;
- The worker's roles and responsibilities under the asbestos management plan;
- Where the AMP is located, how it can be accessed and how to understand the information contained in it;
- Processes and safe work procedures to be followed to prevent exposure, including exposure from any accidental release of airborne asbestos;
- Where applicable, the correct use of PPE including Respiratory Protective Equipment (RPE);
- The implementation of control measures and safe work methods to eliminate or minimise;
- The risks associated with asbestos to limit the exposure to workers and other persons;
- Exposure standard and control levels for asbestos; and
- Purpose of any exposure monitoring or health monitoring that may occur.

The training for earthworks contractors is more general than the training that a worker undertaking asbestos removal work would receive. Further information on these specific training requirements is available in the Code of Practice: How to Safely Remove Asbestos (2018). Records of all training must be kept while the worker is carrying out the work and for five years after the day the worker stops carrying out the work. These records must also be available for inspection by the regulator.

6.2.1 Worker Induction

The person in control of the site will work with contractors to ensure a site-specific induction is provided for all workers before starting work.

This induction must outline:

- The expectations outlined in this AMP, including all policies and procedures;
- The emergency meeting point;
- The site rules;
- The facilities;
- Any site-specific hazards;
- High risk construction work activities; and
- Explanation of the Unexpected Finds Protocol

6.2.2 Worker Training

The person in control of the site will:

- Ensure workers are trained and competent for the work to be carried out;
- Ensure workers are trained to deal with any risks associated with the work and understand the control measures in place;
- Ensure all workers have had relevant white card training (or other appropriate training from another jurisdiction);
- Ensure on-site training and supervision is provided;
- Organise external training for specific tasks where required;
- Seek high risk licences for all high-risk work and maintain a register of licences; and
- Communicate with other contractors to ensure their workers are appropriately trained and competent.

6.3 Required Preparation Works

Prior to exposing and/or disturbing the known or potential ACM impacted soils by intrusive earthworks or excavation works, the following activities should be carried out and implemented by the party responsible for the disturbance of soil in the affected areas:

- Notification to the person in control of the site to discuss the scope of works to be undertaken, the likelihood of generating dust, excess spoil or waste and the management of this material;
- Ensure contractors / workers are aware of the potential for asbestos contaminated materials to be encountered;
- Setup of work area, and exclusion zone including appropriate signage and barriers;
- Assess proposed scope of works to minimise the requirement to expose and / or excavate asbestos contaminated materials;
- Ensure contractors / workers, where any works involving asbestos contaminated materials is expected or identified, are supervised by an appropriately qualified person as required by the relevant legislation (i.e. Class-A or Class-B licensed contractor);
- Preparation of a specific occupational health and safety plan that caters for the proposed activities / works including the provision of PPE (refer to Section 5.3);
- Consideration and/or preparation of a Dust Management Plan to mitigate/minimise dust generation;
- Consideration of the equipment used to minimise potential soil exposure and dust generation;
- Preparation of a specific environmental protection plan including soil, water and air management protocols;
- Preparation of a methodology for managing excavated soil; and
- Contingency planning to include encountering other suspected asbestos impacted material other than that expected.

It is noted that the information provided in this AMP, although it may be common to other tasks, is generally limited to managing works associated with the disturbance of the known and potentially impacted ACM soils, identified in **Figure 2, Appendix A** (outlined in red and potentially blue). Planning and implementation of earthworks will also need to consider other environmental, health and safety risks associated with the specific task to be undertaken at that specific location.

6.4 Health and Air Monitoring

Health and air monitoring must be undertaken when a worker is at risk of exposure due to work that is not licensed asbestos removal work. The need for health and air monitoring of these workers should be determined on the basis of the potential for exposure, frequency of potential exposure and duration of the work being undertaken.

Consideration must be given to the worker's demographic, medical and occupational history and records of the worker's personal exposure. The health and air monitoring must include a physical examination of the worker with emphasis on the respiratory system, including standardised respiratory function tests, unless another form of health and air monitoring is recommended by a registered medical practitioner. Workers must be informed of any health and air monitoring requirements before the worker carries out work that may expose them to asbestos.

All areas or equipment with asbestos or ACM in situ should be assessed by a competent person to determine the appropriate inspection periods to ensure risk controls are effective. Inspection periods are to be identified on the Asbestos Register and organised by the PM responsible for the area. An example of an Asbestos Register is provided in **Appendix C**.

Air monitoring for asbestos exposure may be required as result of the assessment and should be conducted by a competent person in accordance with *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition* [NOHSC:3003(2005)].

