CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

LANCELEY PLACE DATA CENTRE, ARTARMON

MAY 2025

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Authorisation

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GLOSSARY/ABBREVIATIONS

Abbreviation	Expanded Text
AMM	Amended Mitigation Measures.
ANZECC	Australian and New Zealand Environment and Conservation Council
CCCHS	Community Consultation and Complaints Handling Strategy
CTMP	Construction Traffic Management Plan
CEMP	Construction Environmental Management Plan
Conditions	Condition of Consent *(SSD-66777221,11 April 2025)*
Construction	The demolition and removal of buildings or works, the carrying out of works for the purpose of the development, including bulk earthworks, and erection of buildings and other infrastructure permitted by the consent
CTMP	Construction Traffic Management Sub-Plan
CWMP	Construction Waste Management Plan
DPHI, or the Department	NSW Department of Planning, Housing and Infrastructure
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement (*SSD-66777221)*
EMS	Environmental Management System
EP&A Act	*Environmental Planning and Assessment Act 1979 (NSW)*
EPA	Environmental Protection Authority
ESCP	Erosion and Sediment Control Plan
FERP	Flood Emergency Response Plan
HSEQ	Health Safety Environmental Quality
IAQM	Institute of Air Quality Management
ICNG	NSW Interim Construction Noise Guideline
Minister, the	NSW Minister for Planning (or delegate)
NML	Noise Management Levels
NVMP	Noise and Vibration Management Sub-Plan
POEO Act	*Protection of the Environment Operations Act 1997* (NSW)
RtS	*SSD-66777221 Submissions Report*, 14 October 2024
SEPP	*State Environmental Planning Policy*
SSD	State Significant Development
VDV	Vibration Dose Value
WHS	Work Health and Safety

1. INTRODUCTION

1.1 Background

WolfPeak has been engaged by AW Edwards Pty Ltd to prepare this Construction Environmental Management Plan (CEMP) for the development of the Lanceley Place Data Centre at 2-8 Lanceley Place and 14 Campbell Street, Artarmon NSW (the Project). The Project was approved as a State Significant Development (SSD) 66777221 on 11 April 2025.

This CEMP has been prepared in accordance with conditions of Consent C1 to C4, to provide guidance on the Project's environmental requirements, describe methods for minimising environmental risk and details ways to achieve positive environmental management outcomes during construction. The CEMP also addresses the requirements of the *NSW Government Environmental Management Plan Guideline (for Infrastructure Projects)* - April 2020.

Implementing the CEMP and Sub-Plans effectively will ensure that the Project meets the conditions of the Consent, Applicant's Management and Mitigation Measures (AMMMs) (included as Appendix 2 of the Consent) and relevant Acts, Regulations, Standards and Government policies. The relevant statutory requirements and where they have been addressed in the CEMP and Sub-Plans are included in Appendix A.

This CEMP and Sub-Plans are applicable to all staff, workforce and sub-contractors associated with construction of the Project.

1.2 Purpose and scope of this CEMP

The purpose of this CEMP is to:

- Address the relevant requirements of the Consent, the AMMMs, contractual requirements and applicable legislation
- Determine and assess the environmental risks associated with project construction
- Provide specific mitigation measures and controls that can be applied on-site to avoid or minimise negative environmental impacts, including programs and procedures
- Describe the management related roles and responsibilities of personnel
- NSW Government objectives for environmental performance of the Project; and
- Outline a monitoring program to judge the performance of controls implemented during construction.

This CEMP is to be read in conjunction with the AW Edwards Project Management Plan (SYD001-AWE-PMP-001), project-specific Site Management Plan, Safety Plans, and Emergency Management Plans as well as the AW Edwards corporate Environmental Policy.

This CEMP, and associated Sub-Plans and strategies, for the Project must be approved by the Department prior to commencement of construction and will be implemented for the duration of construction.

1.2.1 Ministers Conditions of Consent

The requirements of the Consent relevant to the preparation of the CEMP are presented in Table 1, with cross references to indicate where each requirement is addressed within this CEMP.

The Legal and Compliance Register is presented in Appendix A, which includes the complete Conditions of Consent and AMMMs relevant to construction.

Table 1: Conditions relevant to the preparation of this CEMP.

Condition No.	Requirement	Relevant Section
C1	Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:	This plan
	(a) a condition compliance table for that plan;	Table 1
	(b) detailed baseline data (where required);	Section 1.3.1
	(c) details of: (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);	Legal and Compliance Tracker - Appendix A
	(ii) any relevant limits or performance measures and criteria; and	Section 3.2
	(iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;	Section 3.1
	(d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;	Section 4 Section 5
	(e) a program to monitor and report on the: (i) impacts and environmental performance of the development; and	Section 6.1
	(ii) effectiveness of the management measures set out pursuant to paragraph (d) above;	Section 6.3
	(f) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;	Appendix I – Unexpected Finds Protocol Appendix J - Contingency Plan
	(g) a program to investigate and implement ways to improve the environmental performance of the development over time;	Section 6.1

Condition No.	Requirement	Relevant Section
	(h) a protocol for managing and reporting any: (i) incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria);	Section 4.5
	(ii) complaint;	Section 2 CCCMP (Appendix G)
	(iii) failure to comply with statutory requirements; and	Section 4.5.2.1 Section 6.4
	(i) a protocol for periodic review of the plan.	Section 6.4
C2	The Applicant must prepare a Construction Environmental Management Plan (CEMP) for the development in accordance with the requirements of condition C1 and to the satisfaction of the Planning Secretary.	This Plan
C3	As part of the CEMP required under condition C2 of this consent, the Applicant must include the following: (a) Construction Traffic Management Plan (see condition B20);	CTMP – Appendix C
	(b) Erosion and Sediment Control Plan;	ESCP (Appendix E)
	(c) Construction Noise and Vibration Management Plan (see condition B11);	NVMP (Appendix D)
	(d) Construction Waste Management Plan (see condition B56); and	CWMP (Appendix F)
	(e) Community Consultation and Complaints Handling.	CCCMP (Appendix G)
	(f) a copy of the Construction Flood Emergency Response Plan (see condition B36);	FERP (Appendix H)
C4	The Applicant must: (a) not commence construction of the development until the CEMP is approved by the Planning Secretary; and	Noted
	(b) carry out the construction of the development in accordance with the CEMP approved by the Planning Secretary and as revised and approved by the Planning Secretary from time to time.	Noted

1.3 Project Overview

The Project's State Significant Development Application (SSD-66777221) was lodged by Goodman Pty Ltd in June 2024 under section 4.38 of the *Environmental Planning and Assessment Act 1979* with the Department of Planning, Housing and Infrastructure (the

Department). On 11 April 2025, consent was granted for site preparation works and construction, fit out and operation of a ten-storey data centre, including onsite car parking, ancillary office space and landscaping.

The Site is located in the centre of the Artarmon Industrial Precinct in the Willougby Local Government Area, NSW, legally described as Lots 11-15 in DP 233037. The site covers an area of 14,024 square metres and is bound by Lanceley Place to the east and Campbell Street to the north. It is strategically positioned in the North District of Sydney between the employment centres of North Sydney, Chatswood and St Leonards. The Site is zoned E4 – General Industrial to facilitate large commercial and industrial businesses. The Site is not located near to any environmentally sensitive areas and does not contain any areas of high biodiversity value. Figure 1 provides a map of the site location.



Figure 1: Site location (source: Goodman, 2024)

1.3.1 Predicted Key Construction Impacts

An Environmental Impact Statement (Lanceley Place Data Centre Artarmon EIS, Urbis, 6 June 2024) was submitted with the SSD-66777221 Application. The statement identified a series of key environmental issues that must be addressed during construction of the project, most of which are referenced also in the Conditions of Consent.

This CEMP is informed by the baseline data that was acquired through the environmental impact assessment (EIA) process and the residual impacts after mitigation measures are employed. The key environmental impacts predicted are summarised below:

Noise and Vibration

Construction noise levels are predicted to result in minor exceedances of the Noise Management Levels at North Shore Private Hospital, TAFE NSW St Leonards, and the nearest commercial and childcare receivers during some of the noisier construction work scenarios, which include noise-intensive equipment such as rock breakers. The highest impacts are predicted during ‘vegetation clearing’ when a chainsaw/chipper is in use when exceedances may reach up to 13dB.

Construction noise levels are predicted to comply with the Noise Management Levels at residential receivers, Bradfield Senior College and Twin Towers Inn during all assessed work scenarios.

All residential, hotel, educational and medical buildings are sufficiently distant from the site to be outside the minimum working distance. Cosmetic damage and human comfort impacts at these receivers are unlikely.

Noise and Vibration impacts are managed through the application of the CNVMP which includes reasonable and feasible mitigation measures to minimise the predicted impacts.

Air Quality

The main emissions to air during the construction phase are likely to be fugitive emissions of suspended particulate matter and nuisance dust from the movement of vehicles and construction equipment, excavation and rehabilitation, demolition, clearing and grading, truck loading and unloading and wind erosion.

Based on the IAQM methodology, the overall air quality risk from the project construction activities is rated as high for industrial/commercial receptors and medium for residential receptors and the childcare centres.

For industrial/commercial receptors, the mitigated dust deposition and human health impacts are anticipated to be medium and low respectively if all measures listed in Section 5 of this CEMP are implemented. For residential receptors and the childcare centres, the mitigated dust deposition and human health impacts for residential receptors are anticipated to be low.

Traffic

It is noted that there may be an increased number of heavy vehicles along Campbell Street and Lanceley Place during the construction period. Construction traffic generation during road network peak hour is not expected to exceed the operational peak hour traffic generation of the proposal. A small amount of on-site parking for key contractors and staff is expected to be provided throughout the construction works. The number and location of this temporary on-site car parking is expected to change throughout the various construction phases, depending on the surplus area available not required for truck loading and turning areas.

Construction traffic and transport impacts are mitigated with the implementation of the CTMP and associated mitigation measures detailed in Section 5 of this CEMP. The CTMP will reflect the content and recommendations of the Preliminary CTMP prepared by ASON dated April 2024.

1.4 Construction

1.4.1 Staging

Construction of the development will not be staged. If construction of the development is to be staged, the Planning Secretary will be notified in writing at least one month prior to the commencement in accordance with Condition A11 and a review of this CEMP will be undertaken.

This CEMP applies to all construction works undertaken on site and considers all Conditions of Consent.

1.4.2 Works

Construction of the project will involve site establishment, civil and structural works, fit out and public domain works. Construction is anticipated to commence in Q3 of 2025.

The works will be undertaken in accordance with the Lanceley Place Data Centre SSD Stamped Plans, prepared by HDR in December 2024 and submitted to the Department following a Request for Additional Information (dated 7 March 2025) to the EIS.

Work activities can be broadly grouped into the phases summarised in Table 1 below.

Table 1: Construction phases

Phase	**Activities**
Phase 1 – Shell & Core	• Hoarding, tower crane and erection of other plant • Establishment of temporary facilities • Excavation of tanks, pits and footings • Utility adjustments • Construction of base slab • Construction of above ground structure • Fit out of Level 1 Data Hall • Utility service adjustments • Road pavement and footpath upgrades • Civil and landscaping works
Phase 2 – Fit Out	• Hoarding, tower crane and erection of other plant • Establishment of temporary ancillary facilities • Fit out of Level 2 Data Hall and installation of roof plant • Commissioning of all services
Phase 3 – Fit Out	• Hoarding, tower crane and erection of other plant • Establishment of temporary ancillary facilities • Fit out of Level 3 Data Hall and installation of roof plant • Commissioning of all services associated with Phase 3
Phase 4 – Fit Out	• Hoarding, tower crane and erection of other plant • Establishment of temporary ancillary facilities • Fit out of Level 4 Data Hall and installation of roof plant • Commissioning of all services associated with Phase 4
Phase 5 – Fit Out	• Hoarding, tower crane and erection of other plant • Establishment of temporary ancillary facilities • Fit out of Level 5 Data Hall and installation of roof plant • Commissioning of all services associated with Phase 5.

Equipment assumed to be required for the construction activities are as follows:

- Crane – fixed
- Crane – mobile
- Excavator
- Electric hand tools
- Elevated work platforms
- Generators
- Piling rig
- Concrete pump
- Truck – medium rigid
- Concrete truck

2. STAKEHOLDER ENGAGEMENT

2.1 Consultation on the Sub-Plans

Condition A12 requires that consultation with identified parties is undertaken as prescribed in the Conditions and details of the consultation outcomes are recorded. In so far as the development of the CEMP and Sub-Plans, the NVMP, CTMP and ESCP (stormwater management system) were required to be prepared in consultation with stakeholders. Evidence of consultation is provided in each Sub-plan as required under Conditions B11 (b), B20 (b) and (c), B33 (b).

2.2 Community Communication during Construction

In accordance with Condition C3, a Community Consultation and Complaints Handling Strategy (CCCHS) has been developed and is included as Appendix G of this Plan. The CCCHS details how AWE will manage stakeholder, community and business liaison during the construction of Lanceley Place Data Centre. It is guided by the Conditions of Consent and the Lanceley Place Data Centre Engagement Report prepared by Urbis as Appendix D of the EIS. All community consultation and complaints handling, including under the specification of Sub-Plans, will be undertaken in accordance with the CCCHS.

The Goodman Community Complaints Hotline available on the Project Website will remain the primary channel for stakeholder communication in the form of a complaint, query or feedback.

3. ENVIRONMENTAL MANAGEMENT SYSTEM

3.1 Performance Objectives

As a means of assessing environmental performance during construction of the Project, environmental objectives have been established. These objectives have been developed with consideration of the requirements of the Project's conditions, AMMMs and key issues identified through the environmental assessment and risk assessment processes. The Project's environmental performance objectives will guide the implementation of management measures. Environmental management objectives and targets for the Project are provided in Table 2 below.

Table 2: Performance objectives

Objective	Target	Measurement Tool	Actions
Project statutory compliance	No non-compliances	Non-Compliance Register	Regular toolbox talks with an environmental and compliance focus conducted throughout the construction of the Project. All relevant permits and licenses are obtained for works.
Environmental protection	No environmental incidents occur throughout the Project delivery	Environmental Incident Register	Environmental controls are implemented and maintained, and environmental aspects are monitored regularly. Regular toolbox talks reinforcing environmental standards and mitigation measures.
Minimise environmental disturbance	No community complaints are received	Complaints Register	Maintain compliance with environmental criteria and limits, the Conditions, CEMP, and maintain stakeholder engagement.
Environmental protection	Inspections and audits are completed on time	Inspection Reports	One inspection completed each day and an inspection report produced per week. One internal environmental audit conducted per quarter
Management plan conformity	The CEMP and associated Sub-Plans are implemented by all Project personnel, including contractors	Induction, Training, Audit and Inspection Records	CEMP and Sub-Plans are easily accessible on site and on the dedicated project website. Regular toolbox talks revising management plan information, including processes and expectations. Adhere to auditing and monitoring programs

Project environmental performance data shall be reported each month by the Site Manager. This information includes:

- General Project status

- Environmental performance objectives and targets - inspections, audits, NCRs, Incidents
- Project milestones
- Key issues for management attention
- Work completed
- Work planned

3.2 Relevant Impact Criteria and Limits

3.2.1 Noise

The NSW *Interim Construction Noise Guideline* (ICNG) contains procedures for determining project specific Noise Management Levels (NMLs) for sensitive receivers based on the existing background noise in the area. The 'worst-case' noise levels from construction of a proposal are predicted and then compared to the NMLs in a 15-minute assessment period to determine the likely impact of the proposal. Criteria are presented in the table below.

Table 3: Project NMLs

Receiver	Standard Day	OOH Day	OOH Evening	OOH Night
	dBA			
Residential	68	63	60	57
Hospitals	65	65	65	-
Industry	75	-	-	-
Commercial	70	70	-	-
Education	65	65	65	-
Childcare	60	60	-	-

3.2.2 Vibration

Structural damage vibration limits are outlined in British Standard BS 7385 and German Standard DIN 4150. German Standard DIN 4150 provides guideline vibration limits for different buildings while British Standard BS 7385 recommends vibration limits for transient vibration judged to give a minimal risk of damage to affected buildings.

The EPA *Assessing Vibration: a technical guideline* (2006) provides preferred and maximum criteria for intermittent vibration based on the Vibration Dose Value (VDV) for human comfort.

Minimum working distances for typical vibration-intensive construction equipment are provided in the Roads and Maritime (now Transport for NSW) *Construction Noise and Vibration Guideline* (CNVG) for cosmetic damage and human comfort.

3.2.3 Air Quality

In accordance with the *Protection of the Environment Operations Act 1997* (POEO Act), the operation of plant on site will be conducted in such a manner as to avoid air pollution by maintaining the plant in an efficient condition and operating the plant in a proper and efficient manner.

3.2.4 Dangerous Goods, Hazardous Materials, Chemicals, Fuels, Oils

The quantities of dangerous goods stored and handled at the site must be below the threshold quantities listed in the Department's *Hazardous and Offensive Development Application Guidelines – Applying SEPP 33* at all times. The Project will store all chemicals, fuels and oils used on-site in accordance with:

(a) the requirements of all relevant Australian Standards; and

(b) for liquids, the NSW EPA *Storing and Handling of Liquids: Environmental Protection – Participants Manual*.

3.2.5 Stormwater

Any water to be dewatered from the site must be tested to ensure it does not pollute waters (in accordance with Condition B32 and section 120 of the POEO Act).

Run-off and stormwater are to be collected and/or prevented from running off site, then tested for compliance with the ANZECC Water Quality Guidelines to determine compliance with the acceptance criteria for discharge into the stormwater system. The Test and Discharge Process is presented in Appendix L.

The acceptance criteria for the discharge of water into any water body or stormwater system is an acidity of pH 6.5 to 8.0 and turbidity of 6-50 Nephelometric Turbidity Units (NTU).

A permit will be acquired from Willougby City Council prior to discharge.

Should local waterways sustain damage as a result of the water discharge, AW Edwards will rehabilitate the area under the direction of Council and Sydney Water.

3.3 Preparation and Availability of a Construction Environmental Management Plan

This CEMP has been prepared in accordance with the requirements of the Consent. The terms used in this document are aligned to those defined in AS/NZS ISO 14001:2016 Environmental management systems – Requirements where applicable.

This CEMP and all Sub-Plans will be publicly available on the Goodman Project website (https://au.goodman.com/property-lease-site/2-8-lanceley-place) in accordance with condition C20(a)(iii).

This CEMP will be available to all workers, subcontractors, visitors, members of the WHS Committee, Health and Safety Representative, or anyone working on the Project throughout for the duration of construction. Obligations under this CEMP will be communicated to all Project personnel through inductions and trainings, and other interested parties by request.

Goodman and AW Edwards will ensure that the CEMP and Sub-Plans are implemented, demonstrating that all reasonable and feasible measures are implemented to prevent or minimise environmental harm.

4. CONSTRUCTION MANAGEMENT

4.1 Resources and Responsibilities

4.1.1 Compliance Authority

Goodman is the developer of the Project and has overall accountability for compliance with the Consent. Goodman is accountable for the environmental performance of the Project and compliance with the Consent, the AMMMs, this CEMP and sub-plans as they relate to the construction of the Project. All personnel including consultants, contractors, sub-contractors and all other personnel associated with undertaking construction works on the Project ultimately report to Goodman.

Goodman have engaged AW Edwards to complete the construction works. AW Edwards, as the principal contractor, will undertake the monitoring of compliance and be responsible for day-to-day measures.

4.1.2 Project Personnel

Table 5 outlines the responsibilities of key Project personnel. These responsibilities do not remove the individual's basic obligation to exercise due diligence in matters relating to health and safety. All Project personnel are responsible for the implementation of this CEMP and have the responsibility to stop works if there is the potential for a safety or environmental incident to occur.

Roles and responsibilities specific to implementation of each sub-plan are included in the associated document.

Table 4: Roles and Responsibilities

Role	Responsibility
Goodman's Representative	Environmental reporting responsibility associated with the Project.
	Overall responsibility for environmental management and compliance with the Consent and relevant legislation.
	Liaise with Goodman's management to keep them informed of the Project's environmental performance and progress.
	Record, notify, investigate and respond to any environmental incidents as required and, where necessary, guide the development and implementation of corrective actions.
	Consult and engage with AW Edwards or interfacing contractors regarding the environmental management of the Project.
	Oversee incoming complaints and enquiries via specialist consultants who will be available for contact by residents and the community at all reasonable times.
AWE Project Director/ Manager/ Coordinator	Oversee the maintenance of the CEMP and sub-plans.
	Check that any licence, permit and/or approval required for the Project has been obtained in the required timeframe.
	Report on overall environmental management performance.
	Review periodic environmental inspection reports.

Role	Responsibility
	Initiate project meetings as required or directed, in which environmental items are discussed as appropriate.
	Identify and allocate Project resources to implement the requirements of the CEMP and Sub-Plans.
	Confirm relevant environmental expectations expressed by the client and/or regulatory authorities to the Project team.
	Manage the community involvement activities, including liaison with property owners and key stakeholders to co-ordinate access and to deal with specific property related issues arising from the upgrade works.
AWE Site Manager	Oversee the implementation of the CEMP and Sub-Plans.
	Monitor overall environmental management performance.
	Lead site investigations, inspections, and routine observations.
	Prepare incident and non-compliance reports.
	Communicate requirements to site personnel.
	Conduct consultation and maintain a Project complaints register
	Oversee emergency drills, the execution of the Emergency Management Plan, manage first aid and conduct site surveillance
	Facilitate the environmental induction and training (toolbox talks) of employees and subcontractors (as required).
	Plan and implement training and induction procedures
AWE HSEQ Manager	Provide advice where required in relation to environmental issues associated with the Project.
	Inform all personnel including sub-contractors of the requirement to conform with the CEMP and Sub-Plans.
	Confirm that all necessary environmental controls are implemented and maintained for the duration of the Project.
	Complete weekly site inspections to monitor and verify mitigation measures are implemented and effective.
	Monitor weather conditions to prepare the Project for high winds or other extreme weather events.
	Prepare incident and non-compliance reports
	Facilitate the environmental induction and training (toolbox talks) of employees and subcontractors (as required).
	Conduct environmental incident investigations and implement corrective action responses in consultation with the Project and Site Managers.
	Lead the Project stakeholder communication under the direction of Goodman by providing more information or answering questions from the community hotline.
Goodman Communications and Community Liaison Representative	Build and maintain collaborative and consultative working relationships with internal and external stakeholders.
	Publish notification material on the Project Website and identify other communication tools as appropriate
	Manage property condition surveys
All project personnel	Report all environmental incidents, hazards, non-compliances and near misses to their supervisor or the Site Manager immediately.
	Attend all required environmental awareness, induction and training sessions.

Role	Responsibility
	Stop work or otherwise mitigate the effects of an activity that is causing significant, uncontrolled or unexpected environmental harm.
	A daily pre-start inspection of plant and equipment will be undertaken by plant and equipment operators and any leaks or excessive emissions reported to the Contractors HSEQ Manager.
	Know and observe the site rules and observing all safety signs and risk management procedures.
	Use and maintain personal protective equipment (PPE); and adhere to safe work practices.

4.2 Planning

4.2.1 Risk – Aspects and Impacts

An Aspects and Impacts Register has been prepared to assess the risks associated with the Project (refer Appendix B).

Identification of significant impacts that may occur during construction is central to selection of appropriate environmental safeguards. This approach involves an assessment of all relevant Project aspects and their environmental risks, with corresponding risk mitigation strategy and risk ranking.

Each environmental risk was categorised based on the following:

- Environmental aspect
- Relative scale of potential impact
- Type of potential impact, and
- Likelihood of occurrence.

Identification of risks included a review of the approved works, Conditions, AMMMs, and environmental risks identified in the EIS and RtS.

4.2.2 Unpredicted or Unexpected Impacts

Throughout construction, there is a potential to cause unpredicted, or reveal unexpected, environmental impacts. These impacts are typically related to Aboriginal cultural or historic heritage and contamination.

In accordance with B62, B51-B52, and B53-B54, an Unexpected Finds Procedure has been prepared to ensure that potentially contaminated material and any uncovered heritage items are appropriately managed as per the Conditions of Consent and the relevant legislation. The Unexpected Finds Procedure is presented as Appendix I to this CEMP.

4.2.3 Licenses, Permits and Approvals

In accordance with Advisory Note AN1, all necessary licenses, permits and approvals required for the development of the Project will be obtained and maintained as required throughout the life of the Project. No condition removes the obligation for Goodman and the

AW Edwards to obtain, renew or comply with such necessary licenses, permits or approvals. AW Edwards will ensure that the Project has obtained the relevant approval(s) from the relevant service provider(s), prior to undertaking construction of corresponding utility works.

Any guideline, protocol, Australian Standard or policy stated in the Conditions of Consent are referenced to in the form they are in as at the date of this consent, however, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may require compliance with an updated or revised version. Goodman and AW Edwards will ensure that licenses, permits, and approval related standards are up to date and to the satisfaction of the Planning Secretary.

4.2.4 Continual Improvement

This CEMP has been prepared in alignment with AW Edward's Environmental Policy and Environmental Sustainability Policy which describe their commitment to continual improvement in environmental performance and compliance with applicable legal requirements. These policies will be displayed at the project offices and communicated to all site personnel.

This CEMP will be subject to reviews and (if needed) updates to account for changing conditions on site or the identification of environmental performance opportunities and to ensure that it remains up to date. Refer to Section 6.4 for details on the review process.

4.3 Competence, Training and Awareness

To ensure that this CEMP is effectively implemented during construction, each level of management is responsible for ensuring that Project personnel are aware and instructed to comply with the requirements of this CEMP and the Conditions of Consent.

AWE will coordinate compulsory environmental training so that all personnel on site have the required skills and competence to perform the environmental management, reporting, monitoring and community engagement relevant to their role as outlined in Section 5.2 of this CEMP.

4.3.1 Environmental Induction

All personnel, including sub-contractors, are required to attend a site induction that includes an environmental component, prior to commencement of works onsite. All visitors to site become the responsibility of an AW Edwards Project Team member in relation to safety and the environment. Visitors will be accompanied by an AW Edwards Site Inducted person at all times.

The environmental induction will include, but not be limited to:

- An instruction to comply with Consent conditions relevant to the activities they carry out on the Project, in accordance with Condition A26.
- An overview of:
    - Relevant details of the CEMP including purpose and objectives
    - Key environmental issues

- Project specific environmental management requirements and responsibilities as specified in CEMP and CEMP Sub-Plans, and
- Incident response and reporting requirements.

AWE may authorise amendments to the induction at any time, provided the requirements remain consistent with those set out in the Consent. Possible reasons for changes to the induction may be Project modifications, legislative changes or amendments to this CEMP or related documentation.

Short-term visitors to site will be required to undertake a visitor's induction and be accompanied by inducted personnel at all times.

A record of all environment inductions will be maintained and kept on-site.

4.3.2 Toolbox Talks

Toolbox talks will be one method of raising awareness and educating personnel on issues related to all aspects of construction including environmental issues. The toolbox talks are used to ensure environmental awareness continues throughout construction.

Toolbox talks are to occur at least once per week. Attendance is mandatory and attendees of toolbox talks are required to sign an attendance form and the records maintained. Relevant environmental issues may include:

- Noise and vibration impact management
- Permissible hours of work
- Emergency and spill response, and
- Stormwater management.

4.3.3 Training

Targeted environmental awareness training may be provided to individuals or groups of workers with a specific authority or responsibility for environmental management or those undertaking an activity with a high risk of environmental impact. Topics covered may include those detailed above, or others deemed necessary in the lead up to or during demolition works.

Additional training will be provided, if required, in response to a review of the CEMP or Sub-Plans requiring a change in environmental management, following an environmental incident, or at the direction of the Planning Secretary.

4.4 Working Hours

In accordance with Condition B8, construction activities for the Project will only be undertaken during the following hours:

- Monday to Friday 7 am to 6 pm
- Saturday 8 am to 1 pm
- No work on Sundays or public holidays

In accordance with Condition B9, works outside of the hours specified above may only be undertaken in the following circumstances:

- Works that are inaudible at the nearest sensitive receivers
- Works agreed to in writing by the Planning Secretary
- For the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons, or
- Where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm.

Works outside of standard hours (excluding emergency works) must be approved by Goodman prior to commencing and will be subject to the controls described in the CCCHP and the NVMP.

4.5 Incidents and Non-compliances

As outlined in Section 4.2 of this CEMP, it is the obligation of all personnel to report all environmental incidents, hazards, and non-compliances to their supervisor or Project Manager immediately. Upon becoming aware of an incident and/or non-compliance, the procedures outlined below will be followed.

4.5.1 Incidents

An incident is defined by the Consent as: "*An occurrence or set of circumstances that causes or threatens to cause material harm to the environment, and as a consequence of that environmental harm, may cause harm to the health and safety of human beings, and which may or may not be or cause a non-compliance".*

Material harm is harm that:

(a) involves actual harm to the environment that may include (but not be limited to) a leak, spill, emission other escape or deposit of a substance, and as a consequence of that environmental harm (pollution), may cause harm to the health or safety of people; or

(b) results in actual loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment)

Incidents will be managed and reported in accordance with Conditions C10 and C11, and Appendix 4 - Incident Notification and Reporting Requirement, using the following steps:

1. Immediate management of the incident on site should be conducted using the protocol provided in Appendix K, the Environmental Incident Response Flowchart, in accordance with Condition C1.
2. Following the execution of the Flowchart instructions and assurance that the incident does not pose an immediate threat to human or the environment, the Planning Secretary must be notified in writing through the Major Projects website within 24 hours after the becoming aware of an incident.

3. After following the flowchart and confirming that the incident does not pose an immediate danger to people or the environment, the Planning Secretary must be informed in writing through the Major Projects website within 24 hours of the incident.

   The notification must include the following details:

   - Date, time and location
   - A brief description of what occurred and why it has been classified as an incident
   - A description of what immediate steps were taken in relation to the incident, and
   - Identifying a contact person for further communication regarding the incident.

4. A subsequent incident report must be provided within 7 days of the Applicant making the immediate incident notification (or as otherwise agreed to by the Planning Secretary).

   The report must:

   - Identify how the incident was detected
   - Identify when the Applicant became aware of the incident
   - Identify any actual or potential non-compliance with conditions of Consent
   - Identify further action(s) that will be taken in relation to the incident
   - Provide a summary of the incident
   - Provide outcomes of an incident investigation, including identification of the cause of the incident
   - Provide details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence, including the period for implementing any corrective and/or preventative actions, and
   - Provide details of any communication with other stakeholders regarding the incident.

5. At the Planning Secretary's discretion, within 30 days of the date on which the incident occurred (or as otherwise agreed to), the Applicant must provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with another detailed report on the incident, and such further reports as may be requested.

   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.

6. Within three (3) months of the submission of an incident report, the strategies, plans and programs required under this consent must be reviewed. The Planning Secretary must be notified in writing of the outcomes of any review.

7. If the strategies, plans or programs are revised, the document must be submitted to the Planning Secretary for approval within six (6) weeks of the review, or other such timing as agreed by the Planning Secretary.

4.5.2 Non-compliances

A Non-compliance is defined by the Consent as: "*an occurrence, set of circumstances or development that is a breach of this consent*".

In accordance with Condition C1(h)(i) non-compliances will be managed and reported in accordance with Conditions C12 to C13, in the following steps:

1. The Planning Secretary must be notified in writing through the Major Projects website within seven (7) days after the Project team becomes aware of any non-compliance.

   A non-compliance notification must:

   - identify the development (including the development application number and name)
   - set out the condition of this consent that the development is noncompliant with
   - why it does not comply
   - the reasons for the non-compliance (if known), and
   - what actions have been undertaken, or will be undertaken, and when, to address the non-compliance.

A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

4.5.2.1 Non-compliance with Statutory Requirements

The Legal and Compliance Tracker (refer to Appendix A) summarises the general requirements under each Act and Regulation applicable to the Project.

Where a non-compliance with any statutory requirement is identified, it will be responded to and reported in accordance with the terms of each legislation. If relevant to the Conditions of Consent, the standard non-compliance procedure will also be followed.

The contact details for key relevant agencies and regulatory authorities are listed below:

1. **Willoughby City Council**

   (02) 9777 1000

2. **Fire and Rescue NSW**

   a. 000 (for pollution incidents that present an immediate threat to human health or property)

   b. 1300 729 579 (for pollution incidents that do not present an immediate threat to human health or property)

3. **NSW Ministry of Health**

   (02) 9391 9000

4. **NSW Department of Environment and Heritage**

   (02) 9995 5000

5. **NSW Environment Protection Authority**
   131 555
6. **NSW Department of Planning, Housing, and Infrastructure**
   1300 305 695
7. **Heritage NSW**
   (02) 9873 8500
8. **SafeWork NSW**
   131 050

5. MITIGATION MEASURES

Environmental mitigation measures to be implemented during construction of the Project to enable compliance with the Consent, performance measures and criteria are documented in Table 5 and the aspect-specific CEMP Sub-Plans. The identified mitigation measures are consistent with those identified in the EIS, the RtS, the AMMMs, the Consent and reflect current accepted industry guidelines and practice.

Each mitigation measure is categorised as per the DPIE's hierarchy of approaches for managing impacts identified in the State Significant Development Guidelines released by the Department in June 2021, as:

- Performance based measure – identify performance criteria that must be complied with to achieve an appropriate environmental outcome but do not specify how the outcome is to be achieved.
- Prescriptive measure – require action to be taken or specify something that must not be done.
- Management based measure – identify one or more management objectives that must be achieved through the implementation of a management plan.

A list of the mitigation measures specific to traffic, noise and vibration, erosion, waste, and community can be found in the respective Sub-Plans in Appendices C to K.

Table 5: Construction environmental mitigation measures

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
TRAFFIC AND ACCESS					
T1	A Construction Traffic Management Plan is to be prepared and endorsed by the PCA prior to issuance of a Construction Certificate. The CTMP is to reflect the content and recommendations of the Preliminary CTMP prepared by ASON dated April 2024.	AWE Project Director/ Manager/ Coordinator	Management based measure	AMMMs, Appendix 3 of the Development Consent	CTP
T2	A Green Travel Plan is to be prepared and endorsed by the PCA prior to issuance of a Construction Certificate. The GTP is to reflect the content and recommendations of the Preliminary GTP prepared by ASON dated April 2024.	AWE Project Director/ Manager/ Coordinator	Management based measure	AMMMs, Appendix 3 of the Development Consent	GTP
WATER QUALITY, SOILS, AND EROSION					
SW1 (B2)	The contractor shall implement all soil erosion and sediment control measures as necessary and to the satisfaction of council/CPESC prior to the commencement of and for the duration of construction of the development	AWE Site Manager	Prescriptive measure	Condition B31	Inspection Report
SW2 (B2)	No disturbance to the site shall be permitted other than in the immediate area of the works and no material shall be removed from the site without Council's approval.	AWE Site Manager	Prescriptive measure	ESCP	Disposal records Correspondence with Council Inspection Report
SW3 (B2)	All erosion and sediment control devises to be installed and maintained in accordance with standards outlined in NSW Department of Housing's 'Managing Urban Stormwater – Soils and Constructions'	AWE HSEQ Manager	Prescriptive measure	ESCP	Inspection Report

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
SW4 (B3)	Topsoil shall be stripped and stockpiled outside hazard areas such as drainage lines.	AWE Site Manager	Prescriptive measure	ESCP	Inspection Report
SW5 (B3)	Topsoil is to be respread later on areas to be revegetated and stabilized only (i.e. all footpaths, batters, site regarding areas, basins and catch drains). Topsoil shall not be respread on any other areas unless specifically instructed by the superintendent.	AWE Site Manager	Prescriptive measure	ESCP	Inspection Report
SW6 (B3)	If they are to remain for longer than one month, stockpiles shall be protected from erosion by covering them with a mulch and hydroseeding and, if necessary, by locating banks or drains downstream of a stockpile to retard silt laden runoff	AWE Site Manager	Management based measure	ESCP	Inspection Report
SW7 (B4)	The contractor shall regularly maintain all erosion and sediment control devices and remove accumulated silt from devices such that no more than 60% of their capacity is lost.	AWE HSEQ Manager	Performance measure	ESCP	Inspection Report
SW8 (B4)	All the silt is to be placed outside the limit of works. The period for maintaining these devices shall be at least until all disturbed areas are revegetated or as directed by the superintendent or council.	AWE Site Manager	Prescriptive measure	ESCP	Inspection Report
SW9 (B5)	Vehicular traffic shall be controlled during construction confining access where possible to nominated stabilized access points	AWE Site Manager	Management based measure	ESCP	Inspection Report
SW10 (B6)	The contractor shall implement dust control by regular wetting down (but not saturating) disturbed area	AWE HSEQ Manager	Management based measure	ESCP	Inspection Report
SW11 (B7)	Provide and maintain silt traps around all surface inlet pits until catchments are revegetated or paved	AWE HSEQ Manager	Management based measure	ESCP	Inspection Report

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
SW12 (B8)	Revegetate all trenches immediately upon completion of backfilling	AWE Site Manager	Prescriptive measure	ESCP	Inspection Report
SW13 (B9)	All drainage pipe inlets to be capped until: (a) downpipes connected, (b) pits constructed and protected with silt barrier	AWE Site Manager	Prescriptive measure	ESCP	Inspection Report
SW14 (B10)	Silt fence maintenance inspection to be carried out every 3 months and after each rainfall event	AWE Site Manager	Management based measure	ESCP	Inspection Report
SW15 (B11)	Erosion and sediment control signage available from Council must be attached to the most prominent available structure and be visible at all times when entering the site for the duration of construction	AWE Site Manager	Management based measure	ESCP	Inspection Report
SW16	(a) ensure that only VENM, ENM, or other fill material approved in writing by EPA is brought onto the site; (b) keep accurate records of the volume and type of fill to be used; and (c) make these records available to the Planning Secretary upon request	AWE Project Director/ Manager/ Coordinator	Prescriptive measure	Condition B29	Import Register
SW17	The Applicant must install suitable erosion and sediment control measures on-site, in accordance with the relevant requirements of the Australian Rainfall and Runoff (Engineers Australia, 2016) and Managing Urban Stormwater: Soils and Construction - Volume 1: Blue Book (Landcom, 2004) guideline and the Erosion and Sediment Control Plan included in the CEMP required by condition C2, and manage off site overland flows to provide protection for the development.	AWE Project Director/ Manager/ Coordinator	Management measure	Condition B30	ESCP Inspection Report
SW18	The stormwater management system will be designed by a suitable qualified and experienced person to council design standards and in accordance with the conceptual design in the EIS and RTS.	AWE Project Director/ Manager/ Coordinator	Management Measure	Condition B33	ESCP Inspection Report

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
FIRE					
F1	Performance Solutions to satisfy the Performance Requirements of the NCC have been proposed to account for non-compliances with the DtS provisions as identified in the NCC Compliance Report (Appendix JJ) to address non-compliances. A complete fire engineering analysis will be included within the Fire Engineering Report (FER) which is expected to be undertaken prior to the commencement of CC.	Goodman's Representative	Management based measure	AMMMs, Appendix 3 of the Development Consent	FER Design Report and Architectural Plans
AIR QUALITY					
AQ1	Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.	AWE Site Manager	Prescriptive measure	AMMMs, Appendix 3 of the Development Consent	Inspection Report
AQ2	Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable.	AWE HSEQ Manager	Management based measure	AMMMs, Appendix 3 of the Development Consent	Inspection Report
AQ3	Only remove the cover in small areas during work and not all at once.	AWE HSEQ Manager	Prescriptive measure	AMMMs, Appendix 3 of the Development Consent	Construction Plan

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
AQ4	Avoid scabbling (roughening of concrete surfaces) if possible.	AWE HSEQ Manager	Management based measure	AMMMs, Appendix 3 of the Development Consent	Construction Plan
AQ5	Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.	AWE HSEQ Manager	Management based measure	AMMMs, Appendix 3 of the Development Consent	Inspection Report
AQ6	Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.	AWE Site Manager	Management based measure	AMMMs, Appendix 3 of the Development Consent	Inspection Report
AQ7	For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriately to prevent dust.	AWE Site Manager	Management based measure	AMMMs, Appendix 3 of the Development Consent	Inspection Report
AQ8	Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.	AWE HSEQ Manager	Prescriptive measure	AMMMs, Appendix 3 of the Development Consent	Inspection Report
AQ9	Avoid dry sweeping of large areas.	All project personnel	Management based measure	AMMMs, Appendix 3 of the	Inspection Report

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
				Development Consent	
AQ10	Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.	AWE Site Manager	Management based measure	AMMMs, Appendix 3 of the Development Consent	Inspection Report
AQ11	Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.	AWE Site Manager	Management based measure	AMMMs, Appendix 3 of the Development Consent	Inspection Report
AQ12	Record all inspections of haul routes and any subsequent action in a site log book.	AWE Site Manager	Management based measure	AMMMs, Appendix 3 of the Development Consent	Inspection Report
AQ13	Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.	AWE Site Manager	Prescriptive measure	AMMMs, Appendix 3 of the Development Consent	Inspection Report Site Plan
AQ14	Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).	AWE Site Manager	Prescriptive measure	AMMMs, Appendix 3 of the Development Consent	Inspection Report Site Plan

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
AQ15	Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.	AWE Site Manager	Management based measure	AMMMs, Appendix 3 of the Development Consent	Inspection Report Site Plan
AQ16	Access gates to be located at least 10m from receptors where possible	AWE Site Manager	Prescriptive measure	AMMMs, Appendix 3 of the Development Consent	Site Plan
AQ17	Exposed surfaces and stockpiles are to be suppressed by regular watering or other alternative suppression methods	AWE HSEQ Manager	Management based measure	AMMMs, Appendix 3 of the Development Consent	Inspection Report
NOISE AND VIBRATION					
NV4	provision of noise barriers around each construction site, where possible;	AWE HSEQ Manager	Management measures	NVMP	Construction Plan
NV5	the coincidence of noisy plant working simultaneously close together would be avoided;	AWE HSEQ Manager	Management measures	NVMP	Inspection Report
NV6	offset distances between noisy plant and sensitive receivers would be increased;	AWE HSEQ Manager	Management measures	NVMP	Inspection Report Site Plan
NV7	residential grade mufflers should be fitted to mobile plant, where possible;	AWE HSEQ Manager	Management measures	NVMP	Inspection Report

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
NV8	dampened rock hammers would be used;	AWE HSEQ Manager	Management measures	NVMP	Inspection Report
NV9	non-tonal reversing alarms would be fitted to all permanent mobile plant;	AWE HSEQ Manager	Management measures	NVMP	Inspection Report
NV10	high noise generating activities would be scheduled for less sensitive period considering the nearby receivers. The proposed allowable times for high noise emissions appliances are as follows: i. Monday to Friday: 9:00am – 12:00pm and 1:00pm – 4:00pm ii. Saturday: 9:00am – 1:00pm	AWE Site Manager	Management measures	NVMP	Construction Plan
NV11	the layout of construction sites would consider opportunities to shield receivers from noise. This would also include carrying out the requirements in relation to construction noise and vibration monitoring	AWE HSEQ Manager	Management measures	NVMP	Site Plan
NV12	Where vibration levels are predicted to exceed the screening criteria, a more detailed assessment of the structure and attended vibration monitoring would be carried out to ensure vibration levels remain below appropriate limits for that structure.	AWE HSEQ Manager	Prescriptive measure	NVMP	Detailed Noise Assessment
NV13	Sequencing works to shield noise sensitive receivers by retaining building wall elements	AWE HSEQ Manager	Management measures	NVMP	Construction Plan
NV14	Locating load out areas away from the nearby noise sensitive receivers	AWE HSEQ Manager	Management measures	NVMP	Site Plan
NV15	Providing respite periods for noise intensive works	AWE HSEQ Manager	Management measures	NVMP	Construction Plan

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
	Natural respite periods aligning with construction breaks and lunch periods will aid to protect the amenity of the most affected receivers. Further respite periods can be proposed where construction activities exceed the HANML.				Inspection Report
NV16	Installing sound barrier screening to scaffolding facing noise sensitive neighbours	AWE HSEQ Manager	Management measures	NVMP	Site Plan
NV17	Notification (leaflet or similar) of nearby receivers which are predicted to receive construction noise levels over the ICNG noise management levels as shown in Section 5.4.1. This is only recommended as a notification of scheduled impacts prior to commencement of the specific works that exceed noise management levels.	Goodman Communications and Community Liaison Representative	Management measures	NVMP	Construction Plan
NV18	The primary noise generating activity at the site will be the demolition and bulk excavation period. As much as practicable, use of commercially available and practical for the intended use quieter demolition and excavation methods is to be adopted.	AWE Site Manager	Management measures	NVMP	Construction Plan
NV19	Demolition and excavation shall be conducted initially using excavator with bucket (quietest excavation method), then use of rock saws or rippers. Use of the loudest excavation equipment is used only when other options are not appropriate, i.e., when ripping and breaking	AWE HSEQ Manager AWE HSEQ Manager	Management measures	NVMP	Construction Plan
NV20	It is recommended to use rock saws near all boundaries to reduce vibration and noise levels.	AWE HSEQ Manager	Management measures	NVMP	Inspection Report
NV21	i. Trucks and bobcats to use a non-tonal reversing beacon (subject to OH&S requirements) to minimise potential disturbance of neighbours. ii. Avoid careless dropping of construction materials into empty trucks.	AWE HSEQ Manager	Management measures	NVMP	Inspection Report

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
	iii. Trucks, trailers and concrete trucks (if feasible) should turn off their engines during idling to reduce noise impacts (unless truck ignition needs to remain on during concrete pumping).				
NV22	As much as is feasible, all work should be conducted with the façade intact to maximise noise mitigation. In the event that parts of the façade cannot be installed until a much later date, a 10-15mm plywood hoarding is to be installed over any opening to reasonably minimise noise breakout as much as feasible such as over windows. It is noted that there will still be areas of work where the façade cannot be enclosed, however most internal works will be shielded from nearby receivers.	AWE Site Manager	Management measures	NVMP	Site Plan Inspection Report
NV23	A copy of the Noise Management Plan is to be available to contractors. The location of the Noise Management Plan should be advised in any site induction.	AWE HSEQ Manager	Management measures	NVMP	Inspection Report
NV24	Site induction should also detail the site contact in the event of noise complaint.	AWE HSEQ Manager	Prescriptive measure	NVMP	Site Induction
NV25	Vibration monitoring is recommended during the in-ground/ excavation/piling stage where high vibration generating equipment is utilised. Vibration monitoring is to be implemented at the external wall of the closest receiver. This localised vibration monitoring is to be conducted for a minimum period of 2 weeks to ensure the appropriate criteria is achieved.	AWE HSEQ Manager	Management measures	NVMP	Inspection Report Site Plan Monitoring Results
NV26	Noise monitoring is recommended during the in-ground/ excavation/ piling stage where high noise generating equipment is utilised. Noise monitoring is to be implemented along the property boundary closest to the noise receiver. This localised noise monitoring is to be conducted for a minimum period of 2 weeks for documentation.	AWE HSEQ Manager	Management measures	NVMP	Inspection Report Site Plan Monitoring Results

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
NV27	Vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified in condition B15	AWE Site Manager	Prescriptive measure	Condition B16	Inspection Report
NV28	The limits in condition B15 apply unless otherwise outlined in a Construction Noise and Vibration Management Plan, approved as part of the CEMP required by condition C2 of this consent.	AWE Project Director/ Manager/ Coordinator	Prescriptive measure	Condition B17	Inspection Report
HERITAGE					
H1	If changes are made to the proposal that may result in impacts to areas not assessed by this ACHAR further assessment would be required Unexpected Aboriginal objects remain protected by the National Parks and Wildlife Act 1974.	AWE Project Director/ Manager/ Coordinator	Management measures	AMMMs, Appendix 3 of the Development Consent	Construction Plan
H2	If any such objects, or potential objects, are uncovered in the course of the activity, all work in the vicinity should cease immediately. A qualified archaeologist should be contacted to assess the find and Heritage NSW and Metropolitan LALC must be notified.	AWE Site Manager	Management measures	AMMMs, Appendix 3 of the Development Consent	Incident Report
H3	If human remains, or suspected human remains, are found in the course of the activity, all work in the vicinity should cease, the site should be secured, and the NSW Police and Heritage NSW should be notified.	Goodman's Representative / AWE Site Manager	Management measures	AMMMs, Appendix 3 of the Development Consent	Incident Report