Exposure standards set out the airborne concentrations of asbestos, which should not damage the health of workers. The exposure standards for asbestos are:

- Amosite (brown asbestos) 0.1 f/mL (Fibres per millilitre of air);
- Crocidolite (blue asbestos) 0.1 f/mL; and
- Chrysotile (white asbestos) 0.1 f/mL.

Any situations or areas which exceed the asbestos exposure standard are to be controlled to eliminate or minimise risk of exposure.

6.4.1 Site Specific Health and Air Monitoring

Due to the site operating as a primary school, air monitoring will be required during school hours, in addition to being required each day of excavation works, to check that there is no risk to the children. Arcadis understand that the excavation and remediation work will only be undertaken on weekends and over school holidays. A clearance certificate clarifying that the site is safe to attend must be provided by a licenced asbestos hygienist before the school children can return to the site.

Air monitoring will be undertaken from a total of 5 monitoring points and must be continued until a licenced asbestos hygienist has advised that air monitoring can be decreased. Air monitoring may be stopped once all ACM impacted soils have been placed within the containment cell and have been appropriately capped (as specified in the RAP). The ‘capping’ in this scenario does not have to be the concrete slab but may suffice as the marker and sand layer.

7 HEALTH AND SAFETY (EARTHWORKS AND EXCAVATION WORKS)

7.1 Personal Protective Equipment (PPE)

PPE shall be used, maintained and disposed of in accordance with Section 5.3 of this AMP.

7.2 Safe Work

To avoid any adverse impacts to site personnel, the minimum PPE requirements given in Section 5.3 should be adhered to at all times within the identified 'working' area. Any disposable "dirty" PPE shall be removed, double bagged and disposed to an appropriately licensed landfill.

On leaving the designated ACM impacted working area, all personnel should remove and dispose of their PPE wash their hands and face thoroughly, including prior to using the toilet, smoking, eating or drinking.

7.3 On-site Management

The overall objectives of the strategy to be adopted for management of ACM contaminated soils at the affected areas are:

- Ensure all works involving the disturbance of the ACM contaminated soils are conducted under the supervision of a suitably qualified Class A or Class B asbestos licensed contractor;
- Ensure all soil are wetted to reduce the potential generation of dust;
- Undertake the required air monitoring;
- Minimise erosion at the site, including erosion of soils exposed during excavation and demolition works;
- Protect nearby receiving environments from potential contamination;
- Prevent the re-contamination of areas in which excavation works have been completed via migration of surface water;
- To comply with all regulatory requirements; and
- To facilitate the implementation of the excavation and / or decommissioning programs.

7.3.1 Soil Management

The specific objective of the management of soils relates to the minimisation of cross-contamination to other areas of the site. Measures that can assist in this aspect of site management include, but are not limited to:

- Ensure contaminated site plant are decontaminated prior to commencing work in clean soil;
- Signs and record keeping should indicate the origin and location of contaminated materials;
- No stockpiling of impacted soils (where possible) to prevent cross contamination of clean soils.
- Direct transport form contaminated area to burial site;
- Wetted down area during excavation and dumping with in burial pits;
- Use appropriate waste receptacles for maintenance waste;
- Minimisation of areas of exposed soils, wherever possible, by staging the works, or covering with geotextile warning layer;
- Validated areas should be isolated to prevent cross contamination; and

- Routine site inspections.

7.3.2 Air Quality Management

Earthworks and excavation procedures have the potential to generate significant amounts of dust including free asbestos fibre. Possible dust-generating activities include major earth excavations and vehicle movement. The generation of dust should be minimised and meet relevant air quality standards as specified in the NOHSC:1003 (1995) *Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment*.

Dust control measures that may need to be instigated include:

- Minimising volume and area of disturbance;
- Treatment of soil with an appropriate wetting agent before disturbance;
- Using dust suppression during excavation and covers on soil stockpiles;
- Installing wind barriers;
- Using sheltered areas wherever possible;
- Minimising access to contaminated areas, especially by vehicles;
- Monitoring meteorological conditions and modifying or stopping work when they are adverse;
- Regulating the speed of vehicles;
- Implementing a community dust complaint and response system.

Air monitoring when disturbing the soils across the site should be implemented. Any air monitoring of asbestos should be performed in accordance with the NOHSC:3003 (2005) *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres*.

Air monitoring up and down wind of the asbestos impacted area at the exclusion zone boundary should be implemented (with air monitoring filters to be situated within 10 m of the location of asbestos removal work) in conjunction with secondary monitoring locations whilst moving or disturbing asbestos impacted soils.

Further details on site specific air monitoring requirements have been provided in Section 6.4.1.