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
HAZARDS AND RISK					
HR1	It is recommended that a Flood Emergency Response Plan (FERP) is developed for the site given that both access points lead onto Campbell Street, which is affected in the PMF event. Both the Willougby City Council DCP and LEP require consideration of safe occupation or efficient evacuation. The development of a FERP will determine which of these management strategies is most effective for the site and ensure adequate management strategies are in place in the event of a significant flood, mitigating any residual flood risks.	AWE Project Director/ Manager/ Coordinator	Management based measure Prescriptive measure	AMMMs, Appendix 3 of the Development Consent	FERP
HR2	The design requirements detailed within RiskCon's Dangerous Goods Report 1 May (Appendix BB) shall be adhered to in the development of the design for the facility. Spillage containment with a net capacity of 14m3 shall be installed for the power transformers. The cell manufacturer shall ensure that the Li-ion battery modules and BMS are compliant with the relevant testing requirements.	AWE Project Director/ Manager/ Coordinator	Prescriptive measure	AMMMs, Appendix 3 of the Development Consent	Design Report Architectural Plans
HR3	Goodman shall re-assess their site against Resilience and Hazards SEPP in the event that storage quantities of Dangerous Goods increase.	AWE Project Director/ Manager/ Coordinator	Management based measure	AMMMs, Appendix 3 of the Development Consent	Management Review
HR4	The quantities of dangerous goods stored and handled at the site must be below the threshold quantities listed in the Department's Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 at all times.	AWE Project Director/ Manager/ Coordinator	Prescriptive measure	Condition B41	Inspection Report
HR5	The Applicant must store all chemicals, fuels and oils used on-site in accordance with: (a) the requirements of all relevant Australian Standards; and (b) for liquids, the NSW EPA's Storing and Handling of Liquids: Environmental Protection – Participants Manual.	AWE Project Director/ Manager/ Coordinator	Prescriptive measure	Condition B42	Inspection Report Site Plan

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
WASTE MANAGEMENT					
W1	Where possible, all demolition and construction materials would be recycled either onsite through reuse or offsite at a licensed facility. Waste would be transported and disposed of offsite by a licensed contractor to a licensed landfill facility.	AWE Project Director/ Manager/ Coordinator	Performance measure	AMMMs, Appendix 3 of the Development Consent	Waste dockets Waste register
W2	Where possible, all demolition and construction materials would be recycled either on-site through reuse or offsite at a licensed facility. Waste would be transported and disposed of offsite by a licensed contractor to a licensed landfill facility	AWE Project Manager	Prescriptive measure	Section 6.2.8.4 EIS	Waste Register Waste dockets
W3	Order material / goods with minimal packaging or request suppliers to remove packaging from site	AWE Project Director/ Manager/ Coordinator	Prescriptive measure	CWMP	Suppliers and Contractors
W4	Accurately estimate materials required to minimise wastage of product	AWE Site Manager	Prescriptive measure	CWMP	Construction Plan
W5	Segregate waste on-site – waste materials, including spoil and demolition waste, will be separated into dedicated bins / areas for either reuse on-site or collection by a waste contractor and transported to off-site facilities;	AWE Site Manager	Prescriptive measure	CWMP	Inspection Report
W6	Where feasible and reasonable, secondary waste material would be used in construction	AWE Site Manager	Mitigation measure	CWMP	Inspection Report
W7	Spoil will be stockpiled on-site in allocated areas, where appropriate, and mitigation measures for dust control and surface water management will be implemented in accordance with the CEMP;	AWE Site Manager	Mitigation measure	CWMP	Inspection Report Site Plan

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
W8	Asbestos containing materials and waste would be investigated, managed, handled and disposed by a suitably qualified and experienced occupational hygienist. The disturbance of, handling and disposal of any asbestos containing materials would be undertaken by an appropriately licenced asbestos removal contractor in accordance applicable SafeWork NSW and EPA requirements and guidelines;	AWE Project Director/ Manager/ Coordinator	Prescriptive measure	CWMP	Inspection Report Asbestos Clearance Certificate
W9	Liquid wastes will be stored in appropriate containers in bunded areas until transported off-site. Bunded areas will have the capacity to hold 110% of the liquid waste volume for bulk storage or 120% of the volume of the largest container for smaller packaged storage	AWE HSEQ Manager	Prescriptive measure	CWMP	Site Plan Inspection Report
W10	recyclable or non-recyclable wastes will be stored in appropriate covered receptacles (e.g. bins or skips) in appropriate locations on-site and subcontractors commissioned to regularly remove / empty the bins to approved disposal or recycling facilities	AWE Site Manager	Mitigation measure	CWMP	Inspection Report
W11	if there is any doubt as to whether the material is VENM, the Planning and Environment Manager will arrange for sampling and analysis of the material against the excavated natural material (ENM) resource recovery order (The excavated natural material order 2014) to confirm that the material is free of contaminants	AWE Project Director/ Manager/ Coordinator	Prescriptive measure	CWMP	Assessment Report
W12	Sewage is to be extracted via sealed vacuum tanker by an appropriately licenced contractor. the licenced contractor would transport the material to an appropriately licenced facility permitted to accept sewage/liquid waste for appropriate disposal.	AWE Project Director/ Manager/ Coordinator	Prescriptive measure	CWMP	Contractor register
W13	100% of the spoil that can be reused would be beneficially reused in accordance with the project spoil recovery reuse hierarchy.	AWE Site Manager	Performance measure	CWMP	Waste dockets
W14	Construction waste would be minimised by accurately calculating materials brought to the site and limiting materials packaging	AWE Project Director/ Manager/ Coordinator	Mitigation measure	CWMP	Construction Plan

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
W15	Prior to engaging a contractor to collect, transport and dispose/re-use the waste, the Construction Manager would obtain a copy of all relevant qualifications, accreditations, permits and licences from the nominated contractor to ensure the contractor and receiving facility are legally permitted to accept the waste type, as required by the POEO Act.	AWE Project Director/ Manager/ Coordinator	Prescriptive measure	CWMP	Contractor Register Inspection Report
W16	Construction personnel would be briefed on the potential for unexpected contamination to occur within the site and procedures to be implemented in the event contamination is identified or suspected.	AWE HSEQ Manager	Mitigation measure	CWMP	Toolbox talks Pre-start meetings
CONTAMINATION					
CON1	Appointed environmental consultant recommends that a CEMP be prepared and implemented as part of the proposed development works and include requirements for the following procedures during construction: ▪ Soil and water management. ▪ Waste management. ▪ Validation requirements for imported material. Remediation is not considered to be required based on data collected as part of this investigation. Should unexpected finds with the potential to impact future human or ecological receptors on site be uncovered during the proposed redevelopment, these should be dealt with in line with the unexpected finds protocol of a Construction Environmental Management Plan.	AWE Project Director/ Manager/ Coordinator / AWE Site Manager	Prescriptive measure	AMMMs, Appendix 3 of the Development Consent	This CEMP Incident Register
ECOLOGY					
EC1	Replacement tree species must suit their location on the site in terms of their potential physical size and their tolerance to the surrounding environmental conditions. To avoid unethical or unprofessional tree selection and / or their	AWE Project Director/ Manager/ Coordinator	Prescriptive measure	AMMMs, Appendix 3 of the	Inspection Report

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
	replacement, replacement tree species must be selected in consultation with an arborist, who can assist in implementing successful tree establishment techniques.			Development Consent	Site Plan
EC2	Replacement trees must have the genetic potential to reach a mature size potential of those trees removed to facilitate the development. As a guide, potential height will be a minimum of 10m (or more) and produce a spreading canopy so they may provide amenity value to the property and contribute to the tree canopy of the surrounding area in the future.	AWE Project Director/ Manager/ Coordinator	Prescriptive measure	AMMMs, Appendix 3 of the Development Consent	Inspection Report Site Plan
EC3	All trees identified for retention within the site are to be retained and protected in accordance with the latest version of Australian Standard 4970:2009 – Protection of Trees on Development for the duration of the development	AWE Site Manager	Management measures	B55	Site Plan Inspection Report
CUMULATIVE IMPACTS					
C1	A Construction Management Plan shall be prepared prior to the construction certificate to minimise potential cumulative construction impacts. The CMP should identify and assess potential cumulative construction-related impacts (e.g. noise, vehicle movements, pedestrian safety) associated with other surrounding developments. Mitigation and monitoring measures should be provided for all identified cumulative construction impacts.	AWE Project Director/ Manager/ Coordinator	Prescriptive measure	AMMMs, Appendix 3 of the Development Consent	CEMP
SOCIAL					
S1	Early consultation and communication about construction activities (including timing, duration, likely impacts and mitigation measures).	Goodman Communications and Community Liaison Representative	Management measures	CCCHP	Communication Material

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
S2	Issue regular notifications and updates prior to work starting and at other critical times as required.	AWE HSEQ Manager	Management measures	CCCHP	Communication Material Construction Plan
S3	Undertake doorknocks as required.	AWE HSEQ Manager	Management measures	CCCHP	Communication Material
S4	Use of other communication tools as appropriate	Goodman Communications and Community Liaison Representative	Management measures	CCCHP	Communication Material
S5	Identify relevant strata/building managers, property managers, owners and tenants	Goodman Communications and Community Liaison Representative	Management measures	CCCHP	Key Stakeholder Table
S6	Strata/building managers and owners notified of work before it starts as required.	Goodman Communications and Community Liaison Representative	Management measures	CCCHP	Communication Material
S7	Early and ongoing engagement and consultation with impacted stakeholders on likely noise and vibration impacts, with focus on noise and vibration sensitive receivers.	AWE HSEQ Manager	Management measures	CCCHP	Communication Material
S8	Notification and updates to inform of planned work, working hours and what to expect.	AWE HSEQ Manager	Management measures	CCCHP	Communication Material

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
S9	Use of mitigation measures in the CNVMP.	AWE HSEQ Manager	Management measures	CCCHP	Inspection Report
S10	Noise reduction strategies to be implemented with consideration to business hours of operation and sensitive periods as required.	AWE HSEQ Manager	Management measures	CCCHP	Construction Plan
S11	Use of appropriate plant, tools, construction techniques and programming as required.	All project personnel	Management measures	CCCHP	Construction Plan
S12	High impact noise works staged with respite periods as required by planning approvals.	AWE Site Manager	Management measures	CCCHP	Construction Plan
S13	Staff inductions, toolbox talks and pre-start meetings to inform of mitigation measures including inappropriate behaviour.	AWE Site Manager	Management measures	CCCHP	Induction Toolbox talks Pre-start meetings
S14	Noise and vibration monitoring.	AWE Site Manager	Management measures	CCCHP	Monitoring results Inspection Report
S15	Offer of property condition survey where eligible	Goodman Communications and Community Liaison Representative	Management measures	CCCHP	Communication Material
S16	Dust minimised by using water carts, water sprayers, street sweepers and other measures as needed	AWE HSEQ Manager	Management measures	CCCHP	Inspection Report

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
S17	Issue notifications detailing changes to access/ road, cycle and footpath detours and removal of on-street parking.	Goodman Communications and Community Liaison Representative	Management measures	CCCHP	Communication Material
S18	Coordination of work with business deliveries and priorities wherever possible.	Goodman Communications and Community Liaison Representative	Management measures	CCCHP	Construction Plan
S19	Installation of wayfinding signage to direct pedestrians, delivery drivers, cyclists and customers where appropriate.	AWE Site Manager	Management measures	CCCHP	Site Plan
S20	Traffic controllers/ wayfinding personnel redirecting pedestrians and cyclists as required.	AWE Site Manager	Management measures	CCCHP	Employment Records
S21	Encourage site workers to utilise public transport and ride sharing wherever possible.	Goodman Communications and Community Liaison Representative	Management measures	CCCHP	Pre-start meetings Toolbox talks
S22	Construction vehicle drivers directed as to access requirements	AWE Site Manager	Management measures	CCCHP	Communication Material Inspection report
S23	Specific and ongoing consultation carried out with impacted businesses to identify and develop measures to manage specific construction impacts.	Goodman Communications and Community	Management measures	CCCHP	Communication Material

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
		Liaison Representative			
S24	Compliance with respite periods.	AWE Site Manager	Management measures	CCCHP	Construction Plan Complaints Register
S25	Inspections of footpaths and pedestrian detour signage.	AWE Site Manager	Management measures	CCCHP	Inspection Report
S26	Encourage workers to shop and buy food and beverages from local businesses.	Goodman Communications and Community Liaison Representative	Management measures	CCCHP	Pre-start Meetings Toolbox talks
S27	Ensure shop fronts are kept clean and tidy when working directly adjacent.	AWE Site Manager	Management measures	CCCHP	Inspection Report
S28	Implement Traffic Management Plan and Traffic Control Plans including minimising traffic movements in peak periods, where possible.	AWE Site Manager	Management measures	CCCHP	Inspection Report Vehicle Schedule
S29	Coordinate traffic management with Willoughby Council and the Transport Management Centre	Goodman Communications and Community Liaison Representative	Management measures	CCCHP	Correspondence with Willougby City Council and NSW Transport Management Centre

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
S30	Out of hours deliveries to minimise impacts of oversized vehicles on local roads	AWE Site Manager	Management measures	CCCHP	Construction Plan
S31	Issue regular notifications and updates in advance of changes.	Goodman Communications and Community Liaison Representative	Management measures	CCCHP	Communication Material
S32	Installation of appropriate signage.	AWE Site Manager	Management measures	CCCHP	Site Plan Monitoring Results
S33	Advertisement for major traffic changes as required.	Goodman Communications and Community Liaison Representative	Management measures	CCCHP	Communication Material
S34	Property Condition Surveys offered where eligible	Goodman Communications and Community Liaison Representative	Management measures	CCCHP	Communication Material
S35	Vibration monitoring.	AWE Site Manager	Management measures	CCCHP	Monitoring Results
S36	Issue notifications to inform of outages required for work. Service provider to inform impacted properties.	Goodman Communications and Community	Management measures	CCCHP	Communication Material

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
		Liaison Representative			
S37	Detailed briefings for businesses potentially affected.	Goodman Communications and Community Liaison Representative	Management measures	CCCHP	Communication Material
S38	Seek opportunities to time works to minimise potential impacts in consultation with relevant service providers	AWE Site Manager	Management measures	CCCHP	Construction Plan
S39	Hoarding designed and replaced in line with Goodman Group Brand Style Guidelines	Goodman Communications and Community Liaison Representative	Management measures	CCCHP	Inspection Report
S40	Hoardings and buildings regularly inspected and kept clean.	AWE Site Manager	Management measures	CCCHP	Inspection Report
S41	Prompt graffiti removal from hoarding and buildings.	AWE Site Manager	Management measures	CCCHP	Inspection Report
S42	Plant and surroundings kept well maintained and clean.	AWE Site Manager	Management measures	CCCHP	Inspection Report
S43	Lighting would be oriented to minimise light spill to adjacent properties where practicable.	AWE Site Manager	Management measures	CCCHP	Inspection Report

ID	Measure/Requirement	Responsibility	Type	Reference	Evidence
S44	Consultation and communication with impacted stakeholders about timing and duration of construction activities likely to generate noise, dust, vibration etc., mitigation measures the project will implement, road safety requirements.	Goodman Communications and Community Liaison Representative	Management measures	CCCHP	Communication Material
S45	Inductions for all workers and subcontractors.	AWE Site Manager	Management measures	CCCHP	Inductions Pre-start Meetings
S46	Implementation of Traffic Management Plans.	AWE Site Manager	Management measures	CCCHP	Inspection Report
S47	Vehicle “spotters” to be used when reversing as required.	AWE HSEQ Manager	Management measures	CCCHP	Inspection Report
S48	Signage placed around the site to alert pedestrians and cyclists as to truck movements.	AWE Site Manager	Management measures	CCCHP	Inspection Report
HERITAGE					
H1	The Registered Aboriginal Parties must be kept informed about the commencement of construction and continue to be provided with the opportunity to be consulted about the Aboriginal Heritage management requirements of the development	Goodman Communications and Community Liaison Representative	Prescriptive measure	Condition B50	Communication Material

6. MONITORING AND REVIEWS

6.1 Monitoring, Inspections and Auditing

Environmental monitoring and inspections will be undertaken to validate the impacts predicted for the Project to measure the effectiveness of environmental controls and implementation of this CEMP, and to address approval requirements.

6.1.1 Environmental Inspections

The Contractor Project Manager or delegate will complete weekly environmental inspections of the Project. The purpose of these inspections is to:

- Verify compliance with the Consent
- Review the performance and effectiveness of environmental management measures
- Identify any non-conformances or potential non-conformances against the mitigation measures and other requirements of this CEMP and the Sub-Plans
- Document observations and track performance.
- Ensure that all plant and equipment used on site (or to monitor the performance of the development) is maintained and operated in the proper and effective manner.

These inspections will be documented in the contractor's Environmental Site Inspection Checklist. Any corrective actions identified will be documented and their implementation will be recorded onsite to verify that they have been being actioned and closed out.

6.1.2 Internal Audits

Internal Audits will be conducted by the Project Manager and Site Manager every 6 months using the Site Safety & Environmental Audit/Checklist SE8201 and the Conditions of Consent as guidance. The WHSE Manager and, if required, a professional consultant will also participate in these internal audits.

The purpose of the audits is not only to ensure compliance with this CEMP, but also to identify opportunities for improvement within the plan and the broader Management System. When requested, a summary of the site WHS audit results will be provided to Goodman and relevant third parties, including the Planning Secretary.

6.1.3 Environmental Monitoring

Vibration monitoring in accordance with Condition B11 (i) will be conducted as set out in the NVMP (in Appendix D of this CEMP).

6.2 Environmental Records

Goodman and AW Edwards share responsibility for maintaining environmental management documents and records, including:

- Monitoring, inspection and compliance reports/records
- Correspondence with public authorities
- Induction and training records
- Regulatory licences and permits
- Reports on environmental incidents, other environmental non-compliances, complaints and investigations
- Minutes of review meetings and evidence of action taken
- CEMP, Sub-Plans and procedures
- Any relevant reports submitted to the regulatory authorities or government agencies.

All environmental management documents are subject to ongoing review and continual improvement.

6.3 Management Review

Management reviews will be undertaken as part of the continual improvement process. Management reviews will include:

- A review of the Aspects and Impacts Register and Legal and Compliance Tracker
- The site environmental induction
- A review of the environmental risk assessment
- Analysis of the causes of non-conformance and deficiencies, including those identified in inspections
- Consideration of incidents and lessons learned
- A review of the effectiveness of environmental controls
- Effectiveness of environmental management documentation implementation
- Adequacy of resources and organisation changes
- Compliance with legal and other requirements
- Effectiveness of training and inductions.

Where a change to documentation is identified as necessary to avoid non-compliance or environmental risks, the amendments will be prioritised. The Project Manager shall amend plans and ensure that each relevant person affected by the amendment is advised of the details of the amendment; or given a copy of the amendment. Implementation of this plan shall be monitored through the internal audit process, site inspections and at project Team Meetings.

The CEMP shall be reviewed following any significant incidents or significant changes to the project scope or methodology. A copy of the plan and or any revisions to the plan shall be retained for the duration of the project.

6.4 Revision

Should document review processes identify issues or items within the documents that are either redundant or in need of updating, AW Edwards may propose changes to the documents for Goodman's review. Changes that are not considered minor must be provided to the Department for review and approval prior to use. Minor changes typically include those that:

- Are administrative in nature
- Are consistent with the Conditions
- Do not increase the magnitude of impacts
- Are in response to audit findings
- Are in response to approved modifications to the Project
- Do not compromise the Project's compliance.

In accordance with Condition A3, all written requirements or directions received from the Department shall be complied with at all times, including in relation to environmental performance, document or correspondence, and notifications. Strategies, plans and programs will be reviewed at the following frequencies:

(a) Every six (6) months, at the same intervals as the Project Management Plan

(b) Within three (3) months of:

- Submission of a Compliance Report under Condition C18
- Submission of an incident report under Condition C11
- Submission of an Independent Audit under Condition C18
- Approval of any modification of the conditions of this consent; or
- Issue of a direction of the Planning Secretary under Condition A2(b) which requires a review.

The Planning Secretary must be notified in writing of the outcomes of any review in accordance with Condition C8.

Under Condition C9, if identified as part of the review process or considered necessary to improve the environmental performance of the development, the strategies, plans and programs must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review required under Condition C8, or such other timing as agreed by the Planning Secretary. Updated strategies, plans or programs supersede the previous versions of them.

The Project Manager will ensure that all personnel carrying out construction work in connection with the project are made aware of any revision to the CEMP. This shall be done through electronic correspondence (eg. Aconex), Toolbox Talks, or posting information on the site noticeboards.

APPENDIX A: LEGAL AND COMPLIANCE TRACKER

Conditions of Consent relevant to Construction

Condition No.	Requirement	Document Reference
A1	In addition to meeting the specific performance measures and criteria in this consent, all reasonable and feasible measures must be implemented to prevent, and if prevention is not reasonable and feasible, minimise any material harm to the environment that may result from the construction and operation of the development, and any rehabilitation required under this consent.	This CEMP
A2	The development may only be carried out: (a) in compliance with the conditions of this consent; (b) in accordance with all written directions of the Planning Secretary; (c) in accordance with the EIS and Response to Submissions and Additional Information; (d) in accordance with the Development Layout in Appendix 1; and (e) in accordance with the management and mitigation measures in Appendix 2.	Noted This CEMP
A3	Consistent with the requirements in this consent, the Planning Secretary may make written directions to the Applicant in relation to: (a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this consent, including those that are required to be, and have been, approved by the Planning Secretary; and (b) the implementation of any actions or measures contained in any such document referred to in condition A3(a).	Noted
A4	The conditions of this consent and directions of the Planning Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and a document listed in condition A2(c), or A2(e). In the event of an inconsistency, ambiguity or conflict between any of the documents listed in condition A2(c), or A2(e), the most recent document prevails to the extent of the inconsistency, ambiguity or conflict.	Noted
A11	If the construction or operation of the development is to be staged, the Planning Secretary must be notified in writing, at least one month before the commencement of each stage (or other timeframe agreed with the Planning Secretary).	Noted

Condition No.	Requirement	Document Reference
A12	Where conditions of this consent require consultation with an identified party, the Applicant must: (a) consult with the relevant party prior to submitting the subject document to the Planning Secretary for approval; and (b) provide details of the consultation undertaken including: (i) the outcome of that consultation, matters resolved and unresolved; and (ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.	CNVMP CTMP ESCP FSS This CEMP
A13	With the approval of the Planning Secretary, the Applicant may: (a) prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program); (b) combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); and (c) update any strategy, plan or program required by this consent (to ensure the strategies, plans and programs required under this consent are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the development).	Section 6.5 of this CEMP
A14	If the Planning Secretary agrees, a strategy, plan or program may be staged or updated without consultation being undertaken with all parties required to be consulted in the relevant condition in this consent.	Noted
A15	If approved by the Planning Secretary, updated strategies, plans or programs supersede the previous versions of them and must be implemented in accordance with the condition that requires the strategy, plan or program.	Section 6.5 of this CEMP
A16.	Prior to the commencement of construction of the development, the Applicant must: (a) consult with the relevant owner and provider of services or public infrastructure that are likely to be affected by the development or that need to be installed as part of the development, to make suitable arrangements for relevant approvals, access to, diversion, protection and support of the affected services or infrastructure; (b) prepare a dilapidation report identifying the condition of all public infrastructure in the vicinity of the site (including substation sites, Ausgrid Depot, roads, gutters and footpaths). Necessary access arrangements and permissions must be obtained from Ausgrid to assist with obtaining entry to the substations and Depot when preparing the dilapidation report; and (c) submit a copy of the dilapidation report to the Planning Secretary and Council.	Dilapidation Reports
A17	Unless the Applicant and the applicable authority agree otherwise, the Applicant must:	Noted

Condition No.	Requirement	Document Reference
	(a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the development; (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development; and (c) obtain any relevant approval(s) from the relevant service provider(s), prior to undertaking construction of the corresponding utility works.	
A19	Prior to the commencement of works the Applicant must obtain Building Plan Approval from Sydney Water.	Building Plan Approval
A26	The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of the development.	Section 4.3 of this CEMP
A30	All plant and equipment used on site, or to monitor the performance of the development, must be: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	Section 6.1.1 of this CEMP
A33	References in the conditions of this consent to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, Standards or policies in the form they are in as at the date of this consent.	This CEMP and Sub-Plans
A34	However, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may, when issuing directions under this consent in respect of ongoing monitoring and management obligations, require compliance with an updated or revised version of such a guideline, protocol, Standard or policy, or a replacement of them.	Noted
AN1	All licences, permits, approvals and consents as required by law must be obtained and maintained as required for the development. No condition of this consent removes any obligation to obtain, renew or comply with such licences, permits, approvals and consents.	Noted
B1	The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent	Section 5 of this CEMP
B2	During construction of the development, the Applicant must ensure that: (a) exposed surfaces and stockpiles are suppressed by regular watering or other alternative suppression method; (b) all trucks entering or leaving the site with loads have their loads covered; (c) trucks associated with the development do not track dirt onto the public road network; (d) public roads used by these trucks are kept clean; and	CTMP ESCP Section 5 of this CEMP

<table>
<tr><th>Condition No.</th><th>Requirement</th><th>Document Reference</th></tr>
<tr><td></td><td>(e) land stabilisation works are carried out progressively on site to minimise exposed surfaces.</td><td></td></tr>
<tr><td>B7</td><td>The Applicant must ensure the development does not cause or permit the emission of any offensive odour (as defined in the POEO Act).</td><td>CTMP</td></tr>
<tr><td>B8</td><td>The Applicant must comply with the hours detailed in Table 2. Table 2 Hours of Work
<table>
<tr><th>Activity</th><th>Day</th><th>Time</th></tr>
<tr><td>Construction</td><td>Monday-Friday
Saturday</td><td>7am to 6pm
8am to 1pm</td></tr>
<tr><td>Operation</td><td>Monday-Sunday</td><td>24 hrs</td></tr>
</table></td><td>CTMP</td></tr>
<tr><td>B9</td><td>Works outside of the hours identified in condition Table 2 may be undertaken in the following circumstances:
(a) works that are inaudible at the nearest sensitive receivers;
(b) works agreed to in writing by the Planning Secretary;
(c) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or
(d) where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm.</td><td>Section 4.4 of this CEMP</td></tr>
<tr><td>B10</td><td>The development must be constructed to achieve the construction noise management levels detailed in the Interim Construction Noise Guideline (DECC, 2009) (as may be updated or replaced from time to time). All feasible and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the management and mitigation measures in the Appendix 2, in accordance with the Construction Noise and Vibration Management Plan required under condition B11.</td><td>CNVM</td></tr>
<tr><td>B11</td><td>The Applicant must prepare a Construction Noise and Vibration Management Plan for the development to the satisfaction of the Planning Secretary. The Plan must form part of a CEMP in accordance with condition C2 and must
(a) be prepared by a suitably qualified and experienced noise expert;
(b) be prepared in consultation with Ausgrid and other surrounding affected owners;
(c) describe procedures for achieving the noise management levels in EPA’s Interim Construction Noise Guideline (DECC, 2009) (as may be updated or replaced from time to time);
(d) describe the measures to be implemented to manage high noise generating works such as piling, in close proximity to sensitive receivers;</td><td>CNVMP</td></tr>
</table>

Condition No.	Requirement	Document Reference
	(e) include strategies that have been developed with the community for managing high noise generating works; (f) include strategies developed in consultation with adjacent properties in order to meet the vibration limits in condition B15 such as any alternative construction methods with lower source vibration levels and respite periods; (g) describe the community consultation undertaken to develop the strategies in condition B11(e) and B11(f); and (h) include a complaints management system that would be implemented for the duration of the development. (i) include a Vibration Monitoring system to be installed during demolition, excavation and construction works	
B12	The Applicant must: (a) not commence construction of the development until the Construction Noise and Vibration Management Plan required by condition B11 is approved by the Planning Secretary; and (b) implement the most recent version of the Construction Noise and Vibration Management Plan approved by the Planning Secretary for the duration of construction.	CNVMP
B15	Vibration caused by construction at any residence or structure outside the site must be limited to: (a) for structural damage, the latest version of DIN 4150-3 (2016-12) Vibration in Buildings – Part 3: Effects on Structures (German Institute for Standardisation, 2016); and (b) for human exposure, the acceptable vibration values set out in the Environmental Noise Management Assessing Vibration: a technical guideline (DEC, 2006) (as may be updated or replaced from time to time).	CNVMP
B16	Vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified in condition B15.	Section 5 of this CEMP
B17	The limits in condition B15 apply unless otherwise outlined in a Construction Noise and Vibration Management Plan, approved as part of the CEMP required by condition C2 of this consent.	CNVMP
B18	The Applicant must offer and prepare (if the offer is accepted) a pre-dilapidation and post-dilapidation survey at the adjacent properties with buildings falling within the cosmetic damage buffer zone shown on Figure 2 in this consent: (a) prior to the commencement of construction; and (b) within one month of the conclusion of construction, or as otherwise agreed with the Planning Secretary. The surveys must be submitted to the Planning Secretary and the relevant property owners within seven days of being prepared.	Dilapidation Report
B19	Should the survey at B18(b) identify any damage, the Applicant must discuss the repairs to be undertaken with the relevant property owners, and repair or pay the full costs associated with repairing any part of the building that is determined to be damaged by the carrying out construction works associated with the development.	Dilapidation Report

Condition No.	Requirement	Document Reference
B20	Prior to the commencement of construction of the development, the Applicant must prepare a Construction Traffic Management Plan for the development to the satisfaction of the Planning Secretary. The plan must form part of the CEMP required by condition C2 and must: (a) be prepared by a suitably qualified and experienced person(s); (b) be prepared in consultation with Council; (c) be prepared in consultation with Ausgrid; (d) detail the measures that are to be implemented to ensure road safety and network efficiency during construction; (e) detail heavy vehicle routes, access and parking arrangements; (f) include a Driver Code of Conduct to: (i) minimise the impacts of earthworks and construction on the local and regional road network; (ii) minimise conflicts with other road users; (iii) minimise road traffic noise; and (iv) ensure truck drivers use specified routes; (g) include a program to monitor the effectiveness of these measures; and (h) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.	CTMP
B21	The Applicant must: (a) not commence construction until the Construction Traffic Management Plan required by condition B20 is approved by the Planning Secretary; and (b) implement the most recent version of the Construction Traffic Management Plan approved by the Planning Secretary for the duration of construction.	CTMP
B24	The Applicant must provide sufficient parking facilities on-site, including for heavy vehicles and for site personnel, to ensure that traffic associated with the development does not utilise public and residential streets or public parking facilities.	CTMP
B29	The Applicant must: (a) ensure that only VENM, ENM, or other fill material approved in writing by EPA is brought onto the site; (b) keep accurate records of the volume and type of fill to be used; and (c) make these records available to the Planning Secretary upon request.	Section 5 of this CEMP

Condition No.	Requirement	Document Reference
B30	Prior to the commencement of any construction or other surface disturbance for the development, the Applicant must install suitable erosion and sediment control measures on-site, in accordance with the relevant requirements of the Managing Urban Stormwater: Soils and Construction - Volume 1: Blue Book (Landcom, 2004) guideline and the Erosion and Sediment Control Plan included in the CEMP required by condition C2.	ESCP
B31	The Applicant must maintain the erosion and sediment control measures installed on-site in accordance with condition B30 for the duration of construction of the development.	ESCP
B32	The development must comply with section 120 of the POEO Act, which prohibits the pollution of waters, except as expressly provided for in an EPL	Section 5 of this CEMP
B33	The Applicant must finalise the detailed design of the stormwater management system for the development, prior to the commencement of construction of that system. The system must: (a) be designed by a suitably qualified and experienced person(s); (b) be designed in consultation with Council to Council's design standards; (c) be generally in accordance with the conceptual design in the EIS and RTS; (d) be in accordance with applicable Australian Standards; (e) ensure that the system capacity has been designed in accordance with Australian Rainfall and Runoff (Engineers Australia, 2016) and Managing Urban Stormwater: Council Handbook (EPA, 1997) guidelines; and (f) be designed to manage off site overland flows to provide protection for the development.	ESCP Section 5 of this CEMP Construction Certificate 1
B36	Prior to the commencement of construction of the development, the Applicant must prepare a Construction Flood Emergency Response Plan (CFERP). The Plan must form part of the CEMP required by condition C2 and must: (a) be prepared by a suitably qualified and experienced person(s); (b) address the provisions of the Floodplain risk management manual (DPE, 2023) and Support for emergency management planning (DPE, 2023); and (c) include details of: (i) the flood emergency responses the construction phase of the development; (ii) predicted flood levels; (iii) flood warning time and flood notification; (iv) assembly points and evacuation routes; (v) evacuation and refuge protocols; and (vi) awareness training for employees and contractors	FERP

Condition No.	Requirement	Document Reference
B37	The Applicant must: (a) not commence construction until the CFERP required by condition B36 is submitted to the Planning Secretary; and (b) implement the most recent version of the CFERP submitted to the Planning Secretary for the duration of construction.	FERP
B41	The quantities of dangerous goods stored and handled at the site must be below the threshold quantities listed in the Department's Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 at all times.	Section 3.2 of this CEMP
B42	The Applicant must store all chemicals, fuels and oils used on-site in accordance with: (a) the requirements of all relevant Australian Standards; and (b) for liquids, the NSW EPA's Storing and Handling of Liquids: Environmental Protection – Participants Manual.'	Section 3.2 of this CEMP
B43	In the event of an inconsistency between the requirements of conditions B42 (a) and B42 (b), the most stringent requirement must prevail to the extent of the inconsistency	Noted
B47	The Applicant must store all chemicals, fuels and oils used on-site in accordance with: (a) the requirements of all relevant Australian Standards; and (b) for liquids, the NSW EPA's Storing and Handling of Liquids: Environmental Protection – Participants Manual'	Section 3.2 of this CEMP
B48	In the event of an inconsistency between the requirements of conditions B47(a) and B47(b), the most stringent requirement must prevail to the extent of the inconsistency.	Noted
B49	All reasonable steps must be taken to avoid harm, modification, or other impact to Aboriginal objects except as authorised by this consent.	Section 5 of this CEMP
B50	The Registered Aboriginal Parties must be kept informed about the commencement of construction and commencement of operation of the development. The Registered Aboriginal Parties must continue to be provided with the opportunity to be consulted about the Aboriginal Heritage management requirements of the development	Section 5 of this CEMP
B51	If any item or object of Aboriginal heritage significance is identified on site: (a) all work in the immediate vicinity of the suspected Aboriginal item or object must cease immediately; (b) a 10 m wide buffer area around the suspected item or object must be cordoned off; and (c) Heritage NSW must be contacted immediately.	Unexpected Finds Protocol
B52	Work in the immediate vicinity of the Aboriginal item or object may only recommence in accordance with the provisions of Part 6 of the National Parks and Wildlife Act 1974.	Unexpected Finds Protocol

Condition No.	Requirement	Document Reference
B53	If any non-Aboriginal archaeological relics are uncovered during any works being carried out for the development: (a) all work in the immediate vicinity of the suspected relic(s) must cease immediately; (b) Heritage NSW must be contacted immediately; and (c) the suspected relic(s) must be evaluated, recorded and, if necessary, excavated by a suitably qualified and experienced expert in accordance with the requirements of Heritage NSW.	Unexpected Finds Protocol
B54	Work in the immediate vicinity of any suspected non-Aboriginal archaeological relic(s) must not recommence until this has been authorised by Heritage NSW.	Unexpected Finds Protocol
B55	All trees identified for retention within the site are to be retained and protected in accordance with the latest version of Australian Standard 4970:2009 – Protection of Trees on Development for the duration of the development.	Section 5 of this CEMP
B56	Prior to the commencement of construction of the development, the Applicant must prepare a Construction and Demolition Waste Management Plan for the development to the satisfaction of the Planning Secretary. The Plan must form part of a CEMP in accordance with condition C2 and must: (a) detail the quantities of each waste type generated during construction and the proposed reuse, recycling and disposal locations; and (b) be implemented for the duration of construction works	CWMP
B57	The Applicant must: (a) not commence construction until the Construction Waste Management Plan is approved by the Planning Secretary. (b) implement the most recent version of the Construction Waste Management Plan approved by the Planning Secretary.	CWMP
B58	Waste must be secured and maintained within designated waste storage areas at all times and must not leave the site onto neighbouring public or private properties	CWMP
B59	The Applicant must assess and classify all liquid and non-liquid wastes to be taken off site in accordance with the latest version of EPA's Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014).	CWMP
B60	All waste materials removed from the site must only be directed to a waste management facility or premises lawfully permitted to accept the materials.	CWMP
B61	Waste generated outside the site must not be received at the site for storage, treatment, processing, reprocessing, or disposal	CWMP

Condition No.	Requirement	Document Reference
B62	Prior to the commencement of construction, the Applicant must prepare an unexpected contamination finds procedure to ensure that potentially contaminated material is appropriately managed. The procedure must form part of the CEMP in accordance with condition C2 and must ensure any material identified as contaminated is managed in accordance with the POEO Act and its associated regulations. Details of the final management approach and the results of any associated testing must be submitted to the Planning Secretary within six weeks of the Applicant becoming aware of the contamination find, or as otherwise agreed to by the Planning Secretary.	UFP
B63	The Applicant must ensure that any asbestos encountered during the remediation and construction works for the development is monitored, handled, transported and disposed of by appropriately qualified and licensed contractors in accordance with the requirements of SafeWork NSW and relevant guidelines, including: (a) Work Health and Safety Regulation 2017; (b) SafeWork NSW Code of Practice – How to Manage and Control Asbestos in the Workplace December 2022; (c) SafeWork NSW Code of Practice – How to Safely Remove Asbestos December 2022; and (d) Protection of the Environment Operations (Waste) Regulation 2014.	CWMP
C1	Management plans required under this consent must be prepared in accordance with relevant guidelines, and include: (a) a condition compliance table for that plan; (b) detailed baseline data (where required); (c) details of: (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions); (ii) any relevant limits or performance measures and criteria; and (iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures; (d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria; (e) a program to monitor and report on the: (i) impacts and environmental performance of the development; and (ii) effectiveness of the management measures set out pursuant to paragraph (d) above; (f) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible; (g) a program to investigate and implement ways to improve the environmental performance of the development over time;	This CEMP, CNVMP, CTMP, CWMP, CCCHP, ESCP, FERP

Condition No.	Requirement	Document Reference
	(h) a protocol for managing and reporting any: (i) incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria); (ii) complaint; (iii) failure to comply with statutory requirements; and (i) a protocol for periodic review of the plan. Note: The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans	
C2	The Applicant must prepare a Construction Environmental Management Plan (CEMP) for the development in accordance with the requirements of condition C1 and to the satisfaction of the Planning Secretary.	This CEMP
C3	As part of the CEMP required under condition C2 of this consent, the Applicant must include the following: (a) Construction Traffic Management Plan (see condition B20); (b) Erosion and Sediment Control Plan; (c) Construction Noise and Vibration Management Plan (see condition B11); (d) Construction Waste Management Plan (see condition B56); and (e) Community Consultation and Complaints Handling. (f) a copy of the Construction Flood Emergency Response Plan (see condition B36);	CNVMP, CTMP, CWMP, CCCHP, ESCP, FERP
C4	The Applicant must: (a) not commence construction of the development until the CEMP is approved by the Planning Secretary; and (b) carry out the construction of the development in accordance with the CEMP approved by the Planning Secretary and as revised and approved by the Planning Secretary from time to time.	Noted
C8	Within three months of: (a) the submission of a Compliance Report under condition C18; (b) the submission of an incident report under condition C11; (c) the submission of an Independent Audit under condition C18; (d) the approval of any modification of the conditions of this consent; or (e) the issue of a direction of the Planning Secretary under condition A2(b) which requires a review, the strategies, plans and programs required under this consent must be reviewed, and the Planning Secretary must be notified in writing of the outcomes of any review	Section 6.5 of this CEMP

Condition No.	Requirement	Document Reference
C9	If identified as part of the review process (see condition C8) or considered necessary to improve the environmental performance of the development, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review required under condition C8, or such other timing as agreed by the Planning Secretary	Section 6.5 of this CEMP
C10	The Applicant must notify the Department within 24 hours of becoming aware of an incident. The notification must be made via the NSW planning portal (Major Projects) and address details of the incident including: (a) date, time and location; (b) a brief description of what occurred and why it has been classified as an incident; (c) a description of what immediate steps were taken in relation to the incident; and (d) identifying a contact person for further communication regarding the incident.	Section 4.5.1 of this CEMP
C11	The Applicant must provide the Department with a subsequent incident report in accordance with the requirements set out in Appendix 4 (Incident Notification and Reporting Requirements).	Section 4.5.1 of this CEMP
C12	Within seven days of becoming aware of any non-compliance, the Applicant must notify the Department of the noncompliance, in writing, via the NSW planning portal (Major Projects).	Section 4.5.2 of this CEMP
C13	A non-compliance notification submitted under condition C12 must identify the development (including the development application number and name), set out the condition of this consent that the development is noncompliant with, why it does not comply, the reasons for the non-compliance (if known), and what actions have been undertaken, or will be undertaken, and when, to address the non-compliance.	Section 4.5.2 of this CEMP
C18	Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance reporting and independent auditing. Note: For the purposes of this condition, as set out in the EP&A Act, “monitoring” is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an “environmental audit” is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.	Noted
C20	At least 48 hours before the commencement of construction of the development and for the life of the development, the Applicant must:	Project website: https://au.goodman.com/property-lease-site/2-8-lanceley-place

Condition No.	Requirement	Document Reference
	(a) make the following information and documents (as they are obtained or approved) publicly available on its website: (i) the documents referred to in condition A2 of this consent; (ii) all current statutory approvals for the development; (iii) all approved strategies, plans and programs required under the conditions of this consent, excluding any documents described in conditions B41 to B48; (iv) the proposed staging plans for the development if the construction, operation or decommissioning of the development is to be staged; (v) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent; (vi) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs; (vii) a summary of the current stage and progress of the development; (viii) contact details to enquire about the development or to make a complaint; (ix) a complaints register, updated quarterly; (x) the Compliance Report of the development; (xi) audit reports prepared as part of any Independent Audit of the development and the Applicant's response to the recommendations in any audit report; (xii) any other matter required by the Planning Secretary; and (b) keep such information up to date, to the satisfaction of the Planning Secretary	

Applicant's Management and Mitigation Measures relevant to Construction

Impact Area	Requirement	Document Reference
Landscaping and Tree removal	Replacement tree species must suit their location on the site in terms of their potential physical size and their tolerance to the surrounding environmental conditions. To avoid unethical or unprofessional tree selection and / or their replacement, replacement tree species must be selected in consultation with an arborist, who can assist in implementing successful tree establishment techniques.	Section 5
	Replacement trees must have the genetic potential to reach a mature size potential of those trees removed to facilitate the development. As a guide, potential height will be a minimum of 10m (or more) and produce a spreading canopy so they may provide amenity value to the property and contribute to the tree canopy of the surrounding area in the future.	Section 5
Flooding	It is recommended that a Flood Emergency Response Plan (FERP) is developed for the site given that both access points lead onto Campbell Street, which is affected in the PMF event. Both the Willougby City Council DCP and LEP require consideration of safe occupation or efficient evacuation. The development of a FERP will determine which of these management strategies is most effective for the site and ensure adequate management strategies are in place in the event of a significant flood, mitigating any residual flood risks.	See FERP
Hazards and Risks	The following documentation is to be prepared prior to operation of the facility and kept on site: A Dangerous Goods Register, indicating the type of chemical, any notations that may be required for the risk assessment and the Safety Data Sheet for the chemical. Documentation required by the Work Health and Safety Regulation 2017 specific to the site classification based upon the quantity of goods stored. Placard Schedule. A Manifest and notification shall be submitted to SafeWork NSW. A DG Risk Assessment of the storage and handling areas. An Emergency Response Plan (ERP). Goodman shall re-assess their site against Resilience and Hazards SEPP in the event that storage quantities of Dangerous Goods increase.	Section 5
Air Quality	Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable. Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable. Only remove the cover in small areas during work and not all at once	Section 5

Impact Area	Requirement	Document Reference
	Avoid scabbling (roughening of concrete surfaces) if possible. Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place. Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery. For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriately to prevent dust.	Section 5
	Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use. Avoid dry sweeping of large areas. Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport. Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable. Record all inspections of haul routes and any subsequent action in a site log book. Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned. Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable). Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits. Access gates to be located at least 10m from receptors where possible.	Section 5
Noise and Vibration	The following construction phase mitigation measures are recommended: The use of standard mitigation measures to minimise the impacts is considered sufficient to control the majority of the impacts. Examples of measures that could be applied to the work are provided in the Transport for NSW Construction Noise and Vibration Guideline. A Construction Noise and Vibration Management Plan (CNVMP) is to be prepared before any work begins. This is to identify all potentially impacted receivers, assess the potential noise and vibration impacts from the proposal and provide details regarding how the impacts would be minimised through the use of all feasible and reasonable mitigation measures. The CNVMP is also to contain procedures for handling complaints, should they occur, and detail any compliance monitoring requirements.	See CNVMP
Traffic and Transport	It is recommended that a signage and line-marking plan be prepared to manage vehicle circulation in the car park and to assist with way finding across the Site. The signage and line-marking plan would be prepared prior to Occupation Certificate (OC) and if deemed necessary by the assessing authority. A Construction Traffic Management Plan is to be prepared and endorsed by the PCA prior to issuance of a Construction Certificate. The CTMP is to reflect the content and recommendations of the Preliminary CTMP prepared by ASON dated April 2024. A Green Travel Plan is to be prepared and endorsed by the PCA prior to issuance of a Construction Certificate. The GTP is to reflect the content and recommendations of the Preliminary GTP prepared by ASON dated April 2024. An Operational Traffic Management Plan is to be prepared and endorsed PCA prior to issuance of a Construction Certificate.	See CTMP
Aboriginal cultural heritage	As the study area was found to be previously disturbed and to have a nil-low potential for Aboriginal objects to be located within it, it is recommended that further assessment is not required. As neither the Metropolitan LALC site officer nor the RAPs identified any socio/cultural, historic or aesthetic significance associated with the heritage study area, further assessment is not required. If changes are made to the proposal that may result in impacts to areas not assessed by this ACHAR further assessment would be required	Section 5

Impact Area	Requirement	Document Reference
	Unexpected Aboriginal objects remain protected by the National Parks and Wildlife Act 1974. If any such objects, or potential objects, are uncovered in the course of the activity, all work in the vicinity should cease immediately. A qualified archaeologist should be contacted to assess the find and Heritage NSW and Metropolitan LALC must be notified. If human remains, or suspected human remains, are found in the course of the activity, all work in the vicinity should cease, the site should be secured, and the NSW Police and Heritage NSW should be notified.	
Contamination	Appointed environmental consultant recommends that this CEMP be prepared and implemented as part of the proposed development works and include requirements for soil and water, waste, and imported material validation during construction. Should unexpected finds with the potential to impact future human or ecological receptors on site be uncovered during the proposed redevelopment, these should be dealt with in line with the unexpected finds protocol .	This CEMP, Section 5
Waste	Where possible, all demolition and construction materials would be recycled either on- site through reuse or offsite at a licensed facility. Waste would be transported and disposed of offsite by a licensed contractor to a licensed landfill facility.	See CWMP
Cumulative Construction Phase Impacts	A Construction Management Plan shall be prepared prior to the construction certificate to minimise potential cumulative construction impacts. The CMP should identify and assess potential cumulative construction-related impacts (e.g. noise, vehicle movements, pedestrian safety) associated with other surrounding developments. Mitigation and monitoring measures should be provided for all identified cumulative construction impacts.	This CEMP
BCA	Performance Solutions to satisfy the Performance Requirements of the NCC have been proposed to account for non-compliances with the Dts provisions as identified in the NCC Compliance Report (Appendix JJ) to address non compliances. A complete fire engineering analysis will be included within the Fire Engineering Report (FER) which is expected to be undertaken prior to the commencement of CC.	See FER

Relevant Legislation

Act	Activity / aspect	Requirement	Reference
General			
Environmental Planning and Assessment Act, 1979 (EP&A Act)	All	Comply with the Minister for Planning's approval for the project. Obtain the Minister's approval for any project modifications that are not consistent with the planning approval.	s5.14 s5.25
Water			
Protection of the Environment Operations Act 1997	Water pollution	Do not cause water pollution (other than to a sewer), except in accordance with the conditions of an Environment Protection Licence.	s120 s122
Traffic			
Roads Act 1993	Road work	Requires the consent of the appropriate road authority for carrying out work on, or disturbing, the surface of a public road. Where the proponent is a public authority, the roads authority must consult with the applicant before making a decision.	s138
Roads Act 1993	Road work	Obtain a Road Occupancy Licence prior to commencement of traffic related works that require access to roads	s138
Transport Administration Act 1988	Traffic management	Comply with the functions of Roads and Maritime relating to traffic management and safety	s52A
Road Rules 2014	Use of roads	Establish the road rules that are applicable to vehicles and road users on roads in NSW	-
		Provisions of *Road Rules 2014* not applicable to a person at the site of, and engaged in, roadworks	s310
Noise			
Protection of the Environment Operations Act 1997	Plant maintenance and operation	Do not operate plant if it emits noise caused by poor maintenance or operation.	s139

Act	Activity / aspect	Requirement	Reference
Protection of the Environment Operations Act 1997	Materials management	Do not cause noise by failing to properly and efficiently deal with materials.	s140
Contaminated material			
Protection of the Environment Operations Act 1997	Land pollution	Do not cause or permit land pollution other than under authority of a licence or regulation. (However it is not a land pollution offence to place virgin excavated natural material or lawful pesticides and fertilisers on land, or by placing matter on land that has been notified to the EPA as an unlicensed landfill and which is operated in accordance with the regulations.)	s142A – s142E
Contaminated Land Management Act 1997	Reporting contamination	Notify the EPA if; Contaminants exceed thresholds contained in guidelines or the regulations where contamination has entered or will foreseeably enter neighbouring land, the atmosphere, groundwater or surface water. Contaminants in soil are equal to or exceed guideline levels with respect to the current or approved use of the land. Contamination meets other criteria that may be prescribed by the regulations.	s60
Biodiversity			
Biodiversity Conservation Act 2016	Fauna	Do not harm any animal that is; of a threatened species, that is part of a threatened ecological community or is a protected animal, unless authorised under other legislation (e.g. planning approval).	s2.1 s2.8
Biodiversity Conservation Act 2016	Flora	Do not pick a plant that is; of a threatened species, that is part of a threatened ecological community or is a protected plant, unless authorised under other legislation (e.g. planning approval).	s2.2 s2.8
Biosecurity Act 2015	Weeds	Manage weeds on site in accordance with the relevant Regional Strategic Weed Management Plan.	s22
Biosecurity Regulation 2017	Pests and Diseases	Notify the presence any pest or disease listed in Schedule 1 of the Biosecurity Regulation 2014, within 1 working day after suspecting or becoming aware of the pest or disease.	Regulation cl.7

Act	Activity / aspect	Requirement	Reference
			Schedule 1
Environment Protection Biodiversity Conservation Act, 1999 (Commonwealth)	Flora and fauna conservation	Do not kill, injure or take a member of a listed threatened species without a permit.	Part 13
Waste			
Protection of the Environment Operations Act 1997	Waste and transportation	Do not undertake a scheduled waste activity unless in accordance with an environmental protection licence. A licence must be obtained when construction and demolition wastes are applied to land under certain circumstances. This includes the reincorporation of crushed road base material back into roads and the placing of excess fill material onto properties. A licence is not required if the material: Is VENM. Does not exceed 200 tonnes in the Sydney, Newcastle and Wollongong areas, or 20,000 tonnes outside these areas. Is covered by a "general exemption". Current exempted materials are ENM, recycled aggregates and raw mulch. These exemptions are conditional and require some chemical testing of materials before they are placed onto land. A licence must be obtained if more than 2,500 tonnes (or cubic metres) is stored on a stockpile site at any one time, or more than 30,000 tonnes of waste is received per year from off site.	Part 3.2 Schedule 1
		Only transport waste to a facility that can lawfully accept the waste.	s143
		Do not dispose of waste in a manner that harms or is likely to harm the environment.	s115
Protection of the Environment Operations (Waste) Regulation 2005	Waste and transportation	Comply with general requirements for the transport of waste. For example, any vehicle used by the person to transport waste must be kept in a clean condition and be maintained so as to prevent spillage of waste. For some wastes only licensed transporters can be used.	Regulation cl.49
		Comply with record keeping requirements in relation to the transport of certain types of waste.	Regulation Part 3

Act	Activity / aspect	Requirement	Reference
Heritage			
Heritage Act 1977	Heritage	Notify the heritage Council on discovery of a relic	s146
National Parks and Wildlife Act 1974	Aboriginal places and objects	Do not harm or desecrate an Aboriginal object or Aboriginal place without consent.	s86 s90
		Notify the NPWS within reasonable time of becoming aware of the location or discovery of certain Aboriginal objects.	s89A
Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth)	Protection of areas and objects	Report any discovery of Aboriginal remains to the Federal Minister for the Environment and Heritage.	s20
		Comply with the provisions of any declaration in relation to a significant Aboriginal area or object.	s22
General			
Protection of the Environment Operations Act 1997	Harming the environment	Do not risk harming the environment by wilfully or negligently: disposing of waste unlawfully. causing any substance to leak, spill or otherwise escape (whether or not from a container); or emitting an ozone depleting substance	s115 s116 s117
Protection of the Environment Operations Act 1997	Control equipment	Properly and efficiently maintain and operate any installed pollution control equipment (including monitoring devices).	s167
Protection of the Environment Operations Act 1997	Notification of pollution incidents	Notify the EPA immediately of pollution incidents where material harm to the environment is caused or threatened.	s148
Protection of the Environment Operations Act 1997	Site licensing	Do not carry out or allow an activity listed in Schedule 1, or carry out work to enable such an activity, unless the premises are licensed by the EPA. This applies to: road construction: meaning the construction, widening or re-routing of roads if it results in the existence of 4 or more traffic lanes (other than bicycle lanes or lanes used for entry or	s47 s48

Act	Activity / aspect	Requirement	Reference
		exit) for 1 kilometres of their length in the metropolitan area, or 5 kilometres in length in any other area, where the road is classified, or proposed to be classified, as a freeway or tollway under the *Roads Act 1993*.	
Environmentally Hazardous Chemicals Act, 1985	Hazards and risks	Obtain a licence to undertake prescribed activities involving environmentally hazardous chemicals or declared chemical wastes.	s28
Dangerous Goods (Road and Rail Transport) Act 2008	Hazards and risks	Ensure that dangerous goods are transported in a safe manner.	s9
Pesticides Act 1999	Hazards and risks	Use pesticides in an environmentally sensitive manner. Do not use an unregistered pesticide without a permit. Read the label or permit for the pesticide. Use registered pesticides in accordance with instructions on the label. Do not use any restricted pesticide unless authorised by a certificate of competency or a pesticide control order under the Act. Compliance with pesticide codes of practice is required.	s12 s13 s14 s15 s17
National Greenhouse and Energy Reporting Act, 2007 and Regulations 2008	Greenhouse gas emissions	Accounting and reporting of greenhouse gases produced and energy consumed during construction. Applicability dependent on thresholds.	-

APPENDIX B: ASPECTS AND IMPACTS

This Environmental Aspects and Impacts Register has been prepared to supplement the environmental risk assessment for the Project. Identification of construction activities has guided environmental safeguards. The risk management approach involves developing a list of environmental impacts and providing a corresponding risk mitigation strategy and residual ranking.

Each environmental risk is categorised based on the following:

a) Environmental aspect

b) Relative scale of impact

c) Type of impact

d) Likelihood of occurrence

Risks in Table 1, below, have been identified with reference to the proposed works, Conditions, Applicant's Management and Mitigation Measures, the EIS and RtS. Figure 1 below hosts the Risk Matrix used for assessing the level of risk for each potential impact.

Aspect	Potential Impact	Inherent Risk	Indicative Mitigation Measures	Residual Risk	Addressed by:
Establishment and operation of ancillary facilities	• Delays and disruptions to the road network during construction due to vehicles utilizing site access	Moderate	• For any works that will impact the traffic flows on the external road network, a permit will need to be obtained from the relevant road authority (Council and / or TfNSW) by the Contractor. • At all times, two-way traffic shall be maintained along Campbell Street and Lanceley Place. Any works within or affecting (e.g., signage within) Campbell Street and Lanceley Place shall only be undertaken in accordance with relevant TGS developed by an accredited person that has relevant Prepare Work Zone Traffic Management Plan accreditation • All subcontractors must be inducted by the Contractor to ensure that the procedures are met for all vehicles entering and exiting the construction site. • Public roads and access points shall not be obstructed by any materials, vehicles, refuse skips or the like, under any circumstances • All materials handling shall be undertaken off public roadways, however in the event materials handling is required from a public roadway, then prior approval shall be sought and obtained from the relevant Authorities. If required Works Zones may be required. • Traffic Guidance Schemes for the site access (if will be designed to minimise vehicle, pedestrian and cyclists impacts along Campbell Street and Lanceley Place, as far as practicable. • Construction Traffic Management Sub-Plan	Minor	• CTMP
	• Traffic related safety incidents during vehicles entering or exiting the site	Significant	• Emergency vehicle access to and from the site will be available at all times while the Site is occupied by construction workers • Traffic Guidance Schemes for the site will be designed to minimize vehicle, pedestrian and cyclist impacts along Campbell Street and Lanceley Place, as far as reasonably practicable. • All subcontractors must be inducted by the Contractor to ensure that the procedures are met for all vehicles entering and exiting the construction site. • Supervision of all construction vehicle movements into and out of site at all times,	Minor	• CTMP

Aspect	Potential Impact	Inherent Risk	Indicative Mitigation Measures	Residual Risk	Addressed by:
			• Supervision of all loading and unloading of construction materials during the deliveries in the construction phase of the project, and • Pedestrian management, to ensure that adverse conflicts between vehicle movements and pedestrians do not occur, while maintaining radio communication with construction vehicles at all times. • Construction Traffic Management Sub-Plan		
	• Damage or impacts to road infrastructure resulting from construction works	Minor	• Any vehicles required to access the Site that do not comply with the mass, dimension or operating requirements as specified by the National Heavy Vehicle Regulator (NHVR) will need to apply for a class 1 Oversize Over-mass (OSOM) permit. • Engage with Council to ensure any utility service adjustments and repairs to road pavement and footpaths are accounted for in the construction program prior to commissioning. • Ensure all site personnel are appropriately trained on the traffic management plan and site rules and expectations.	Minor	• CTMP
Civil and Landscaping works	• Fauna injury	Minor	• According to the BDAR Waiver Request, areas of vegetation and the buildings to be removed provide marginal artificial habitats for threatened species and removal of these features is not likely to result in a significant impact on threatened species. • The site does not contain any areas of high biodiversity value and the project impacts will not result in a significant impact on ay biodiversity values.	Minor	• CEMP
	• Impacts to business as a result of changes in traffic, access, parking and amenity. • Temporary impacts to property access during construction	Moderate	• For any works that will impact the traffic flows on the external road network, a permit will need to be obtained from the relevant road authority (Council and / or TfNSW) by the Contractor. • At all times, two-way traffic shall be maintained along Campbell Street and Lanceley Place. Any works within or affecting (e.g., signage within) Campbell Street and Lanceley Place shall only be undertaken in accordance with relevant TGS developed by an accredited person that has relevant Prepare Work Zone Traffic Management Plan accreditation • All subcontractors must be inducted by the Contractor to ensure that the procedures are met for all vehicles entering and exiting the construction site.	Minor	• CTMP

Aspect	Potential Impact	Inherent Risk	Indicative Mitigation Measures	Residual Risk	Addressed by:
			• Public roads and access points shall not be obstructed by any materials, vehicles, refuse skips or the like, under any circumstances • Traffic Guidance Schemes for the site access will be designed to minimise vehicle, pedestrian and cyclists impacts along Campbell Street and Lanceley Place, as far as practicable. • Construction Traffic Management Sub-Plan • Community will be informed of the commencement of construction works and the potential impacts to themselves and their businesses		
	• Noise and vibration impacts to sensitive receivers	Significant	• Works outside of the standard hours may be undertaken in the following circumstances: works that are inaudible at the nearest sensitive receivers; for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm. • Community consultation on the proposed management measures for noise and vibration impacts will be undertaken prior to the finalization of the Noise and Vibration Management Plan and the commencement of construction works. • Limiting construction hours to the standard construction hours, site environmental inductions with all employees, contractors and subcontractors, construction respite periods during hours of work, appropriate selection of quieter and less vibration emitting construction methods, implementation of a noise monitoring audit program, offset distance between noisy levels of plant and equipment items and sensitive receivers, plan traffic movements to minimise reversing or noisy movements, loading and unloading of materials as far as possible from sensitive receivers will be implemented	Minor	• NVMP • CCCHS
	• Contamination of soil or water due to spills of oils and chemicals related to mechanical failures, or refuelling activities	Moderate	• All plant and equipment used on site, or to monitor the performance of the development, must be maintained in a proper and efficient condition; and operated in a proper and efficient manner. • All chemicals, fuels and oils used on-site will be stored in accordance with the requirements of all relevant Australian Standards; and, for liquids, the NSW EPA's Storing and Handling of Liquids: Environmental Protection – Participants Manual'	Minor	• ESCP

Aspect	Potential Impact	Inherent Risk	Indicative Mitigation Measures	Residual Risk	Addressed by:
	• Direct contact, inhalation and/or ingestion of dust from hazardous building materials exposed through ground disturbance and mobilization of contaminants in surrounding environment	Significant	• Exposed surfaces and stockpiles are suppressed by regular watering or other alternative suppression method, all trucks entering or leaving the site with loads have their loads covered, trucks associated with the development do not track dirt onto the public road network, public roads used by these trucks are kept clean; and land stabilisation works are carried out progressively on site to minimise exposed surfaces. • The Unexpected Finds Procedure ensures that potentially contaminated material is appropriately managed. The procedure must form part of the of the CEMP in accordance with condition C2 and must ensure any material identified as contaminated is disposed of in accordance with the POEO Act and its associated regulations. Details of the final disposal location and the results of any associated testing must be submitted to the Planning Secretary prior to removal of the contaminated material from the site.		• CEMP • CWMP
Excavation works	• Inappropriate disposal of waste (including vegetation, hazardous and general waste)	Moderate	• The Construction Waste Management Plan detail the quantities of each waste type generated during construction and the proposed reuse, recycling and disposal locations; and will be implemented for the duration of construction works. • Waste must be secured and maintained within designated waste storage areas at all times and must not leave the site onto neighbouring public or private properties. • The Applicant must assess and classify all liquid and non-liquid wastes to be taken off site in accordance with the latest version of EPA's Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014). • All waste materials removed from the site must only be directed to a waste management facility or premises lawfully permitted to accept the materials. • Waste generated outside the site must not be received at the site for storage, treatment, processing, reprocessing, or disposal. • Clear and correct labelling on all waste and recycling bins, indicating the correct type or types of waste that can be placed into a given bin; signposts and directions to location of waste storage areas	Minor	• CWMP
	• Sedimentation of waterways from erosion and runoff	Moderate	• The stormwater system capacity has been designed in accordance with Australian Rainfall and Runoff (Engineers Australia, 2019) and Managing Urban Stormwater: Council Handbook (EPA, 1997) guidelines.	Minor	• CEMP • ESCP

Aspect	Potential Impact	Inherent Risk	Indicative Mitigation Measures	Residual Risk	Addressed by:
			• Exposed surfaces and stockpiles are suppressed by regular watering or other alternative suppression method, all trucks entering or leaving the site with loads have their loads covered, trucks associated with the development do not track dirt onto the public road network, public roads used by these trucks are kept clean; and land stabilisation works are carried out progressively on site to minimise exposed surfaces. • The SWMP and ESCPs would be developed in accordance with the principles and requirements of Managing Urban Stormwater – Soils & Construction Volume 1 ('Blue Book') (Landcom, 2004) with a staged approach. • Installation of sediment basin, Sediment fences and diversion drains located around perimeter of site, Stabilised site access at the entry to the works area, Minimising extent of disturbed areas on site at once time, Progressive stabilisation of disturbed areas or previously completed earthworks, and Regular monitoring and implementation of remedial works to maintain efficiency of all controls will be implemented		
	• Impacts to business as a result of changes in traffic, access, parking and amenity. • Temporary impacts to property access during construction	Moderate	• For any works that will impact the traffic flows on the external road network, a permit will need to be obtained from the relevant road authority (Council and / or TfNSW) by the Contractor. • At all times, two-way traffic shall be maintained along Campbell Street and Lanceley Place. Any works within or affecting (e.g. signage within) Campbell Street and Lanceley Place shall only be undertaken in accordance with relevant TGS developed by an accredited person that has relevant Prepare Work Zone Traffic Management Plan accreditation • All subcontractors must be inducted by the Contractor to ensure that the procedures are met for all vehicles entering and exiting the construction site. • Public roads and access points shall not be obstructed by any materials, vehicles, refuse skips or the like, under any circumstances • Traffic Guidance Schemes for the site access will be designed to minimise vehicle, pedestrian and cyclists impacts along Campbell Street and Lanceley Place, as far as practicable. • Construction Traffic Management Sub-Plan • Community will be informed of the commencement of construction works and the potential impacts to themselves and their businesses	Minor	• CTMP

Aspect	Potential Impact	Inherent Risk	Indicative Mitigation Measures	Residual Risk	Addressed by:
	• Greenhouse gas emissions generated by machinery, transport, and other activities.	Minor	• install and operate equipment in line with best practice to ensure that the development complies with all load limits, air quality criteria/air emission limits and air quality monitoring requirements as specified in the Protection of the Environment Operations (Clean Air) Regulation 2022.	Negligible	• CEMP
	• Air quality reduction from dust and odour causing nuisance to the community	Moderate	• install and operate equipment in line with best practice to ensure that the development complies with all load limits, air quality criteria/air emission limits and air quality monitoring requirements as specified in the Protection of the Environment Operations (Clean Air) Regulation 2022. • Ensure effective water suppression is used during construction works. Handheld sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.	Minor	• CEMP
	• Unexpected discovery of Aboriginal objects or human remains	Minor	• If any item or object of Aboriginal heritage significance is identified on site all work in the immediate vicinity of the suspected Aboriginal item or object must cease immediately; a 10 m wide buffer area around the suspected item or object must be cordoned off; and Heritage NSW must be contacted immediately. • If any non-Aboriginal archaeological relics are uncovered during any works being carried out for the development: (a) all work in the immediate vicinity of the suspected relic(s) must cease immediately; (b) Heritage NSW must be contacted immediately; and (c) the suspected relic(s) must be evaluated, recorded and, if necessary, excavated by a suitably qualified and experienced expert in accordance with the requirements of Heritage NSW. • Work in the immediate vicinity of any suspected non-Aboriginal archaeological relic(s) must not recommence until this has been authorised by Heritage NSW.	Minor	• CEMP
	• Noise disturbance for surrounding receivers	Moderate	• Works outside of the standard hours may be undertaken in the following circumstances: works that are inaudible at the nearest sensitive receivers; for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm.	Minor	• NVMP

Aspect	Potential Impact	Inherent Risk	Indicative Mitigation Measures	Residual Risk	Addressed by:
			• Community consultation on the proposed management measures for noise and vibration impacts will be undertaken prior to the finalization of the Noise and Vibration Management Plan and the commencement of construction works. • limiting construction hours to the standard construction hours, site environmental inductions with all employees, contractors and subcontractors, construction respite periods during hours of work, appropriate selection of quieter and less vibration emitting construction methods, implementation of a noise monitoring audit program, offset distance between noisy levels of plant and equipment items and sensitive receivers, plan traffic movements to minimise reversing or noisy movements, loading and unloading of materials as far as possible from sensitive receivers will be implemented • Adoption of all measures in the Noise and Vibration Management Plan		

APPENDIX C: CONSTRUCTION TRAFFIC MANAGMENT SUB-PLAN

TTW Structural Civil Traffic Façade

Construction Traffic Management Plan

Lanceley Place Data Centre, Artarmon

Prepared for A W Edwards

30 July 2025

231976

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Revision Register

Rev	Date	Prepared by	Reviewed by	Approved by	Remarks
P1	3/12/24	S. Sharma	M. Babbage	M. Babbage	Issued as draft
P2	13/03/25	S. Sharma	M. Babbage	M. Babbage	Updated draft
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Section 1 Introduction

1.1 Background

TTW has been engaged by A W Edwards to prepare a Construction Traffic Management Plan (CTMP) for the approved development of a data centre at 2-8 Lanceley Place and 14 Campbell Street, Artarmon.

This CTMP examines the impacts of the construction works on the surrounding road network and details the proposed construction traffic and pedestrian management measures.

A state significant development application (SSDA) (SSD-66777221) has been approved for the project.

1.2 Purpose of this Report

This report examines the transport-related impacts associated with the Lanceley Place Data Centre on the surrounding road network. This includes vehicles, cyclists and pedestrians and details the mitigation measures necessary to address specific construction-related impacts. It aims to maintain the safety of all workers and road users in the vicinity of the construction site, with the following objectives:

- Identify the need for adequate and compliant traffic management requirements in the vicinity of the site.
- Provide continuous, safe and efficient movement of traffic for both the general public and construction workers.
- Establish a safe pedestrian environment around and near the site.
- Inform all contractors and set the ground rules for managing traffic associated with the construction site.

The Traffic Guidance Scheme (TGS) provided in this report has been checked and approved by the following engineer who holds the SafeWork NSW Prepare Work Zone (formerly TfNSW Prepare a Work Zone Traffic Management Plan) certification.

- Maria Mulholland, Card Number: TCT0045869

1.3 Authority Requirements

This CTPMP has also been developed to satisfy Consent Conditions B20 issued by DPHI set out in Table 1.1

Table 1.1: Consent Condition Requirements

Condition	Condition Requirements	Document Reference
B20	Prior to the commencement of construction of the development, the Applicant must prepare a Construction Traffic Management Plan for the development to the satisfaction of the Planning Secretary. The plan must form part of the CEMP required by condition C2 and must: a) be prepared by a suitably qualified and experienced person(s);	The CV is provided in Appendix C.
	b) be prepared in consultation with Council;	Section 1.4
	c) be prepared in consultation with Ausgrid;	Section 1.4
	d) detail the measures that are to be implemented to ensure road safety and network efficiency during construction;	Section 3 and Section 4
	e) detail heavy vehicle routes, access and parking arrangements;	Section 3.8

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Condition	Condition Requirements	Document Reference
	f) include a Driver Code of Conduct to: i. minimise the impacts of earthworks and construction on the local and regional road network; ii. minimise conflicts with other road users; iii. minimise road traffic noise; and iv. ensure truck drivers use specified routes;	Section 5
	(g) include a program to monitor the effectiveness of these measures; and	Section 4.12 The construction manager will regularly undertake a monthly internal audit of all the scheduling, delivery, and complaints processes. The complaints register will be made available for all staff and stakeholders.
	(h) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.	Section 4.10

1.4 Authority Consultation

This document has been prepared in consultation with Willoughby City Council ('Council') and Ausgrid. Consultation events and outcomes are identified in Table 1.2, with a full record of consultation attached to Appendix D.

Table 1.2: Consultation Summary

Agency	Consultation History	Consultation Outcomes	Action
Ausgrid	A draft revision of this document was provided to Ausgrid on 6 May 2025.	A response was received from Royce Cox, Field Supervisor, on 7 May 2025. Comments included a request to ensure no heavy vehicle layover between the Campbell Street/Clarendon Street roundabout and Broadcast Way, as this may obstruct access to their basement facilities. Final confirmation of satisfaction with the consultation was received from Ausgrid on 19 June 2025.	Sections 4.5 and 5 of the documents have been updated to address this feedback.

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Agency	Consultation History	Consultation Outcomes	Action
Willoughby City Council	A draft revision of this document was provided to the Council on 6 May 2025. A follow-up email was sent on 19 May 2025, 21 May 2025 and 18 June 2025. A response was provided to the council on 25 June 2025. Additional correspondence occurred throughout June and July 2025 to provide the requested information by Council.	A response was received from Terry Yu, Traffic Engineer, on 24 June 2025 with further correspondence exchanged throughout June and July 2025 to address Council's detailed comments on construction worker parking arrangements. The CTMP was subsequently updated on 25 July 2025 with the confirmation of off-street parking location and shuttle bus arrangements details. Final confirmation of satisfaction with the consultation was received from Council on 29 July 2025.	The report has been updated to address Council feedback. A response to Council feedback is provided in Table 1.3.

Table 1.3: Willoughby City Council Comments and Responses

	Willoughby City Council Comments	TTW Response	Willoughby City Council Comments 2	Updated TTW Response
1	Section 3.3 – Construction Worker Parking The site is not proposing any on-site parking during the development. The CTMP must, for all stages of construction, provide on-site parking for staff and contractors to minimise parking impacts on the surrounding area. Ideally, all contractor and staff parking should be accommodated within the site boundaries. The CTMP must also include	It is acknowledged that no on-site parking can be provided during construction due to the site being built to the boundary and constrained on all sides. In response to Council's comments, the following measures will be implemented to manage construction worker travel and minimise impacts on the surrounding street network: ▪ Public Transport Use as a Primary Mode Given the site's proximity to St Leonards and Artarmon train stations, as well as high-frequency express bus services along the Pacific Highway, workers will be strongly encouraged to commute via public transport. ▪ To support workers commuting via train, shuttle bus services will be operated by the contractor between St	Due to the high demand for on-street parking in the Artarmon industrial area from local businesses, Council's objective is to minimise on-street parking associated with development projects. Council conditionally accepts your response on the basis that no construction-related vehicles will be parked on-street and that all	Offsite parking has been secured to accommodate up to 50 vehicles, exclusively allocated for management personnel. This parking facility is conveniently located within a five-minute walking distance from the project site. To further mitigate traffic impacts—particularly on public roads, residential streets, shuttle bus services will operate between the project site and the nearby Artarmon and St Leonards train stations, both of which serve as major public transport hubs. These shuttle services will run during peak arrival and departure periods, in

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	Willoughby City Council Comments	TTW Response	Willoughby City Council Comments 2	Updated TTW Response
	detailed parking arrangements, specifying the number of spaces to be provided. This is to include designated areas for employees, tradespersons, and construction vehicles to ensure efficient use of space and minimise disruption to local traffic. The CTMP is to assess potential parking spillover and outline appropriate control measures.	Leonards and Artarmon stations and the site, with two morning and two afternoon trips scheduled daily. ▪ A dedicated on-site tool and equipment storage area will be provided to reduce the need for workers to transport large or heavy items, thereby supporting greater use of public transport. ▪ Off-Site Parking (Supplementary Measure) While workers will be encouraged to use public transport without reliance on off-site parking, the project team is also progressing discussions to secure off-site parking within a 5-minute walk of the site for approximately 50 construction worker vehicles. If finalised, this would provide additional flexibility during construction, particularly during peak workforce periods.	parking associated with the development will be managed entirely within private property	alignment with the approved SSD-66777221 site working hours and anticipated workforce movements.
2	Section 5.5 – Haulage Routes Due to space constraints at the Reserve Road and Campbell Road intersection, vehicles exceeding 19 metres in length will only be permitted to access the site via Pacific Highway, which means that the proposed large vehicle access via Gore Hill Freeway and Reserve Road will not be permitted. Council acknowledges the	Noted. Construction vehicle movements are expected to primarily involve trucks up to 19-metre semi-trailers. In accordance with the Council's requirements, any vehicles exceeding 19 metres in length will access the site exclusively via the Pacific Highway in accordance with the restrictions.	Noted.	

	Willoughby City Council Comments	TTW Response	Willoughby City Council Comments 2	Updated TTW Response
	existing “No Left Turn” restriction from the southbound approach of Pacific Highway into Campbell Street between 07:00 and 10:00. It is recommended that the developer liaise with Transport for NSW regarding this restriction, or consider alternative truck management measures, such as scheduling site entry prior to 07:00 (before the restriction commences), or accessing Campbell Road from the northbound approach, which is not subject to the restriction.			
3	Section 5.10 – Complaint Resolution and Disciplinary Procedure This section needs to provide more details by clarifying whether there is a dedicated contact person for managing complaints, including those relating to the construction site. The procedure must outline how complaints will be received, recorded, assessed, and addressed, and whether there is a process for escalation or	A Community Consultation & Complaints Handling Strategy has been prepared, referenced in Section 5.10, and included as Appendix E. This strategy details how A W Edwards will proactively manage communications with stakeholders, including the receipt and resolution of complaints, enquiries, and feedback related to the construction works.	Please provide Appendix E to Council, as the current CTMP submitted (attached) ends at Appendix C – CV.	Please refer to Appendix E.

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	Willoughby City Council Comments	TTW Response	Willoughby City Council Comments 2	Updated TTW Response
	disciplinary action where necessary.			
4	If any part of the crane operates over the road or footpath, the CTMP must address measures to mitigate impacts and ensure pedestrian safety, such as the provision of B-class hoarding.	Currently, all crane lifting is proposed to be within the site boundary. If at any stage this changes during construction, all Council approvals will be obtained and the CTMP will be updated to suit.	Noted	
5	The CTMP must specify that Council land, including roadways, footpaths, kerb and gutter, and grass verges, is to be maintained in a serviceable condition throughout the construction period. Remedial treatments are to be undertaken at the direction of Council and at no cost to Council.	Section 4.5 has been updated to require maintenance of Council land (roads, footpaths, kerbs, gutters, verges) in a serviceable condition during construction. Any remedial works will be done at the Council's direction and at no cost to the Council.	Noted	
6	SKTR00003 – Swept Path Analysis Campbell Street Access It has been noted that the proposed site entry point and the associated swept path analysis are not based on an existing driveway. It is advised for the	Noted. AW Edwards has previously consulted with the Council regarding the proposed temporary driveways (Evidence attached in Appendix F). Following these consultations, AW Edwards has submitted three (3) Roads Act Applications for Vehicular Crossings, which form part of the required Section	Noted	

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	Willoughby City Council Comments	TTW Response	Willoughby City Council Comments 2	Updated TTW Response
	developer to liaise with Council's Development Engineering team regarding the approval of this new/temporary driveway as part of the construction. It has also been observed that a tree is located within the area of this proposed driveway. Coordination between Council's Development Engineering team and Environment team will be required should the removal of this tree be necessary as part of the driveway construction. https://maps.app.goo.gl/TjWy3zWpvn6WMnpe6	138 Roads Act Approval process. Coordination with both Council's Development Engineering and Environment teams will be undertaken should removal or relocation of the tree be required as part of the construction works.		
7	SKTR00004 – Swept Path Analysis Lanceley Place Access The northern driveway on Lanceley Place shown in the sketch does not appear to have sufficient width to accommodate the proposed vehicle swept path. Please provide a detailed swept path analysis demonstrating that the largest vehicle accessing the site via the northern driveway will not encroach onto the road kerbs. Alternatively, please propose a strategy for driveway	As noted above, AW Edwards has previously consulted with the Council regarding the proposed construction/ extension of temporary driveways. Following these consultations, AW Edwards has submitted three (3) Roads Act Applications for Vehicular Crossings, which form part of the required Section 138 Roads Act Approval process.	Noted.	

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	Willoughby City Council Comments	TTW Response	Willoughby City Council Comments 2	Updated TTW Response
	widening to be incorporated into the construction and associated public domain works.			
8	00003 - Traffic Guidance Scheme Construction of Vehicle Access Council's Development Engineering team has advised that a separate Vehicle Crossing application will be required for any temporary driveways or changes to existing driveway required for the construction. https://www.willoughby.nsw.gov.au/MyWilloughby-home-page/MyWilloughby-online-services/Construct-repair-or-demolish-the-vehicle-crossing-for-your-property	Noted. Response as per above.	Noted.	

1.5 References

In preparing this report, reference has been made to the following:

- Traffic Control at Work Sites Technical Direction, TfNSW, November 2022
- Australian Standard AS1742.3:2019 'Manual of Uniform Traffic Control Devices – Traffic control for works on roads'
- Austroads Guide to Temporary Traffic Management (2021)
- Austroads Guide to Traffic Management Part 3: Traffic Studies and Analysis (2020)
- Austroads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management (2020)
- Lanceley Place Data Centre Traffic Impact Assessment (Ason Group, 2024)
- other documents referenced in this report.

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1.6 Development Description

The proposed development comprises the redevelopment of the site as summarised below:

- A ten-storey data centre which includes:
  - 26,769 m2 of total Gross Floor Area (GFA)
  - 2x HRV loading bays
  - 41x car parking spaces, inclusive of 2x accessible spaces
  - Visitor bicycle spaces
  - End of trip facilities

The proposed development architectural plan is shown in Figure 1.1.

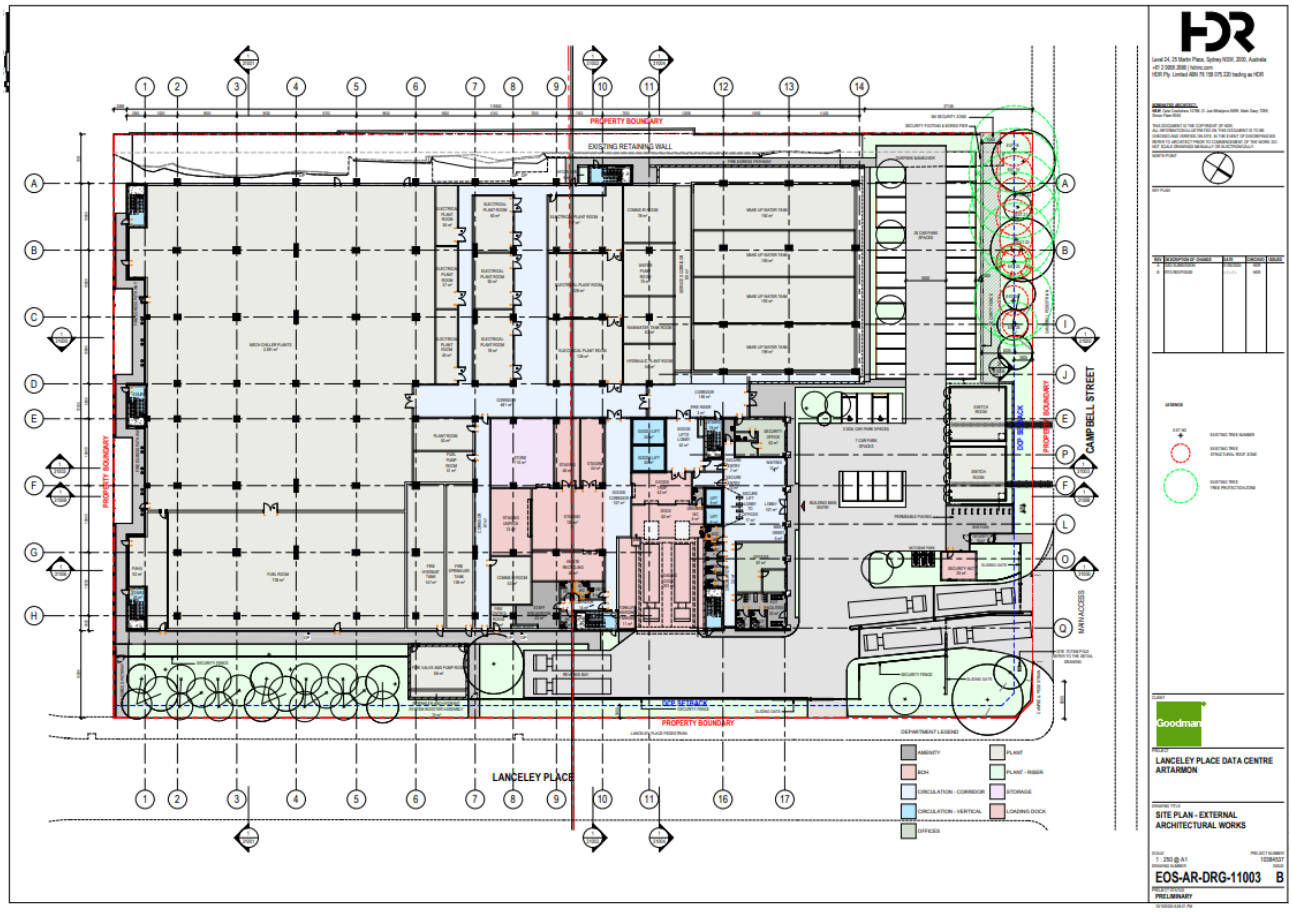


Figure 1.1: Proposed Development
Source: HDR (Drawing No EOS-AR-DRG-11003)

Section 2 Existing Conditions

2.1 Overview

The site is situated in the Artarmon industrial precinct within the Willoughby Local Government Area (LGA). It is legally identified as Lot 11, 12, 13, 14, and 15 in DP 233037. The site is bordered by Campbell Street to the north and Lanceley Place to the east, with direct adjacency to a concrete batching plant to the south-east. Several buildings are located to the west of the site, including the NEXTDC Data Centre.

The site was most recently occupied by film and television studios tenanted by the Australian Broadcasting Corporation (ABC) which sold the Site in 2021. The site was subject to a state significant development application (SSDA) in 2023 which proposed an industrial warehouse and distribution centre. The site is currently vacant. Prominent nearby land uses include the Home HQ shopping centre, the Artarmon Bunnings Warehouse, the Royal North Shore Hospital, and the North Shore Private Hospital.

The site is zoned as E4 General Industrial under the Willoughby Local Environmental Plan (LEP) 2012. It currently accommodates a building comprising 9,691 m² of warehouse Gross Lettable Area (GLA) and 346 m² of office GLA.

The site is shown in Figure 2.1.



Figure 2.1: Site Overview
Source: Nearmap (modified)

2.2 Surrounding Road Network

Transport for NSW (TfNSW) in partnership with local government established an administrative framework of State, Regional, and Local Road categories to help manage the extensive network of roads. State roads are managed by TfNSW, and Regional / Local Roads are managed by councils.

Notwithstanding, Regional Roads perform an intermediate function between the main arterial network of State Roads and council-controlled local roads.

The key roads in the local network are described in Table 2.1

Table 2.1: Road Network

Road Name	Classification	Speed Limit	Road Geometry	Parking Restrictions
Campbell Street	Local Road	50 km/h	One lane in each direction	On-street parking is permitted on both sides.
Lanceley Place	Local Road	50 km/h	One lane in each direction	On-street parking is permitted on both sides.
Pacific Highway	State Road	60 km/h	Two lanes northbound and three lanes southbound	No on-street parking is permitted.
Reserve Road	Local Road	50 km/h	Two lanes in each direction	On-street parking with 2P or 4P restrictions in place.

2.3 Public Transport

2.3.1 Bus

Nearby bus stops from the Site include Campbell Street opposite Gore Hill Technology Park stop and Campbell Street before Reserve Road which services bus route 119.

Other bus stops within 400 metres of the site include the Pacific Highway stop opposite Campbell Street, which serves several public bus routes along the Pacific Highway. These routes include some express services to Castle Hill, Bella Vista, and North Sydney.

Table 2.1 and Figure 2.2 summarise the bus routes and frequencies operated from these bus stops.

Table 2.2: Public Bus Services Nearby

Stop Location	Route No	Route Name	Frequency
Campbell Street	119	Gore Hill to North Sydney Station (Loop Service)	20 Minutes
Pacific Highway	612X	Castle Hill to North Sydney (Express Service)	15 Minutes
	113	Chatswood to Royal North Shore Hospital	1 Hour

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Stop Location	Route No	Route Name	Frequency
	144	Manly to Chatswood via St Leonards	10 Minutes
	252	Gladesville to North Sydney	30 Minutes
	254	Riverview to McMahons Point via North Sydney	30 Minutes
	286	Denistone East to Milsons Point via St Leonards & North Sydney	40 Minutes
	287	Ryde to Milsons Point via St Leonards & North Sydney	40 Minutes
	290	Epping to City Erskine St via North Sydney	30 Minutes
	291	Epping to McMahons Point via North Sydney	20 Minutes

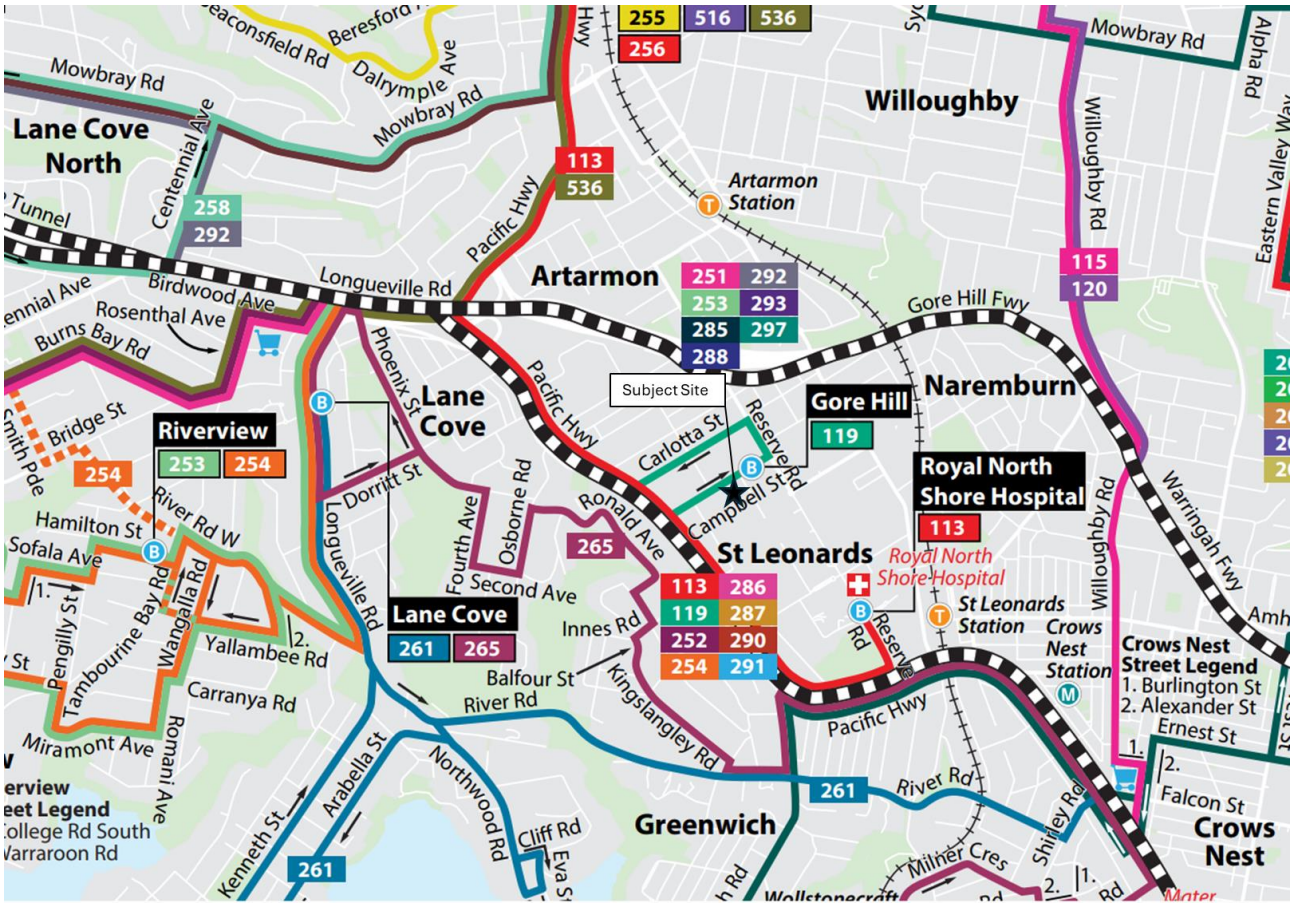


Figure 2.2: Public Bus Operator Map Surrounding the Site
Source: TfNSW

The closest train stations are Artarmon and St Leonards, located on the T9 Northern Line and the T1 North Shore and Western Line, both approximately 1 km from the site.

2.4 Active Transport

The site is well-serviced by an extensive pedestrian network. A shared path and footpath that runs along Campbell Street provide convenient access for pedestrians to the Pacific Highway, Reserve Road, and bus stops. Signalised pedestrian crossings are available at both the Campbell Street/Pacific Highway intersection and the Campbell Street/Reserve Road intersection, ensuring safe pedestrian movement.

The site is well-serviced by cycle routes, as outlined in the Willoughby City Council Cycling Guide shown in Figure 2.3. Notably, the potential future bicycle route along Campbell Street has already been implemented through a shared user path that connects to the Pacific Highway.

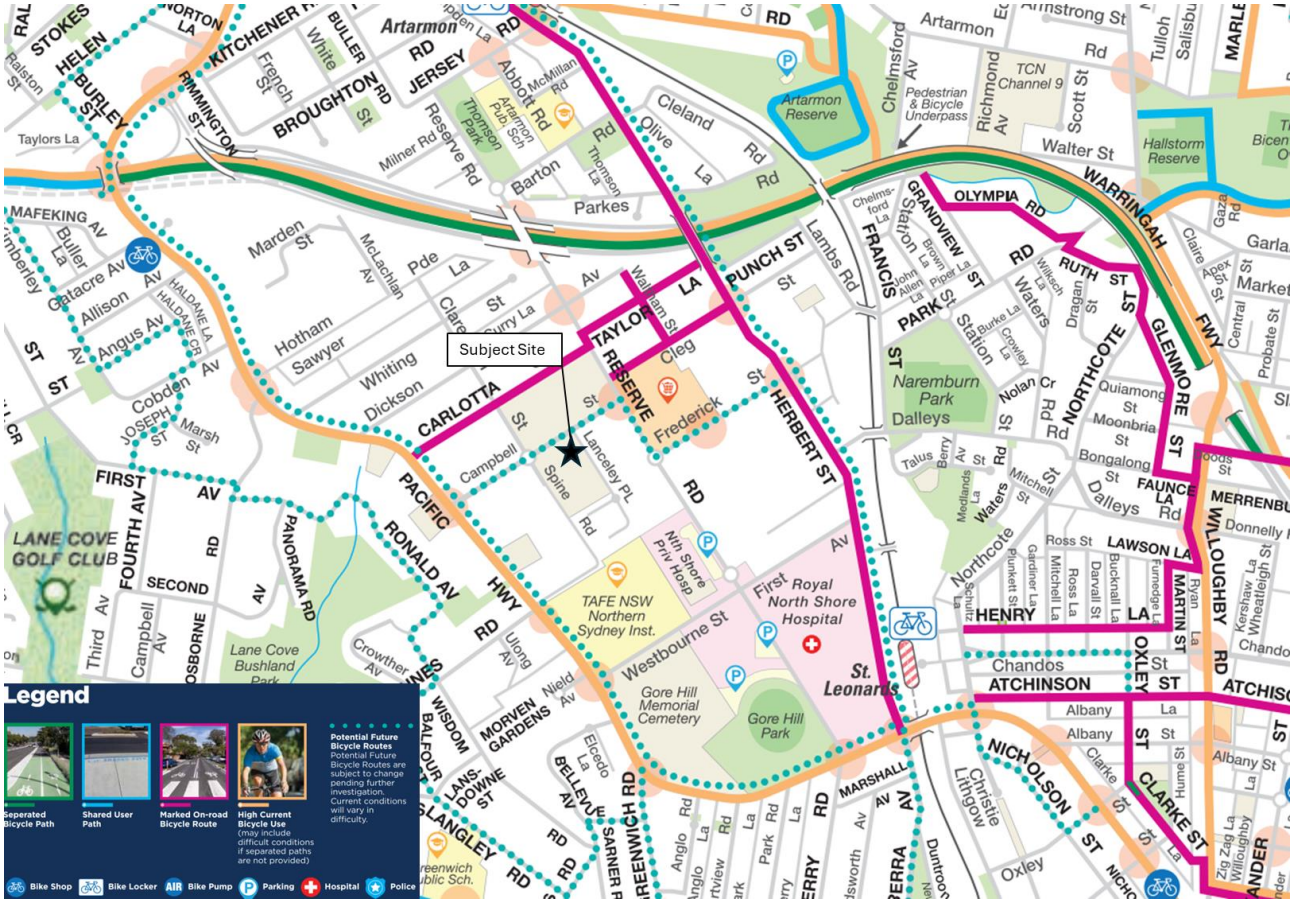


Figure 2.3: Active Transport
Source: Willoughby City Council Cycling Guide

Section 3 Overview of Construction Activities

3.1 Description and Duration of Works

The works are expected to commence in July 2025, with completion expected by September 2027. The key stages and milestones are summarised in Table 3.1

Table 3.1: Stages of the Project

Stage	Description	Expected Start	Expected Completion
1	Main Works	July 2025	September 2027
2	Phase 1 Fitout	July 2026	September 2027

3.2 Hours of Operation

Construction work would be undertaken in accordance with the following work hours in accordance with consent condition B8:

- Mondays to Fridays: 7:00am-6:00pm
- Saturday: 8:00am-1:00pm
- Sundays / Public Holidays: No work

The contractor will be responsible for instructing and controlling all subcontractors regarding the hours of work. Any work or deliveries required outside the approved construction hours will be subject to specific prior approval from the Council. Such work may include:

- Delivery of large plant or equipment required to the site
- Non-noise generating activity such as internal fit-out works.

3.3 Construction Worker Parking

It is anticipated that there will be, on average, 260 workers on-site at any given time during construction activities, with up to a maximum of 380 workers on-site during peak activities, which are expected to occur during the fit-out stage.

Given the site's proximity to public transport services, including express bus services via Pacific Highway, workers will be encouraged to use public transport. During site induction, workers will be informed of the existing public transport network. Appropriate arrangements will be made for equipment and tool storage, including a dedicated area on-site to minimise the need for construction workers to transport large or heavy items to and from the site each day. This will encourage them to use public transport to travel to and from the site.

Reference is made to the *Lanceley Place Data Centre Traffic Impact Assessment (Ason Group, 2024)*, which includes a Journey to Work Data analysis for the Artarmon area based on data from the Australian Bureau of Statistics (ABS) 2021 Census. The data indicates that the majority of workers in the Artarmon statistical area travel to work by car as drivers, with approximately 79% commuting by car, followed by 8% using trains and 3% using buses.