7.4 Decontamination

Decontamination for the work area, workers, PPE and tools used in asbestos removal work is an important process in eliminating or minimising exposure to airborne asbestos fibres, particularly to persons outside the asbestos removal work area. The code of practice list two types of decontamination procedures that may be used:

Wet decontamination, or **wet wiping**, involves the use of damp rags to wipe down contaminated areas. Cleaning rags should only be used once, although they may be re-folded to expose a clean surface. The rags should be used flat and should not be wadded. If a bucket of water is used, the rags should not be re-wetted in the bucket, as this will contaminate the water. Care should be taken to avoid any potential electrical hazards when using this procedure.

Dry decontamination should be only used where wet methods are not suitable or pose a risk because of other hazards such as electricity or slipping. Dry decontamination procedures include carefully rolling or folding up and sealing plastic sheeting and/or vacuuming the asbestos work area with an asbestos vacuum cleaner. Large pieces of asbestos debris should be wetted and picked up by hand rather than vacuumed.

7.4.1 Decontamination of Tools, Equipment, or Machines

All tools / equipment used during earthworks / excavations of asbestos impacted soils should be fully dismantled (where appropriate), cleaned under controlled conditions and decontaminated using either

the wet or dry decontamination procedures before they are removed from the removal work area. The method chosen will depend on its practicality, the level of contamination and the presence of any electrical / mechanical hazards.

If tools cannot be decontaminated in the asbestos impacted work area, or are to be reused at another asbestos impacted work area, they should be:

- Tagged to indicate asbestos contamination; and
- Double bagged in asbestos labelled bags before removing from the asbestos removal work area.

The bags containing the tools must remain sealed until decontamination or the commencement of the next asbestos maintenance or service task where the equipment can be taken into the removal work area and reused under full control conditions.

PPE should be worn when opening the bag to clean or reuse the equipment or tools, and decontamination should only be performed in a controlled environment.

In some circumstances, it may be better to dispose of contaminated tools and equipment, depending on the level of contamination and the ease of replacement.

All machinery (i.e. excavators and / or trucks) that are required to conduct work on or pass over the site will need to be enclosed (windows wound to the full up position) with re-circulatory air functioning working. Movement outside of the vehicle should be conducted with the required PPE unless done in a designated clean area of the site.

All machines used during earthworks / excavations of asbestos impacted soils should be fully dismantled (where appropriate), cleaned under controlled conditions and decontaminated using either the wet or dry decontamination procedures before they are removed from the removal work area. The method chosen will depend on its practicality, the level of contamination and the presence of any electrical / mechanical hazards.

7.4.2 Personal Decontamination Procedures

Personal decontamination involves the removal of all visible asbestos dust/residue from PPE and RPE. Personal decontamination must be undertaken each time a worker leaves the asbestos removal work area and at the completion of the asbestos maintenance or service work. Personal decontamination should be done within the asbestos removal work area to avoid recontamination. Personal decontamination should be carried out where a decontamination unit is not necessary such as during minor or small-scale removal and maintenance work.

Asbestos-contaminated PPE must not be transported outside the asbestos removal work area except for disposal purposes. Before work clothes and footwear worn during asbestos removal work are removed from the asbestos removal work area for any reason, they should be thoroughly vacuumed with an asbestos vacuum cleaner to remove any asbestos fibres and the footwear should also be wet wiped.

PPE should be used until all contaminated disposable coveralls and clothing has been vacuum cleaned and/or removed and bagged for disposal and personal washing has been completed. Any PPE used while carrying out asbestos removal work must not be taken home by a worker.

Personal hygiene and careful washing are essential. Particular attention should be paid to the hands, fingernails, face and head. Personal Decontamination procedures are provided in Table 7-1, below.

Table 7-1 Personal Decontamination (SafeWork Australia, October 2018)

Personal Decontamination
• Remove any visible asbestos dust/residue from protective clothing using an asbestos vacuum cleaner or wiping down with damp cloths. Do not reuse or resoak damp cloths. • Carefully remove disposable protective clothing and place into bags (RPE must still be worn). • Place cloths into disposal plastic bags (200 µm thick).

Personal Decontamination

- Take disposable coveralls off and place into disposal bags (RPE must still be worn).
- Use damp cloths to wipe down footwear and place cloths into disposal bag.
- Seal all plastic bags with duct tape and place each into a second plastic bag.
- Seal this second plastic bag and label/mark as ‘Asbestos Waste’.
- Use damp rags to wipe external surfaces of the disposal bags to remove any dust before it is removed from the asbestos removal work area.
- Remove PPE and double bag, seal with duct tape and mark as ‘Asbestos Waste’.
- Remove non-disposable PPE and place in container labelled as containing asbestos.
- Remove RPE and double bag, seal with duct tape and mark as ‘Asbestos Waste’.
- Ensure the outside of the bags are decontaminated by using a damp cloth.
- Place the damp cloth into disposable bags.
- Dispose of asbestos waste at the appropriate waste facility

8 VARIATIONS TO THE AMP

Should site conditions change which require an amendment to the AMP, then the variations should be completed by a suitably qualified environmental consultant.

Any variations to the AMP must be documented. St Hilliers and their nominated representative will be responsible to ensure all revisions to the AMP are appropriately distributed.

When a Construction Environmental Management Plan (CEMP) is prepared for the site, it is intended that this AMP will be included as an appendix.

9 REFRENCES

Arcadis Australia Pacific Pty Ltd (Arcadis, 27 April 2018) Preliminary Site Investigation

Arcadis Australia Pacific Pty Ltd (Arcadis, 30 July 2018) Due Diligence Soil Contamination Assessment

Arcadis Australia Pacific Pty Ltd (Arcadis, 11 November 2019) Further Supplementary Soil Contamination Assessment

Arcadis Australia Pacific Pty Ltd (Arcadis, 19 November 2019) Remediation Action Plan

Arcadis Australia Pacific Pty Ltd (Currently being prepared) Unexpected Finds Protocol

Code of Practice for the Safe Removal of Asbestos 2nd Edition [NOHSC:2002(2005)]

National Environment Protection Council (NEPC, 10th December 1999) as amended 11th April 2013, *National Environment Protection (Assessment of Site Contamination) Measure* [NEPM].

NSW Office of Environment & Heritage (NSW OEH, August 2011) *Guidelines for Consultants Reporting on Contaminated Sites.*

NSW Environment Protection Authority (NSW EPA, November 2014) *Waste classification guidelines Part 1: Classifying waste*

NSW WorkCover (2014) *Managing Asbestos in or on Soil.*

Protection of the Environment (Operations) Act 1997;

Protection of the Environment Operations (Waste) Regulation 2014; and

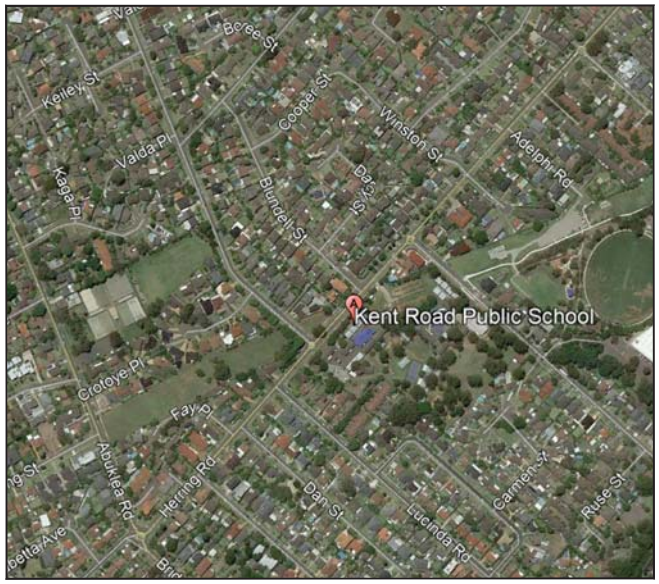
Work Health and Safety Regulation 2011.

WorkSafe Australia; How to safely remove asbestos - Code of Practice, 2018;

APPENDIX A FIGURES

COUNTRY

REGION



SITE LOCATION

LEGEND:

Site Boundary

N

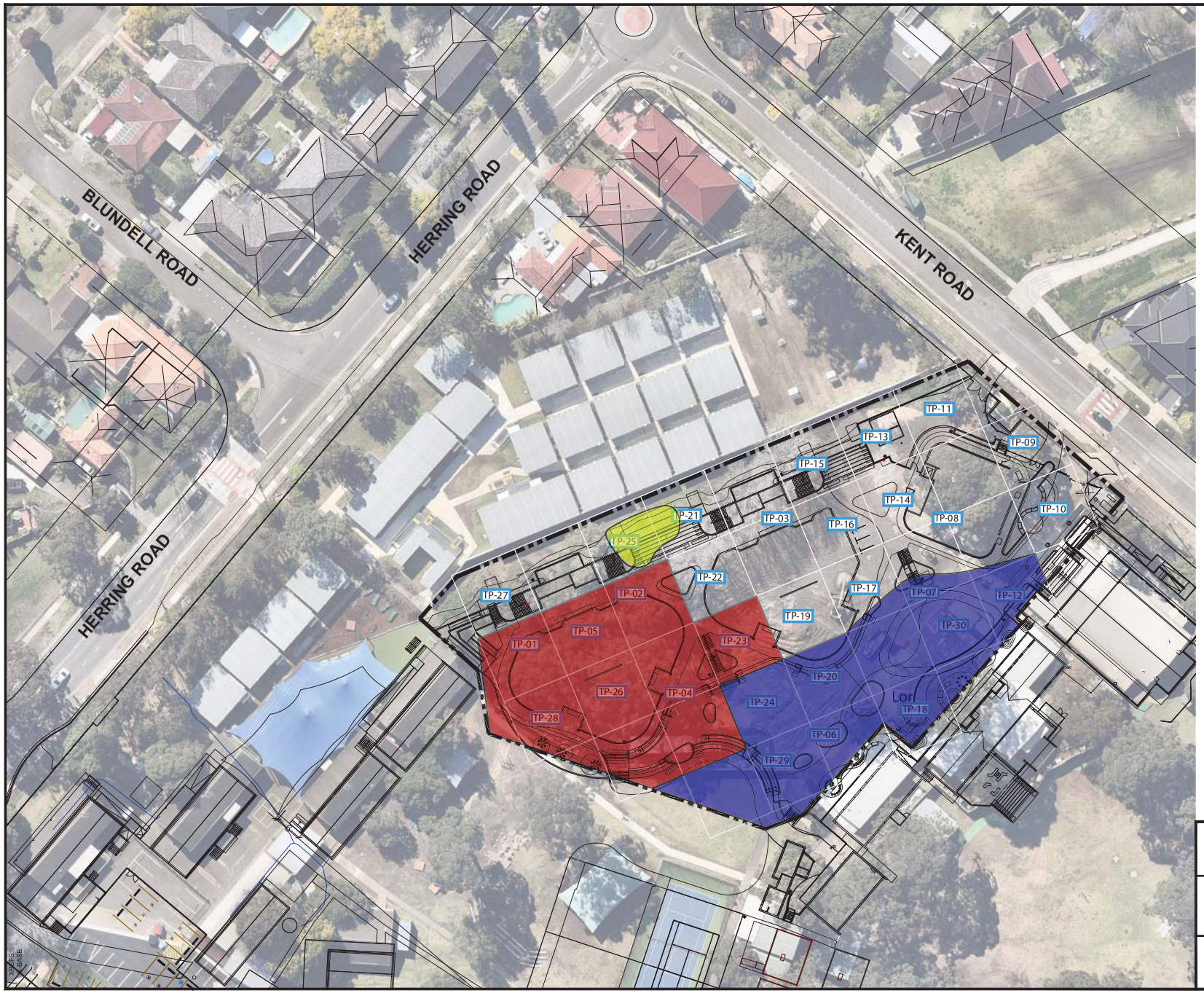
KENT ROAD PUBLIC SCHOOL- 126 KENT ROAD
MARSFIELD, NSW, AUSTRALIA

SITE LOCATION PLAN

ARCADIS

FIGURE
1

CITY:EMERYVILLE, CA DIV/GROUP:ENV/CAD DB:A.REYES
E:\OneDrive - ARCADIS\BIM 360 Docs\AUSTRALIA\10034229 Kent Rd, Marsfield\2019\10034229\01-DWG\10034229-Fig1-SLM.dwg LAYOUT: 1 SAVED: 8/30/2019 11:14 AM ACADVER: 23.0S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 8/30/2019 11:14 AM BY: NADIGERA, CHIDAMBARA
XREFS:



LEGEND:

- Site Boundary
- Test Pit Location
- 14 m Grid
- GSW CT1 Recyclable
- GSW due to TRH exceedance
- GSW CT1 Recyclable. Providing no ACM is observed when excavating anthropogenic material observed in fill
- Special Waste with GSW matrix

N

0 20 40

SCALE IN METRES

KENT ROAD PUBLIC SCHOOL- 126 KENT ROAD
MARSFIELD, NSW, AUSTRALIA

SITE LAYOUT AND INDICATIVE WASTE CLASSIFICATION

ARCADIS

FIGURE
2

APPENDIX B INDUCTION REGISTER

Date	Inductor				Inductee			
	Name	Company	Position	Signature	Name	Company	Position	Signature

APPENDIX C ASBESTOS REGISTER

Date of Unexpected Find	Details of Unexpected Find (e.g. Type of Contaminant, volume etc.)	Actions Required	Date Actions Complete

B.21 - Appendix J – Contamination Report for Waste Classification