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To support sustainable travel and minimise traffic impacts during construction, a combination of off-street parking and public transport initiatives will be implemented for the anticipated 79% commuting by car. These measures are designed to accommodate the peak construction workforce:

- Off-Street Parking: A minimum of 50 off-street parking spaces will be provided within a 5-minute walk of the site (located at 1–5 Dickson Avenue, Artarmon). These spaces will primarily be allocated to management personnel, ensuring essential staff have access. Refer to Appendix G.
- Shuttle Bus Services: For the broader workforce, shuttle buses will operate between St Leonards station and the site. These services will run during morning arrival and afternoon departure periods, aligning with approved SSD-66777221 site working hours and peak workforce movements. The number of trips will vary depending on the peak workforce at the time.

The details of the shuttle bus are provided in Table 3.2 and Figure 3.1.

Table 3.2: Goodman SYD01 - Shuttle Bus Timetable

Shuttle Bus 1 - Self MANAGED				
Monday to Friday				
Trips	**Pick up Time**	**Collection**	**Final Destination**	**PAX**
1 (am)	0615	St Leonards Station, St Leonards 2065	2-8 Lanceley Place, Artarmon 2064	49
2 (am)	0630	St Leonards Station, St Leonards 2065	2-8 Lanceley Place, Artarmon 2064	49
3 (am)	0645	St Leonards Station, St Leonards 2065	2-8 Lanceley Place, Artarmon 2064	49
4 (am)	0700	St Leonards Station, St Leonards 2065	2-8 Lanceley Place, Artarmon 2064	49
5 (am)	0715	St Leonards Station, St Leonards 2065	2-8 Lanceley Place, Artarmon 2064	49
Total Morning				**245**
1 (pm)	1515	2-8 Lanceley Place, Artarmon 2064	St Leonards Station, St Leonards 2065	49
2 (pm)	1530	2-8 Lanceley Place, Artarmon 2064	St Leonards Station, St Leonards 2065	49
3 (pm)	1545	2-8 Lanceley Place, Artarmon 2064	St Leonards Station, St Leonards 2065	49
4 (pm)	1600	2-8 Lanceley Place, Artarmon 2064	St Leonards Station, St Leonards 2065	49
5 (pm)	1630	2-8 Lanceley Place, Artarmon 2064	St Leonards Station, St Leonards 2065	49
Total Afternoon				**245**

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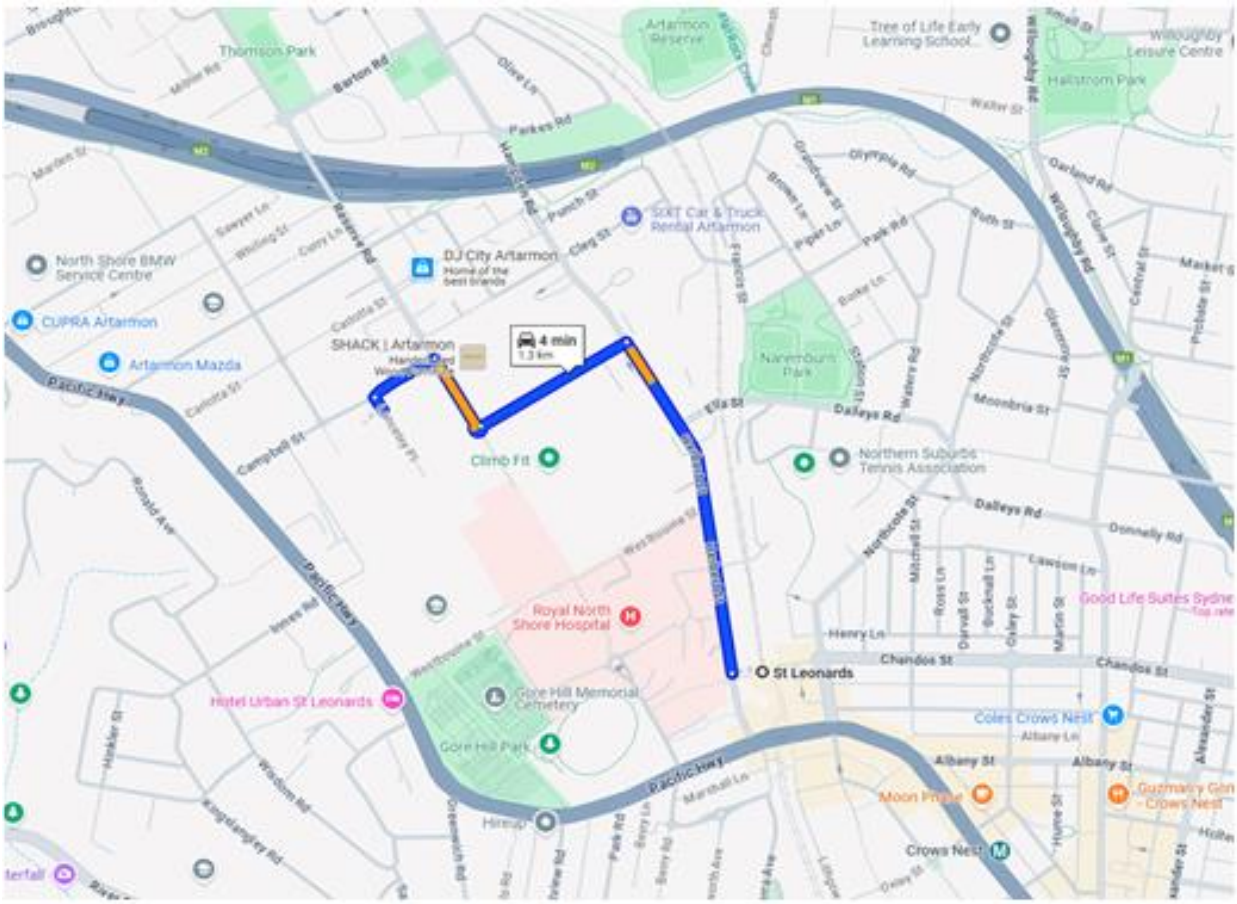


Figure 3.1: Shuttle Bus Route

- Subcontractor Engagement: Subcontractors will be informed through the tender process that no on-site parking is available. They will be directed to use public transport and the shuttlebus services provided.
- Site Inductions: Workers will be informed during site inductions that no on-site parking is available. They will be encouraged to use public transport or carpool where offsite parking has been provided.
- Transport Information Displays: Public transport timetables and travel information will be displayed at prominent locations on-site to assist workers in planning their commute.
- Tool Drop-Off Arrangements: The contractor will implement specific arrangements to facilitate tool drop-offs, reducing the need for workers to drive to the site.

With these measures in place, the combination of off-street parking and shuttle bus services is expected to sufficiently accommodate the peak construction workforce.

3.4 Construction Site Access

Site access is proposed along both Lanceley Place and Campbell Street. The Lanceley Place access will accommodate both entry and exit movements, while the Campbell Street access will be limited to exit movements only. The proposed site access arrangement, shown in Figure 3.2, accommodates vehicles up to and including 19-metre semi-trailers.

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Figure 3.2: Construction Site Access
Source: Nearmap (modified)

Construction vehicle swept paths outlining key movements during construction are included in Appendix A.

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3.5 Construction Vehicle Volumes

There will be various types of construction vehicles accessing the site during construction. The largest of these vehicles will include:

- Concrete trucks
- Concrete pump and boom vehicles
- Mobile cranes
- Excavators and bulldozers
- Rigid trucks, truck and dog combinations and articulated vehicles.

Most construction traffic will be associated with the removal of spoil, concrete pours and general delivery of materials and equipment.

Construction vehicles likely to be generated by construction activities include:

- 19m semi-trailers
- 18m truck and dog combinations
- 6.4m small rigid vehicles (SRV)
- 8.8m medium rigid vehicles (MRV)
- 12.5m heavy rigid vehicles (HRV)
- Vans and couriers to deliver smaller materials

The estimated peak number of construction vehicles (one-way movements) per construction phase is detailed in Table 3.3.

Table 3.3: Estimated Construction Vehicle

Construction Stage	Duration	Vehicle Type	Average Vehicles per Day	Average Vehicle per Hour[1]
1 (Main Works)	24 Months	Semi-trailer, Concrete Agitator, Rigid Vehicle	80	10
2 (Phase 1 Fitout)	13 Months	Rigid Vehicle	10	1

Vehicle volumes during the busiest period of construction, being utilised for major concrete pours during the main works phase, are expected to be about 80 vehicles per day (equivalent to 160 movements).Peak construction activity is anticipated to occur during the overlap of Stage 1 main works and Stage 2 works, when up to 11 construction vehicles (or 22 movements) are expected during the peak hour. Most vehicle movements during the main works phase are expected to primarily consist of concrete agitator trucks. The volume of semi-trailers will likely be low and is anticipated to occur mainly outside peak periods.

Work zones are proposed along the frontages of both Campbell Street and Lanceley Place to evenly distribute construction traffic impacts, thereby minimising disruptions to traffic flow at any single location.

Construction-related peak hour traffic generation is not expected to exceed the approved operational peak hour traffic generation for the site. As detailed in the *Lanceley Place Data Centre Traffic Impact Assessment*

[1] Assuming the truck will evenly arrive and depart during 8-hour period.

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(Ason Group, 2024), the site, approved under SSD-48478458, is projected to generate 79 AM peak trips and 74 PM peak trips.

SIDRA modelling undertaken for SSD-48478458 indicated that key surrounding intersections would operate at a Level of Service (LoS) B or better under the 2032 project scenario. The modelling concluded that no upgrades to the existing intersections were required as part of the previous SSDA assessment.

Based on the above, the traffic volumes associated with construction activities at the site remain within acceptable levels and are not expected to have a significant impact on the surrounding road network.

3.6 Cranes

All crane lifting activities will be confined to the site and will primarily be carried out using three tower cranes. Liaison and consultation with relevant stakeholders will be undertaken to determine appropriate times for the delivery and installation of crane components.

A mobile crane will be used for the one-off installation of the first large tower crane. This process may require a road closure application for Lanceley Street. If required, A W Edwards will apply for a Road Occupancy License (ROL) to the Council prior to the commencement of these works.

3.7 On-Street Works Zone

Work zones are proposed on both Campbell Street and Lanceley Place frontages to facilitate all construction works through the various construction stages. The hours for the work zones would be as per the approved construction work hours.

This arrangement of work zones allows construction vehicle activity to be distributed across both site frontages, effectively mitigating potential impacts. The proposed work zone locations and parking impact are summarised in Table 3.4 and indicatively shown in Figure 3.3.

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Table 3.4: Proposed Work Zone

Location	On Street Parking Supply Impact
Campbell Street Site Frontage (between Pacific Highway and Lanceley Place)	45m (approx. 7 car parking spaces)
Lanceley Place Site Frontage (south of Campbell Street)	45m (approx. 7 car parking spaces)



Figure 3.3: Proposed Work Zone
Source: Nearmap (modified)

A work zone permit application form will be submitted to the Council with the applicable standard work zone fee.

The work zones on Campbell Street and Lanceley Place will each be approximately 40m long. These zones will require the temporary removal of unrestricted parking spaces, which will be reinstated outside work hours in accordance with existing parking restrictions.

These parking spaces are primarily used by industrial and commercial properties on Campbell Street and Lanceley Place. However, the temporary loss of these spaces is not expected to significantly impact the operations of surrounding industrial land uses, as the existing parking demand in the area can continue to be accommodated within nearby available parking. It is also noted that these parking spaces have historically served industrial/commercial properties fronting Campbell Street and Lanceley Place, some of which will be demolished as part of the construction works.

Parking impacts and the potential implications on other road users have been further explained in Section 4.6. Location-specific TGS plans have been prepared and included in Appendix B.

3.8 Haulage Routes

Truck movements will be restricted to designated routes and confined to the State and Regional Roads. Truck routes to/ from the site, as indicated below, have been identified with the aim of minimising the impact of construction traffic on roads near the site. The directional distribution and assignment of traffic generated by the construction works will be influenced by several factors, most notably the origin/ destination of materials, the configuration of access points to the site and the configuration of the arterial road network in the vicinity.

As shown in Figure 3.4 National Heavy Vehicle Regulator (NHVR) identifies Campbell Street, Lanceley Place, and the northern section of the Pacific Highway as approved 19m B-double truck routes without any travel conditions.



Figure 3.4: Approved B-double Route
Source: National Heavy Vehicle Regulator

However, restrictions apply to heavy vehicles (12.5m Heavy Rigid Vehicles or larger) making left turns at the Campbell Street and Pacific Highway intersection during AM/PM peak hours. A review of aerial imagery indicates that the neighbouring sites, which are primarily industrial land uses, already accommodate vehicles up to 19m semi-trailers, such as at 12 Lanceley Place, Artarmon Resource Recovery Centre.

The section below details the anticipated construction vehicle routes to/ from the site.

Vehicles Smaller than 12.5m HRV

Approach Routes: Pacific Highway, Reserve Road, Campbell Street, Lanceley Place

Departure Routes: Lanceley Place, Campbell Street, Pacific Highway

The construction vehicle routes are shown in Figure 3.5.

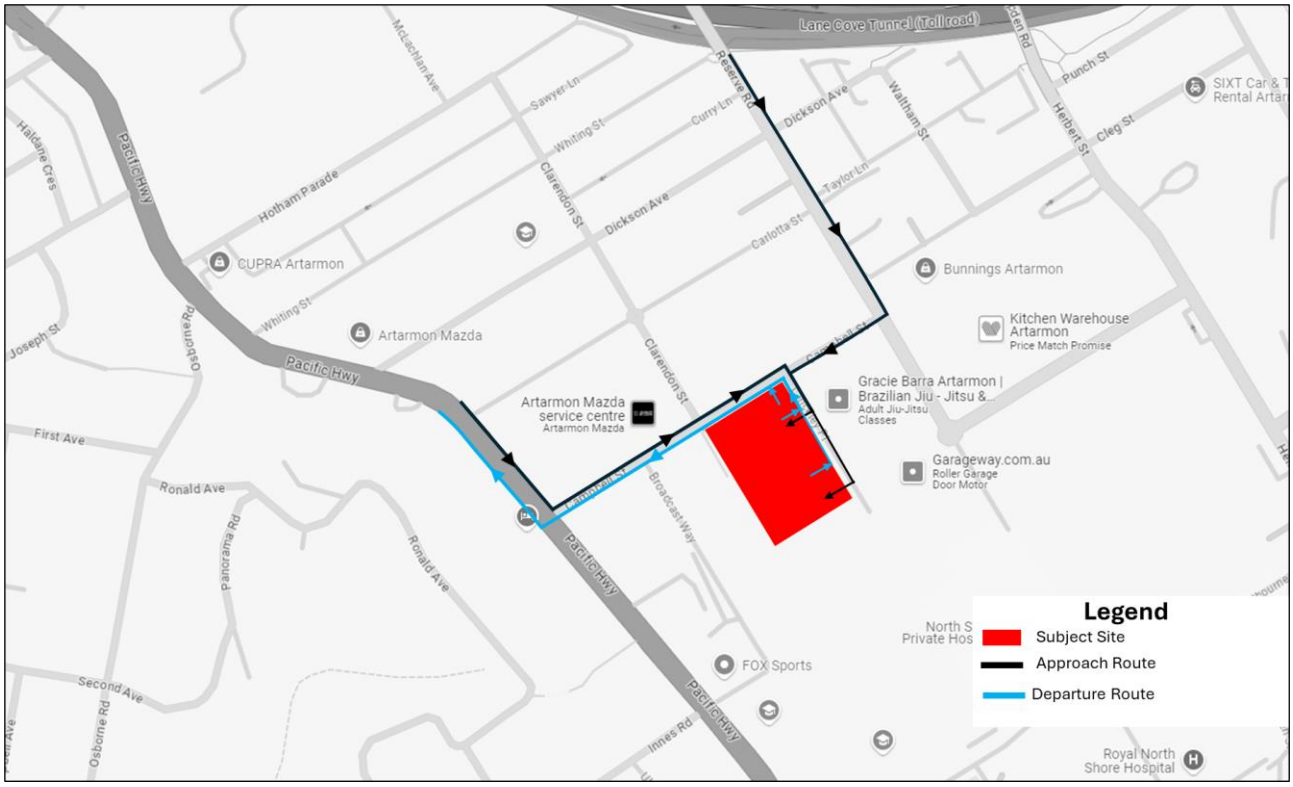


Figure 3.5: Construction Vehicle Routes (Vehicles Smaller than 12.5m HRV)
Source: Google Maps (modified)

12.5m HRV or Larger

The heavy vehicle routes and the existing left turn ban at the Pacific Highway/ Campbell Street intersection during peak hours are shown in Figure 3.6.

Approach Routes: Pacific Highway (outside of 7am-10am), Reserve Road, Campbell Street, Lanceley Place

Departure Routes: Lanceley Place, Campbell Street, Pacific Highway

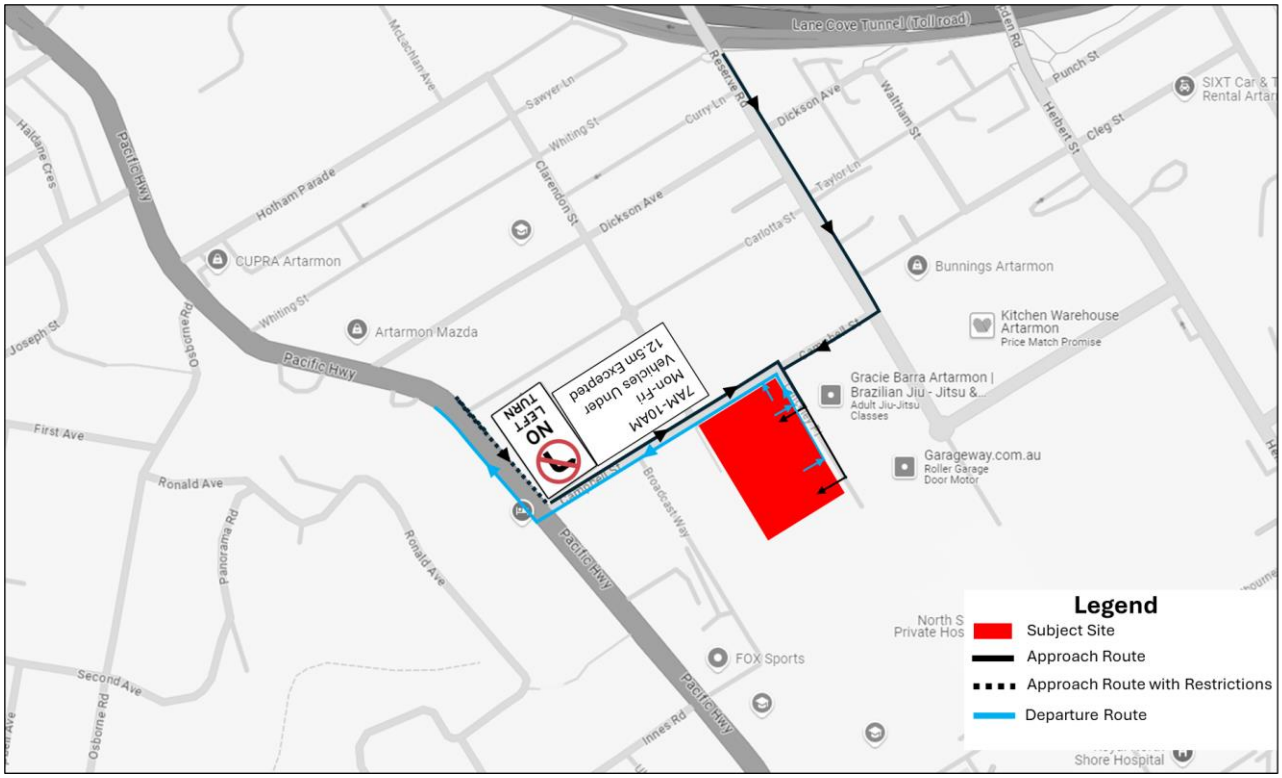


Figure 3.6: Construction Vehicle Routes (12.5m HRV or Larger)
Source: Google Maps (modified)

Swept paths have been completed for 19m semi-trailers approaching and departing via the proposed route and are included in Appendix A.

Semi-trailers can be appropriately managed through the intersections, however, they will need to utilise a short section of both lanes on the approach to the Pacific Highway/Campbell Street and Reserve Road/Campbell Street intersections, as illustrated in the swept path. Additionally, semi-trailer construction vehicles making the left turn must do so only after the opposing right-turn movement has been completed. The volume of semi-trailers is expected to be low and primarily outside peak periods, resulting in minimal and short-term impacts on surrounding traffic.

In order to facilitate semi-trailer movement at the Reserve Road/Campbell Street intersection, it is recommended to extend the existing no-stopping zone on the Campbell Street westbound departure lane by approximately 5 metres, resulting in a total no-stopping length of 20 metres. A request will be made to the Local Traffic Committee for the signage changes. This minor adjustment, equivalent to the removal of less than one car parking space, will effectively accommodate semi-trailer vehicle swept paths. Furthermore, this recommendation aligns with *Australian Road Rules 170*, which stipulate that a driver must not stop on a road within 20 metres of the nearest point of an intersecting road at an intersection with traffic lights, unless stopping is permitted by a parking control sign in accordance with these Rules.

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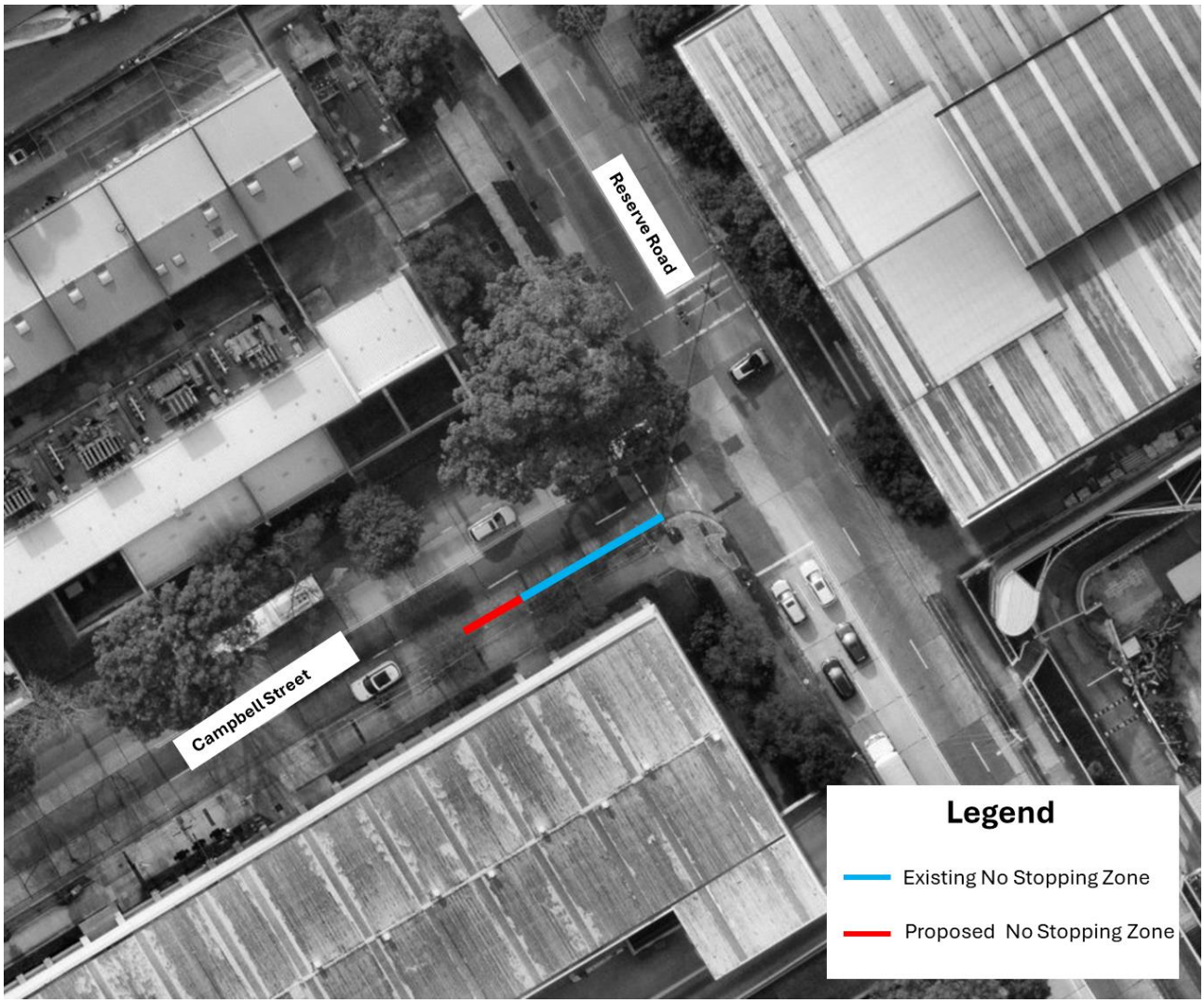


Figure 3.7: Proposed No-Stopping Extension
Source: Google Maps (modified)

The *Austroads Design Vehicles and Turning Path Template (Austroads, 2023)* specifies the minimum turning circle (kerb-to-kerb) radius for a 19m semi-trailer specified as 12.5m, equating to a 25m diameter. While the turning head at Lanceley Place can accommodate a 19m semi-trailer with minimal clearance. Minor kerb impacts and potential effects on surrounding crossovers are anticipated. However, the surrounding crossovers are primarily designed to facilitate heavy vehicles, including semi-trailers. Swept path analysis confirms that the turning head at Lanceley Place can adequately accommodate an 18m truck and dog.

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Section 4 Construction Traffic Management

4.1 Traffic Guidance Scheme

Detailed information for work site operations is contained in the *Traffic Control at Work Sites manual (TfNSW, 2022).* The control of traffic at work sites must be undertaken with reference to *SafeWork* requirements and any other relevant Workplace Health and Safety manuals.

The TGS is included in Appendix B. It generally includes the following considerations:

- Construction vehicle activity, including the loading/ unloading of trucks and all materials handling provided within the construction site boundaries, or within any proposed work zones at all times.
- Positioning of traffic controllers to manage construction vehicle access.
- Clear definition of the work site boundary to be provided by the erection of A-class construction hoarding around the site boundaries adjacent to Campbell Street and Lanceley Place
- Clean, visible, and unobscured signage to ensure safety and clear communication.
- Minimisation of construction vehicle activity during peak periods, where possible.

4.2 Pedestrian and Cyclist Management

A-Class hoarding will be installed along the site frontage to maintain pedestrian movements during the construction works. Turnstiles would be provided at worker's access points along Campbell Street to ensure separation from the public.

Furthermore, recently a shared path has been provided along Campbell Street's southern frontage which connects to the Pacific Highway. Accredited traffic controllers will be positioned at all site accesses during each stage to manage pedestrian/ cyclist movements at times when construction vehicles are entering/ exiting the site. Where the construction works require the closure of an existing pedestrian route, a suitable alternative will be provided and signposted with directional signage.

Truck movements will be avoided during peak hours where possible to minimise the impact on pedestrians and cyclists.

4.3 Public Transport

There is a bus zone on the southern side of Campbell Street (between Clarendon Street and Lanceley Place), however, no vehicular activity will occur from the bus zone to the construction area. Furthermore, a review of publicly available TfNSW bus routes shows that the bus stop is not currently utilised by any public bus services. However, ongoing monitoring of the bus zone will be undertaken to ensure the area remains free of hazards.

4.4 Traffic Impacts

Construction vehicle routes are designed to utilise the signalised intersections at Pacific Highway and Reserve Road with Campbell Street to manage turning movements effectively. At the priority-controlled intersection of Campbell Street and Lanceley Place, closer to the site, truck drivers will be required to adhere to normal road rules, including finding safe gaps in traffic and giving way to pedestrians and cyclists.

Delays for construction vehicles are expected along the congested Pacific Highway, particularly during peak traffic periods. Delivery schedules should account for these delays, considering the peak periods on the arterial road network (morning and afternoon) and the trading hours of the surrounding commercial and industrial areas.

Campbell Street and Lanceley Place are already approved for 19m B-double vehicles and currently accommodate heavy vehicles. The anticipated construction traffic is not expected to significantly impact these

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roads. During the peak construction period, up to 11 trucks per hour (22 two-way movements) are forecast, equating to one additional vehicle movement approximately every 3 minutes. This level of traffic is unlikely to adversely affect the operation of the surrounding road network. Minor delays at key intersections may occur at times but are expected to remain negligible throughout the day, consistent with typical construction projects.

As discussed earlier, the construction-related peak hour traffic generation is not expected to exceed the approved operational peak hour traffic generation for the site. As detailed in the *Lanceley Place Data Centre Traffic Impact Assessment (Ason Group, 2024),* the site, approved under SSD-48478458, is projected to generate 79 AM peak trips and 74 PM peak trips.

Construction workforce trips are expected to be minimal during peak periods. As no on-site parking will be provided for workers, the workforce will be encouraged to travel via public transport or carpool. This approach is expected to significantly reduce demand for on-street parking, with only a minimal number of staff vehicle trips anticipated in the surrounding road network.

Overall, the traffic generated by construction activities is expected to remain within acceptable limits, with no significant impact on the surrounding road network.

4.5 Impacts on Neighbouring Properties

Access to surrounding properties is not expected to be affected during construction. Pedestrian movements will be maintained through the use of A-Class hoarding.

Key neighbouring industrial and commercial land uses, including and not limited to 12 Lanceley Place (Artarmon Resource Recovery Centre), 10 Lanceley Place (Heidelberg Materials – Artarmon Concrete), 13/8 Campbell Street (Artarmon Business Centre), and 5 Lanceley Place (Storage King), will be notified of the works and consulted as required. No adverse impacts on neighbouring properties are anticipated, other than typical construction-related activities associated with a site.

Construction vehicles will not be permitted to layover between the Campbell Street/Clarendon Street roundabout and Broadcast Way, as this area is not designated as a work zone. This restriction is intended to ensure unimpeded access to surrounding properties and to remind drivers that stopping or parking across driveways is not permitted under road rules and may cause unnecessary disruption to neighbouring properties.

Council land, including roadways, footpaths, kerb and gutter, and grass verges, will be maintained in a serviceable condition for the duration of the construction works. Any damage to these assets will be remediated at the direction of Council and at no cost to Council.

A letterbox drop will be conducted for nearby businesses as required ahead of key construction activities—such as the establishment of work zones to ensure ongoing communication and consultation throughout the construction period.

4.6 Parking Impacts

As previously discussed, construction activity will affect on-street parking adjacent to the site, with the potential loss outlined in Section 3.7. This primarily involves the temporary removal of approx. 14 parking spaces to establish a work zone. Most of these spaces will remain available for public use outside of approved work hours.

The parking spaces predominantly serve industrial/commercial land uses on Campbell Street and Lanceley Place. However, the temporary loss of these spaces is not expected to significantly impact the operations of surrounding land uses. There is ample public parking within a 400m radius, including the Home HQ Centre Car Park (380 spaces), which offers free parking for up to 3 hours. Surrounding streets will also accommodate any displaced vehicles.

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Several industrial properties along Campbell Street and Lanceley Place, which these parking spaces historically served, are scheduled for demolition as part of the construction works, further reducing the demand for parking in the affected area.

To accommodate the movement of a 19m semi-trailer at the Reserve Road/Campbell Street intersection, it is recommended to extend the existing no-stopping zone on the westbound departure lane of Campbell Street by approximately 5m, resulting in a total no-stopping length of 20m. This minor adjustment will have a negligible impact on parking, equivalent to the removal of less than one car parking space.

As previously noted, workers will be encouraged to utilise the available surrounding public transport services, with parking on surrounding roads discouraged.

As the parking loss is temporary and the spaces will be reinstated once construction activities in the work zone are completed, the overall impact on surrounding industrial land uses is expected to be minor.

4.7 Emergency Vehicle Access

Emergency services' access to all adjacent properties will be maintained under the existing conditions, with no impacts as a result of the construction works. Emergency vehicle access within the construction site, if required, will be managed on a case-by-case basis.

4.8 Traffic Movement in Adjoining Areas

The construction traffic volumes and the respective approach and departure routes have been detailed in this report. Overall, no adverse impacts are expected from the movement of heavy vehicles through adjacent council areas given that associated construction vehicles will disperse across the arterial road network.

4.9 Site Induction

All workers employed on-site by A W Edwards (including sub-contractors) would be required to undergo a site induction. The induction would include:

- Permitted truck routes to and from the work site
- Preferred travel to site by public transport
- Standard environmental, Work Health and Safety, and driver protocols
- Pedestrian management and associated requirements
- Emergency procedures
- Agreed work hours.

4.10 Public Notification

As discussed, A W Edwards will implement a coordinated communication strategy to inform nearby stakeholders prior to and throughout all stages of the works. This will include letterbox notifications and/or direct liaison with surrounding properties, as required, ahead of key construction activities—such as the establishment of work zones associated with the redevelopment. The communication will cover, but is not limited to, the following:

- 12 Lanceley Place (Artarmon Resource Recovery Centre)
- 10 Lanceley Place (Heidelberg Materials – Artarmon Concrete)
- 13/8 Campbell Street (Artarmon Business Centre)
- 3 Lanceley Place
- 5 Lanceley Place (Storage King)
- 11 Lanceley Place (National Storage)

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4.11 Workplace Health and Safety

Any workers required to undertake works or traffic control within the public domain shall be suitably trained and covered by adequate and appropriate insurances. All traffic control personnel will be required to hold Transport for NSW certification in accordance with the 'Traffic Control at Work Sites' manual.

4.12 Site Inspections and Record Keeping

The construction work will be closely monitored to ensure compliance with the A W Edwards Construction Management Plan. Monthly inspections will be conducted to verify that conditions align with those outlined in the plan and that no potential hazards are present. Any identified adverse impacts will be recorded and addressed promptly.

Additionally, the construction manager will perform monthly internal audits on scheduling, delivery, and complaint management processes. A complaints register will be accessible to all staff and stakeholders to ensure transparency and efficient resolution of issues.

4.13 Construction Management Software

Construction traffic will be coordinated by the Construction Manager using the project's management software. All deliveries will be scheduled and tracked through VEYOR, a digital platform that facilitates real-time coordination. The anticipated truck movements are not expected to result in a noticeable increase in delays on the existing road network, as VEYOR enables monitoring of peak construction vehicle volumes and movements. Subcontractors and delivery drivers will be granted access to VEYOR, which mandates the booking of specific delivery time slots and designated loading areas. This approach ensures deliveries are effectively managed in terms of traffic flow, on-site storage capacity, and the availability of construction personnel for loading and unloading.

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Section 5 Construction Vehicle Code of Conduct

The following overview code of conduct will form part of the requirements of the contractor, where the contractor is expected to comply with the code of conduct in full. It is expected that the Code of Conduct will be implemented for all traffic and transport construction activities associated with construction.

5.1 Driver's Code of Conduct

This overview code of conduct will be communicated to all site workers during the site induction process. Workers will be reminded of the requirements of the code of conduct regularly in toolbox meetings.

The code of conduct will be revised prior to the commencement of on-site works and when required during construction works.

5.2 Travelling Speeds

All vehicles associated with the site are required to travel within the posted speed limits on public roads. In situations where driver's visibility and traffic safety on public roads is affected by weather related conditions such as heavy rainfall or fog, construction vehicles should reduce their speed limit until visibility and traffic safety has improved.

Vehicle tracking management systems will be used for all site-based vehicles during construction.

5.3 Noise Control

Where possible, heavy vehicle operators should not use engine brakes near residential areas and built-up areas. All heavy vehicles must be fitted with audible reversing alarms. However, to minimise disturbance to neighbouring residents, reversing should be minimised on-site where possible.

5.4 Load Covering

All loaded trucks arriving at and departing from the construction site are required to have an effective cover over their load for the duration of the journey. The load cover may be removed only upon arrival at the destination (ie. at the site).

Care must be taken to ensure that all loose debris from vehicles and wheels is removed prior to exiting the site.

Site management is to monitor loose material along the designated haul route and take appropriate action regularly, as required.

5.5 Haulage Routes

The nominated access routes to the site, and traffic flows around the site for construction vehicles are to be as follows:

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Vehicles Smaller than 12.5m HRV

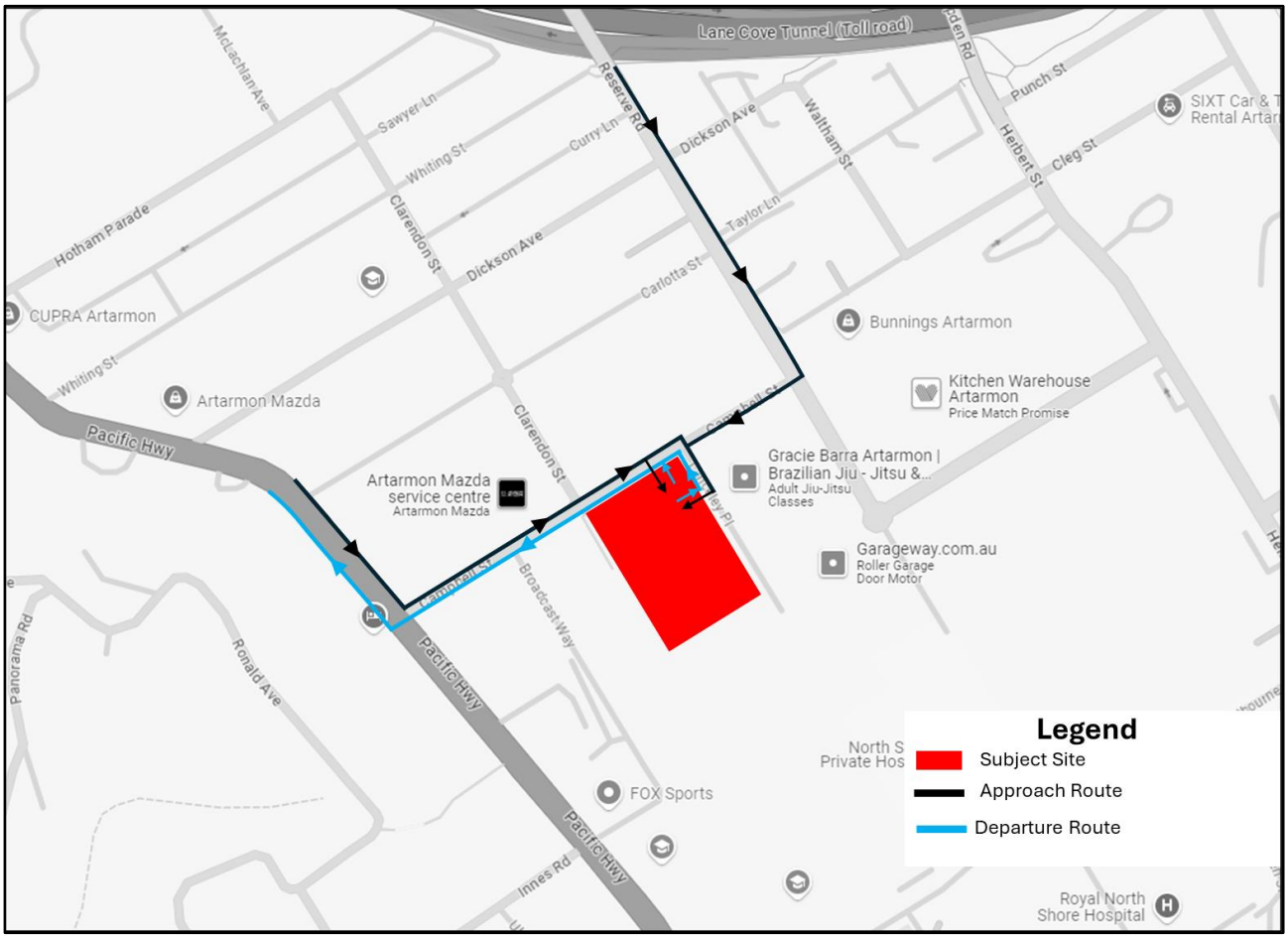


Figure 5.1: Construction Vehicle Routes (Vehicles Smaller than 12.5m HRV)
Source: Google Maps (modified)

12.5m HRV or Larger

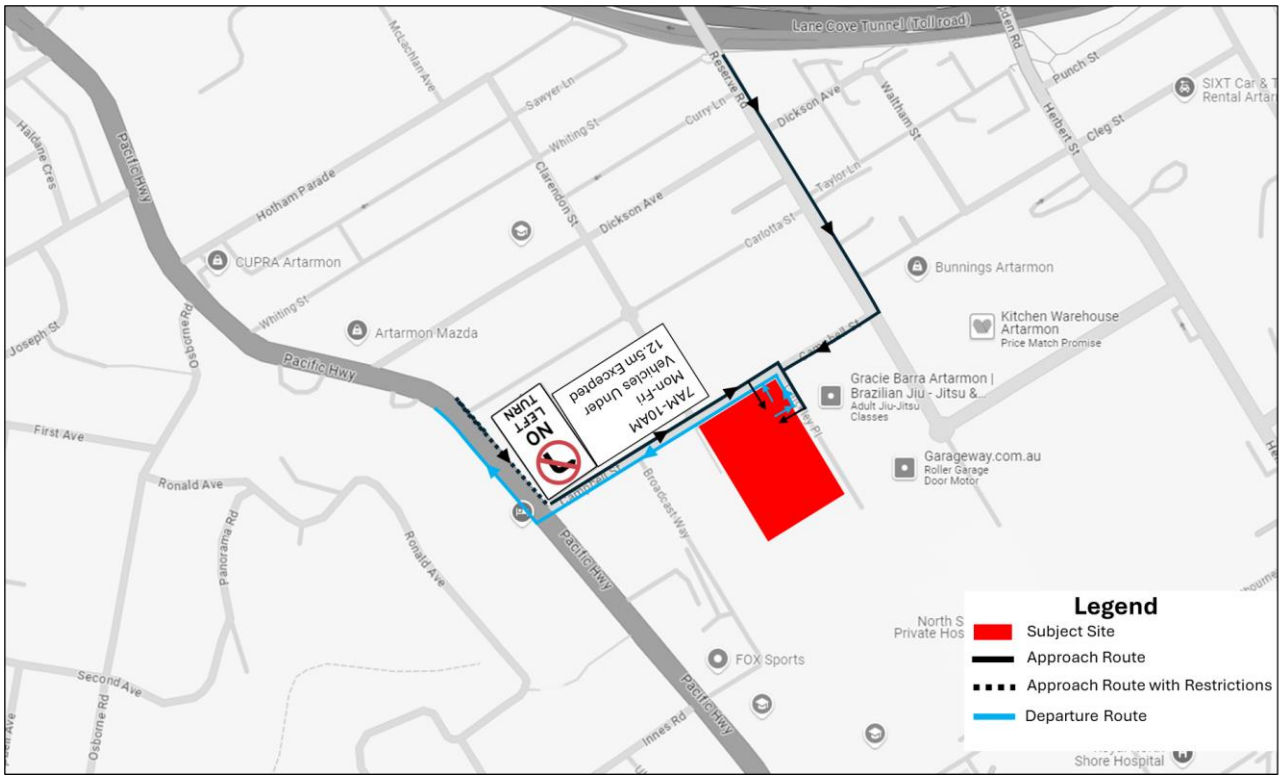


Figure 5.2: Construction Vehicle Routes (12.5m HRV or Larger)
Source: Google Maps (modified)

5.6 Safe Driving Practices

The operators of all vehicles associated with the site would maintain a high level of awareness and respect for all other road users. All on-site staff will receive a site induction, which will include details regarding the CPTMP, and associated code of conduct. Regular toolbox meetings will be held to maintain awareness of required controls. Details of the traffic and access training and induction will focus on:

- Objectives of the CTMP are to be prepared by the Contractor.
- Performance goals.
- Mitigation measures required to be implemented.
- Traffic and access monitoring and reporting requirements.
- Incident investigation and response protocols.

Training is to be provided prior to start-up of any traffic and access related management tasks and updated if task, equipment or procedures are expected to or have changed.

The following requirements would be adhered to at all times:

- Obey all laws and regulations.
- Do not drive whilst under the influence of alcohol, drugs, nor any medication which may affect ability to drive.
- Be medically fit to drive at all times and must inform site coordinators if they have any medical condition which may affect their ability to drive.

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- Drive in a considerate manner at all times and respect the rights of others to use and share the road space.
- Report all vehicle defects to their employer. Serious defects must be corrected immediately, or an alternative vehicle supplied.
- Any vehicle crash or incident resulting in injury or significant damage to property must be reported to the police.
- Report any near misses.
- Always adhere to the site working hours.
- Only drive the construction vehicle when conducting works related to the project.
- Securely fasten and cover loads, as appropriate.
- Keep their vehicle clean and in good mechanical condition to reduce the environmental impact.
- Extra care should be taken when driving at dawn or dusk, being particularly watchful for wildlife.
- Vehicles must give way to pedestrians, public and school buses and emergency vehicles.

Stopping or parking across driveways is not permitted under road rules. The transport contractor is to develop and implement a maintenance program for the heavy transport vehicles that is consistent with these safety requirements.

5.7 Heavy Vehicle Driver Fatigue

Fatigue is one of the biggest causes of crashes for heavy vehicle drivers. The Heavy Vehicle Driver Fatigue Reform was therefore developed by the National Transport Commission and approved by Ministers from all States and Territories in February 2007. The heavy vehicle driver fatigue law commenced in NSW on 28 September 2008 and applies to trucks and truck combinations over 12 tonne gross vehicle mass (however there are Ministerial Exemption Notices that can apply). Under the law, industry has the choice of operating under three fatigue management schemes:

- Standard hours of operation.
- Basic fatigue management.
- Advanced fatigue management

A W Edwards will be responsible for ensuring all heavy vehicle drivers operating out of the site are to be aware of and understand the adopted fatigue management scheme and operate within its requirements.

5.8 Other Safety Considerations Along the Haul Route

Heavy vehicle drivers should be aware of the following:

- Concealed driveways – drivers are to drive with caution around any signed concealed driveways
- Wet weather safety – drivers should adjust their driving speed to suit weather condition at the time.
- Other motorists – drivers should stay alert to other drivers, motorcyclists and cyclists on whilst driving to/ from the site.
- Safe driving practices – apply minimum distance between vehicles, minimise distractions within the vehicle, ensure checks for vehicles and equipment quality prior to journey, observe dispatch and product transportation schedule.

5.9 Maintenance Requirements

The operators of all vehicles associated with the site would maintain a high level of maintenance. The following requirements would be adhered to at all times:

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- Ensure their vehicle complies with relevant state legislation in relation to roadworthiness and modifications.
- Undergo regular vehicle checks and maintenance.
- Ensure their vehicles have correctly fitted mufflers to minimise noise disturbance.

5.10 Complaint Resolution

All traffic-related complaints will be managed in accordance with the Community Consultation & Complaints Handling Strategy provided in Appendix E. This strategy details how AW Edwards will proactively manage communications with stakeholders, including the receipt and resolution of complaints, enquiries, and feedback related to the construction works.

Failure to comply with these procedures for safe transport may result in disciplinary action. Vehicle tracking will be used to follow-up on any complaints lodged.

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Appendix A Swept Paths

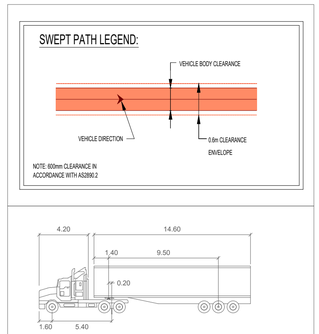
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THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES ON DRAWING C01







AV

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

THIS DRAWING HAS BEEN PREPARED USING COLOUR

0 4 8 12 16 20 24 28 32m

1:400 A1 1:800 A3

FileName: 231976-TTW-00-SK-TR-00001-[P1]-SWEPT PATH ANALYSIS PRINCESS HIGHWAY.dwg - USER: georgea - Plot File Created: Nov 21, 2024 - 12:41pm

Rev	Description	Eng	Draft	Date
P1	PRELIMINARY	GA	GA	21/11/24

Client
A W EDWARDS
Level 12, 558 Pacific Highway, St Leonards
NSW 2065

Engineer
TTW Structural Civil Traffic Façade
612 9439 7288 | Level 6, 73 Miller Street, North Sydney, NSW 2060

Project
GOODMAN DATA CENTRE (EOS)
ARTARMON

Sheet Subject
SWEPT PATH ANALYSIS
PRINCESS HIGHWAY

Scale : A1	Drawn	Authorised
1:400	GA	-

Job No	Drawing No	Revision
231976	SKTR00001	P1

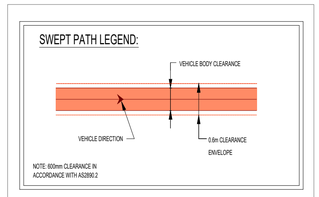
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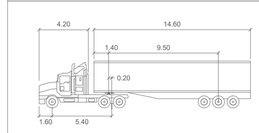
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THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES ON DRAWING C01









AV

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

THIS DRAWING HAS BEEN PREPARED USING COLOUR

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1:400 A1 1:800 A3

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Rev	Description	Eng	Draft	Date
P1	PRELIMINARY	GA	GA	21/11/24

Client
A W EDWARDS
Level 12, 558 Pacific Highway, St Leonards
NSW 2065

Engineer
TTW Structural Civil Traffic Façade
612 9439 7288 | Level 6, 73 Miller Street, North Sydney, NSW 2060

Project
GOODMAN DATA CENTRE (EOS)
ARTARMON

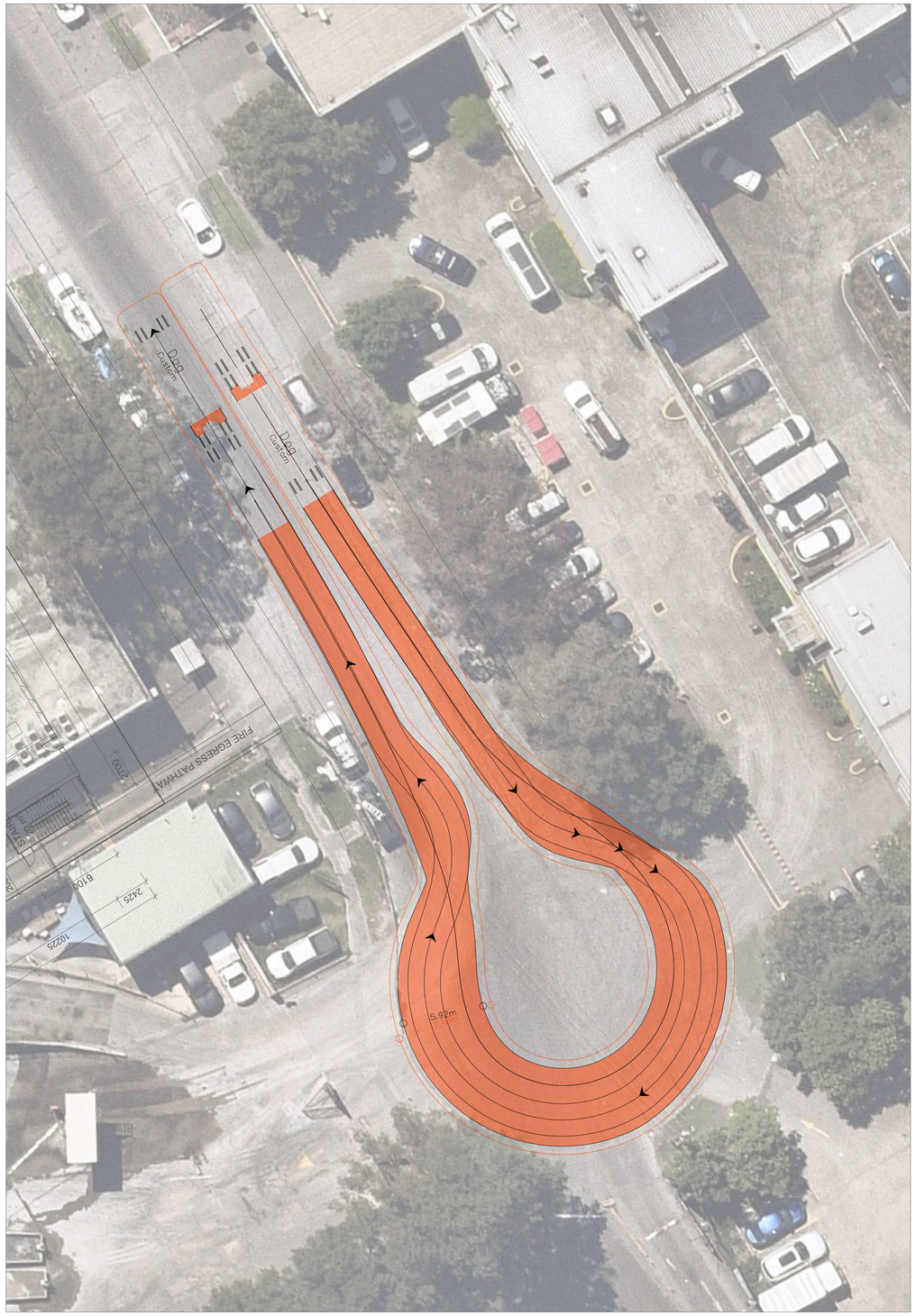
Sheet Subject
SWEPT PATH ANALYSIS
RESERVE ROAD

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Drawn: GA
Authorised: -
Job No: 231976
Drawing No: SKTR00002
Revision: P1
Plot File Created: Nov 21, 2024 - 2:17pm

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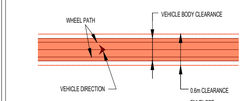


ARTICULATED VEHICLE

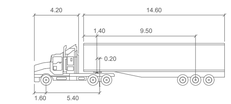


TRUCK AND DOG

SWEPT PATH LEGEND:



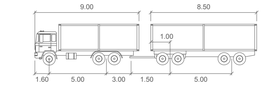
NOTE: 600mm CLEARANCE IN ACCORDANCE WITH AS2890.2



AV

meters

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Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		



Dog

meters

First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 30.0
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

THIS DRAWING HAS BEEN PREPARED USING COLOUR

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1:200 A1 1:400 A3

Rev	Description	Eng	Draft	Date
P2	PRELIMINARY	GA	GA	15/04/25
P1	PRELIMINARY	SS	SS	29/11/24

Client
A W EDWARDS
Level 12, 558 Pacific Highway, St Leonards
NSW 2065

Engineer
TTW Structural Civil Traffic Façade
612 9439 7288 | Level 6, 73 Miller Street, North Sydney, NSW 2060

Project
GOODMAN DATA CENTRE (EOS)
ARTARMON

Sheet Subject
SWEPT PATH ANALYSIS
LANCELEY PLACE U TURN
AV AND TRUCK & DOG

Scale : A1	Drawn	Authorised
1:200	GA	-

Job No	Drawing No	Revision
231976	SKTR00005	P2

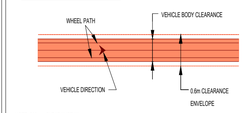
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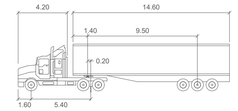
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SWEPT PATH LEGEND:



NOTE: 600mm CLEARANCE IN ACCORDANCE WITH AS2890.2



AV

meters			
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

THIS DRAWING HAS BEEN PREPARED USING COLOUR

0 2 4 6 8 10 12 14 16m

1:200 A1 1:400 A3

Rev	Description	Eng	Draft	Date
P1	PRELIMINARY	GA	GA	12/03/25

Client
A W EDWARDS
Level 12, 558 Pacific Highway, St Leonards
NSW 2065

Engineer
TTW Structural Civil Traffic Façade
612 9439 7288 | Level 6, 73 Miller Street, North Sydney, NSW 2060

Project
GOODMAN DATA CENTRE (EOS)
ARTARMON

Sheet Subject
SWEPT PATH ANALYSIS
CAMPBELL STREET ACCESS

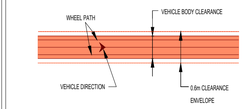
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Job No: 231976
Drawing No: SKTR00003
Revision: P1
Plot File Created: Mar 12, 2025 - 10:59am

FileName: 231976-TTW-00-SK-TR-00003-[P1]-SWEPT PATH ANALYSIS CAMPBELL STREET ACCESS.dwg - USER: georgea - Plot File Created: Mar 12, 2025 - 10:59am

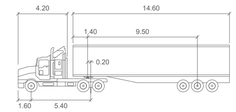
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SWEPT PATH LEGEND:



NOTE: 600mm CLEARANCE IN ACCORDANCE WITH AS2890.2



AV

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

THIS DRAWING HAS BEEN PREPARED USING COLOUR

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1:400 A1 1:800 A3

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Rev	Description	Eng	Draft	Date
P2	PRELIMINARY	GA	GA	15/04/25
P1	PRELIMINARY	GA	GA	05/03/25

Client
A W EDWARDS
Level 12, 558 Pacific Highway, St Leonards
NSW 2065

Engineer
TTW Structural Civil Traffic Façade
612 9439 7288 | Level 6, 73 Miller Street, North Sydney, NSW 2060

Project
GOODMAN DATA CENTRE (EOS)
ARTARMON

Sheet Subject
SWEPT PATH ANALYSIS
LANCELEY PLACE ACCESS

Scale : A1	Drawn	Authorised
1:400	GA	-

Job No	Drawing No	Revision
231976	SKTR00004	P2

Plot File Created: Apr 15, 2025 - 12:42pm

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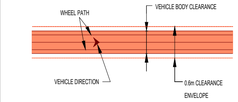


CAMPBELL STREET

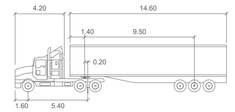


LANCELEY PLACE

SWEPT PATH LEGEND:



NOTE: 600mm CLEARANCE IN ACCORDANCE WITH AS2890.2



AV

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

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0 5 10 15 20 25 30 35 40m

1:500 A1 1:1000 A3

Rev	Description	Eng	Draft	Date
P2	PRELIMINARY	GA	GA	15/04/25
P1	PRELIMINARY	GA	GA	11/03/25

Client
A W EDWARDS
Level 12, 558 Pacific Highway, St Leonards
NSW 2065

Engineer
TTW Structural Civil Traffic Façade
612 9439 7288 | Level 6, 73 Miller Street, North Sydney, NSW 2060

Project
GOODMAN DATA CENTRE (EOS)
ARTARMON

Sheet Subject
SWEPT PATH ANALYSIS
WORK ZONES

Scale : A1	Drawn	Authorised
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Job No	Drawing No	Revision
231976	SKTR00006	P2

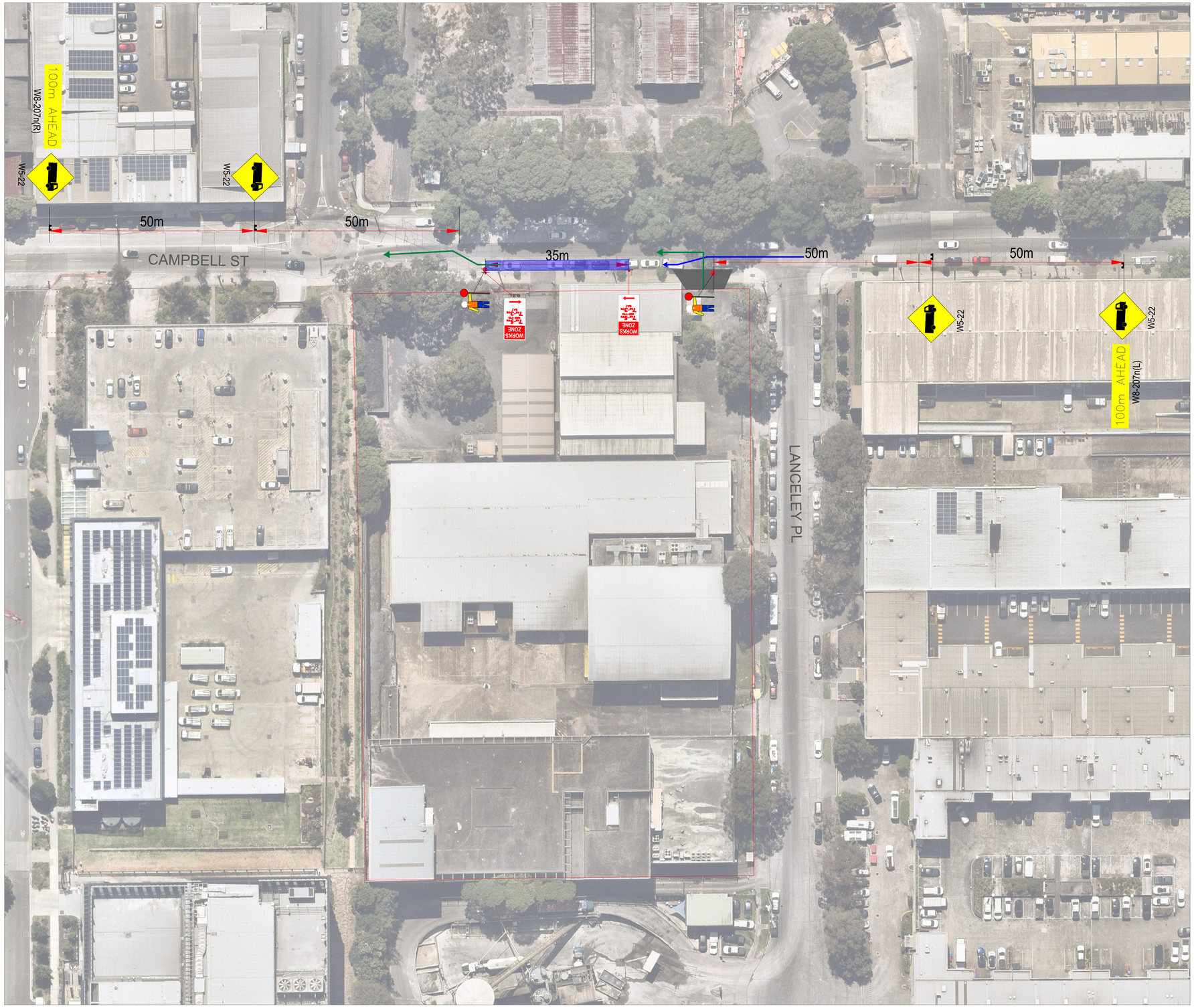
Plot File Created: Apr 15, 2025 - 12:24pm

FileName: 231976-TTW-00-SK-TR-00006-[P1]-SWEPT PATH ANALYSIS WORK ZONES.dwg - USER: georgea - Plot File Created: Apr 15, 2025 - 12:24pm

Appendix B Traffic Guidance Scheme

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0 5 10 15 20 25 30 35 40m

1:500 A1 1:1000 A3

SITE NOTES:

- TfNSW Authorised Traffic Controllers to assist with truck movements in and out of the driveways and work zone on Campbell Street
- It is understood vehicle access to the site and works zones will not have an impact on traffic movements along Campbell street
- Two (2) Authorised Traffic Controllers will be present when a truck is entering / exiting the driveway and work zone on Campbell Street

TRAFFIC GUIDANCE SCHEME NOTES:

- This TGS has been designed in accordance with AS1742.3 (2009) and TfNSW Traffic Control at Works Site Manual V6.1
- Dimension D provided in accordance with Section 7.3 of TCAWS
- Refer to Truck Route Figures within the CTMP report for specified inbound / outbound routes
- Traffic Controllers to manage vehicles, pedestrians, cyclists movements and footpaths as required.
- This TGS plan is preliminary and will require a detailed review prior to construction
- Footpath to remain open - following more detailed construction methodology this needs to be confirmed
- Works zone times required to be confirmed following SSDA approval

LEGEND:

Inbound Truck Movement

Outbound Truck Movement

Internal Circulation

Work Zone

FileName: 231976-TTW-00-DR-TGS-TR-00001-[P1] - TRAFFIC GUIDANCE SCHEME - CAMPBELL STREET.dwg - USER: georgea - Plot File Created: Apr 17, 2025 - 10:45am

Rev	Description	Eng	Draft	Date
P2	ISSUE FOR DRAFT	GA	GA	17.04.25
P1	ISSUE FOR DRAFT	GA	GA	12.03.25

Safe Works NSW Certification:
Prepare a Works Zone Traffic Management Plan
Card Number: TCT0045869
Maria Mulholland

Engineer
TTW Structural Civil Traffic Façade
612 9439 7288 | Level 6, 73 Miller Street, North Sydney, NSW 2060

Project
GOODMAN DATA CENTRE (EOS), ARTARMON

Sheet Subject
TRAFFIC GUIDANCE SCHEME
TRUCK ENTRY / EXIT MOVEMENTS FROM WORKS ZONE AND SITE ACCESS ON CAMPBELL STREET

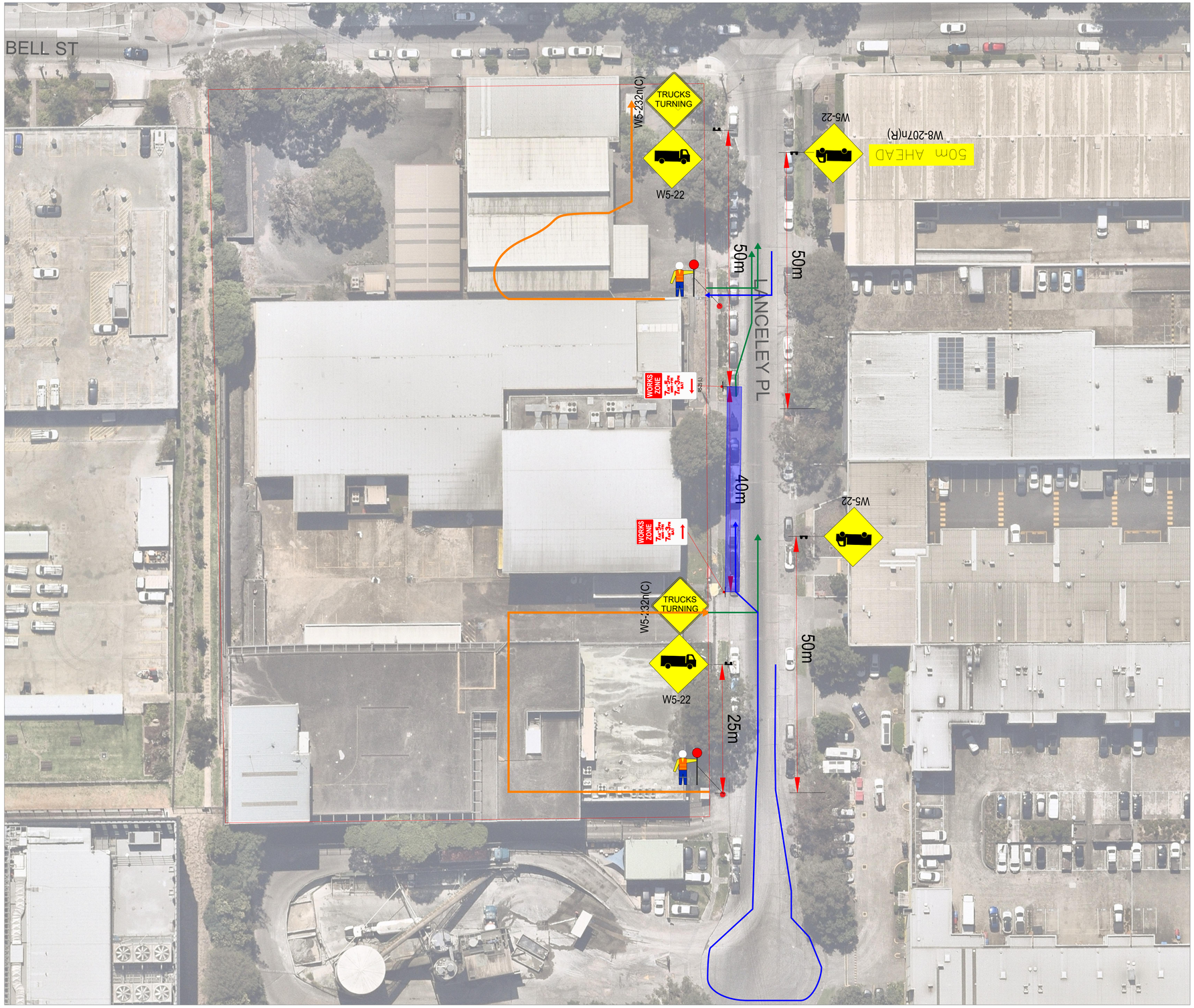
THIS DRAWING HAS BEEN PREPARED USING COLOUR

Scale : A1	Drawn	Authorised
1:500	GA	MM

Job No	Drawing No	Revision
231976	00001	P2

Plot File Created: Apr 17, 2025 - 10:45am

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0 4 8 12 16 20 24 28 32m

1:400 A1 1:800 A3

SITE NOTES:

- TfNSW Authorised Traffic Controllers to assist with truck movements in and out of the driveways and work zone on Lanceley Place
- It is understood vehicle access to the site and works zones will not have an impact on traffic movements along Lanceley Place
- Two (2) Authorised Traffic Controllers will be present when a truck is entering / exiting the driveway and work zone on Lanceley Place

TRAFFIC GUIDANCE SCHEME NOTES:

- This TGS has been designed in accordance with AS1742.3 (2009) and TfNSW Traffic Control at Works Site Manual V6.1
- Dimension D provided in accordance with Section 7.3 of TCAWS
- Refer to Truck Route Figures within the CTMP report for specified inbound / outbound routes
- Traffic Controllers to manage vehicles, pedestrians, cyclists movements and footpaths as required.
- This TGS plan is preliminary and will require a detailed review prior to construction
- Footpath to remain open - following more detailed construction methodology this needs to be confirmed
- Works zone times required to be confirmed following SSDA approval

LEGEND:

Inbound Truck Movement

Outbound Truck Movement

Internal Circulation

Work Zone

THIS DRAWING HAS BEEN PREPARED USING COLOUR

Rev	Description	Eng	Draft	Date
P2	ISSUE FOR DRAFT	GA	GA	16.04.25
P1	ISSUE FOR DRAFT	GA	GA	12.03.25

Safe Works NSW Certification:
Prepare a Works Zone Traffic Management Plan
Card Number: TCT0045869
Maria Mulholland

Engineer
TTW Structural Civil Traffic Façade
612 9439 7288 | Level 6, 73 Miller Street, North Sydney, NSW 2060

Project
GOODMAN DATA CENTRE (EOS), ARTARMON

Sheet Subject
TRAFFIC GUIDANCE SCHEME
TRUCK ENTRY / EXIT MOVEMENTS FROM WORKS ZONE AND SITE ACCESS ON LANCELEY PLACE

Scale : A1	Drawn	Authorised
1:400	GA	MM

Job No	Drawing No	Revision
231976	00002	P2

Plot File Created: Apr 16, 2025 - 8:58am

FileName: 231976-TTW-00-DR-TGS-TR-00002-[P1]- TRAFFIC GUIDANCE SCHEME - LANCELEY PLACE.dwg - USER: georgea - Plot File Created: Apr 16, 2025 - 8:58am

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0 5 10 15 20 25 30 35 40m

1:500 A1 1:1000 A3

THIS DRAWING HAS BEEN PREPARED USING COLOUR

TRAFFIC GUIDANCE SCHEME NOTES:

1. This TGS has been designed in accordance with AS1742.3 (2019) and TfNSW Traffic Control at Works Site Manual V6.1
2. Temporary safety barriers are to be provided between the work area and the road for pedestrian protection.Provide a minimum clear width of 1.5-2m for pedestrian traffic & provide a full width temporary ramp for prams and an all weather surface on all pedestrian areas. The barrier is required to be off-set by 0.5m from the road.
3. Temporary safety barriers in accordance with TCAWS V6.1
4. This TGS plan is preliminary and will require a detailed review prior to construction

Rev	Description	Eng	Draft	Date
P1	ISSUE FOR DRAFT	GA	GA	17.04.25

Safe Works NSW Certification:
Prepare a Works Zone Traffic Management Plan
Card Number: TCT0045869
Maria Mulholland

Engineer
TTW Structural Civil Traffic Façade
612 9439 7288 | Level 6, 73 Miller Street, North Sydney, NSW 2060

Project
GOODMAN DATA CENTRE (EOS), ARTARMON

Sheet Subject
TRAFFIC GUIDANCE SCHEME

CONSTRUCTION OF VEHICLE ACCESS

Scale : A1	Drawn	Authorised
1:500	GA	MM

Job No	Drawing No	Revision
231976	00003	P1

Plot File Created: Apr 17, 2025 - 10:00am

FileName: 231976-TTW-00-DR-TGS-TR-00003-[P1]- TRAFFIC GUIDANCE SCHEME - CONSTRUCTION OF VEHICLE ACCESS.dwg - USER: georgiea - Plot File Created: Apr 17, 2025 - 10:00am

Appendix C CV

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Sabal Sharma

Traffic Engineer

M.Phil in Transportation Engineering

sabal.sharma@ttw.com.au

Experience

2024– current
Traffic Engineer, TTW Sydney

2018 – 2024
Transport Engineer, Stantec Australia

Sabal is a motivated and dedicated traffic engineering professional with over 6 years of experience.

Sabal has delivered several transport and infrastructure projects for public and private sector clients in metropolitan Sydney and regional NSW. Sabal's experience includes transport assessments for various land uses, assessments for concept highway design, green travel plans, construction traffic management plans, and parking demand studies.

Sabal has broad skills including project management, traffic engineering, transport modelling (SIDRA), swept path analysis, and parking assessment. In addition, Sabal also has valuable skills in ArcGIS and data analysis, which are required by the project to create informative maps.

Education

Castle Hill Public School
Darcy Road Public School
Matthew Pearce Public School
Samuel Gilbert Public School
Wentworthville Public School
Darlington Public School
Hurlstone Agricultural School
Rouse Hill High School

Renewable Energy

Bowmans Creek Widfarm - Stage 1

Health

Liverpool Health and Academic Precinct

Residential

Iowna Neighbourhood Plan
Bingara Gorge
Calderwood Urban Development

Mining/Quarry

Boggabri Coal Mine
Constellation Mine
South Keswick
Clarence Colliery

Transport

Newell Highway Flood Immunity, Concept Design
Nowra Bridge - Princes Highway Upgrade
Edmondson Avenue Upgrade

Mixed Development

146 Arthur Street, North Sydney

Industrial

Link Road, Bankstown

Sports + Recreation

Timbrell Park

Mass Rapid Transit System

Sydney Metro Northwest

Commuter Car Park

North Rocks



Michael Babbage

Associate

BE(Hons), Road Safety Auditor (Level 1)

Michael.babbage@ttw.com.au

Experience

2021 – Current
Associate, TTW

2019 – 2021
Senior Traffic Engineer, TTW

2016 – 2018
Traffic Engineer, TTW

Michael is a traffic engineer with a keen interest in designs that really consider the end-user experience, not just the technical requirements. He is involved in all types of projects, from traffic impact assessments, transport planning, construction traffic management, road safety, and car park design, at all stages of the project life cycle.

He has experience in the design development of multi-storey car parks (including for significant transport interchanges, hospitals, and community facilities), drop-off and pick-up facilities, loading docks, and pedestrian facilities. Michael is also a qualified road safety auditor, a TTW service that not only results in safer outcomes for road users on third-party projects but also provides valuable experience and lessons learned for TTW-designed projects. Recently, Michael has been part of TTW's traffic engineering team through an ongoing period of growth and is looking forward to continuing to service the industry with an expanding set of team capabilities.

Schools

Carlingford West Public School
Cronulla High School
Cumberland High School
Denistone East Public School
Glenfield High School and SSPs
Glenwood High School
Hawkesbury Centre of Excellence
John Palmer Public School
Kent Road Public School
Melonba Primary School
Marsden Park High School & Primary School
Pendle Hill High School
Randwick TAFE
Richmond High School
Russell Lea Public School
Rydalmere Education Campus
Shore Physical Education Centre
Smalls Road Public School

Transport

Ashfield Commuter Car Park
Edmondson Park Commuter Car Park
Leppington Commuter Car Park
Merrylands Commuter Car Park
Penrith Commuter Car Park
St Marys Commuter Car Park

Community +Public

Australian Museum Redevelopment
Australian War Memorial
Lane Cove Sport & Recreation Precinct
Merrylands Civic Square
Mona Vale Surf Life Saving Club
NGV Contemporary
Powerhouse Precinct at Parramatta
Ryde Central
Sydney Football Stadium
Sydney Opera House
Thredbo Alpine Resort
Wagga Wagga PCYC
Wilberforce Avenue Car Park, Rose Bay

Aged Care

Edinglassie Village
Lark Ellen Aged Care
Opal Seaside, Warriewood
Pemulwuy Aged Care
RFBI Hawkins Village
SCC Cardinal Gilroy Village

Health

Bankstown-Lidcombe Hospital Emergency Department
Bulli Aged Care Centre of Excellence
Campbelltown Hospital Redevelopment Stage 2
Concord Hospital Redevelopment Stage 1
Hills Private Hospital
Lismore Hospital
Peninsula Private Hospital
Robina Medical Centre
SAN Clinic Parkway
Shellharbour Hospital Redevelopment
Shoalhaven Hospital
The Tweed Hospital
Wyong Hospital Redevelopment

Mixed Use Development

1 Eden Park Drive, Macquarie Park
10 Valentine Avenue, Parramatta
20 Berry Street, North Sydney
21 Harris Street, Pyrmont
60 Union Street, Pyrmont
118 Mount Street, North Sydney
Dicker Data Warehouse & Distribution Centre
Dural Business Park
Macquarie Exchange Precinct MQX4
NECA Training Facility, Chullora
Accommodation + Residential
61 Lavender Street, Milsons Point
105-115 Portman Street, Zetland
135 Queen Street, Woollahra
458-468 George Street, Sydney
700 George Street, Sydney
989-1015 Pacific Highway, Chatswood
Esplanade Norwest
Shell Cove Precinct C2

Michael Babbage

What inspired you to become an engineer?

From a young age I had a keen in interest in the big stuff – roads, bridges, dams, train lines – and hoped to eventually work in the field. Halfway through an engineering degree I worked out that structural engineering wasn't for me (so I'm thankful for the other experts at TTW) but the field of traffic and transport became much more appealing. Moving people around, getting from here to there, and the exciting possibilities of new and emerging technologies.

What is it about the industry that motivates you?

The joy of traffic and transport is that in each project we take on, the correct answer is never the same, and the challenge to find that correct answer each time is a great motivation. It's also motivating knowing that the solutions we develop will end up in the hands of (and under the feet of) residents, students, patients, families, and workers who are relying on our solutions in their daily lives. It's an intimidating challenge but a motivating one.

Residential

61 Lavender Street, Milsons Point
105-115 Portman Street, Zetland
135 Queen Street, Woollahra
137-143 Herring Road, Macquarie Park
700 George Street, Sydney
989-1015 Pacific Highway, Chatswood
Esplanade Norwest
Shell Cove Precinct C2
St Columba's Springwood Planning Proposal

Hotels + Colleges

Four Points by Sheraton, Darling Harbour
Moxy Sydney Airport Hotel
Sydney Airport Ninth Street Hotel
UNE – Robb College
UNE – Wright Block
UNSW – Mulwarree Avenue Student Housing
USYD – St Andrew's College

Retail

Charlestown Square Shopping Centre
Lake Macquarie Fair Shopping Centre
Overseas Passenger Terminal Tenancy 5
Rosebery Engine Yards
The Canopy, Lane Cove
Public Domain
Martin Place Renewal Works
Mitchell Street Plaza, St Leonards
Parks for People – Belrose
Parks for People – Frenchs Forest

Appendix D Consultation Record

© 2025 Taylor Thomson Whitting

Sabal Sharma

From: Terry Yu <Terry.Yu@Willoughby.nsw.gov.au>
Sent: Tuesday, 29 July 2025 12:39 PM
To: ARFANIS, Nathan; STALEY, Jack; Sabal Sharma
Cc: MCGLONE, William; MCALLISTER, Rauiri; TrafficEng; Clare Woods; Daniel Sui; Craig O'Brien; Brian Duong; Nathan Nguyen
Subject: RE: Acknowledgement - SSD-66777221 – Consultation on Condition B20 (Construction Traffic Management Plan)

You don't often get email from terry.yu@willoughby.nsw.gov.au. Learn why this is important

[External Email]: Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Nathan,

Council has reviewed your attached Construction Traffic Management Plan dated 29 July 2025 and has no objection. The CTMP is considered satisfactory by Council.

You may use this to supply to the Planning Secretary to fulfil Conditions B20 and B20(b).

Regards,
Terry

From: ARFANIS, Nathan <narfanis@awedwards.com.au>
Sent: Tuesday, 29 July 2025 8:24 AM
To: Terry Yu <Terry.Yu@Willoughby.nsw.gov.au>; STALEY, Jack <jstaley@awedwards.com.au>; 'sabal.sharma@ttw.com.au' <sabal.sharma@ttw.com.au>
Cc: MCGLONE, William <wmcglone@awedwards.com.au>; MCALLISTER, Rauiri <rmcallister@awedwards.com.au>; TrafficEng <TrafficEng@Willoughby.nsw.gov.au>; Clare Woods <Clare.Woods@Willoughby.nsw.gov.au>; Daniel Sui <Daniel.Sui@Willoughby.nsw.gov.au>; Craig O'Brien <Craig.Obrien@Willoughby.nsw.gov.au>; Brian Duong <Brian.Duong@Willoughby.nsw.gov.au>; Nathan Nguyen <Nathan.Nguyen@Willoughby.nsw.gov.au>
Subject: RE: Acknowledgement - SSD-66777221 – Consultation on Condition B20 (Construction Traffic Management Plan)

Hi Terry,

As per our discussion last week, please refer to the link below for the updated CTMP:

250725_Lanceley Place Data Centre CTMP (1).pdf

Key updates:

- Pages 18, 19 & 20 for updated text for 3.3 Construction Worker Parking.
- Appendix G for evidence of the above.

Once approval is provided via return response to this Outlook email, the Authority Consultation section will be updated accordingly.

Regards,

Nathan Arfanis
Senior Project Coordinator

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0405 338 722
E: narfanis@awedwards.com.au
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"COMMUNITY" Artwork by Raechel Saunders

From: Yu, Terry <Terry.Yu@Willoughby.nsw.gov.au>
Sent: Wednesday, 16 July 2025 10:59 AM
To: ARFANIS, Nathan <narfanis@awedwards.com.au>; STALEY, Jack <jstaley@awedwards.com.au>; 'sabal.sharma@ttw.com.au' <sabal.sharma@ttw.com.au>
Cc: MCGLONE, William <wmcglone@awedwards.com.au>; MCALLISTER, Rauiri <rmcallister@awedwards.com.au>; TrafficEng <TrafficEng@Willoughby.nsw.gov.au>; Woods, Clare <Clare.Woods@Willoughby.nsw.gov.au>; Sui, Daniel <Daniel.Sui@Willoughby.nsw.gov.au>; O'Brien, Craig <Craig.Obrien@Willoughby.nsw.gov.au>; Duong, Brian <Brian.Duong@Willoughby.nsw.gov.au>; Nguyen, Nathan <Nathan.Nguyen@Willoughby.nsw.gov.au>
Subject: RE: Acknowledgement - SSD-66777221 – Consultation on Condition B20 (Construction Traffic Management Plan)

Hi Nathan,

Council appreciates your efforts in providing the additional measures. However, as explained previously, Council is unable to provide full approval of the CTMP for a construction without written confirmation of measures to accommodate construction workers parking off-street.

Please find Council's comments to your proposed measures below –

- *It is anticipated that there will be on average 260 workers on-site at any given time during construction activities, with up to a maximum of 380 workers on-site during peak activities which are expected to occur during the fit-out stage.*
- *Reference is made to the Lanceley Place Data Centre Traffic Impact Assessment (Ason Group, 2024), which includes a Journey to Work Data analysis for the Artarmon area based on data from the Australian Bureau of Statistics (ABS) 2021 Census. The data indicates that the majority of workers in the Artarmon statistical area travel to work by car as drivers, with approximately 79% commuting by car, followed by 8% using trains and 3% using buses.*
  The analysis states that approximately 79% of construction workers will commute by car – please provide a detailed breakdown of how the maximum number of construction workers during peak activities, estimated to be approximately 300 (380 x 79%), will commute to the site without taking on-street parking spaces.

- *Off-Street Parking: Up to 50 off-street car parking spaces will be provided within a 5-minute walk of the site. These spaces will primarily be allocated to management personnel, ensuring essential staff have access.*
  Council requires formal written confirmation and correspondence from the relevant land or business owners confirming that a lease for off-street parking provisions for construction workers has been secured, with the exact locations for off-street parking clearly outlined and the minimum number of car parking spaces that can be accommodated off-street clearly stated.

- *Shuttle Bus Services: For the broader workforce, shuttle buses will operate between Artarmon and St Leonards stations and the site. These services will run during morning arrival and afternoon departure periods, aligning with approved SSD-66777221 site working hours and peak workforce movements.*
  Council requires detailed shuttle bus service schedules and written confirmation from the service providers, including timetables and capacities, to review the capacity that shuttle bus services can provide for construction worker commuting.

Regards,
Terry

Terry Yu - *Traffic Engineer*
WILLOUGHBY CITY COUNCIL
PO Box 57 Chatswood NSW 2057
P +61 2 9777 7633 | E Terry.Yu@Willoughby.nsw.gov.au
willoughby.nsw.gov.au | visitchatswood.com.au | theconcourse.com.au



Council acknowledges the Gamaragal People as the Traditional Owners of these lands. We pay our respects to their Elders past and present.

From: ARFANIS, Nathan <narfanis@awedwards.com.au>
Sent: Tuesday, 15 July 2025 9:52 AM
To: Yu, Terry <Terry.Yu@Willoughby.nsw.gov.au>; STALEY, Jack <jstaley@awedwards.com.au>; 'sabal.sharma@ttw.com.au' <sabal.sharma@ttw.com.au>
Cc: MCGLONE, William <wmcglone@awedwards.com.au>; MCALLISTER, Rauiri <rmcallister@awedwards.com.au>; TrafficEng <TrafficEng@Willoughby.nsw.gov.au>; Woods, Clare <Clare.Woods@Willoughby.nsw.gov.au>; Sui, Daniel <Daniel.Sui@Willoughby.nsw.gov.au>; O'Brien, Craig <Craig.Obrien@Willoughby.nsw.gov.au>; Duong, Brian <Brian.Duong@Willoughby.nsw.gov.au>; Nguyen, Nathan <Nathan.Nguyen@Willoughby.nsw.gov.au>
Subject: RE: Acknowledgement - SSD-66777221 – Consultation on Condition B20 (Construction Traffic Management Plan)

Hi Terry,

The CTMP has been updated to include the below wording for construction worker parking. Can you please confirm that this has been accepted by Willoughby Council. A response at your earliest opportunity would be appreciated.

250714_ Lanceley Place Data Centre CTMP.pdf

3.3 Construction Worker Parking

It is anticipated that there will be on average 260 workers on-site at any given time during construction activities, with up to a maximum of 380 workers on-site during peak activities which are expected to occur during the fit-out stage.

It is not proposed to provide any on-site worker car parking for workers. Given the site's proximity to public transport services including express bus services via Pacific Highway, workers will be encouraged to use public transport, where practical. During site induction, workers will be informed of the existing public transport network. Appropriate arrangements will be made for equipment and tool storage, including a dedicated area on-site to minimise the need for construction workers to transport large or heavy items to and from the site each day. This will encourage them to use public transport to travel to and from the site.

Reference is made to the Lanceley Place Data Centre Traffic Impact Assessment (Ason Group, 2024), which includes a Journey to Work Data analysis for the Artarmon area based on data from the Australian Bureau of Statistics (ABS) 2021 Census. The data indicates that the majority of workers in the Artarmon statistical area travel to work by car as drivers, with approximately 79% commuting by car, followed by 8% using trains and 3% using buses.

To support sustainable travel and minimise traffic impacts during construction, a combination of off-street parking and public transport initiatives will be implemented. These measures are designed to accommodate the peak construction workforce while reducing reliance on on-street parking:

- *Off-Street Parking: Up to 50 off-street car parking spaces will be provided within a 5-minute walk of the site. These spaces will primarily be allocated to management personnel, ensuring essential staff have access.*
- *Shuttle Bus Services: For the broader workforce, shuttle buses will operate between Artarmon and St Leonards stations and the site. These services will run during morning arrival and afternoon departure periods, aligning with approved SSD-66777221 site working hours and peak workforce movements.*
- *Site Inductions: Workers will be informed during site inductions that no on-site parking is available. They will be encouraged to use public transport or carpool wherever possible.*
- *Transport Information Displays: Public transport timetables and travel information will be displayed at prominent locations on-site to assist workers in planning their commute.*
- *Tool Drop-Off Arrangements: The contractor will implement specific arrangements to facilitate tool drop**[1]**offs, reducing the need for workers to drive to the site.*

With these measures in place, the combination of off-street parking and shuttle bus services is expected to sufficiently accommodate the peak construction workforce. As a result, traffic impacts during peak periods are anticipated to be minimal, with significantly reduced demand for on-street parking and private vehicle trips.

Regards,

Nathan Arfanis
Senior Project Coordinator

A W Edwards Pty Limited
Level 12, 558 Pacific Highway

St Leonards NSW 2065
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E: narfanis@awedwards.com.au
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A W Edwards acknowledges Traditional Owners of Country throughout Australia and recognises the continuing connection to lands, waters and communities. We pay respect to Aboriginal and Torres Strait Islander cultures and to Elders past and present.

"COMMUNITY" Artwork by Raechel Saunders

From: ARFANIS, Nathan <narfanis@awedwards.com.au>
Sent: Thursday, 10 July 2025 4:15 PM
To: 'Yu, Terry' <Terry.Yu@Willoughby.nsw.gov.au>; STALEY, Jack <jstaley@awedwards.com.au>; sabal.sharma@ttw.com.au
Cc: MCGLONE, William <wmcglone@awedwards.com.au>; MCALLISTER, Rauiri <rmcallister@awedwards.com.au>; TrafficEng <TrafficEng@Willoughby.nsw.gov.au>; BAKOULIS, Jonathan <jbakoulis@awedwards.com.au>; Woods, Clare <Clare.Woods@Willoughby.nsw.gov.au>; Sui, Daniel <Daniel.Sui@Willoughby.nsw.gov.au>; O'Brien, Craig <Craig.Obrien@Willoughby.nsw.gov.au>; Duong, Brian <Brian.Duong@Willoughby.nsw.gov.au>; Nguyen, Nathan <Nathan.Nguyen@Willoughby.nsw.gov.au>
Subject: RE: Acknowledgement - SSD-66777221 – Consultation on Condition B20 (Construction Traffic Management Plan)

Hi Terry,

The Planning Secretary has rejected the CTMP on the basis we only have Conditional Approval from Willoughby.

Can you please advise exactly what is required from AW Edwards, for the Parking Condition to be Unconditionally Approved?

Note that the below is currently included within the CTMP:

- To support workers commuting via train, shuttle bus services will be operated by the Contractor between St Leonards and Artarmon stations and the site, with two morning and two afternoon trips scheduled daily.
- During site inductions, workers would be informed that no parking is available on site and encouraged to use public transport or carpool.
- Public transport timetable information would be made available and displayed at prominent locations.
- Specific tool drop-off arrangements would be made by the appointed contractor.
- A Construction Worker Transportation Strategy will be prepared in order to minimise demand for parking in nearby public streets.

While workers will be encouraged to use public transport without reliance on off-site parking, the project team is also progressing discussions to secure off-site parking within a 5-minute walk of the site for approximately 50 construction worker vehicles. When finalised, this will provide additional flexibility during construction, particularly during peak workforce periods.

Given the proposed measures, it is anticipated that construction activities will generate minimal traffic impacts during peak periods. With no on-site parking provided and workers encouraged to utilise public transport the demand for on-street parking and vehicle trips is expected to be significantly reduced.

Please give me a call should you have any questions.

Regards,

Nathan Arfanis
Senior Project Coordinator

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
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"COMMUNITY" Artwork by Raechel Saunders

From: Yu, Terry <Terry.Yu@Willoughby.nsw.gov.au>
Sent: Tuesday, 1 July 2025 11:06 AM
To: ARFANIS, Nathan <narfanis@awedwards.com.au>; STALEY, Jack <jstaley@awedwards.com.au>; sabal.sharma@ttw.com.au
Cc: MCGLONE, William <wmcglone@awedwards.com.au>; MCALLISTER, Rauiri <rmcallister@awedwards.com.au>; TrafficEng <TrafficEng@Willoughby.nsw.gov.au>; BAKOULIS, Jonathan <jbakoulis@awedwards.com.au>; Woods, Clare <Clare.Woods@Willoughby.nsw.gov.au>; Sui, Daniel <Daniel.Sui@Willoughby.nsw.gov.au>; O'Brien, Craig <Craig.Obrien@Willoughby.nsw.gov.au>; Duong, Brian <Brian.Duong@Willoughby.nsw.gov.au>; Nguyen, Nathan <Nathan.Nguyen@Willoughby.nsw.gov.au>
Subject: RE: Acknowledgement - SSD-66777221 – Consultation on Condition B20 (Construction Traffic Management Plan)

Hi Nathan,

In principle, Council does not have objection to the submitted Construction Traffic Management Plan.

However, Council cannot proceed with formal approval at this stage. In Section 3.3 Construction Worker Parking, Council requests formal confirmation of the private land lease for off-street parking for construction staff, or confirmation of alternative arrangements ensuring that parking spaces on private land will be reserved for construction worker parking.

An updated Construction Traffic Management Plan will be required to include this confirmation of off-street parking, or to detail alternative arrangements if this off-street parking plan does not proceed.

Regards,
Terry

From: ARFANIS, Nathan <narfanis@awedwards.com.au>
Sent: Wednesday, 25 June 2025 4:26 PM
To: Yu, Terry <Terry.Yu@Willoughby.nsw.gov.au>; STALEY, Jack <jstaley@awedwards.com.au>; sabal.sharma@ttw.com.au
Cc: MCGLONE, William <wmcglone@awedwards.com.au>; MCALLISTER, Rauiri <rmcallister@awedwards.com.au>; TrafficEng <TrafficEng@Willoughby.nsw.gov.au>; BAKOULIS, Jonathan <jbakoulis@awedwards.com.au>; Woods, Clare <Clare.Woods@Willoughby.nsw.gov.au>; Sui, Daniel <Daniel.Sui@Willoughby.nsw.gov.au>; O'Brien, Craig <Craig.Obrien@Willoughby.nsw.gov.au>; Duong, Brian <Brian.Duong@Willoughby.nsw.gov.au>; Nguyen, Nathan <Nathan.Nguyen@Willoughby.nsw.gov.au>
Subject: RE: Acknowledgement - SSD-66777221 – Consultation on Condition B20 (Construction Traffic Management Plan)

Hi Terry,

The CTMP has been updated to include the Consultation as evidence we have satisfied Willoughby Councils comments.

Can you please confirm that this update is accepted, and ready to issue back to the Planning Secretary?

250625_ Lanceley Place Data Centre CTMP - Consultation Inclusion.pdf

Regards,

Nathan Arfanis
Senior Project Coordinator

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
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E: narfanis@awedwards.com.au
www.awedwards.com.au

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"COMMUNITY" Artwork by Raechel Saunders

From: Yu, Terry <Terry.Yu@Willoughby.nsw.gov.au>
Sent: Wednesday, 25 June 2025 10:46 AM
To: ARFANIS, Nathan <narfanis@awedwards.com.au>; STALEY, Jack <jstaley@awedwards.com.au>; sabal.sharma@ttw.com.au
Cc: MCGLONE, William <wmcglone@awedwards.com.au>; MCALLISTER, Rauiri <rmcallister@awedwards.com.au>; TrafficEng <TrafficEng@Willoughby.nsw.gov.au>; BAKOULIS, Jonathan <jbakoulis@awedwards.com.au>; Woods, Clare <Clare.Woods@Willoughby.nsw.gov.au>; Sui, Daniel <Daniel.Sui@Willoughby.nsw.gov.au>; O'Brien, Craig

<Craig.Obrien@Willoughby.nsw.gov.au>; Duong, Brian <Brian.Duong@Willoughby.nsw.gov.au>; Nguyen, Nathan <Nathan.Nguyen@Willoughby.nsw.gov.au>
Subject: RE: Acknowledgement - SSD-66777221 – Consultation on Condition B20 (Construction Traffic Management Plan)

Hi Nathan,

Thank you for providing your responses.

As discussed over the phone, a revised CTMP is required to be submitted to Council for adoption and approval.

Please find Council's responses below.

	Willoughby City Council Comments	Response	Willoughby City Council Comments 2

1	Section 3.3 – Construction Worker Parking The site is not proposing any on-site parking during the development. The CTMP must, for all stages of construction, provide on-site parking for staff and contractors to minimise parking impacts on the surrounding area. Ideally, all contractor and staff parking should be accommodated within the site boundaries. The CTMP must also include detailed parking arrangements, specifying the number of spaces to be provided. This is to include designated areas for employees, tradespersons, and construction vehicles to ensure efficient use of space and minimise disruption to local traffic. The CTMP is to assess potential parking spillover and outline appropriate control measures.	It is acknowledged that no on-site parking can be provided during construction due to the site being built to the boundary and constrained on all sides. In response to the Council's comments, the following measures will be implemented to manage construction worker travel and minimise impacts on the surrounding street network: ▪ Public Transport Use as a Primary Mode Given the site's proximity to St Leonards and Artarmon train stations, as well as high-frequency express bus services along the Pacific Highway, workers will be strongly encouraged to commute via public transport. ▪ To support workers commuting via train, shuttle bus services will be operated by the Contractor between St Leonards and Artarmon stations and the site, with two morning and two afternoon trips scheduled daily. ▪ A dedicated on-site tool and equipment	Due to the high demand for on-street parking in the Artarmon industrial area from local businesses, Council's objective is to minimise on-street parking associated with development projects. Council conditionally accepts your response on the basis that no construction-related vehicles will be parked on-street and that all parking associated with the development will be managed entirely within private property.

	Willoughby City Council Comments	Response	Willoughby City Council Comments 2
		storage area will be provided to reduce the need for workers to transport large or heavy items, thereby supporting greater use of public transport. ▪ Off-Site Parking (Supplementary Measure) While workers will be encouraged to use public transport without reliance on off-site parking, the project team is also progressing discussions to secure off-site parking within a 5-minute walk of the site for approximately 50 construction worker vehicles. When finalised, this will provide additional flexibility during construction, particularly during peak workforce periods.	

	Willoughby City Council Comments	Response	Willoughby City Council Comments 2
2	Section 5.5 – Haulage Routes Due to space constraints at the Reserve Road and Campbell Road intersection, vehicles exceeding 19 metres in length will only be permitted to access the site via Pacific Highway, which means that the proposed large vehicle access via Gore Hill Freeway and Reserve Road will not be permitted. Council acknowledges the existing "No Left Turn" restriction from the southbound approach of Pacific Highway into Campbell Street between 07:00 and 10:00. It is recommended that the developer liaise with Transport for NSW regarding this restriction, or consider alternative truck management measures, such as scheduling site entry prior to 07:00 (before the restriction commences), or accessing Campbell Road from the northbound approach, which is not subject to the restriction.	Noted. Construction vehicle movements are expected to primarily involve trucks up to 19-metre semi-trailers. In accordance with the Council's requirements, any vehicles exceeding 19 metres in length will access the site exclusively via the Pacific Highway in accordance with the restrictions.	Noted.
3	Section 5.10 – Complaint Resolution and Disciplinary Procedure This section needs to provide more details by clarifying whether there is a dedicated contact person for managing complaints, including those relating to the construction site. The procedure must outline how complaints will be received, recorded, assessed, and addressed, and whether there is a process for escalation or disciplinary action where necessary.	A Community Consultation & Complaints Handling Strategy has been prepared, referenced in Section 5.10, and included as Appendix E. This strategy details how A W Edwards will proactively manage communications with stakeholders, including the receipt and resolution of complaints, enquiries, and feedback related to the construction works.	Please provide Appendix E to Council, as the current CTMP submitted (attached) ends at Appendix C – CV.

	Willoughby City Council Comments	Response	Willoughby City Council Comments 2
4	If any part of the crane operates over the road or footpath, the CTMP must address measures to mitigate impacts and ensure pedestrian safety, such as the provision of B-class hoarding.	Currently, all crane lifting is proposed to be within the site boundary. If at any stage this changes during construction, all Council approvals will be obtained and the CTMP will be updated to suit.	Noted.
5	The CTMP must specify that Council land, including roadways, footpaths, kerb and gutter, and grass verges, is to be maintained in a serviceable condition throughout the construction period. Remedial treatments are to be undertaken at the direction of Council and at no cost to Council.	Section 4.5 has been updated to require maintenance of Council land (roads, footpaths, kerbs, gutters, verges) in a serviceable condition during construction. Any remedial works will be done at the Council's direction and at no cost to the Council.	Noted.

	Willoughby City Council Comments	Response	Willoughby City Council Comments 2
6	SKTR00003 – Swept Path Analysis Campbell Street Access It has been noted that the proposed site entry point and the associated swept path analysis are not based on an existing driveway. It is advised for the developer to liaise with Council's Development Engineering team regarding the approval of this new/temporary driveway as part of the construction. It has also been observed that a tree is located within the area of this proposed driveway. Coordination between Council's Development Engineering team and Environment team will be required should the removal of this tree be necessary as part of the driveway construction. https://maps.app.goo.gl/TjWy3zWpvn6WMnpe6	Noted. AW Edwards has previously consulted with the Council regarding the proposed temporary driveways (Evidence attached in Appendix F). Following these consultations, AW Edwards has submitted three (3) Roads Act Applications for Vehicular Crossings, which form part of the required Section 138 Roads Act Approval process. Coordination with both Council's Development Engineering and Environment teams will be undertaken should removal or relocation of the tree be required as part of the construction works.	Noted.
7	SKTR00004 – Swept Path Analysis Lanceley Place Access The northern driveway on Lanceley Place shown in the sketch does not appear to have sufficient width to accommodate the proposed vehicle swept path. Please provide a detailed swept path analysis demonstrating that the largest vehicle accessing the site via the northern driveway will not encroach onto the road kerbs. Alternatively, please propose a strategy for driveway widening to be incorporated into the construction and associated public domain works.	As noted above, AW Edwards has previously consulted with the Council regarding the proposed construction/ extension of temporary driveways. Following these consultations, AW Edwards has submitted three (3) Roads Act Applications for Vehicular Crossings, which form part of the required Section 138 Roads Act Approval process.	Noted.

	Willoughby City Council Comments	Response	Willoughby City Council Comments 2
8	00003 - Traffic Guidance Scheme Construction of Vehicle Access Council's Development Engineering team has advised that a separate Vehicle Crossing application will be required for any temporary driveways or changes to existing driveway required for the construction. https://www.willoughby.nsw.gov.au/MyWilloughby-home-page/MyWilloughby-online-services/Construct-repair-or-demolish-the-vehicle-crossing-for-your-property	Noted. Response as per above.	Noted.

Regards,
Terry

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Sabal Sharma

From: Royce Cox <rcox@ausgrid.com.au>
Sent: Thursday, 19 June 2025 7:24 AM
To: ARFANIS, Nathan; Sabal Sharma
Cc: Development; Michael Babbage; Brendon Jobson
Subject: RE: SSD-66777221 – Consultation on Condition B20 (Construction Traffic Management Plan)

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Hello Nathan

I am satisfied with consultation, please consider this a final response.

Thanks

Royce Cox
Field Supervisor | Field Services - *the Service Provider of Choice*

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rcox@ausgrid.com.au

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From: ARFANIS, Nathan <narfanis@awedwards.com.au>
Sent: Thursday, 19 June 2025 7:16 AM
To: Royce Cox <rcox@ausgrid.com.au>; Sabal Sharma <sabal.sharma@ttw.com.au>
Cc: Tim Dorrian <TDorrian@ausgrid.com.au>; George Zervellis <GZervellis@ausgrid.com.au>; Angelo Pandzic <APandzic@ausgrid.com.au>; Development <Development@Ausgrid.com.au>; Brendon Jobson <bjobson@ausgrid.com.au>; Justin Falke <justin.falke@ausgrid.com.au>; Reuben Stroud <rstroud@ausgrid.com.au>; Andy Frith <AFrith@ausgrid.com.au>; Jack Johnson <Jack.Johnson@Ausgrid.com.au>; Reuben Stroud <rstroud@ausgrid.com.au>; Michael Babbage <Michael.Babbage@ttw.com.au>
Subject: RE: SSD-66777221 – Consultation on Condition B20 (Construction Traffic Management Plan)

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Hi Royce,

The existing signage adequately confirms the 'No Stopping' restrictions in the area. To ensure compliance, we will be conducting periodic spot checks to confirm that construction-related vehicles are not parking within this zone.

In accordance with the Construction Traffic Management Plan (CTMP) and in consultation with Willoughby City Council, we will also be implementing a designated work zone of approximately 80 lineal metres for the staging of our trucks.

To formally document this approach, we have updated both the CTMP (Driver's Code of Conduct) to explicitly state that construction vehicles are not permitted to lay over between the Campbell Street/Clarendon Street roundabout and Broadcast Way. This area is not a designated work zone.

Please let us know if this response sufficiently addresses your concerns.

Regards,

Nathan Arfanis
Senior Project Coordinator

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
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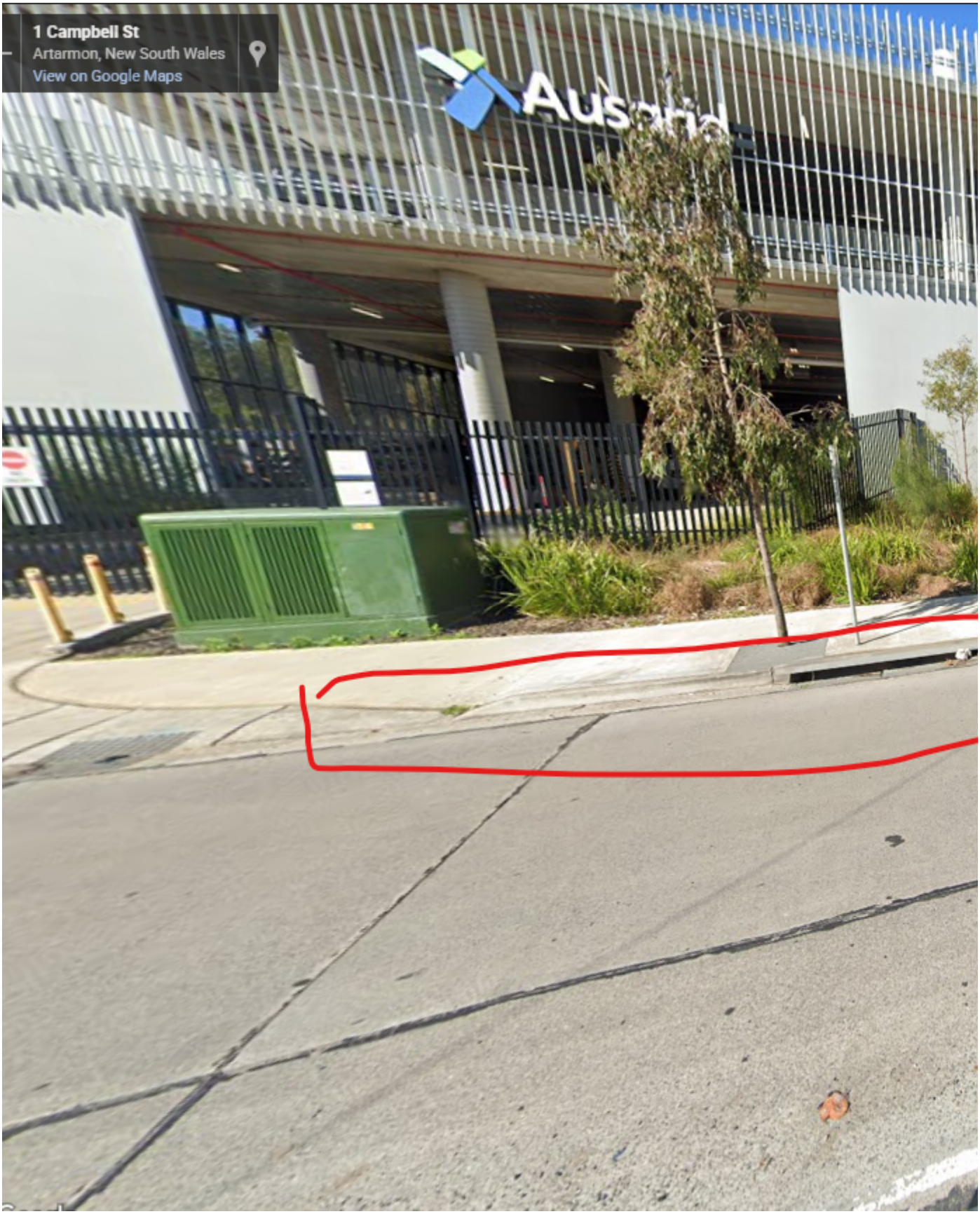
"COMMUNITY" Artwork by Raechel Saunders

From: Royce Cox <rcox@ausgrid.com.au>
Sent: Wednesday, 18 June 2025 1:03 PM
To: ARFANIS, Nathan <narfanis@awedwards.com.au>; Sabal Sharma <sabal.sharma@ttw.com.au>
Cc: Tim Dorrian <TDorrian@ausgrid.com.au>; George Zervellis <GZervellis@ausgrid.com.au>; Angelo Pandzic <APandzic@ausgrid.com.au>; Development <Development@Ausgrid.com.au>; Brendon Jobson <bjobson@ausgrid.com.au>; Justin Falke <justin.falke@ausgrid.com.au>; Reuben Stroud <rstroud@ausgrid.com.au>; Andy Frith <AFrith@ausgrid.com.au>; Jack Johnson <Jack.Johnson@Ausgrid.com.au>; Reuben Stroud <rstroud@ausgrid.com.au>; Michael Babbage <Michael.Babbage@ttw.com.au>
Subject: RE: SSD-66777221 – Consultation on Condition B20 (Construction Traffic Management Plan)

Hello Nathan

Please provide evidence to assure me no trucks will park in area indicated in picture. We have been advised this would not happen in other nearby projects, but the request was ignored as some driver feel they have no choice. No Stopping signs may have been moved by past projects and not replaced, please investigate if signage is adequate.

Thanks



Royce Cox
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From: ARFANIS, Nathan <narfanis@awedwards.com.au>
Sent: Wednesday, 18 June 2025 11:52 AM
To: Sabal Sharma <sabal.sharma@ttw.com.au>; Royce Cox <rcox@ausgrid.com.au>
Cc: Tim Dorrian <TDorrian@ausgrid.com.au>; George Zervellis <GZervellis@ausgrid.com.au>; Angelo Pandzic <APandzic@ausgrid.com.au>; Development <Development@Ausgrid.com.au>; Brendon Jobson <bjobson@ausgrid.com.au>; Justin Falke <justin.falke@ausgrid.com.au>; Reuben Stroud <rstroud@ausgrid.com.au>; Andy Frith <AFrith@ausgrid.com.au>; Jack Johnson <Jack.Johnson@Ausgrid.com.au>; Reuben Stroud <rstroud@ausgrid.com.au>; Michael Babbage <Michael.Babbage@ttw.com.au>
Subject: RE: SSD-66777221 – Consultation on Condition B20 (Construction Traffic Management Plan)

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Hi Royce,

Hope you have been well.

We have received the below response from the Planning Secretary regarding the CTMP –

B20(c)	Be prepared in consultation with Ausgrid.	*Evidence of consultation with Ausgrid has been provided but no final response from Ausgrid is included. As above, please provide Ausgrid's final response.*

To close out this loop, can you please provide a formal response to Sabals email dated, Friday, 9 May 2025 9:31 AM.

Thankyou.

Regards,

Nathan Arfanis
Senior Project Coordinator

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From: Sabal Sharma <sabal.sharma@ttw.com.au>
Sent: Friday, 9 May 2025 9:31 AM
To: Royce Cox <rcox@ausgrid.com.au>
Cc: Tim Dorrian <TDorrian@ausgrid.com.au>; George Zervellis <GZervellis@ausgrid.com.au>; Angelo Pandzic <APandzic@ausgrid.com.au>; Development <Development@Ausgrid.com.au>; Brendon Jobson <bjobson@ausgrid.com.au>; Justin Falke <justin.falke@ausgrid.com.au>; Reuben Stroud <rstroud@ausgrid.com.au>; Andy Frith <AFrith@ausgrid.com.au>; Jack Johnson <Jack.Johnson@Ausgrid.com.au>; Reuben Stroud <rstroud@ausgrid.com.au>; Michael Babbage <Michael.Babbage@ttw.com.au>; ARFANIS, Nathan <narfanis@awedwards.com.au>
Subject: RE: SSD-66777221 – Consultation on Condition B20 (Construction Traffic Management Plan)

Hi Royce,

Thank you for your response.

You are correct — the primary construction-related impacts include increased heavy vehicle movements and the temporary loss of on-street parking adjacent to the site, as outlined in Section 3.7 of the report. Approximately 14 parking spaces are proposed to be removed to accommodate the work zone; however, these spaces will generally remain available for public use outside of approved construction hours.

Traffic generated during construction peak periods is not expected to exceed the site's approved operational peak hour traffic volumes. Accordingly, construction traffic is anticipated to remain within acceptable limits and is not expected to significantly impact the surrounding road network.

Access to surrounding properties will be maintained throughout the construction period and is not expected to be affected.

Regarding your concern about heavy vehicles laying up between the roundabout and Broadcast Way — this area is not proposed as a layover or work zone. We will ensure the updated CTMP explicitly mentions this to avoid any interference with your basement access. In addition, we will include a note in the CTMP (and the driver code of conduct) reminding drivers that stopping or parking across driveways is not permitted under road rules and can cause unnecessary issues to neighbouring properties.

Please feel free to reach out if you have any further questions or require additional information.

Kind regards,

Sabal

Sabal Sharma | Traffic Engineer
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Read our latest news here

From: Royce Cox <rcox@ausgrid.com.au>
Sent: Wednesday, 7 May 2025 11:22 AM
To: Sabal Sharma <sabal.sharma@ttw.com.au>
Cc: Tim Dorrian <TDorrian@ausgrid.com.au>; George Zervellis <GZervellis@ausgrid.com.au>; Angelo Pandzic <APandzic@ausgrid.com.au>; Development <Development@Ausgrid.com.au>; Brendon Jobson <bjobson@ausgrid.com.au>; Justin Falke <justin.falke@ausgrid.com.au>; Reuben Stroud <rstroud@ausgrid.com.au>; Andy Frith <AFrith@ausgrid.com.au>; Jack Johnson <Jack.Johnson@Ausgrid.com.au>; Reuben Stroud <rstroud@ausgrid.com.au>
Subject: RE: SSD-66777221 – Consultation on Condition B20 (Construction Traffic Management Plan)

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Hello Sabal

As far as I can see the impacts are:

- Increased heavy vehicles
- Loss of street parking

Please advise if I am missing something?

If not, I see no issue.

Is there any way you can ensure no heavy vehicles lay up between roundabout and Broadcast Way as this impacts our basement access.

Thanks

Royce Cox
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From: Sabal Sharma <sabal.sharma@ttw.com.au>
Sent: Tuesday, 6 May 2025 10:19 AM
To: Development <Development@Ausgrid.com.au>; Royce Cox <rcox@ausgrid.com.au>
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>; MCALLISTER, Rauiri <rmcallister@awedwards.com.au>; GALBRAITH, Michael <mgalbraith@awedwards.com.au>; Michael Babbage <Michael.Babbage@ttw.com.au>; Ivan Ip <ivan.ip@ttw.com.au>; George Awadalla <george.awadalla@ttw.com.au>; Sabal Sharma <sabal.sharma@ttw.com.au>
Subject: SSD-66777221 – Consultation on Condition B20 (Construction Traffic Management Plan)

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Hi Ausgrid Team,

I hope this email finds you well.

As required under the SSD Approval (SSD-66777221) issued by the Department of Planning, Housing and Infrastructure (DPHI), we are seeking Ausgrid's consultation in relation to Condition B20 of the approval. The project relates to the development of a data centre at 2–8 Lanceley Place and 14 Campbell Street, Artarmon.

The relevant condition requiring Ausgrid's input is:

- Condition B20 – Construction Traffic Management Plan

To assist with this consultation, please find attached the following documents for your review and feedback:

- Construction Traffic Management Plan (prepared by TTW), dated 17 April 2025
- A copy of the SSDA approval and associated conditions

Could you please confirm receipt of this email and advise who the appropriate contact person is at Ausgrid for this matter? We would also appreciate an indication of Ausgrid's expected timeframe for providing a consolidated response.

We are happy to provide any additional information or arrange a meeting to support this process. Let us know your availability or if any further steps are required.

Thank you for your assistance. We look forward to hearing from you.

Sabal

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TTW Engineers | Sydney
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Appendix E Community Consultation & Complaints Handling Strategy

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AW EDWARDS



Lanceley Place Data Centre

Community Consultation & Complaints Handling Strategy

SYD001-AWE-CCCHS-001

Prepared By:

A W EDWARDS PTY LIMITED

Author:	Nathan Arfanis
Revision:	03
Status:	Draft

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Port Macquarie NSW 2444
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Project No.	693
Project Name	Lanceley Place Data Centre
Project Manager	Michael Galbraith
Project Location	2-8 Lanceley Place, Artarmon
Phone No.	02 8036 7200
Client	Goodman Group
DA No.	SSD-66777221
Scope of Works	The proposed development will have a maximum building height of 51.479m, with a floor space ratio of 1.91:1. The project also proposes 36 car parking spaces. The data centre will operate on a 24-hour basis with a total power supply of Eighty (80) MVA. There are 5 levels of technical data hall floor space with a single 10.4 MW data hall.
Timing of the Works	July 25 – 2027

Revision Register:

REVISION	DATE	STATUS	AUTHOR	APPROVED / REVIEWED BY
01	6-Mar-25	Draft	Nathan Arfanis	
02	4-Apr-25	Draft	Nathan Arfanis	
03	1-May-25	Draft	Nathan Arfanis	
	Date	Status		
	Date	Status		
	Date	Status		

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3 INTRODUCTION

3.1 Document Purpose

This Community Consultation and Complaints Handling Strategy (CC&CHS) has been developed to detail how AWE will manage stakeholder, community and business liaison during the construction of Lanceley Place Data Centre. It is guided by the Conditions of Consent and the Urbis Engagement Report.

3.2 Objectives

Objectives of this CC&CHS are to:

- Comply with Project planning approvals
- Identify and implement appropriate communication tools and activities for a range of stakeholders
- Support Goodman Group in the delivery of a coordinated and consistent approach to communications and stakeholder engagement
- Identify and appropriately address stakeholder, business and community issues
- Ensure stakeholders, businesses and the community are well informed and understand the activities to be undertaken by AWE, the project objectives, benefits, potential impacts and expected outcomes
- Mitigate, where possible, project impacts on stakeholders and the community including sensitive receivers and vulnerable persons
- Enhance and protect the reputation of the project, Goodman Group and AWE

3.3 Compliance

This CC&CHS has been prepared to address the relevant community and stakeholder requirements set out in the Conditions of Consent & Urbis Engagement Report. This CC&CHS will be submitted for approval at least one month before commencement of any work and will be implemented throughout the duration of construction.

Construction works will not commence until this CC&CHS has been approved.

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3.4 Review Mechanisms and Accountability

AWE's Senior Project Manager is accountable for this CC&CHS, including the authorisation and monitoring of the document, and delegation of responsibilities to implement this CC&CHS.

This CC&CHS will be reviewed every 12 months and updated as necessary to reflect:

1. Changes in design and construction program
2. Community interests and issues
3. Lessons learnt

Updates to this CC&CHS will be submitted to Goodman Group for review and approval.

3.5 Interface with Other Plans

This CC&CHS sits within the Construction Environmental Management Plan and has been prepared in line with the Projects Conditions of Consent to ensure a coordinated approach to stakeholder, business and community liaison throughout the entire program of work.

This strategy interfaces with other AWE management plans and statements including the Construction Environment Management Plan (CEMP), Construction Noise and Vibration Management Plan (CNVMP), Construction Waste Management Plan (CWMP), Unexpected Finds Protocol (UFP) and Construction Traffic Management Plan (CTMP).

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4 PROJECT DESCRIPTION

4.1 Project Overview

The construction, fit out and commissioning of an 7-story Data Centre, with a maximum building height of 51.479m and total gross floor area of 26, 769m2 comprising of:

- 5 levels of technical data hall floor space
- Ancillary office space
- A lobby, offices and amenities located on the ground floor
- Two 12.5m long vehicle loading dock spaces
- At grade parking, including accessible parking spaces

4.2 Key Construction Phases & Activities

The Data Centre construction is expected to be commenced during the month of July 2025 with a completion time of 2027.

Table 1 below outlines the key work phases and activities.

Table 1 - Key Work Phases and Activities

SHELL & CORE + PHASE 1	CONSTRUCTION ACTIVITIES
Site Establishment	Hoarding, tower crane and other plant erection. Establishment of temporary facilities including amenities.
Civil & Substructure Works	Excavation of tanks, pits and footings. Utility adjustments. Installation of footings, services and foundations. Construction of base slab.
Construction of above ground structure and fit out	Construction of above ground structure including: -Installation of precast walls and columns -Construction of concrete decks -Installation of roof plant -Installation of services, equipment, fixtures and finishes Fit out of Level 1 Data Hall.
Precinct/public domain works	Utility service adjustments. Road pavement and footpath upgrades. Civil and landscaping work.

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SHELL & CORE + PHASE 1	CONSTRUCTION ACTIVITIES
Commissioning	Commissioning of all services associated with Phase 1.

PHASE 2	CONSTRUCTION ACTIVITIES
Phase 2 Fit out	Hoarding, tower crane and other plant erection. Establishment of temporary ancillary facilities. Fit out of Level 2 Data Hall and Installation of roof plant Commissioning of all services associated with Phase 2.

PHASE 3	CONSTRUCTION ACTIVITIES
Phase 3 Fit out	Hoarding, tower crane and other plant erection. Establishment of temporary ancillary facilities. Fit out of Level 3 Data Hall and Installation of roof plant. Commissioning of all services associated with Phase 3.

PHASE 4	CONSTRUCTION ACTIVITIES
Phase 4 Fit out	Hoarding, tower crane and other plant erection. Establishment of temporary ancillary facilities. Fit out of Level 4 Data Hall and Installation of roof plant. Commissioning of all services associated with Phase 4.

PHASE 5	CONSTRUCTION ACTIVITIES
Phase 5 Fit out	Hoarding, tower crane and other plant erection. Establishment of temporary ancillary facilities. Fit out of Level 5 Data Hall and Installation of roof plant. Commissioning of all services associated with Phase 5.

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5 PROJECT DELIVERY TEAM

The AWE Project Delivery Team will ensure effective management of all stakeholder issues, communication and engagement activities. This will support Goodman Groups objective to build confidence in its project, and commitment to provide proactive and positive interactions with all stakeholders throughout its delivery.

5.1 Roles and Responsibilities

The key community and stakeholder roles and responsibilities for the project team are described in Tables 2 and 3.

Table 2 - Key Community and Stakeholder Roles and Responsibilities

ROLE	COMMUNITY AND STAKEHOLDER RESPONSIBILITIES
Senior Project Manager	▪ Develop, proactively manage and implement stakeholder and community engagement requirements of Goodman Group including interfacing with other relevant contractors and stakeholders and the implementation of this CC&CHS. ▪ Ensure compliance with the planning approval. ▪ Review and approve all public communication material. ▪ Oversee the development, management, coordination and delivery of all communication and engagement activities. ▪ Work with the project team to support the delivery of key project milestones and targets. ▪ Maintain collaborative and consultative strategic partnerships with the Goodman Group delivery team to ensure integrated engagement and communication.
Community Place Coordinator (Trade Coordinator)	▪ Be the key contact for residents and businesses. ▪ Be available to meet with community members on request. ▪ Be the key contact for key stakeholders and point of escalation for complaints. ▪ Prepare public communication material. ▪ Proactively notify stakeholders, businesses and the community of current and upcoming construction activities. ▪ Manage complaints, enquiries and feedback in accordance with requirements, ensuring all records are filed within required timeframes, and issues are escalated as required. ▪ Identify, pre-empt, manage and report community and stakeholder issues to minimise impacts on the community.

Table 2

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5.2 Other Roles with Stakeholder Responsibilities

The strategy is supported by the Managers, and their respective teams.

Table 3 - Key Community and Stakeholder Roles and Responsibilities

ROLE	COMMUNITY AND STAKEHOLDER RESPONSIBILITIES
Construction Manager, Site Manager, Senior Project Engineers and Team	▪ Ensure communication requirements and timeframes are understood by the construction team and embedded into program. ▪ Participate in key stakeholder meetings, events, site visits and forums as required. ▪ Minimise impacts of construction on the community as much as possible. ▪ Promote commitment to community and stakeholder policies, protocols and procedures. ▪ Ensure safe access around the site and work areas.
Work, Health and Safety Manager and Team	▪ Participate in key stakeholder meetings, events, site visits and forums as required. ▪ Ensure safe access around the site and work areas. ▪ Ensure community communication requirements are explained at site inductions. Participate in key stakeholder meetings, events, site visits and forums as required. ▪ Investigate complaints relating to environmental aspects (noise, dust, vibration etc.). ▪ Provide guidance to satisfy various environmental obligations e.g. mitigation measures required for out of hours works etc.

5.2.2.1 Project Team Inductions and Training

All AWE staff (including contractors and subcontractors) will be made aware of stakeholder and community relations requirements through mandatory project inductions, toolbox talks, pre-start meetings and other internal meetings and training events. This will include at a minimum:

- Key stakeholder and community issues and mitigation measures
- Specific communications and engagement requirements and responsibilities
- Community contact protocols and procedures

Site induction and training material will be updated regularly to address any actions taken in response to stakeholder and community issues or changes to this strategy.

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6 OUR COMMUNICATION AND ENGAGEMENT APPROACH

Consistent with the Goodman Group approach to successful project delivery through effective communication, AWE has developed a targeted approach to communicating and engaging with stakeholders, businesses and community members impacted by the Project. This approach is informed by:

- Identification of key stakeholders
- Analysis of stakeholder interests and issues
- Determining communication tools to inform and engage with identified stakeholders
- Identifying and implementing mitigation measures for key issues.

AWE's communication and engagement approach aims to ensure that stakeholders and the community are kept well informed of construction activities and expected impacts to avoid any surprises. Key to this will be proactive engagement and ongoing consultation with residents, businesses and other interested stakeholders.

AWE has developed this strategy and implementation plan to ensure adequate, accessible information is released ahead of key construction activities and milestones and that known and emerging issues are identified and addressed.

6.1 Our guiding principles

AWE understands the significance of effective communication and engagement in successful project delivery and is committed to driving this through:

- Establishing genuine, trusting relationships with stakeholders and the community
- Ensuring stakeholders and the community are well informed, and fully understand the activities to be undertaken by AWE, their potential impacts and benefits
- Communicating early, openly and inclusively.
- Providing adequate and coordinated stakeholder and community consultation that identifies and addresses issues in a timely manner
- Supporting and working cooperatively with Goodman Group to provide a coordinated and consistent approach to stakeholder and community engagement.

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7 COMMUNITY PROFILE, STAKEHOLDER IDENTIFICATION AND ANALYSIS

The site is located in Cammeraygal Land and is in the Artarmon industrial area within the Willougby Council Government area. It is bounded by Campbell Street to the North and Lanceley Place to the East and has immediate frontages with a concrete batching plant to the South-east, and several buildings including NextDC Data Centre to the West.

7.1 Stakeholder Analysis

A broad range of stakeholders with interest in the Project have been identified. The industrial precinct comprises relatively new commercial and industrial developments and has been subject to several separate DAs which has increased the densities in the area. Other notable nearby land users include the Home HQ shopping centre, the Artarmon Bunnings Warehouse, Artarmon Business Centre, the Royal North Shore Hospital and the North Shore Private Hospital.

The closest residential uses include residential flat buildings on the Western side of Pacific Highway (approximately 300m West from the Site).

AWE recognises that diverse engagement and communication is needed to ensure all stakeholders are informed about the project's current and upcoming construction activities.

Stakeholders and the community will be informed of significant events or changes that affect or may affect individual properties, residences and businesses. These include:

- key milestones
- changes to traffic conditions and access arrangements for road users and the affected public
- construction operations which will have an impact on stakeholders and the community including noisy works, interruptions to utility services or construction work outside of standard work hours.

Table 4 identifies key stakeholders, their interests and/or potential issues and communication tools to engage and consult with them. Table 5 summarises key stakeholder issues and mitigation measures.

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Table 4 - Key Stakeholder Interests, Issues and Communication

KEY STAKEHOLDERS	DETAIL	ISSUES/INTEREST	COMMUNICATION	TIMING
GOVERNMENT				
Emergency Services.	NSW Ambulance. Fire and Rescue NSW Police Area Command. State Emergency Services.	Access for emergency vehicles. Traffic changes impacting vehicle routes. Traffic congestion. Impact to emergency response times.	Project briefings. Updates and notifications. Council liaison.	Prior to commencing work. Ongoing, as required.
SERVICE PROVIDERS				
Utility service providers.	Sydney water. Ausgrid. Jemena. Telstra. NBN. Optus.	Impact on assets. Impact to customers.	Meetings and briefings. Service authority/provider notification of planned work. Correspondence with Service Manager.	Prior to commencing work. Ongoing, as required.
COMMUNITY				
Local Residents (owners and tenants)	Pacific Highway. Herbert Street. Hotham Road. Gore Hill Freeway. Campbell Street. Lanceley Place.	Keeping informed. Noise, vibration and dust. Traffic, parking and access impacts. Service interruptions (utility outages, Garbage collection etc.). Public domain works including noise, vibration and dust impacts, access and	Newsletters, notifications and progress updates. Wayfinding/ directional signage.	As required.

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KEY STAKEHOLDERS	DETAIL	ISSUES/INTEREST	COMMUNICATION	TIMING
		temporary pedestrian detours, temporary loss of parking, disruptions to services. Health and safety concerns.		
Local businesses within work impact zone.	Artarmon Progress Association. Royal North Shore Hospital. Papilio Early Learning Artarmon. Explore and Develop Artarmon. Bradfield Senior. Europcar. Artarmon Mazda. NextDC. Ausgrid. Artarmon Business Centre. Storage King. Hanson Yard. Resource Recovery Centre. National Storage.	Keeping businesses informed. Property impacts. Complaints from tenants. Cumulative impacts from multiple developments in the area. Construction fatigue. Construction noise, vibration and dust. Public domain works including noise, vibration and dust impacts, access and temporary pedestrian detours, temporary loss of parking, disruptions to services. Traffic changes. Parking impacts (impact to local street parking and public carparks). Access for deliveries, customers and waste services. Service interruptions. Visual impact – businesses overlooking/ adjacent to the site.	Individual/ group meetings and community forums. Newsletters, notifications and progress updates. Wayfinding/ directional signage.	Prior to commencing work. Ongoing, as required.

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7.2 Stakeholder Liaison

A range of communication tools and activities will be used to implement a robust and coordinated approach to stakeholder liaison. AWE will record all stakeholder interactions and respond to stakeholder enquiries and complaints. This will form and maintain collaborative relationships and strategic partnerships with all stakeholders identified in this plan, whilst managing day to day interactions as required. Refer to Table 5 for communication techniques during disruptive works.

8 KEY ISSUES AND MITIGATION MEASURES

AWE will proactively consult potentially affected stakeholders to determine the effectiveness of measures put in place to respond to issues and minimise construction impacts.

Key stakeholder issues for construction of the Lanceley Place Data Centre were initially identified in Urbis Engagement Report. These have been incorporated into our key issues. Corresponding measures the project team will implement in response to these issues is provided in Table 5 below.

The management of issues and implementation of mitigation measures is supported by a number of AWE Management Plans including the CEMP, CNVP and the CTMP. Project personnel will be informed about key issues, mitigation measures and responsibilities through site inductions and training.

Table 5 - Key Issues and Communication & Mitigation Measures

ISSUE	DETAIL	COMMUNICATION AND MITIGATION MEASURES
Keeping stakeholders and the community informed.	▪ Lack of information about construction activities can lead to uncertainty and inability to plan and manage daily life and business operations around construction activities.	▪ Early consultation and communication about construction activities (including timing, duration, likely impacts and mitigation measures). ▪ Issue regular notifications and updates prior to work starting and at other critical times as required. ▪ Undertake doorknocks as required. ▪ Use of other communication tools as appropriate.
Keeping residential and business	▪ Coordination of information to relevant parties as needed.	▪ Identify relevant strata/building managers, property managers, owners and tenants.

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property owners, tenants and / owners corporation/ strata managers informed.		▪ Strata/building managers and owners notified of work before it starts as required.
Construction noise and vibration (including Out of Hours Work - OOHW).	▪ Effects of noise on quiet enjoyment and sleep. ▪ Effects of noise and vibration on sensitive receivers (day care, medical practices and education).	▪ Early and ongoing engagement and consultation with impacted stakeholders on likely noise and vibration impacts, with focus on noise and vibration sensitive receivers. ▪ Notification and updates to inform of planned work, working hours and what to expect. ▪ Use of mitigation measures in the CNVMP. ▪ Noise reduction strategies to be implemented with consideration to business hours of operation and sensitive periods as required. ▪ Use of appropriate plant, tools, construction techniques and programming as required. ▪ High impact noise works staged with respite periods as required by planning approvals. ▪ Staff inductions, toolbox talks and pre-start meetings to inform of mitigation measures including inappropriate behaviour. ▪ Noise and vibration monitoring. ▪ Offer of property condition survey where eligible.
Dust.	▪ Dust generated from construction activities.	▪ Dust minimised by using water carts, water sprayers, street sweepers and other measures as needed.
Access and parking.	▪ Maintaining access to residential and business driveways.	▪ Issue notifications detailing changes to access/ road, cycle and footpath detours and removal of on-street parking. ▪ Coordination of work with business deliveries and priorities wherever possible.

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	▪ Impacts to local street parking. ▪ Works affecting road, footpath or cycleway access. ▪ Significant detours and diversions.	▪ Installation of wayfinding signage to direct pedestrians, delivery drivers, cyclists and customers where appropriate. ▪ Traffic controllers/ wayfinding personnel redirecting pedestrians and cyclists as required. ▪ Encourage site workers to utilise public transport and ride sharing wherever possible. ▪ Construction vehicle drivers directed as to access requirements.
Impact to business operations.	▪ Businesses adjacent to and surrounding the site may be exposed to construction noise, dust and potential vibration. ▪ Access for deliveries and customers and other impacts such as removal of on-street parking. ▪ Public domain works have potential to cause additional impacts to business	▪ Specific and ongoing consultation carried out with impacted businesses to identify and develop measures to manage specific construction impacts. ▪ Compliance with respite periods. ▪ Inspections of footpaths and pedestrian detour signage. ▪ Encourage workers to shop and buy food and beverages from local businesses. ▪ Ensure shop fronts are kept clean and tidy when working directly adjacent.
Traffic changes, congestion and delays.	▪ Driver confusion. ▪ Increased travel time/ delays for residents, businesses, commuters, and emergency services.	▪ Implement Traffic Management Plan and Traffic Control Plans including minimising traffic movements in peak periods, where possible. ▪ Coordinate traffic management with Willoughby Council and the Transport Management Centre. ▪ Out of hours deliveries to minimise impacts of oversized vehicles on local roads. ▪ Issue regular notifications and updates in advance of changes.

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		▪ Installation of appropriate signage. ▪ Advertisement for major traffic changes as required.
Property impacts.	▪ Potential residential and business property damage due to the works.	▪ Property Condition Surveys offered where eligible. ▪ Vibration monitoring.
Service interruptions.	▪ Disruption to property services (power, water, gas, telecommunications, garbage collection).	▪ Issue notifications to inform of outages required for work. Service provider to inform impacted properties. ▪ Detailed briefings for businesses potentially affected. ▪ Seek opportunities to time works to minimise potential impacts in consultation with relevant service providers.
Visual amenity and visibility.	▪ Adjacent resident and business visibility into the site. ▪ Adjacent resident and business visual impacts from scaffolding. ▪ Potential exposure to light glare/ spill from night-time activities. ▪ Plant and equipment visible over hoardings. ▪ Graffiti/ vandalism of hoarding and fencing.	▪ Hoarding designed and replaced in line with Goodman Group Brand Style Guidelines. ▪ Hoardings and buildings regularly inspected and kept clean. ▪ Prompt graffiti removal from hoarding and buildings. ▪ Plant and surroundings kept well maintained and clean. ▪ Lighting would be oriented to minimise light spill to adjacent properties where practicable.

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Health and Safety – general.	▪ Safety of road users, cyclists and pedestrians, particularly near site entrance/exit points. ▪ Worker behaviour e.g. reckless driving, having regard for nearby residents and businesses. ▪ Noise, light spill, dust and vibration from construction activities may impact on health and wellbeing of occupants of buildings nearest to the site.	▪ Consultation and communication with impacted stakeholders about timing and duration of construction activities likely to generate noise, dust, vibration etc., mitigation measures the project will implement, road safety requirements. ▪ Inductions for all workers and subcontractors. ▪ Implementation of Traffic Management Plans. ▪ Vehicle "spotters" to be used when reversing as required. ▪ Signage placed around the site to alert pedestrians and cyclists as to truck movements.

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9 FURTHER MANAGEMENT RESPONSIBILITIES

9.1 Management of Enquiries, Complaints and Feedback

Community and stakeholder complaints, enquires and feedback must be effectively managed and recorded. They provide a mechanism for tracking issues and interests and for evaluating the effectiveness of mitigation measures and communication tools used.

To ensure effective management of complaints and enquires related to Lanceley Place Data Centre works, AWE will record, manage, and respond to all complaints, enquiries, and feedback accurately and in accordance with Project requirements.

9.2 Enquiries

An enquiry is an act of a community member or stakeholder asking for information relating to the project. AWE will respond to all any relevant enquiries associated with the Project, otherwise, if necessary, will direct the enquiry to Goodman Group for their action.

9.3 Complaints

A complaint is an interaction with a community member or stakeholder who expresses dissatisfaction with the project, its policies, AWE services, staff members, activities or proposed activities. AWE will respond to all Lanceley Place Data Centre complaints received via phone, face to face, email or letter.

A dedicated call line and email address have been established for the lodgement of complaints and should be the first point of contact for all community or stakeholder concerns. https://au.goodman.com/property-lease-site/2-8-lanceley-place.

Email – community@contactlanceleyplace.com
Contact Number – 1800 718 531.

Table 6 - Complaint Types & Subsequent Response Times

COMPLAINT TYPE	RESPONSE TIME
Telephone or face to face	▪ Answer all complaints received in person during construction hours. ▪ Initiation of investigation upon receipt. ▪ Verbal update within 24 hours unless complainant agrees otherwise.
Written - email	▪ Initiate investigation upon receipt of complaint.

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	▪ Verbal response within 24 hours (if telephone contact details are recorded). ▪ Written response within 48 hours of receipt.
Written - letter	▪ Initiate investigation upon receipt of complaint. ▪ Verbal response within 24 hours (if telephone contact details are recorded). ▪ Written response within 48 hours of receipt.
Social media	▪ Initiate investigation upon receipt of complaint. ▪ Response provided to Goodman Group within 24 hours of receiving the complaint.

10 COMPLAINT HANDLING PROCESS

The Project delivery team will ensure a customer focused approach to complaints handling by being open to feedback and suggestions and showing commitment to resolving complaints by taking all reasonable action. To this end, actions will be implemented to prevent complaint recurrence. The Community Coordinator will be principally responsible for the management of complaints about Lanceley Place Data Centre construction activities and will be available to receive and respond to all complaints during the noted timeframes.

Should a complainant be unsatisfied with the Community Coordinators response to their complaint, the complainant will be escalated to the Senior Project Manager. If the complainant remains unsatisfied, they will then be escalated to Goodman Group

Complaint handling responsibilities are summarised in the table below.

Table 7 - Complaint Type and Responsibility

COMPLAINT TYPE	RESPONSIBILITY
Complaints about construction activities during business hours	Community Coordinator
Complaints about construction activities after hours	Community Coordinator
Complaints unrelated to Lanceley Place Data Centre	AW Edwards refer to relevant organisation.
Complaints that are not resolved by the AWE Team	Escalated to Goodman Group

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10.1 Feedback

Feedback is defined as information or statements of opinion obtained from stakeholders about the project, its policies, AWE services, staff members, activities or proposed activities. Feedback may be received via phone, face to face, in writing or via social media.

Feedback will be recorded and passed onto the construction team and Goodman Group to inform continuous improvement.

10.2 Recording Enquiries, Complaints and Feedback

All enquiries and feedback will be recorded in AW Edwards internal database, through An enquiries and feedback register. Detail will include how each was managed and closed out. Records will be input into the database within 48 hours for enquiries and feedback.

A Complaints Register will also be maintained by AWE to record information on all complaints received during construction. Records will be input into the database within 24 hours for complaints.

The Complaints Register at a minimum will record:

- Number of complaints received
- Number of people affected in relation to the complaint
- Nature of the complaint and means by which the complaint was addressed (whether resolved using mediation or without)
- Determination as to whether the complaint was avoidable or unavoidable.

The Complaints Register will be provided to Goodman Group monthly and on request. This information will also be made available via the website.

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11 COMMUNITY COMMUNICATION IMPLEMENTATION PLAN

Table 8 - Community Communication Implementation Plan

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PROJECT PHASE/ KEY ACTIVITIES	TOOLS/ACTION	STAKEHOLDERS
Site establishment	▪ Doorknocks as required. ▪ Information board installed on hoarding. ▪ Consultation with sensitive receivers.	▪ Local businesses within work impact zone. ▪ Adjacent residents, businesses and sensitive receivers. ▪ Pedestrians, cyclists, motorists and commuters. ▪ Local council and traffic authorities. ▪ Neighbouring construction projects.
Construction of above ground structure	▪ Doorknocks as required. ▪ Signage for pedestrians, cyclists and motorists. ▪ Key stakeholder presentations and briefings. ▪ Coordination with council waste services.	▪ Local businesses within work impact zone. ▪ Noise and vibration sensitive receivers. ▪ Pedestrians, cyclists, motorists and commuters. ▪ Strata managers and building owners.
Precinct (Public domain) works	▪ Doorknocks as required.	▪ Noise and vibration sensitive receivers – business neighbouring residents on streets directly affected by works. ▪ Local businesses within work impact zone. ▪ Pedestrians, cyclists, motorists and commuters. ▪ Strata managers and building owners

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Key activities throughout construction		
▪ Crane deliveries and other Out of Hour's work	▪ Consultation with any noise sensitive receivers. ▪ Doorknock adjacent properties. ▪ Provide for any agreed additional mitigation measures as required.	▪ Local businesses within work impact zone. ▪ Affected Sensitive receivers.
▪ Road and footpath closures	▪ Traffic Management Plan, notifications, road and pedestrian detours, signage. ▪ Traffic controllers deployed to manage pedestrians, cyclists, and motorists through the changes. ▪	▪ Local businesses within work impact zone. ▪ Pedestrians, cyclists, motorists and commuters.
▪ Utility works (relocation, installation and protection)	▪ Notification and doorknock – noise, detours, access, service disruptions. ▪ Notice to and coordination with utility providers. Utility provider to issue notification for any service disruptions to impacted properties. ▪ Directional signage to inform pedestrian and vehicle detours. ▪ Traffic controllers deployed as required to manage pedestrian/ commuter/vehicle interface with vehicles.	▪ Local businesses within work impact zone. ▪ Service providers. ▪ Pedestrians, cyclists, motorists and commuters.
▪ Emergency work	▪ Notification via doorknock/ email/ telephone call.	▪ Affected properties.
▪ Daily activities	▪ Toolbox briefings. ▪ Signage and footpath safety check. ▪ Graffiti check. ▪ Contact mechanisms and Consultation Manager management	▪ Those affected by daily construction or requiring information from the project team.

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Appendix F Consultation for Vehicular Crossover

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Sabal Sharma

From: Woods, Clare <Clare.Woods@Willoughby.nsw.gov.au>
Sent: Wednesday, 2 April 2025 7:26 AM
To: STALEY, Jack
Cc: MCALLISTER, Rauiri; Yu, Terry; ARFANIS, Nathan; Hird, Ellen; GALBRAITH, Michael
Subject: RE: 2-4 Lanceley Place Data Centre, Artarmon - Future Construction Vehicular Crossings
Attachments: wccsig_publicforumv2_51686732-9380-476a-a2d3-272dfd95ffd5.jpg

Hi Jack,

I have answered your queries below.

Regards,

Clare

From: STALEY, Jack <jstaley@awedwards.com.au>
Sent: Monday, 17 March 2025 3:23 PM
To: Woods, Clare <Clare.Woods@Willoughby.nsw.gov.au>
Cc: MCALLISTER, Rauiri <rmcallister@awedwards.com.au>; Yu, Terry <Terry.Yu@Willoughby.nsw.gov.au>; ARFANIS, Nathan <narfanis@awedwards.com.au>; Hird, Ellen <Ellen.Hird@Willoughby.nsw.gov.au>; GALBRAITH, Michael <mgalbraith@awedwards.com.au>
Subject: RE: 2-4 Lanceley Place Data Centre, Artarmon - Future Construction Vehicular Crossings

Hi Clare,

As shown in the below aerial image the 2-4 Lanceley Place Data Centre, Artarmon project is progressing towards the early works stage of the project.

As a part of these early works, it is proposed that three (3) existing laybacks along Lanceley Place are extended, and one (1) new layback is constructed along Campbell Street to facilitate construction.

Could you please confirm the following, so we are able to plan in advance the construction/extension of these laybacks and ensure we lodge a permit in time. Thanks.

- Confirm current processing times are 6 to 8 weeks? Current times are less than 4 weeks.
- Are detailed plans and sections required for each proposed vehicle crossings in accordance with the attached guidelines? We will require a plan to indicate the location of the crossing and proposed size. Swept path diagrams for the trucks should be provided, so that we can confirm that the temporary crossing width is suitable. A single section through each crossing should be provided, so that it is clear what is to be constructed.
- 'The plan is to include the location of the parking space within the site.' Is this a requirement for a construction project? This is not a requirement for a construction project. However, please provide some detail to indicate what is being accessed.
- Details of DA consent to be included? Please indicate that this is associated with an SSD and indicate the package of works that it will be associated with.
- Please note any other information or documents that are to be included as a part of the permit application?
- All existing vehicle crossings are to be extended because they are not wide enough to facilitate construction. Please confirm this is sufficient reasoning for extension? As detailed above, please provide swept path diagrams that support the extension. As these will be temporary crossings

and we will condition that they are removed or replaced with the permanent crossing on completion of works, then we can require extension only and not full construction.

https://www.willoughby.nsw.gov.au/MyWilloughby-home-page/MyWilloughby-online-services/Construct-repair-or-demolish-the-vehicle-crossing-for-your-property



Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway

St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

AW EDWARDS
BUILDING FOR LIFE

A W Edwards acknowledges Traditional Owners of Country throughout Australia and recognises the continuing connection to lands, waters and communities. We pay respect to Aboriginal and Torres Strait Islander cultures and to Elders past and present.

"COMMUNITY" Artwork by Raechel Saunders

From: Woods, Clare <Clare.Woods@Willoughby.nsw.gov.au>
Sent: Monday, 17 February 2025 9:55 AM
To: STALEY, Jack <jstaley@awedwards.com.au>
Cc: MCALLISTER, Rauiri <rmcallister@awedwards.com.au>; Yu, Terry <Terry.Yu@Willoughby.nsw.gov.au>; ARFANIS, Nathan <narfanis@awedwards.com.au>; Hird, Ellen <Ellen.Hird@Willoughby.nsw.gov.au>; GALBRAITH, Michael <mgalbraith@awedwards.com.au>; DIAS, Nathan <ndias@awedwards.com.au>
Subject: RE: 2-4 Lanceley Place Data Centre, Artarmon - Future Construction Vehicular Crossings

Hi Jack,

At present art / hoarding graphics are not a requirement. There is a draft policy which may require art in the future. I believe that if graphics were proposed they would be supported, provided that they were not advertising.

Regards,

Clare

Clare Woods - *Development Control Team Leader*
WILLOUGHBY CITY COUNCIL
PO Box 57 Chatswood NSW 2057
P +61 2 9777 7717 | E Clare.Woods@Willoughby.nsw.gov.au
willoughby.nsw.gov.au | visitchatswood.com.au | theconcourse.com.au



Council acknowledges the Gamaragal People as the Traditional Owners of these lands. We pay our respects to their Elders past and present.

From: STALEY, Jack <jstaley@awedwards.com.au>
Sent: Thursday, 13 February 2025 4:25 PM
To: Woods, Clare <Clare.Woods@Willoughby.nsw.gov.au>
Cc: MCALLISTER, Rauiri <rmcallister@awedwards.com.au>; Yu, Terry <Terry.Yu@Willoughby.nsw.gov.au>; ARFANIS, Nathan <narfanis@awedwards.com.au>; Hird, Ellen <Ellen.Hird@Willoughby.nsw.gov.au>; GALBRAITH, Michael

<mgalbraith@awedwards.com.au>; DIAS, Nathan <ndias@awedwards.com.au>
Subject: RE: 2-4 Lanceley Place Data Centre, Artarmon - Future Construction Vehicular Crossings

Hi Clare,

Thanks for confirming the below.

Additionally, could you please confirm that hoarding graphics are NOT required on temporary A Class and B Class Hoardings installed.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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"COMMUNITY" Artwork by Raechel Saunders

From: Woods, Clare <Clare.Woods@Willoughby.nsw.gov.au>
Sent: Tuesday, 4 February 2025 4:47 PM
To: STALEY, Jack <jstaley@awedwards.com.au>
Cc: MCALLISTER, Rauiri <rmcallister@awedwards.com.au>; Yu, Terry <Terry.Yu@Willoughby.nsw.gov.au>; ARFANIS, Nathan <narfanis@awedwards.com.au>; Hird, Ellen <Ellen.Hird@Willoughby.nsw.gov.au>; GALBRAITH, Michael <mgalbraith@awedwards.com.au>
Subject: 2-4 Lanceley Place Data Centre, Artarmon - Future Construction Vehicular Crossings

Hi Jack,

That is not 100% correct.

Temporary vehicle crossings, permanent vehicle crossings and a public domain works required to comply with a consent are to be undertaken by the developer / builder, in accordance with permit conditions.

Restoration works associated with a road opening permit will depend on the location. If they are located within an area for which the developer is required to undertake public domain works, then the final restoration will be undertaken by the developer / builder as part of the public domain works. If the trenching occurs in other areas, then Council will undertake the works, with fees charged in accordance with our current Fees and Charges.

Regards,

Clare Woods

From: STALEY, Jack <jstaley@awedwards.com.au>
Sent: Tuesday, 4 February 2025 4:31 PM
To: Woods, Clare <Clare.Woods@Willoughby.nsw.gov.au>
Cc: MCALLISTER, Rauiri <rmcallister@awedwards.com.au>; Yu, Terry <Terry.Yu@Willoughby.nsw.gov.au>; ARFANIS, Nathan <narfanis@awedwards.com.au>; Hird, Ellen <Ellen.Hird@Willoughby.nsw.gov.au>; GALBRAITH, Michael <mgalbraith@awedwards.com.au>
Subject: RE: (ECM:7131574) 2-4 Lanceley Place Data Centre, Artarmon - Future Construction Vehicular Crossings

Hi Clare,

As discussed, and confirmed by yourself over the phone you have advised that we are only required to pay permit and inspection fees to Willoughby Council regarding works to be undertaken on council land.

AW Edwards are to engage our own subcontractors to undertake temporary laybacks, permanent laybacks, restoration works, road openings etc.

Works undertaken within council lands are required to adhere to Willoughby design guidelines and be inspected by council to certify council design compliance. Thanks.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
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E: jstaley@awedwards.com.au
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"COMMUNITY" Artwork by Raechel Saunders

From: STALEY, Jack <jstaley@awedwards.com.au>
Sent: Friday, 24 January 2025 9:49 AM
To: Woods, Clare <Clare.Woods@Willoughby.nsw.gov.au>
Cc: MCALLISTER, Rauiri <rmcallister@awedwards.com.au>; Yu, Terry <Terry.Yu@Willoughby.nsw.gov.au>; ARFANIS, Nathan <narfanis@awedwards.com.au>; Hird, Ellen <Ellen.Hird@Willoughby.nsw.gov.au>; GALBRAITH, Michael <mgalbraith@awedwards.com.au>
Subject: RE: (ECM:7131574) 2-4 Lanceley Place Data Centre, Artarmon - Future Construction Vehicular Crossings

Hi Clare,

Thanks for the below.

You have noted that 'Council does all construction of temporary vehicle crossings to facilitate access during construction.'

Could you please confirm that AW Edwards are required to engage Willoughby Council to undertake all works outside of the site boundary (Roads, Footpath, Footpath Crossings).

For example, where a footpath crossing is temporary and will be reinstated upon completion of the works. Does AW Edwards engage their own contractors to install the temporary crossing and then engage Willoughby Council to reinstate the crossing.

OR

Does AW Edwards engage Willoughby Council to undertake both the installation of the temporary crossing and reinstatement of the crossing as per the attached Willoughby Council adopted Fees and Charges.

Note this has varied across previous projects and councils. We are hoping to understand some further clarification so we can plan for this moving forward. Thanks.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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"COMMUNITY" Artwork by Raechel Saunders

From: Woods, Clare <Clare.Woods@Willoughby.nsw.gov.au>
Sent: Wednesday, 15 January 2025 11:13 AM
To: STALEY, Jack <jstaley@awedwards.com.au>
Cc: MCALLISTER, Rauiri <rmcallister@awedwards.com.au>; Yu, Terry <Terry.Yu@Willoughby.nsw.gov.au>; ARFANIS, Nathan <narfanis@awedwards.com.au>; Hird, Ellen <Ellen.Hird@Willoughby.nsw.gov.au>
Subject: RE: (ECM:7131574) 2-4 Lanceley Place Data Centre, Artarmon - Future Construction Vehicular Crossings

Resending as I cut off part of Jake's email address and it bounced.

Clare Woods - *Development Control Team Leader*
WILLOUGHBY CITY COUNCIL

PO Box 57 Chatswood NSW 2057
P +61 2 9777 7717 | M
E Clare.Woods@Willoughby.nsw.gov.au
willoughby.nsw.gov.au | visitchatswood.com.au | theconcourse.com.au

Council acknowledges the Gamaragal People as the Traditional Owners of these lands. We pay our respects to their Elders past and present.



From: Woods, Clare
Sent: Wednesday, 15 January 2025 10:51 AM
To: 'jstaley@awedwards.com.a' <jstaley@awedwards.com.a>
Cc: 'rmcallister@awedwards.com.au' <rmcallister@awedwards.com.au>; Yu, Terry <Terry.Yu@Willoughby.nsw.gov.au>; 'narfanis@awedwards.com.au' <narfanis@awedwards.com.au>; Hird, Ellen <Ellen.Hird@Willoughby.nsw.gov.au>
Subject: FW: (ECM:7131574) 2-4 Lanceley Place Data Centre, Artarmon - Future Construction Vehicular Crossings

Dear Jack,

As discussed, Council does all construction of temporary vehicle crossings to facilitate access during construction. However, they do need to be constructed in accordance with our current specification and standard drawings and be removed at the end of construction and the kerb and gutter, footpath and nature strip reinstated.

In order to construct temporary crossings, you will need to apply for a vehicle crossing permit. For a temporary crossing, you will need to select the “Other” option (and not DA or CDC related). As it is for temporary crossings, we will require information to support the need for the crossings, which should demonstrate that the works cannot be constructed without them. Swept path diagrams will also be required to show that the crossings are the minimum width suitable for the proposed vehicles, as we need to minimise the impact for pedestrians. For all new crossings, we require longitudinal sections, extending from the centreline of the road to 10m within the property.

Applications will need to be made using the on-line form, available on Council’s website.

Regards,

Clare Woods

From: Yu, Terry <Terry.Yu@Willoughby.nsw.gov.au>
Sent: Friday, 10 January 2025 4:15 PM
To: Woods, Clare <Clare.Woods@Willoughby.nsw.gov.au>; Hird, Ellen <Ellen.Hird@Willoughby.nsw.gov.au>
Cc: Sui, Daniel <Daniel.Sui@Willoughby.nsw.gov.au>; Duong, Brian <Brian.Duong@Willoughby.nsw.gov.au>; Tam, Scipio <Scipio.Tam@Willoughby.nsw.gov.au>
Subject: FW: Lanceley Place Data Centre, Artarmon - Future Construction Vehicular Crossings

Hi Clare and Ellen,

Our Traffic Team have received an email inquiry from a developer seeking advice on vehicle crossings for an upcoming project in Artarmon. We believe this matter should be for the Development Control Team.

Could you kindly provide guidance to the developer regarding the questions forwarded below?

Regards,
Terry

Terry Yu - *Traffic Engineer*
WILLOUGHBY CITY COUNCIL
PO Box 57 Chatswood NSW 2057
P +61 2 9777 7633 | E Terry.Yu@Willoughby.nsw.gov.au
willoughby.nsw.gov.au | visitchatswood.com.au | theconcourse.com.au



Council acknowledges the Gamaragal People as the Traditional Owners of these lands. We pay our respects to their Elders past and present.

From: STALEY, Jack <jstaley@awedwards.com.au>
Sent: Monday, 6 January 2025 2:36 PM
To: Yu, Terry <Terry.Yu@Willoughby.nsw.gov.au>; Tam, Scipio <Scipio.Tam@Willoughby.nsw.gov.au>
Cc: GALBRAITH, Michael <mgalbraith@awedwards.com.au>; MCALLISTER, Rauiri <rmcallister@awedwards.com.au>; ARFANIS, Nathan <narfanis@awedwards.com.au>
Subject: Lanceley Place Data Centre, Artarmon - Future Construction Vehicular Crossings

Hi Terry/Scipio,

Could you please provide some initial advice for the installation of 4 off Vehicle Crossings for the Lanceley Place Data Centre, Artarmon upcoming project.

Could you please confirm what is required from council in relation to design, installation, related costs, and any other requirements for these crossings.

Please refer attached Project logistics plan indicating the width of these crossings and subsequent metres squared of crossing to be installed outside of the site boundary (council footpath/land).

I have also attached an existing snapshot of the 3 off existing vehicle crossings which front onto Lanceley Place. We are currently proposing to increase the size of these crossings to accommodate large vehicles (prime mover and semi-trailer) which will be required to safely move in and out of site during construction. (refer attached vehicle movement paths and dimensions indicated the required gate widths).

I have also attached your Vehicular Footpath Crossing and Kerb & Gutter Details + Vehicle Crossings Guidelines for reference. We have reviewed these however would greatly appreciate any advice and requirements pertaining to the installation of the 4 off Vehicle Crossings noted above. Thanks.

Feel free to give me a call to discuss any of the above.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
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E: jstaley@awedwards.com.au
www.awedwards.com.au

AW EDWARDS
BUILDING FOR LIFE

A W Edwards acknowledges Traditional Owners of Country throughout Australia and recognises the continuing connection to lands, waters and communities. We pay respect to Aboriginal and Torres Strait Islander cultures and to Elders past and present.

"COMMUNITY" Artwork by Raechel Saunders

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Appendix G Off-Street Parking and Shuttle Bus

© 2025 Taylor Thomson Whitting

Licence Agreement for Carparking Area

Parties:

This Agreement is made between **Hesco Pty Ltd** (ABN 29 000 112 809) of 1–5 Dickson Avenue, Artarmon, NSW 2064 ("Licensor") and **A W Edwards Pty Limited** (ABN 76 000 045 849) ("Licensee").

Purpose:

The Licensor agrees to grant the Licensee a non-exclusive licence to occupy designated parking area located at **1–5 Dickson Avenue, Artarmon, NSW 2064** ("Premises") for the sole purpose of parking motor vehicles owned or used by the Licensee's employees.

Term and Fee:

The Licence shall commence on 1 September 2025 and shall continue for a period of 24 months.

The Licensee agrees to pay the Licensor a monthly licence fee of

This fee shall be payable in advance on the first day of each month, without any deduction or set-off.

Extension and Termination:

1. The Licensee shall have the option to extend this Agreement for an additional period of either twelve (12) or twenty-four (24) months. This option must be exercised by giving written notice to the Licensor at least thirty (60) days prior to the expiry of the current term. Any extension shall be on the same terms and conditions as set out in this Agreement, unless otherwise agreed in writing by the parties.
2. Either party may terminate this Agreement at any time after the first 24 months by providing the other party with no less than sixty (60) days' written notice. Termination shall not relieve the Licensee of any payment obligations accrued up to the effective date of termination.

Insurance Requirement:

The Licensee must provide the Licensor with a valid **Certificate of Currency for Public Liability Insurance** with a minimum coverage amount of **$20 million**, prior to the commencement of this Agreement. The Licensee must ensure that this insurance remains current for the duration of the Agreement and provide a renewed Certificate of Currency upon each policy renewal or upon request by the Licensor.

Maintenance of Parking Area:

The Licensee must keep the area immediately surrounding the licensed parking area **tidy and free from weeds, rubbish, and debris at all times**, and ensure that vehicles do not obstruct access or create a safety hazard.

Liability and Risk:

1. The Licensee parks vehicles and any associated contents at the Premises entirely **at their own risk**.
2. Hesco Pty Ltd, Big Country Developments, and their respective officers, employees, and agents **shall not be liable** for any loss, damage, or theft of the vehicles or their contents, howsoever caused.
3. The Licensee is responsible for maintaining **adequate insurance coverage** for all vehicles stored on the Premises.

General:

1. This Agreement **does not create a lease** or any interest in the Premises beyond a revocable licence to occupy.
2. This Agreement **may not be assigned or transferred** without the prior written consent of the Licensor.
3. Any variation to this Agreement must be **in writing and signed** by both parties.
4. This Agreement is governed by the **laws of New South Wales**.

Executed as an Agreement

Signed for and on behalf of Hesco Pty Ltd

Signature: _____

Name: _____

Position: _____

Date: ___ / ___ / 20___

Signed for and on behalf of A W Edwards Pty Limited

Signature: _____

Name: _____

Position: _____

Date: ___ / ___ / 20___

COACHHIRE.COM.AU
RELIABLE GROUP TRANSPORT

PRICING

Daily shuttle service for a 49 seater coach between St Leonards Station and 2-8 Lanceley Place, Artarmon

Pricing option 1:

6-month agreement -

Pricing option 2:

12-month agreement -

Pricing option 3:

24-month agreement -



Upon signing an agreement, we will guarantee that there will be no price increase during the agreement term.

APPENDIX D: NOISE AND VIBRATION SUB-PLAN

MATTHEW PALAVIDIS
VICTOR FATTORETTO
MATTHEW SHIELDS

2-8 Lanceley Place and 14 Campbell Street, Artarmon

Construction Noise and Vibration Management Plan

SYDNEY
9 Sarah St
MASCOT NSW 2020
(02) 8339 8000

ABN 98 145 324 714
www.acousticlogic.com.au

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Project ID	20250168.1
Document Title	Construction Noise and Vibration Management
Attention To	A.W. Edwards Pty Ltd

Revision	Date	Document Reference	Prepared By	Checked By	Approved By
0	24/03/2025	20250168.1/2403A/R0/EM	EM		WY
1	2/04/2025	20250168.1/0204A/R1/EM	EM		WY
2	3/04/2025	20250168.1/0304A/R2/EM	EM		WY
3	15/04/2025	20250168.1/1504A/R3/EM	EM		WY
4	13/05/2025	20250168.1/1305A/R4/EM	EM		WY
5	15/05/2025	20250168.1/1505A/R5/EM	WY		WY
6	27/06/2025	20250168.1/1505A/R6/EM	WY		WY

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1 INTRODUCTION

Acoustic Logic have been engaged to provide a project construction noise and vibration management plan (**CNVMP** or the **Plan**) that will be used to manage noise and vibration emissions associated with the proposed works at 2-8 Lanceley Place and 14 Campbell Street, Artarmon.

The assessment:

- Identifies sensitive receivers that are likely to be potentially impacted by the proposed works.
- Develops project specific noise and vibration management levels. These will be used to indicate whether additional impact mitigation, beyond normal "good practice", is indicated.
- Identifies the major noise and vibration sources that will be present on the construction site.
- Predicts the likely noise and vibration levels during the phases of construction and assesses these against the established management levels. Where the predicted impacts exceed the management levels, the Plan identifies and assesses potential measures to minimise these impacts.
- Provides specific and general recommendations for the ongoing monitoring, assessment and management of noise and vibration emissions as the works progress in response to additional information and site conditions, and the updating of the Plan to reflect additional information obtained during the construction period.

The subject site and local context are indicated in Figure 1.

Where the term "construction" is used in this plan, it includes demolition, excavation and any other site activity related to the construction of the development being assessed.

This assessment has been prepared for the sole purpose as stated above and should not be used or relied on for any other purpose.

2 ASSESSMENT AUTHORITY REQUIREMENTS

The addresses the requirements raised by Minister for Planning and Public Spaces (ref: SSD-66777221) consent condition B8, B11 and B15. Consent condition B11, B15 and C1 have been repeated below.

B8. Hours of Work

The applicant must comply with the hours detailed in Table 2

Table 2 Hours of Work

Activity	***Day***	***Time***
Construction	*Monday – Friday* *Saturday*	*7am to 6pm* *8am to 1pm*
Operation	*Monday - Sunday*	*24 Hours*

B9. *Works outside of the hours identified in condition Table 2 may be undertaken in the following circumstances:*

(a) works that are inaudible at the nearest sensitive receivers;

(b) works agreed to in writing by the Planning Secretary;

(c) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or

(d) where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm.

B11. Construction Noise and Vibration Management Plan

The Applicant must prepare a Construction Noise and Vibration Management Plan for the development to the satisfaction of the Planning Secretary. The Plan must form part of a CEMP in accordance with condition C2 and must

(a) be prepared by a suitably qualified and experienced noise expert;

(b) be prepared in consultation with Ausgrid and other surrounding affected owners;

(c) describe procedures for achieving the noise management levels in EPA's Interim Construction Noise Guideline (DECC, 2009) (as may be updated or replaced from time to time);

(d) describe the measures to be implemented to manage high noise generating works such as piling, in close proximity to sensitive receivers;

(e) include strategies that have been developed with the community for managing high noise generating works;

(f) include strategies developed in consultation with adjacent properties in order to meet the vibration limits in condition B15 such as any alternative construction methods with lower source vibration levels and respite periods;

(g) describe the community consultation undertaken to develop the strategies in condition B11(e) and B11(f); and

(h) include a complaints management system that would be implemented for the duration of the development.

(i) include a Vibration Monitoring system to be installed during demolition, excavation and construction works

B15. Vibration Criteria

Vibration caused by construction at any residence or structure outside the site must be limited to:

(a) for structural damage, the latest version of DIN 4150-3 (2016-12) Vibration in Buildings – Part 3: Effects on Structures (German Institute for Standardisation, 2016); and

(b) for human exposure, the acceptable vibration values set out in the Environmental Noise Management Assessing Vibration: a technical guideline (DEC, 2006) (as may be updated or replaced from time to time).

Management Plan Requirements

***C1**. Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:*

(a) a condition compliance table for that plan;

(b) detailed baseline data (where required);

(c) details of:

(i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);

(ii) any relevant limits or performance measures and criteria; and

(iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;

(d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;

(e) a program to monitor and report on the:

(i) impacts and environmental performance of the development; and

(ii) effectiveness of the management measures set out pursuant to paragraph (d) above;

(f) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;

(g) a program to investigate and implement ways to improve the environmental performance of the development over time;

(h) a protocol for managing and reporting any:

(i) incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria);

(ii) complaint;

(iii) failure to comply with statutory requirements; and

(i) a protocol for periodic review of the plan.

Note: The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans

Each of relevant sections have been addressed throughout the plan and are referenced below.

Proposed construction hours (condition B8 and B9)	Section 4.4
Construction Noise Assessment (Condition B11 (a)-(c))	Section 5.4
Measures and/or strategies to high noise construction works (Condition B11 (d)-(h))	Section 6
Strategies for noise management and community liaison (Condition B11 (e)-(g))	Section 6, Appendix D
Vibration Monitoring System (Condition B11 (i))	Section 6
Vibration Criteria (Condition B15)	Section 5.3

3 REFERENCED DOCUMENTS

3.1 BACKGROUND INFORMATION USED

The plan is based on the following information:

- *Site Shed Initial Setup*, prepared by AW Edwards (Project: SYD001, 2-8 Lanceley Place, Artarmon, dated 13/2/2025, also see Appendix C in this plan).
- *Noise and Vibration Impact Assessment*, prepared by SLR (ref: 610.31079.00502-R01-v1.1-20240528.docx, dated 28/5/2024).

Note that the aforementioned *Noise and Vibration Impact Assessment* is part of the SSDA Management Plans.

3.2 GUIDELINES

The primary guideline that will be used in this plan is the NSW EPA – 'Interim Construction Noise Guideline' (**ICNG**) July 2009.

The ICNG recognises that development occurs close to sensitive receivers and the nature of construction means that it is not possible to prevent noise impacts. The ICNG is focused *"on applying a range of work practices most suited to minimise construction noise impacts, rather than focusing only on achieving numeric noise levels. While some noise from construction sites is inevitable, the aim of the Guideline is to protect the majority of residences and other sensitive land uses from noise pollution most of the time."*

The ICNG requires the identification of activities likely to exceed the noise/vibration management levels, and the implementation of feasible and reasonable mitigation strategies to minimise emissions. Strategies include physical and management controls, liaising with the public and stakeholders, monitoring, etc. The ICNG recognises that each site will have a particular set of circumstances to be addressed, and that it is typically not possible to fully mitigate impacts. The guideline is intended as a pathway to determining a realistic compromise between construction sites and the surrounding receivers.

The following additional planning instruments and guidelines have also been used in this plan:

- NSW Department of Environment and Conservation *Assessing Vibration: A Technical Guideline* February 2006
- NSW EPA *Noise Policy for Industry* (**NPfI**) October 2017
- DIN 4150-3 *Structural Vibration: Effects of Vibration on Structures*.
- NSW Transport (RMS) Construction Noise and Vibration Guideline ("CNVG") (2016)
- Transport for NSW Construction Noise and Vibration Strategy ("CNVS") (2018)
- NSW EPA – 'Road Noise Policy" (**RNP**) March 2011

4 SITE DESCRIPTION AND THE PROPOSAL

4.1 SITE DESCRIPTION

The site is located at 2-8 Lanceley Place and 14 Campbell Street, Artarmon (Lanceley Place Data Centre, Artarmon).

As illustrated in Figure 1, the site is approximately 14,000m^2 in area, is zoned E4 General Industrial and has road frontages to both Lanceley Place and Campbell Street.

Investigation has been carried out by this office in regard to the existing properties and noise impacts surrounding the proposed developments, e.g., nearby commercial receivers and existing residential receivers to the south-west.

4.2 PROJECT DESCRIPTION

The project site is located at 2-8 Lanceley Place and 14 Campbell Street, Artarmon, and consists of construction of a ten-storey, 80MVA data centre with a maximum building height of 51.479m (RL 124.5) ridge height (street wall height of 50m).

4.3 PROPOSED WORKS

Construction of the proposed development includes construction phase (expected from July 2025 to August 2027), which includes the erection of structure, façade, internal fit out and landscape works.

4.4 PROPOSED CONSTRUCTION HOURS

Construction of the works is proposed to occur during EPA ICNG "standard" work hours, these being Monday to Friday 7 am to 6 pm and Saturday 8 am to 1 pm.

Work outside these hours may also occur under the following circumstances:

- the delivery of oversized plant or structures that police or other authorities determine require special arrangements to transport along public roads.
- emergency work to avoid the loss of life or damage to property, or to prevent environmental harm.
- maintenance and repair of public infrastructure where disruption to essential services and/or considerations of worker safety do not allow work within standard hours.

4.5 SENSITIVE RECEIVERS

The nearest/potentially most impacted sensitive receivers surrounding the site representative of noise catchments have been identified and as summarised in the following table. An aerial photo of the site indicating nearby noise sensitive receivers and the catchment areas, and the ambient noise measurement locations is presented in Figure 1.

Table 1 – Sensitive Receivers

Receiver (Refer Figure 1)	Receiver Type	Comment
R1	Residential	Multi-storey residential apartments/houses to the south-western of the site along Pacific Highway
I1	Industrial	Industrial areas to the north of the site at 86 & 88 Reserve Road, 6 Campbell Street, Artarmon
I2		Industrial areas to the south-east of the site at 10-12 Lanceley Place, Artarmon
C1	Commercial	Existing commercial buildings to the south-west of the site along Broadcast Way and Clarendon Street.
C2		Existing commercial buildings to the east of the site along Lanceley Place.
C3		Existing commercial buildings to the north of the site along Carlotta Street.
H1	Hospital	Existing hospital to the south-eastern of the site at 3 Westbourne Street, St Leonards
E1	Educational/Childcare	Existing educational buildings to the south of the site at 213 Pacific Highway, St Leonards
E2		Existing childcare to the north-west of the site at 1c Clarendon Street, Artarmon

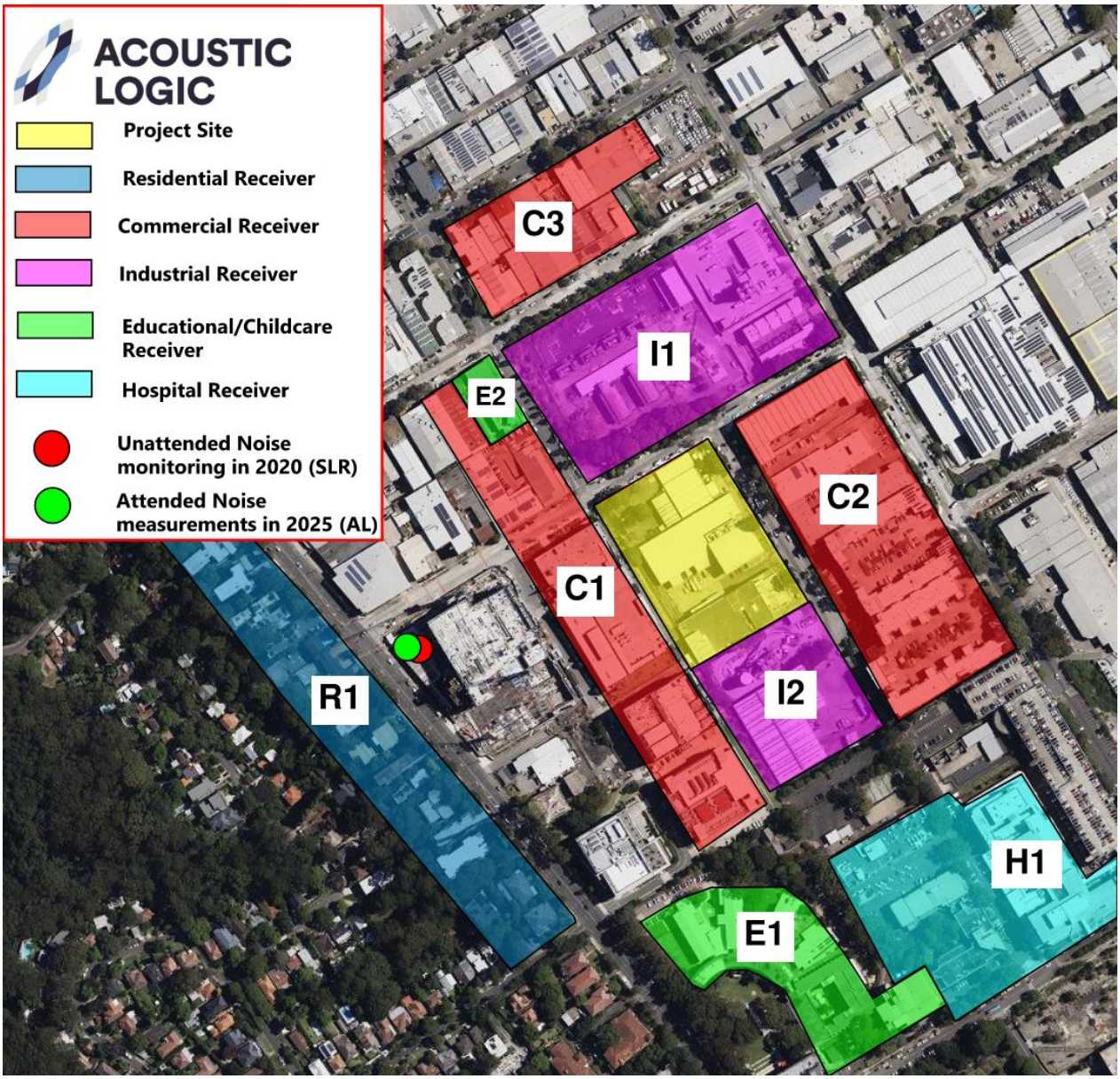


Figure 1 - Site Plan Showing Local Context, Noise Monitoring Locations (Source: NSW Six Map)

4.6 NOISE AND VIBRATION SOURCES

The main noise and vibration sources relevant to phase of the construction works have been identified and are summarised in the following table.

Table 2 – Sound Power Levels of the Proposed Equipment

Construction Stage	Equipment	Sound Power Level – dB(A)[1]	Duty
Construction	Crane - Fixed	113[2]	50%
	Crane - Mobile	113	25%
	Excavator – Tracked (10t)	100[3]	100%
	Electric Hand Tools	105	50%
	Elevated Work Platform (Lifts)	97	10%
	Generator – Diesel/Petrol	103[4]	100%
	Piling Rig - Bored	112	100%
	Pump - Concrete	109[2]	100%
	Truck – Medium rigid (20t)	103	10%
	Truck – Concrete	109	100%

1: Noise levels taken into account correction factors (for tonality, intermittency where necessary).

2: Up to 3 have been allowed in this plan according to the provided information.

3: Up to 15 excavators have been allowed in this plan according to the provided information, but this worst-case scenario only occurs at the earthworks & structure phase (informatively July 2025 to April 2026).

4: The use of generator only occurs at the commissioning phase for a short period of time (informatively June 2027 to August 2027)

5 CONSTRUCTION NOISE AND VIBRATION ASSESSMENT

5.1 GENERAL

A quantitative evaluation of the proposed works has been undertaken to identify those activities that have the potential to adversely impact nearby properties.

The assessment uses site specific noise and vibration management levels developed using the EPA ICNG. The predicted, receiver noise and vibration levels will be compared to the management levels to identify those activities that are likely to require additional management, above what is considered to be normal good practice.

5.2 CONSTRUCTION NOISE MANAGEMENT LEVELS

5.2.1 Residential Receivers

Residential noise management levels are based on the "rating background noise level" (**RBL**) applicable to the receivers. RBL's are typically determined by measuring the ambient noise environment using the methodology in the EPA NPfI. The measurements, analysis and RBL's determined for this project are based on Noise and Vibration Impact Assessment, prepared by SLR (ref: 610.31079.00502-R01-v1.1-20240528.docx, dated 28/5/2024), and reproduced in the table below. Note that the noise measurements in the SLR report was conducted in year 2020 using an unattended noise monitor. AL has conducted an attended measurements near SLR's monitor (i.e., 3m away from the kerb of Pacific Highway, refer Figure 1 for detailed location) between 12:45pm and 1pm on 13/3/2025.

Table 3 – Result of Measured Background Noise Levels

Location	Time	Monitoring Type	Measured Background Noise Levels L_{90} dB(A) at Daytime
Refer Figure 1 for detailed location	Year 2020 (Done by SLR)	Unattended Noise Monitoring	58
	Year 2025 (Done by AL)	Attended Measurement	62[1]

1 *The location of the attended measurement was conducted closer to the Pacific Highway due to access issue to the previous SLR's monitoring location.*

Given the most recent background noise measurement done by AL is 4dB(A) higher than the rated background noise level in SLR report, the rated background noise level in SLR report is selected to be the representative background noise levels of the closest residential receivers in this assessment for conservative considerations, i.e., **58dB(A)**.

The ICNG construction noise management levels are summarised in the following table, along with how they should be used to manage impacts.

Table 4 – Construction Noise Management Levels

Management Level $L_{Aeq,(15min)}$*	**How to Apply**
Noise affected Management Level (**NML**) RBL + 10dB	The noise affected level represents the point above which there may be some community reaction to noise. Where the predicted or measured $L_{Aeq\ (15\ min)}$ is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level. The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.
Highly noise affected 75 dB(A)	The highly noise affected level represents the point above which there may be strong community reaction to noise. Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restricting the hours that the very noisy activities can occur.

*** Noise levels apply at the property boundary that is most exposed to construction noise, and at a height of 1.5 m above ground level. If the property boundary is more than 30 m from the residence, the location for measuring or predicting noise levels is at the most noise-affected point within 30 m of the residence. Noise levels may be higher at upper floors of the noise affected residence.**

5.2.2 Other Land Uses

For other land uses, the management levels are absolute noise levels, independent of the prevailing noise environment, so monitoring of the prevailing environment is not generally required for these uses. The ICNG construction noise management levels for uses other than residential dwellings are summarised in the following table.

Table 5 – Construction Noise Management Levels – Non-Residential Uses

Land Use	**Management Level, $L_{Aeq\ (15min)}$ (applies for times when properties are being used)**
Classrooms at School and other Educational Institutions	45 (internal)
Hospital Wards and Operating Theatres	45 (internal)
Industrial Premises	75 (external)
Commercial and Retail Outlets	70 (external)*

The project specific NML's for the most impacted receivers are summarised in the following table using the objectives tabled above and the adopted RBL's.

Table 6 – Noise Management Levels for Most Impacted Receivers

Location/Receiver	RBL dB(A) L_{90}	NML dB(A) L_{eq}	HANML dB(A) L_{eq}
R1	58	68	75
E1	-	45 internal 65[2] external	-
E2[1]	-	40 internal 60[2] external	
H1	-	45 internal 65[2] external	-
I1-I2	-	75	-
C1-C3	-	70	-

1. *Internal noise levels at E2 (childcare) is taken from Association of Australian Acoustical Consultant Guideline for Childcare Centre Acoustic Assessment.*
2. *An external noise level of 65dB(A) would result in an internal noise level of 45 dB(A) assuming a typical 20 dB(A) reduction for a standard façade. Similarly, an external noise level 60dB(A) would result in an internal noise level of 40dB(A). Therefore, compliance with the external NML will also result in compliance with the internal NML.*

5.3 CONSTRUCTION VIBRATION MANAGEMENT LEVELS

5.3.1 Amenity Management

Vibration goals for the amenity of nearby land users are those recommended by the EPA document *Assessing Vibration: A technical guideline*. These levels (extracted from Tables 2.2 and 2.4 of the guideline) are presented in the following table for various types of vibration:

Table 7 – (Table 2.2 *Assessing Vibration: A Technical Guideline*) – Preferred and Maximum Weighted RMS Values for Continuous and Impulsive Vibration Acceleration (m/s2) 1-80Hz

Location	Assessment Period [1]	Preferred values		Maximum Values	
		z-axis	x- and y-axes	z-axis	x- and y-axes
Continuous Vibration					
Critical areas[2]	Daytime / Night-time	0.0050	0.0036	0.010	0.0072
Residences	Daytime	0.010	0.0071	0.02	0.014
	Night-time	0.007	0.005	0.014	0.010
Office, schools, educational institutions and places of worship	Daytime / Night-time	0.020	0.014	0.040	0.028
Impulsive Vibration					
Critical areas[2]	Daytime / Night-time	0.0050	0.0036	0.010	0.0072
Residences	Daytime	0.30	0.21	0.60	0.42
	Night-time	0.10	0.071	0.20	0.14
Office, schools, educational institutions and places of worship	Daytime / Night-time	0.64	0.46	1.28	0.92

1. *Daytime is 7:00am to 10:00pm and night-time is 10:00pm to 7:00am.*
2. *Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring. There may be cases where sensitive equipment or delicate tasks require more stringent criteria than the human comfort criteria specified above. Stipulation of such criteria is outside the scope of this policy, and other guidance documents (e.g. relevant standards) should be referred to. Source: BS 6472–1992*

Table 8 – (Table 2.4 *Assessing Vibration: A technical guideline*) – Acceptable Vibration Dose Values for Intermittent Vibration (m/s1.75)

Location	Daytime[1]		Night-time[1]	
	Preferred value	Maximum Value	Preferred value	Maximum Value
Critical areas[2]	0.10	0.20	0.10	0.20
Residences	0.20	0.40	0.13	0.26
Office, schools, educational institutions and places of worship	0.40	0.80	0.40	0.80

1. *Daytime is 7:00am to 10:00pm and night-time is 10:00pm to 7:00am.*
2. *Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring. There may be cases where sensitive equipment or delicate tasks require more stringent criteria than the human comfort criteria specified above. Stipulation of such criteria is outside the scope of this policy, and other guidance documents (e.g. relevant standards) should be referred to. Source: BS 6472–1992*

5.3.2 Structure Damage Risk Criteria

5.3.2.1 Generally

German Standard DIN 4150-3 (2016) provides a guideline for acceptable levels of vibration velocity in building foundations, to assess the effects of vibration on structures. The table give guidance on the maximum accepted values of velocity at the foundation and in the plane of the highest floor of various types of buildings, to prevent any structural damage.

The table following lists the peak particle velocity, which is the maximum absolute value of the velocity signals for the three orthogonal components. This is measured as a maximum value of any of the three orthogonal component particle velocities when 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.

It is noted that if measured vibration levels do not exceed the guidelines listed in the following table, damage that will reduce the serviceability of the building will not occur, and if damage to the building does occur, it is assumed that the damage is related to other causes. Furthermore, the DIN4150-3 guideline states the following regarding the limits presented in Table 1 of the standard:

"Exceeding the guideline values does not necessarily lead to damage. Should they be exceeded, however, further investigations may be necessary, such as determining and evaluating the stresses as detailed in 4.3 and 4.4.".

Table 9 – (Table 1 – DIN 4150-3 (2016)) – Guideline Values for Vibration Velocity, $v_{i,max}$, for Evaluating the Effects of Short-Term Vibration on Structures

	TYPE OF STRUCTURE	Guideline values for $v_{i,max}$ in mm/s				
		Foundation, all directions, i = x, y, z, at a frequency of			Topmost floor, horizontal direction, i = x, y	Floor slabs, vertical direction, i = z
		1Hz to 10Hz	10Hz to 50Hz	50Hz to 100Hz [a]	All Frequencies	All Frequencies
L/C	1	2	3	4	5	6
1	Buildings used for commercial purposes, industrial buildings, and buildings of similar design	20	20 to 40	40 to 50	40	20
2	Residential buildings and buildings of similar design and/or occupancy	5	5 to 15	15 to 20	15	20
3	Structures that, because of their particular sensitivity to vibration, cannot be classified under lines 1 and 2 **and** are of great intrinsic value (e.g. listed buildings) buildings that are under a preservation order)	3	3 to 8	8 to 10	8	20[b]

NOTE Even if guideline values as in line 1, columns 2 to 5, are complied with, minor damage cannot be excluded.

a At frequencies above 100 Hz, the guideline values for 100 Hz can be applied as minimum values.

b It may be necessary to lower the guideline value markedly to prevent minor damage

5.4 CONSTRUCTION NOISE ASSESSMENT

5.4.1 Predictions

Construction noise emissions to nearby development depend on the activities being undertaken at the time, and where on the site the activities occur. Construction noise levels at the surrounding receivers have been predicted based on the following inputs.

- The plant sound power levels indicated in Appendix A. These have been corrected for estimated typical operation duty indicated in the table using 10 x log(% duty/100).
- Site Shed Initial Setup, provided by AW Edwards (Project: SYD001, 2-8 Lanceley Place, Artarmon) to obtain the distance range between equipment and nearby receivers.
- Corrections for source to receiver distance attenuation including air absorption (20°C , 70% RH, neutral wind conditions).
- Barrier or directivity attenuation where present.
- Source heights – 1.5m above the ground/building level of the noise source location, unless noted otherwise.

5.4.2 Predicted Noise Impacts

Table 10 – Predicted Noise Impacts to R1

Activity	Predicted Level Range dB(A) $L_{eq\ (15min)}$ [1]	NML dB(A) L_{eq}	HANML dB(A) L_{eq}	Requires Assessment of Additional Management
Crane - Fixed	53-54	68	75	No
Crane - Mobile	45-47	68	75	No
Excavator – Tracked (10t)	50-52	68	75	No
Electric Hand Tools	40-42	68	75	No
Elevated Work Platform (Lifts)	<40	68	75	No
Generator – Diesel/Petrol	41-43	68	75	No
Piling Rig - Bored	50-52	68	75	No
Pump - Concrete	52-54	68	75	No
Truck – Medium rigid (20t)	32-34	68	75	No
Truck – Concrete	47-49	68	75	No

1: Predicted noise levels will reduce by 20-30 dB(A) if the construction process is conducted internally or shielded by existing buildings.

Table 11 – Predicted Noise Impacts to E1

Activity	Predicted Level Range dB(A) $L_{eq\ (15min)}$[1]	NML dB(A) L_{eq}[2]	HANML dB(A) L_{eq}	Requires Assessment of Additional Management
Crane - Fixed	52-57	65	-	No
Crane - Mobile	44-49	65	-	No
Excavator – Tracked (10t)	49-54	65	-	No
Electric Hand Tools	39-44	65	-	No
Elevated Work Platform (Lifts)	<40	65	-	No
Generator – Diesel/Petrol	40-45	65	-	No
Piling Rig - Bored	49-54	65	-	No
Pump - Concrete	51-56	65	-	No
Truck – Medium rigid (20t)	<40	65	-	No
Truck – Concrete	46-51	65	-	No

1: Predicted noise levels will reduce by 20-30 dB(A) if the construction process is conducted internally or shielded by existing buildings.

2. An external noise level of 65dB(A) would result in an internal noise level of 45 dB(A) assuming a typical 20 dB(A) reduction for a standard façade. Therefore, compliance with the external NML will also result in compliance with the internal NML.

Table 12 – Predicted Noise Impacts to E2

Activity	Predicted Level Range dB(A) $L_{eq\ (15min)}$[1,2]	NML dB(A) L_{eq3}	HANML dB(A) L_{eq}	Requires Assessment of Additional Management
Crane - Fixed	54-62	60	-	Yes, above NML when near receiver[2]
Crane - Mobile	47-55	60	-	No
Excavator – Tracked (10t)	51-59	60	-	No
Electric Hand Tools	42-50	60	-	No
Elevated Work Platform (Lifts)	<40	60	-	No
Generator – Diesel/Petrol	42-50	60	-	No
Piling Rig - Bored	51-59	60	-	No
Pump - Concrete	53-61	60	-	No
Truck – Medium rigid (20t)	34-42	60	-	No
Truck – Concrete	48-56	60	-	No

1: Predicted noise levels will reduce by 20-30 dB(A) if the construction process is conducted internally or shielded by existing buildings.

2: 1-2 dB(A) exceedance is considered imperceptible

3: An external noise level of 65dB(A) would result in an internal noise level of 40 dB(A) assuming a typical 20 dB(A) reduction for a standard façade. Therefore, compliance with the external NML will also result in compliance with the internal NML.

Table 13 – Predicted Noise Impacts to H1

Activity	Predicted Level Range dB(A) $L_{eq\ (15min)}$[1]	NML dB(A) L_{eq}[2]	HANML dB(A) L_{eq}	Requires Assessment of Additional Management
Crane - Fixed	57-62	65	-	No
Crane - Mobile	49-55	65	-	No
Excavator – Tracked (10t)	54-59	65	-	No
Electric Hand Tools	44-50	65	-	No
Elevated Work Platform (Lifts)	<40	65	-	No
Generator – Diesel/Petrol	45-50	65	-	No
Piling Rig - Bored	54-59	65	-	No
Pump - Concrete	56-61	65	-	No
Truck – Medium rigid (20t)	36-42	65	-	No
Truck – Concrete	51-56	65	-	No

1: Predicted noise levels will reduce by 20-30 dB(A) if the construction process is conducted internally or shielded by existing buildings.

2. An external noise level of 65dB(A) would result in an internal noise level of 45 dB(A) assuming a typical 20 dB(A) reduction for a standard façade. Therefore, compliance with the external NML will also result in compliance with the internal NML.

Table 14 – Predicted Noise Impacts to I1

Activity	Predicted Level Range dB(A) $L_{eq\ (15min)}$[1]	NML dB(A) L_{eq}	HANML dB(A) L_{eq}	Requires Assessment of Additional Management
Crane - Fixed	62-75	75	-	No
Crane - Mobile	54-70	75	-	No
Excavator – Tracked (10t)	59-75	75	-	No
Electric Hand Tools	49-65	75	-	No
Elevated Work Platform (Lifts)	35-51	75	-	No
Generator – Diesel/Petrol	50-66	75	-	No
Piling Rig - Bored	59-75	75	-	No
Pump - Concrete	61-77	75	-	Yes, above NML when near receiver[2]
Truck – Medium rigid (20t)	41-57	75	-	No
Truck – Concrete	56-72	75	-	No

1: Predicted noise levels will reduce by 20-30 dB(A) if the construction process is conducted internally or shielded by existing buildings.

2: 1-2 dB(A) exceedance is considered imperceptible.

Table 15 – Predicted Noise Impacts to I2

Activity	Predicted Level Range dB(A) $L_{eq\ (15min)}$[1]	NML dB(A) L_{eq}	HANML dB(A) L_{eq}	Requires Assessment of Additional Management
Crane - Fixed	64-73	75	-	No
Crane - Mobile	56-71	75	-	No
Excavator – Tracked (10t)	60-76	75	-	Yes, above NML when near receiver[2]
Electric Hand Tools	51-66	75	-	No
Elevated Work Platform (Lifts)	37-52	75	-	No
Generator – Diesel/Petrol	51-67	75	-	No
Piling Rig - Bored	60-76	75	-	Yes, above NML when near receiver[2]
Pump - Concrete	62-72	75	-	No
Truck – Medium rigid (20t)	43-58	75	-	No
Truck – Concrete	57-73	75	-	No

1: Predicted noise levels will reduce by 20-30 dB(A) if the construction process is conducted internally or shielded by existing buildings.

2: 1-2 dB(A) exceedance is considered imperceptible.

Table 16 – Predicted Noise Impacts to C1

Activity	Predicted Level Range dB(A) $L_{eq\ (15min)}$[1]	NML dB(A) L_{eq}	HANML dB(A) L_{eq}	Requires Assessment of Additional Management
Crane - Fixed	68-77	70	-	Yes, above NML when near receiver
Crane - Mobile	59-81	70	-	Yes, above NML when near receiver
Excavator – Tracked (10t)	64-84	70	-	Yes, above NML when near receiver
Electric Hand Tools	54-74	70	-	Yes, above NML when near receiver
Elevated Work Platform (Lifts)	40-62	70	-	No
Generator – Diesel/Petrol	55-75	70	-	Yes, above NML when near receiver
Piling Rig - Bored	64-84	70	-	Yes, above NML when near receiver
Pump - Concrete	67-76	70	-	Yes, above NML when near receiver
Truck – Medium rigid (20t)	46-68	70	-	No
Truck – Concrete	61-83	70	-	Yes, above NML when near receiver

1: Predicted noise levels will reduce by 20-30 dB(A) if the construction process is conducted internally or shielded by existing buildings.

Table 17 – Predicted Noise Impacts to C2

Activity	Predicted Level Range dB(A) $L_{eq\ (15min)}$[1]	NML dB(A) L_{eq}	HANML dB(A) L_{eq}	Requires Assessment of Additional Management
Crane - Fixed	67-73	70	-	Yes, above NML when near receiver
Crane - Mobile	58-70	70	-	No
Excavator – Tracked (10t)	63-75	70	-	Yes, above NML when near receiver
Electric Hand Tools	53-65	70	-	No
Elevated Work Platform (Lifts)	39-51	70	-	No
Generator – Diesel/Petrol	54-66	70	-	No
Piling Rig - Bored	63-75	70	-	Yes, above NML when near receiver
Pump - Concrete	66-72	70	-	Yes, above NML when near receiver[2]
Truck – Medium rigid (20t)	45-57	70	-	No
Truck – Concrete	60-72	70	-	Yes, above NML when near receiver[2]

1: Predicted noise levels will reduce by 20-30 dB(A) if the construction process is conducted internally or shielded by existing buildings.

2: 1-2 dB(A) exceedance is considered imperceptible.

Table 18 – Predicted Noise Impacts to C3

Activity	Predicted Level Range dB(A) $L_{eq\ (15min)}$ [1]	NML dB(A) L_{eq}	HANML dB(A) L_{eq}	Requires Assessment of Additional Management
Crane - Fixed	52-58	70	-	No
Crane - Mobile	45-50	70	-	No
Excavator – Tracked (10t)	49-55	70	-	No
Electric Hand Tools	40-45	70	-	No
Elevated Work Platform (Lifts)	<40	70	-	No
Generator – Diesel/Petrol	40-46	70	-	No
Piling Rig - Bored	54-60	70	-	No
Pump - Concrete	51-57	70	-	No
Truck – Medium rigid (20t)	<40	70	-	No
Truck – Concrete	46-52	70	-	No

1: Predicted noise levels will reduce by 20-30 dB(A) if the construction process is conducted internally or shielded by existing buildings.

This analysis indicates that:

- For residential receiver **R1**, construction noise will generally below NML.
- With the exception of the nearest commercial receivers on Broadcast Way and Lanceley Place (being **C1** and **C2**), no commercial receivers will be subject to noise exceeding the NML. The highest predicted exceedance of the NML at the Broadcast Way commercial receivers opposite the site is 13 dB(A), due to concrete truck getting closer to the nominated receivers. The most affected location at these receivers are on higher storeys which have direct line of sight to the delivery driveway and the rest of the site, however it is noted based on site investigations that these affected façades are likely to be fixed windows. Modern fixed glazing systems are likely to provide up to 20-30dB(A) noise reduction when measured internally if not more.
- Exceedances are expected to affect nearest industrial receivers I1 and I2. However, the highest exceedance of the NML at **I1** is 2 dB(A), due to excavators getting closer to the nominated receiver, which is considered imperceptible.
- For educational/childcare/hospital receivers (**E1-E2 & H1)**, construction noise will generally below NML.

To assess whether mitigation of these exceedances is feasible or reasonable" the ICNG indicates the following should be considered:

- The levels of impact including noise levels and the number of people affected.
- The benefits of noise mitigation and the number of people protected.
- Cost effectiveness of mitigation.
- Community views.

As predicted noise level difference of 2 dB(A) is not readily perceptible, and the exceedances will only occur when plants is operating on the part of the site closest to the receiver **I1** & **I2**, any significant mitigation for receivers **I1** & **I2** is not indicated beyond "good practice" management of the works.

For commercial receiver **C1** & **C2**, this preliminary assessment indicates that feasible and reasonable noise mitigation would need to be investigated to by the contractor to minimise noise impacts, based on the procedures and methods in Section 6 and the ICNG.

- Select the quietest plant/activity available (or retrofit acoustic treatment to the plant such as residential class mufflers) to minimise any NML exceedances.
- If any remaining residual significant exceedances, investigate time restrictions (e.g. avoiding loud early morning works at the residences) and notification of affected receivers when works likely to exceed the NML's is likely to occur.

5.5 CONSTRUCTION VIBRATION

5.5.1 Vibration Sources

The following sources have been identified as potentially producing significant ground vibration:

- Bore Piling (in rock)
- Excavation (in rock)
- Impacts from falling rocks/rubble
- Ripping (excavator with claw)

The remaining activities are not expected to produce significant ground vibration and/or are sufficiently separated from sensitive receivers. Vibration from these activities are expected to be significantly below amenity or damage risk management levels at all receivers.

5.5.2 Assessment of Vibration

A precise assessment of vibration emissions from the proposed works is not possible due to the large number of unknowns including the actual equipment employed, how it is operated, site conditions, etc.

In the absence of any specific equipment the generic minimum safe working distances presented in Table 19 should be used with caution for guidance.

Should the types and models of the plant and equipment be available then vibration levels may be predicted at the nearest and most affected receivers by using the published generic formulae, source levels or historical data as found in:

- BS 5228-2:2009+A1:2014
- ISO 4866:2010
- FTA Transit Noise and Vibration Impact Assessment Manual (2018)
- Caltrans Transportation and Construction Vibration Guidance Manual (2020)
- Construction Vibrations 2nd Edition (Dowding, 2000)

Regardless of the method used site vibration levels from machinery and processes should be verified on site as soil conditions may be different from the basis sources.

The assessment of building and soil settlement or the liquefaction of soils under induced vibration is outside the scope of typical vibration standards such as DIN 4150-3 and expert advice is to be sought from a Geotechnical Engineer.

Table 19 – Recommended Base Minimum Working Distances for Vibration Intensive Plant From Sensitive Receivers

Plant item	Rating / Description	Minimum Working Distance			
		Cosmetic Damage			Human Response
		Light-Framed Structure (BS 7385)	Residential Structures (DIN 4150)	Heritage and Other Sensitive Structures (DIN 4150)	NSW EPA's Vibration Guideline
Vibratory Roller	< 50 kN (Typically 1-2 tonnes)	5 m	18.5	14 m	15m
	< 100 kN (Typically 2-4 tonnes)	6 m	17.8	16 m	20 m
	< 200 kN (Typically 4-6 tonnes)	12 m	43	33 m	40 m
	< 300 kN (Typically 7-13 tonnes)	15 m	51.5	41 m	100 m
	> 300 kN (Typically 13-18 tonnes)	20 m	-	54 m	100 m
	> 300 kN (> 18 tonnes)	25 m	-	68 m	100 m
Small Hydraulic Hammer	(300 kg - 5 to 12t excavator)	2 m	-	5 m	7 m
Medium Hydraulic Hammer	(900 kg – 12 to 18t excavator)	7 m	-	19 m	23 m
Large Hydraulic Hammer	(1600 kg – 18 to 34t excavator)	22 m	-	60 m	73 m
Vibratory Pile Driver	Sheet piles	20 m	-	50 m	100 m
Pile Boring	≤ 800 mm	2 m (nominal)	-	5 m	7 m
Jackhammer	Hand held	1 m (nominal)	-	2 m	3 m
Profiler	Wirtgen W210	4 m	-	-	-
Asphalt Paver	Vogele Super 1800-3	1 m	-	-	-
Steel Drum Roller	Hamm HD70 (Oscillating Mode)	2 m	-	-	-
Steel Drum Roller	Hamm HD70 (Static Mode)	1 m	-	-	-

6 NOISE AND VIBRATION MANAGEMENT PLANT AND CONTROL

6.1 MANAGEMENT PLAN

The plan indicates that the proposed activities will produce noise or vibration that will exceed the adopted management levels. These impacts should be minimised by developing and adopting a project specific management plan to regulate site activities.

The plan should be revised as the works proceed in response to changing or latent conditions and to incorporate the results of additional analysis, monitoring or modified work practices implemented to minimise impacts.

The management plan should be prepared in accordance with **ICNG** guideline and include:

- Identification of sensitive receivers and applicable noise and vibration management levels
- A description of the main noise or vibration producing activities, processes and equipment that will be employed and an indicative construction programme.
- Proposed construction hours.
- A prediction of likely noise/vibration levels at the most impacted receivers.
- The plan and recommendation of mitigation methods to be applied where the predicted levels exceed the management levels, as indicated below.
- A monitoring plan including the type and extent of monitoring, reporting procedures.
- Recommended management procedures including complaints handling, response to monitoring exceedances, reporting, site training, etc.
- Community liaison.

6.2 NOISE AND VIBRATION CONTROL

The flow chart that follows illustrate the process followed to assess construction activities prior to the start of work on site, and for the ongoing investigation of noise and vibration impacts during the construction period.

The **ICNG** recommends "feasible and reasonable" mitigation measures to be implemented where works generate noise levels above the out of normal hours NML but does not specify what mitigation measures or to what extent these measures should be applied.

6.2.1 General Noise Control Methods

The determination of appropriate additional noise control measures will be dependent on the particular activities and the construction equipment and plant identified as requiring future acoustic treatments to those already identified in this report. This section provides an outline of available methods which have previously been used on similar construction sites and may be possible on this site.

6.2.1.1 Selection of Alternate Appliance or Process

Where a particular activity or plant and equipment is found to generate noise levels that exceed the management levels, it may be possible to select an alternative approach or plant and equipment. For example; the use of excavator mounted hydraulic hammers of the site may potentially generate high levels of noise. By carrying this activity by using concrete saws or smaller plant here practical, construction noise levels and/or length of exposure to construction noise levels may be reduced.

6.2.1.2 Acoustic Barriers

The placement of barriers at the source is generally only effective for static plant. Placing barriers at the source cannot effectively attenuate equipment which is on the move or working in rough or undulating terrain.

The degree of noise reduction provided by barriers is dependent on the amount by which the line of sight can be blocked by the barrier. If the receiver is totally shielded from the noise source reductions of up to 15 dB(A) can be effected. Where only partial obstruction of line of sight occurs, noise reductions of 5 to 8 dB(A) may be achieved. Where the barrier does not obstruct line of sight, generally no noise reduction will occur.

Barriers are used to provide shielding and do not act as an enclosure. The material they are constructed from should have a noise reduction performance which is approximately 10dB(A) greater than the maximum reduction provided by the barrier screening. In this case, the use of a material such as 15mm plywood (or equivalent material) would be acceptable for the barriers.

6.2.1.3 Silencing Devices

Where construction methodologies or plant and equipment permit, investigate the use of silencing devices. These may take the form of engine shrouding, or special industrial silencers fitted to exhausts, for example.

6.2.1.4 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.

6.2.1.5 Establishment of Site Practices

This involves the formulation of work practices to reduce noise generation. This includes, for example, investigating the possibility of locating fixed plant items as far as possible from residents, rotating plant and activities to provide respite to receivers, scheduling activities after the construction of buildings that will screen receivers, avoiding noise sensitive periods for receivers, identify "safe" working distances, etc.

6.2.1.6 Vibration Management

The following principles should be considered to manage adverse vibration impacts identified:

- Obtaining separate structural or specialist advice for critical or fragile structures as to the level of damage risk.
- Selection of processes that minimise structure and ground vibration – generally avoiding percussive methods.
- Use smallest plant that is able to efficiently undertake the work activity.
- Lay vibration absorbing mats to cushion impacts from falling debris.
- Application of vibration dampening pads to metal surfaces subject to impacts.
- When demolishing, cut control joints in structures to form vibration "breaks", or work away from sensitive receiver locations to form natural vibration breaks in propagation path.
- Monitoring of structures using attended and/or unattended monitors with alarms.
- Time scheduling works to minimise amenity impacts.
- Communicating with affected receivers.
- Identify "safe" working distances to sensitive receivers/structures for various activities by conducting site simulation tests and limiting activities within those distances to those that are not likely to exceed vibration goals. Vary locations/equipment/techniques used as determined by the simulation testing. The following table provides an initial guide to working distances that should be confirmed by site measurement.

6.2.1.7 Notification

Notification of affected receivers of the when short-term activities that likely to create higher noise levels are planned to be conducted, can in many cases minimise community reaction. This can be in the form of notification of scheduled impacts rather than general day to day activities.

6.3 SUMMARY OF MITIGATION

The project specific mitigation and management to be adopted is summarised in the following sections.

6.3.1 Management Controls

1. **Community Consultation/Notification:** Notification (leaflet or similar) of nearby receivers which are predicted to receive construction noise levels over the ICNG noise management levels as shown in Section 5.4.1. This is only recommended as a notification of scheduled impacts prior to commencement of the specific works that exceed noise management levels.
2. **Respite Periods:** Natural respite periods aligning with construction breaks and lunch periods will aid to protect the amenity of the most affected receivers. Further respite periods can be proposed where construction activities exceed the HANML. Note that these respite periods are subject to change following consultant and written approval from the Minister for Planning and Public Spaces.

    a. The proposed allowable times for high noise emissions appliances are as follows:

        i. Monday to Friday: 9:00am – 12:00pm and 1:00pm – 4:00pm

        ii. Saturday: 9:00am – 1:00pm

    b. It is noted that the loudest construction plant which is predicted to exceed the NML and HANML would only be in use during the demolition and excavation stage.

    c. It is noted that respite periods will extend the length of demolition, excavation and construction works and may provide heavier loss of amenity compared to non-imposed respite.

    d. CFA/bored piers may not require respite periods and are subject to further investigations depending on any complaints or feedback from local commercial receivers, noting that most predictions outside out immediately adjacent receivers are within NML.

3. **Quiet Work Methods/Technologies:**

    a. The primary noise generating activity at the site will be the demolition and bulk excavation period. As much as practicable, use of commercially available and practical for the intended use quieter demolition and excavation methods is to be adopted.

    b. Demolition and excavation shall be conducted initially using excavator with bucket (quietest excavation method), then use of rock saws or rippers. Use of the loudest excavation equipment is used only when other options are not appropriate, i.e., when ripping and breaking.

    c. It is recommended to use rock saws near all boundaries to reduce vibration and noise levels.

    d. Materials handling/vehicles:

        i. Trucks and bobcats to use a non-tonal reversing beacon (subject to OH&S requirements) to minimise potential disturbance of neighbours.

        ii. Avoid careless dropping of construction materials into empty trucks.

        iii. Trucks, trailers and concrete trucks (if feasible) should turn off their engines during idling to reduce noise impacts (unless truck ignition needs to remain on during concrete pumping).

4. **Internal Works:** as much as is feasible, all work should be conducted with the façade intact to maximise noise mitigation. In the event that parts of the façade cannot be installed until a much later date, a 10-15mm plywood hoarding is to be installed over any opening to reasonably minimise noise breakout as much as feasible such as over windows. It is noted that there will still be areas of work where the façade cannot be enclosed, however most internal works will be shielded from nearby receivers.

5. **Complaints Handling:** In the event the procedures outlined in the below chart should be adopted.

6. **Site Induction:**

   a. A copy of the Noise Management Plan is to be available to contractors. The location of the Noise Management Plan should be advised in any site induction.

   b. Site induction should also detail the site contact in the event of noise complaint.

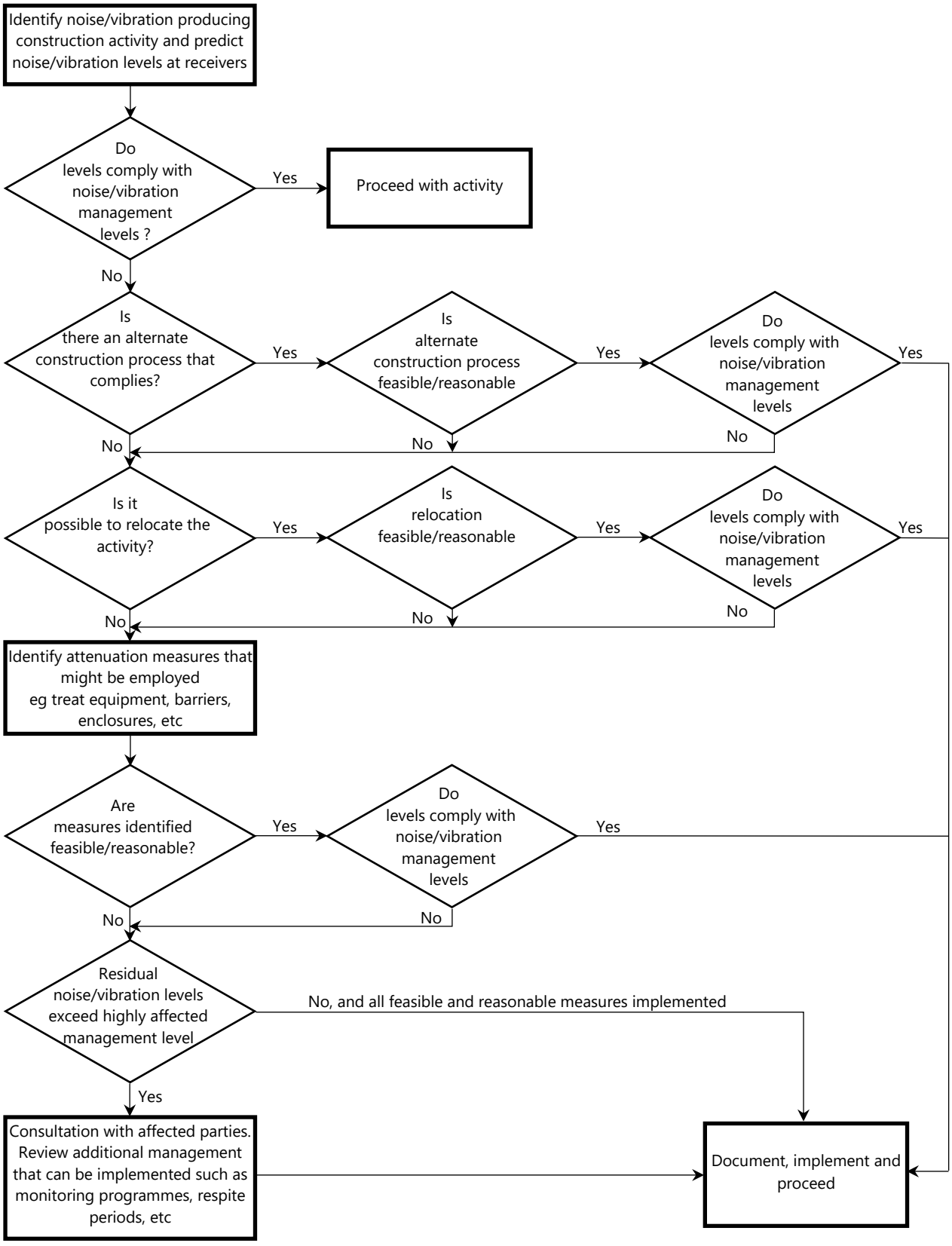
7. **Compliance Management Roles and responsibilities:**

   The overall roles and responsibilities for A W Edwards personnel are outlined in Appendix B which includes the implementation of the plan for the duration of construction. Furthermore, specific responsibilities for the implementation of the mitigation measures for the duration of construction are detailed in the Appendix B.

6.3.2 Recommended Monitoring

1. **Vibration monitoring:** Vibration monitoring is recommended during the in-ground/ excavation/ piling stage where high vibration generating equipment is utilised. Vibration monitoring is to be implemented at the external wall of the closest receiver. This localised vibration monitoring is to be conducted for a minimum period of 2 weeks to ensure the appropriate criteria is achieved.

2. **Noise monitoring:** Noise monitoring is recommended during the in-ground/ excavation/ piling stage where high noise generating equipment is utilised. Noise monitoring is to be implemented along the property boundary closest to the noise receiver. This localised noise monitoring is to be conducted for a minimum period of 2 weeks for documentation.



Noise and Vibration Management Flow Chart

7 CONCLUSION

This report assesses potential noise and vibration impacts from the construction of the proposed development at 2-8 Lanceley Place and 14 Campbell Street, Artarmon NSW. The plan uses the methodology contained in the EPA ICNG to:

- determine appropriate noise and vibration management levels
- identify those activities that are likely to impact nearby receivers.
- indicate the measures that are likely to be required to minimise impacts to the extent that is recommended in the **ICNG**.

The plan indicates that:

- There will be receivers around the site (as identified in the plan) that will be exposed to noise levels exceeding using ICNG management levels. Mitigation of these impacts has been recommended in the Plan.
- Vibration levels are not expected to exceed the amenity and damage rise vibration levels. Vibration monitoring is not recommended during construction stage.
- It is concluded that with the implementation of the mitigation and ongoing assessment recommended in Section 6, construction noise and vibration emissions from the proposed development will be minimised in accordance with the **ICNG**.

Please contact us should you have any further queries.

Yours faithfully,



Acoustic Logic Pty Ltd
Eric Mao

APPENDIX A CONSTRUCTION PLANT NOISE AND VIBRATION EMISSION LEVELS

This section provides the plant noise and vibration emission levels adopted in the plan.

A.1 NOISE

The following table presents typical sound power levels for construction plant used in this plan.

The following have been considered to establish typical plant A-weighted sound power levels:

- Transport for NSW Construction Noise and Vibration Strategy (April 2018).
- Previous measurements undertaken by Acoustic Logic.
- AS 2436-2010 "Guide to noise and vibration control on construction, demolition and maintenance sites (Appendix A).

The equipment sound power spectra are based on information in the DEFRA database, and when not available from that source, from manufacturer's data or from measured spectra taken by this office of similar machinery.

Items identified as having annoying characteristics have been penalised by adding 5dB to the levels in the Transport for NSW's noise data base.

The emission levels in the table assume that machinery operates continuously (i.e. 100% duty), which is not always be the case. For example, excavators may load trucks intermittently for 5 minutes in every 15-minute assessment period so their duty would be 33%. The duty correction used in the plan is indicated in the table.

For impact piling the sound power levels have been given in both L_{Aeq} and L_{Amax} descriptors as the City of Sydney uses the $L_{Amax,avg}$ to assess impact piling noise.

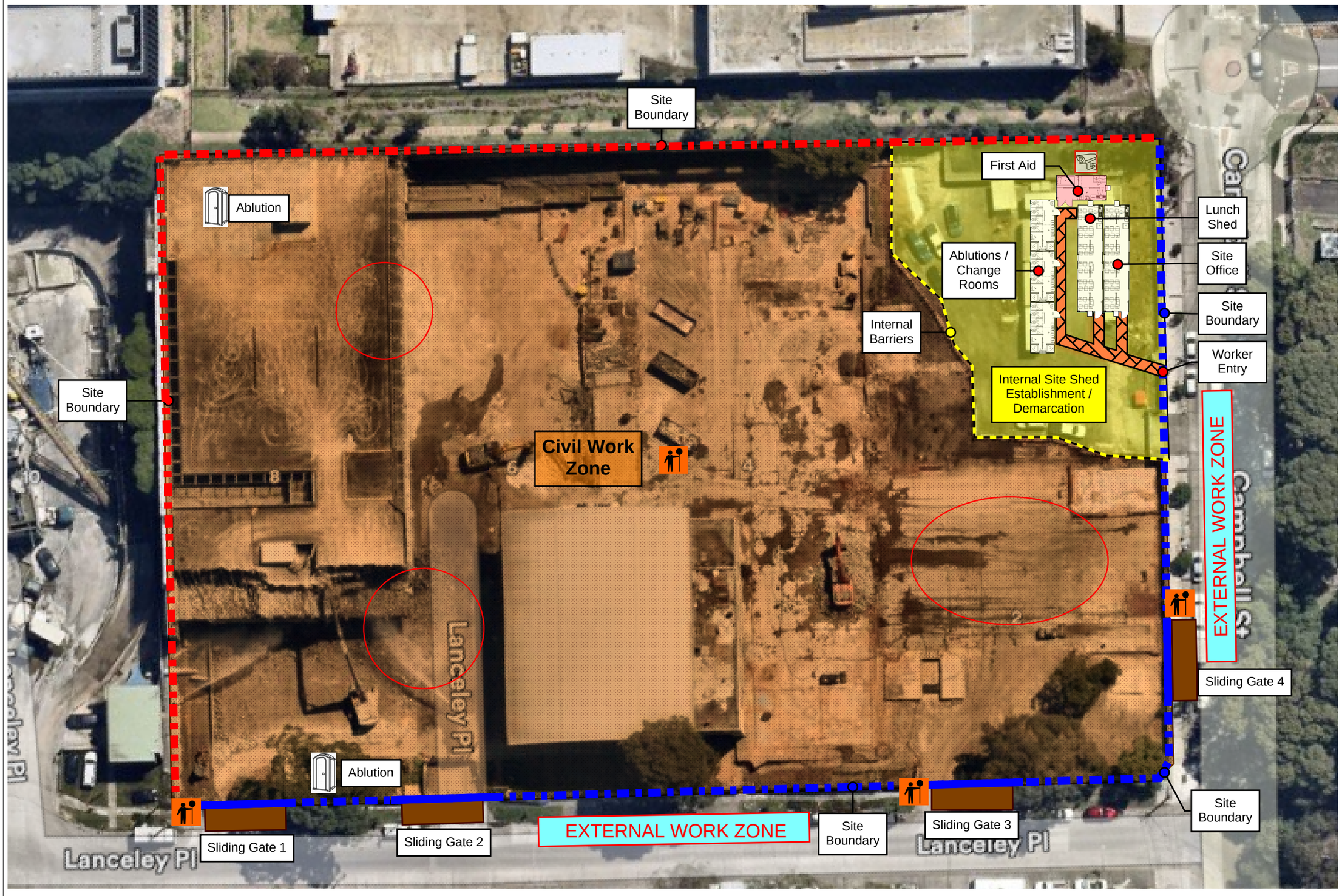
Construction, Demolition and Civil works Machinery Effective Sound Power Levels based on Continuous operation (100% duty)

Equipment	Approx. Size/ Weight/Model	Sound Power Level (dBA) 100% Duty (inc Penalties)	Duty	Unweighted Octave Band Sound Power Levels, dB (includes Applicable Penalties)							
				63	125	250	500	1000	2000	4000	8000
Crane - Fixed	-	113	50%	120	115	116	112	106	99	93	87
Crane - Mobile	-	113	25%	115	114	108	109	108	108	99	90
Elevated work platform	-	97	10%	108	106	92	93	90	89	88	79
Electrical Hand Tools	-	105	50%	86	80	81	89	99	106	102	102
Excavator - tracked	10 tonne	100	100%	104	100	99	97	95	92	86	81
Generator - diesel/petrol	6kW	103	100%	115	110	102	98	97	95	92	80
Piling Rig - Bored	-	112	100%	112	120	109	108	106	104	96	89
Pump - Concrete	-	109	100%	115	107	101	102	104	104	97	89
Truck - Concrete	-	109	100%	112	103	95	98	99	107	89	84
Truck - Medium rigid	20 tonne	103	10%	109	107	101	99	96	94	97	89

APPENDIX B COMPLIANCE MANAGEMENT ROLES AND RESPONSIBILITIES

Mitigation Measure & Implementation	Timing	Responsibility
The Construction Noise and Vibration Strategy would be implemented with the aim of achieving the noise management levels where feasible and reasonable. This would include the following example standard mitigation measures where feasible and reasonable: a) provision of noise barriers around each construction site, where possible; b) the coincidence of noisy plant working simultaneously close together would be avoided; c) offset distances between noisy plant and sensitive receivers would be increased; d) residential grade mufflers should be fitted to mobile plant, where possible; e) dampened rock hammers would be used; f) non-tonal reversing alarms would be fitted to all permanent mobile plant; g) high noise generating activities would be scheduled for less sensitive period considering the nearby receivers; and h) the layout of construction sites would consider opportunities to shield receivers from noise. This would also include carrying out the requirements in relation to construction noise and vibration monitoring	Preconstruction and Construction	Construction Manager Site Manager Site Supervisor
Where vibration levels are predicted to exceed the screening criteria, a more detailed assessment of the structure and attended vibration monitoring would be carried out to ensure vibration levels remain below appropriate limits for that structure.	Construction	Construction Manager Site Manager Site Supervisor
Feasible and reasonable measures would be implemented to minimise ground-borne noise where exceedances are predicted.	Construction	Construction Manager Site Manager Site Supervisor
Alternative construction techniques that minimise noise and vibration levels would be investigated and implemented where feasible and reasonable. This would include consideration of: a) Sequencing works to shield noise sensitive receivers by retaining building wall elements b) Locating load out areas away from the nearby noise sensitive receivers c) Providing respite periods for noise intensive works d) Installing sound barrier screening to scaffolding facing noise sensitive neighbours	Construction	Construction Manager Site Manager Site Supervisor

APPENDIX C SHED INITIAL SETUP (DATED 13/2/2025)



REV	DESCRIPTION	DATE

TRADE CONTRACTORS TO CHECK ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK OR PREPARING ANY SHOP DRAWINGS.

DO NOT SCALE DRAWINGS USE FIGURED DIMENSIONS ONLY.

CLIENT:

Goodman

AW EDWARDS
Level 12, 558 Pacific Highway
St Leonards NSW 2065
Tel: +61 2 9958 1474
Fax: +61 2 9958 2779

PROJECT:

SYD001
2-8 LANCELEY PLACE,
ARTARMON

TITLE:

SITE SHED INITIAL SETUP

NORTH	DRAWN: JS	APPROVED: NA
	PRINT DATE: 13.02.2025	SCALE: N.T.S

FILE:

PROJECT No:	REV. No:
001	A

DRAWING No:

SYD001-AWE-XXX-XXX-0101-XXXXX

APPENDIX D COMMUNITY CONSULTATION

	Address	Business	Receiver Code	Consultation	Consultation Process	Acceptance	Number	Email
1	86 Reserve Rd, Artarmon NSW 2064	Fulcrum3D Pty Ltd	I1	Yes	- Verbal Conversation dated 18/06 - Outlook email issued 18/06	- Verbal acceptance provided via phone call (no issues raised in relation to CNVMP) - Close out email issued 25/06	(02) 8381 4200	info@fulcrum3d.com
2	88 Reserve Rd, Artarmon NSW 2064	Boral Concrete	I1	Yes	- Verbal Conversation dated 18/06 - Outlook email issued 18/06	- Verbal acceptance provided via phone call (no issues raised in relation to CNVMP) - Close out email issued 25/06	(02) 9436 2601 0401 897 949	richard.bugeja@boral.com.au
3	2/6 Campbell St, Artarmon NSW 2064	Ausgid Depot and Yard	I1	Yes	Email	Yes	+61 407 264 177	rcox@ausgrid.com.au
4	1 Broadcast Way, Artarmon NSW 2064	Ausgrid Artarmon Depot	C1	Yes	Email	Yes	+61 407 264 177	rcox@ausgrid.com.au
5	3 Broadcast Way, Artarmon NSW 2064	Next DC	C1	Yes	- Verbal Conversation dated 19/06 - Outlook email issued 19/06	- Verbal acceptance provided via phone call (no issues raised in relation to CNVMP) - Close out email issued 25/06	13 63 98	nxtops@nextdc.com
6	5 Broadcast Way, Artarmon NSW 2064	Keppel Data Centre	C1	Yes	- Verbal Conversation dated 18/06 - Outlook email issued 18/06	- Verbal acceptance provided via phone call (no issues raised in relation to CNVMP) - Close out email issued 25/06	+61 450 184 660	ashok.kumar@iseekkdc.com
7	3-5 Campbell St, Artarmon NSW 2064	Artarmon Mazda service centre	C1	Yes	- Verbal Conversation dated 18/06 - Outlook email issued 18/06	- Verbal acceptance provided via phone call (no issues raised in relation to CNVMP) - Close out email issued 25/06	(02) 8318 0723	timg@artarmonmazda.com.au
8	1 Campbell St, Artarmon NSW 2064	The Car Kit Company/FleetSafe	C1	Yes	Email	Yes	1800 227 548	crogers@fleetsafe.com.au
9	8 Carlotta St, Artarmon NSW 2064	Wyvern Smash Repairs	C1	Yes	- Verbal Conversation dated 18/06 - Outlook email issued 18/06	- Verbal acceptance provided via phone call (no issues raised in relation to CNVMP) - Close out email issued 25/06	(02) 9901 3433	office@wyvernsmash.com.au
10	6 Carlotta St, Artarmon NSW 2064	Artarmon Deli	C1	Yes	- Verbal Conversation dated 19/06 - Outlook email issued 19/06	- Verbal acceptance provided via phone call (no issues raised in relation to CNVMP) - Close out email issued 25/06	0402 601 135	artarmon.deli@outlook.com
11	10 Lanceley Pl, Artarmon NSW 2064	Heidelberg Materials - Artarmon Concrete	I2	Yes	Email	Yes	+61 418 277 082	mike.etcell@heidelbergmaterials.com
12	12 Lanceley Pl, Artarmon NSW 2064	Cleanaway Artarmon Resource Recovery Centre	I2	Yes	- Verbal Conversation dated 19/06 - Outlook email issued 19/06	- Verbal acceptance provided via phone call (no issues raised in relation to CNVMP) - Close out email issued 25/06	(02) 8645 4304	cssydney@cleanaway.com.au sydneypostcollections@cleanaway.com.au artarmon.waybridge@cleanaway.com.au
13	2-8 Campbell St, Artarmon NSW 2064	Strata Property (23 Lots)	C2	Yes	- Verbal Conversation dated 19/06 - Outlook email issued 19/06	- Verbal acceptance provided via phone call (no issues raised in relation to CNVMP) - Close out email issued 26/06	02 9417 2366	cbasoria@stratapartners.com.au
14	82 Reserve Rd, Artarmon NSW 2064	Strata Property (17 Lots)	C2	Yes	- Verbal Conversation dated 19/06 - Outlook email issued 19/06	- Verbal acceptance provided via phone call (no issues raised in relation to CNVMP) - Close out email issued 26/06	02 9902 7100	Chris.Sibraa@bright-duggan.com.au
15	5 Lanceley Place, Artarmon NSW 2064	Strata Property (7 Lots)	C2	Yes	- Verbal Conversation dated 19/06 - Outlook email issued 19/06	- Verbal acceptance provided via phone call (no issues raised in relation to CNVMP) - Close out email issued 26/06	02 9902 7100	lauren.tracey@bright-duggan.com.au
16	78 Reserve Road, Artarmon NSW 2064	Strata Property (16 Lots)	C2	Yes	- Verbal Conversation dated 19/06 - Outlook email issued 19/06	- Verbal acceptance provided via phone call (no issues raised in relation to CNVMP) - Close out email issued 26/06	02 8969 3356	tarissal@jamesons.com.au
17	76 Reserve Road, Artarmon NSW 2064	Strata Property (29 Lots)	C2	Yes	- Verbal Conversation dated 19/06 - Outlook email issued 19/06	- Verbal acceptance provided via phone call (no issues raised in relation to CNVMP) - Close out email issued 26/06		

STALEY, Jack

From: STALEY, Jack
Sent: Wednesday, 25 June 2025 1:19 PM
To: 'info@fulcrum3d.com'
Cc: ARFANIS, Nathan
Subject: RE: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)
Attachments: 20250515EMA_R5_Construction_Noise_and_Vibration_Management_Plan.pdf

Hi,

Thanks for your time over the phone.

As discussed, Fulcrum 3D was consulted last Wednesday 18th June 2025 via phone call and email (refer below) regarding the attached Construction Noise & Vibration Management Plan (CNVMP). Verbal acceptance of the attached CNVMP via phone call was provided today (Wednesday 25th June 2025) with no issues/comments raised in relation to the attached CNVMP by Fulcrum 3D.

The attached email has been provided to close out this consultation. Thanks.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

AW EDWARDS
BUILDING FOR LIFE



A W Edwards acknowledges Traditional Owners of Country throughout Australia and recognises the continuing connection to lands, waters and communities. We pay respect to Aboriginal and Torres Strait Islander cultures and to Elders past and present.

"COMMUNITY" Artwork by Raechel Saunders

From: STALEY, Jack
Sent: Wednesday, 18 June 2025 4:40 PM
To: info@fulcrum3d.com
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>
Subject: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Hi,

Thanks for your time over the phone.

As discussed, the attached Construction Noise and Vibration Management Plan (CNVMP) has been developed for management of noise and vibration to nearby receivers of the proposed development at 2-8 Lanceley Place, Artarmon NSW 2064.

Management controls can be found in Section 6 of the management plan. **Please advise acceptance (consultation) of the attached CNVMP by COB Wednesday 25th June 2025. If no response is received, we will deem this as acceptance (consultation) of the attached CNVMP. Thanks!**

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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"COMMUNITY" Artwork by Raechel Saunders

STALEY, Jack

From: STALEY, Jack
Sent: Wednesday, 25 June 2025 1:37 PM
To: richard.bugeja@boral.com.au
Cc: ARFANIS, Nathan
Subject: RE: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)
Attachments: 20250515EMA_R5_Construction_Noise_and_Vibration_Management_Plan.pdf

Hi Richard,

Thanks for your time over the phone.

As discussed, Boral Concrete (88 Reserve Rd, Artarmon NSW 2064) was consulted last Wednesday 18th June 2025 via phone call and email (refer below) regarding the attached Construction Noise & Vibration Management Plan (CNVMP). Verbal acceptance of the attached CNVMP via phone call was provided today (Wednesday 25th June 2025) with no issues/comments raised in relation to the attached CNVMP by Boral Concrete Artarmon.

The attached email has been provided to close out this consultation.

Feel free to reach out if you have any further queries or concerns. Thanks.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
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E: jstaley@awedwards.com.au
www.awedwards.com.au

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"COMMUNITY" Artwork by Raechel Saunders

From: STALEY, Jack
Sent: Wednesday, 18 June 2025 4:40 PM
To: richard.bugeja@boral.com.au
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>
Subject: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Hi Richard,

As discussed, the attached Construction Noise and Vibration Management Plan (CNVMP) has been developed for management of noise and vibration to nearby receivers of the proposed development at 2-8 Lanceley Place, Artarmon NSW 2064.

Management controls can be found in Section 6 of the management plan. **Please advise acceptance (consultation) of the attached CNVMP by COB Wednesday 25th June 2025. If no response is received, we will deem this as acceptance (consultation) of the attached CNVMP. Thanks!**

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
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STALEY, Jack

From: Royce Cox <rcox@ausgrid.com.au>
Sent: Monday, 26 May 2025 10:44 AM
To: STALEY, Jack; Timothy Dodd
Cc: ARFANIS, Nathan; BAKOULIS, Jonathan
Subject: Re: Construction Noise and Vibration Management Plan Consultation - Ausgrid

Hello Jack

Accepted.

Thanks.

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From: STALEY, Jack <jstaley@awedwards.com.au>
Sent: Thursday, May 22, 2025 11:17:31 AM
To: Timothy Dodd <timothy.dodd@ausgrid.com.au>; Royce Cox <rcox@ausgrid.com.au>
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>; BAKOULIS, Jonathan <jbakoulis@awedwards.com.au>
Subject: RE: Construction Noise and Vibration Management Plan Consultation - Ausgrid

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Hi Timothy/Royce,

Can you please confirm that the attached CNVMP has now been accepted by Ausgrid. Thanks.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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From: Timothy Dodd <timothy.dodd@ausgrid.com.au>
Sent: Tuesday, 20 May 2025 3:00 PM
To: Royce Cox <rcox@ausgrid.com.au>
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>; BAKOULIS, Jonathan <jbakoulis@awedwards.com.au>; STALEY, Jack <jstaley@awedwards.com.au>
Subject: RE: Construction Noise and Vibration Management Plan Consultation - Ausgrid

Hi Royce,

I don't see any issues. I have forwarded it onto Jarrod for review as well

Regards,

Timothy Dodd
Tenant & Accommodation Manager | Legal Governance & Property

Ausgrid Connecting communities, empowering lives

0428 343 692
Level 18, 24-28 Campbell Street, Sydney, NSW, 2000
timothy.dodd@ausgrid.com.au

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From: Royce Cox <rcox@ausgrid.com.au>
Sent: Tuesday, 20 May 2025 1:07 PM
To: Timothy Dodd <timothy.dodd@ausgrid.com.au>
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>; BAKOULIS, Jonathan <jbakoulis@awedwards.com.au>; STALEY, Jack <jstaley@awedwards.com.au>
Subject: RE: Construction Noise and Vibration Management Plan Consultation - Ausgrid

Hello Tim

Please see below from Jack.

From what I can understand this will go through the Department of Planning and I am happy to accept.

Please advise by Thursday afternoon if there are any issues.

Thanks

Royce Cox
Field Supervisor | Field Services - *the Service Provider of Choice*

Ausgrid Connecting communities, empowering lives

02 94105261 / 0407264177
1 Broadcast Way, Artarmon NSW 2064
rcox@ausgrid.com.au

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From: STALEY, Jack <jstaley@awedwards.com.au>
Sent: Friday, 16 May 2025 1:13 PM
To: Royce Cox <rcox@ausgrid.com.au>
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>; BAKOULIS, Jonathan <jbakoulis@awedwards.com.au>
Subject: Construction Noise and Vibration Management Plan Consultation - Ausgrid

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Hi Royce,

Please note that I have attached the latest Construction Noise and Vibration Management Plan pertaining to the 2-8 Lanceley Place, Artarmon Data Centre Development.

We have developed the CNVMP for management of noise and vibration to nearby receivers. Management controls can be found in Section 6 of the management plan.

Ausgrid Properties located at 1 Broadcast Way and Campbell St Yard are both noted as nearby receivers.

Happy for you to reach out if you have any queries or concerns regarding the attached.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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STALEY, Jack

From: STALEY, Jack
Sent: Wednesday, 25 June 2025 1:46 PM
To: nxtops@nextdc.com
Cc: ARFANIS, Nathan
Subject: RE: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)
Attachments: 20250515EMA_R5_Construction_Noise_and_Vibration_Management_Plan.pdf

Hi,

Thanks for your time over the phone.

As discussed, Next DC S6 (3 Broadcast Way, Artarmon NSW 2064) was consulted last Thursday 19th June 2025 via phone call and email (refer below) regarding the attached Construction Noise & Vibration Management Plan (CNVMP). Verbal acceptance of the attached CNVMP via phone call was provided today (Wednesday 25th June 2025) with no issues/comments raised in relation to the attached CNVMP by Next DC S6.

The attached email has been provided to close out this consultation.

Feel free to reach out if you have any further queries or concerns. Thanks.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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"COMMUNITY" Artwork by Raechel Saunders

From: STALEY, Jack
Sent: Thursday, 19 June 2025 10:54 AM
To: nxtops@nextdc.com
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>
Subject: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Hi,

Thanks for your time over the phone.

As discussed, the attached Construction Noise and Vibration Management Plan (CNVMP) has been developed for management of noise and vibration to nearby receivers of the proposed development at 2-8 Lanceley Place, Artarmon NSW 2064.

Management controls can be found in Section 6 of the management plan. **Please advise acceptance (consultation) of the attached CNVMP by COB Wednesday 25th June 2025. If no response is received, we will deem this as acceptance (consultation) of the attached CNVMP. Thanks!**

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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"COMMUNITY" Artwork by Raechel Saunders

STALEY, Jack

From: STALEY, Jack
Sent: Wednesday, 25 June 2025 1:54 PM
To: Ashok Kumar
Cc: ARFANIS, Nathan
Subject: RE: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)
Attachments: 20250515EMA_R5_Construction_Noise_and_Vibration_Management_Plan.pdf

Hi Ashok,

Thanks for your time over the phone.

As discussed, Keppel Data Centre (5 Broadcast Way, Artarmon NSW 2064) was consulted last Wednesday 18th June 2025 via email (refer below) regarding the attached Construction Noise & Vibration Management Plan (CNVMP). Verbal acceptance of the attached CNVMP via phone call was provided today (Wednesday 25th June 2025) with no issues/comments raised in relation to the attached CNVMP by Keppel Data Centre, Artarmon.

The attached email has been provided to close out this consultation.

Feel free to reach out if you have any further queries or concerns. Thanks.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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"COMMUNITY" Artwork by Raechel Saunders

From: STALEY, Jack
Sent: Wednesday, 18 June 2025 4:57 PM
To: Ashok Kumar <ashok.kumar@iseekkdc.com>
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>
Subject: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Hi Ashok,

The attached Construction Noise and Vibration Management Plan (CNVMP) has been developed for management of noise and vibration to nearby receivers of the proposed development at 2-8 Lanceley Place, Artarmon NSW 2064.

Management controls can be found in Section 6 of the management plan. **Please advise acceptance (consultation) of the attached CNVMP by COB Wednesday 25th June 2025. If no response is received, we will deem this as acceptance (consultation) of the attached CNVMP. Thanks!**

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
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"COMMUNITY" Artwork by Raechel Saunders

STALEY, Jack

From: STALEY, Jack
Sent: Wednesday, 25 June 2025 3:31 PM
To: 'timg@artarmonmazda.com.au'
Cc: ARFANIS, Nathan
Subject: RE: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)
Attachments: 20250515EMA_R5_Construction_Noise_and_Vibration_Management_Plan.pdf

Hi Tim,

Thanks for your time over the phone.

As discussed, Artarmon Mazda service centre (3-5 Campbell St, Artarmon NSW 2064) was consulted last Wednesday 18th June 2025 via phone call and email (refer below) regarding the attached Construction Noise & Vibration Management Plan (CNVMP). Verbal acceptance of the attached CNVMP via phone call was provided today (Wednesday 25th June 2025) with no issues/comments raised in relation to the attached CNVMP by Artarmon Mazda service centre.

The attached email has been provided to close out this consultation.

Feel free to reach out if you have any further queries or concerns. Thanks.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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From: STALEY, Jack
Sent: Wednesday, 18 June 2025 4:49 PM
To: timg@artarmonmazda.com.au
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>
Subject: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Hi Tim,

Thanks for your time over the phone.

As discussed, the attached Construction Noise and Vibration Management Plan (CNVMP) has been developed for management of noise and vibration to nearby receivers of the proposed development at 2-8 Lanceley Place, Artarmon NSW 2064.

Management controls can be found in Section 6 of the management plan. **Please advise acceptance (consultation) of the attached CNVMP by COB Wednesday 25th June 2025. If no response is received, we will deem this as acceptance (consultation) of the attached CNVMP. Thanks!**

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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"COMMUNITY" Artwork by Raechel Saunders

STALEY, Jack

From: Clive Rogers <crogers@fleetsafe.com.au>
Sent: Wednesday, 18 June 2025 5:30 PM
To: STALEY, Jack; Ian Kalmek
Cc: ARFANIS, Nathan
Subject: Re: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

received and accepted.

Clive Rogers

crogers@fleetsafe.com.au
1800 227 548
+ 61 (0)416 194 557
1A Campbell St
Artarmon
NSW 2064
Australia
fleetsafe.com.au

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On Wed, 18 Jun 2025 at 16:49, STALEY, Jack <jstaley@awedwards.com.au> wrote:

> Hi Clive,
>
> Thanks for your time over the phone.
>
> As discussed, the attached Construction Noise and Vibration Management Plan (CNVMP) has been developed for management of noise and vibration to nearby receivers of the proposed development at 2-8 Lanceley Place, Artarmon NSW 2064.
>
> Management controls can be found in Section 6 of the management plan. **Please advise acceptance (consultation) of the attached CNVMP by COB Wednesday 25th June 2025. If no response is received, we will deem this as acceptance (consultation) of the attached CNVMP. Thanks!**

Kind Regards,

Jack Staley

TRADE COORDINATOR

A W Edwards Pty Limited

Level 12, 558 Pacific Highway

St Leonards NSW 2065

P: 02 8036 7200 M: 0451 632 045

E: jstaley@awedwards.com.au

www.awedwards.com.au

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STALEY, Jack

From: STALEY, Jack
Sent: Wednesday, 25 June 2025 2:54 PM
To: 'office@wyvernsmash.com.au'
Cc: ARFANIS, Nathan
Subject: RE: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)
Attachments: 20250515EMA_R5_Construction_Noise_and_Vibration_Management_Plan.pdf

Hi,

Thanks for your time over the phone.

As discussed, Wyvern Smash Repairs (8 Carlotta St, Artarmon NSW 2064) was consulted last Wednesday 18th June 2025 via phone call and email (refer below) regarding the attached Construction Noise & Vibration Management Plan (CNVMP). Verbal acceptance of the attached CNVMP via phone call was provided today (Wednesday 25th June 2025) with no issues/comments raised in relation to the attached CNVMP by Wyvern Smash Repairs.

The attached email has been provided to close out this consultation.

Feel free to reach out if you have any further queries or concerns. Thanks.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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"COMMUNITY" Artwork by Raechel Saunders

From: STALEY, Jack
Sent: Wednesday, 18 June 2025 4:50 PM
To: office@wyvernsmash.com.au
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>
Subject: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Hi,

Thanks for your time over the phone.

As discussed, the attached Construction Noise and Vibration Management Plan (CNVMP) has been developed for management of noise and vibration to nearby receivers of the proposed development at 2-8 Lanceley Place, Artarmon NSW 2064.

Management controls can be found in Section 6 of the management plan. **Please advise acceptance (consultation) of the attached CNVMP by COB Wednesday 25th June 2025. If no response is received, we will deem this as acceptance (consultation) of the attached CNVMP. Thanks!**

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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"COMMUNITY" Artwork by Raechel Saunders

STALEY, Jack

From: Catherine Chan <Artarmon.Deli@outlook.com>
Sent: Wednesday, 25 June 2025 3:50 PM
To: STALEY, Jack
Subject: Re: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Jack,

Thank you for your email.

We have no issues and is accepting the noise and vibration plan as per below.

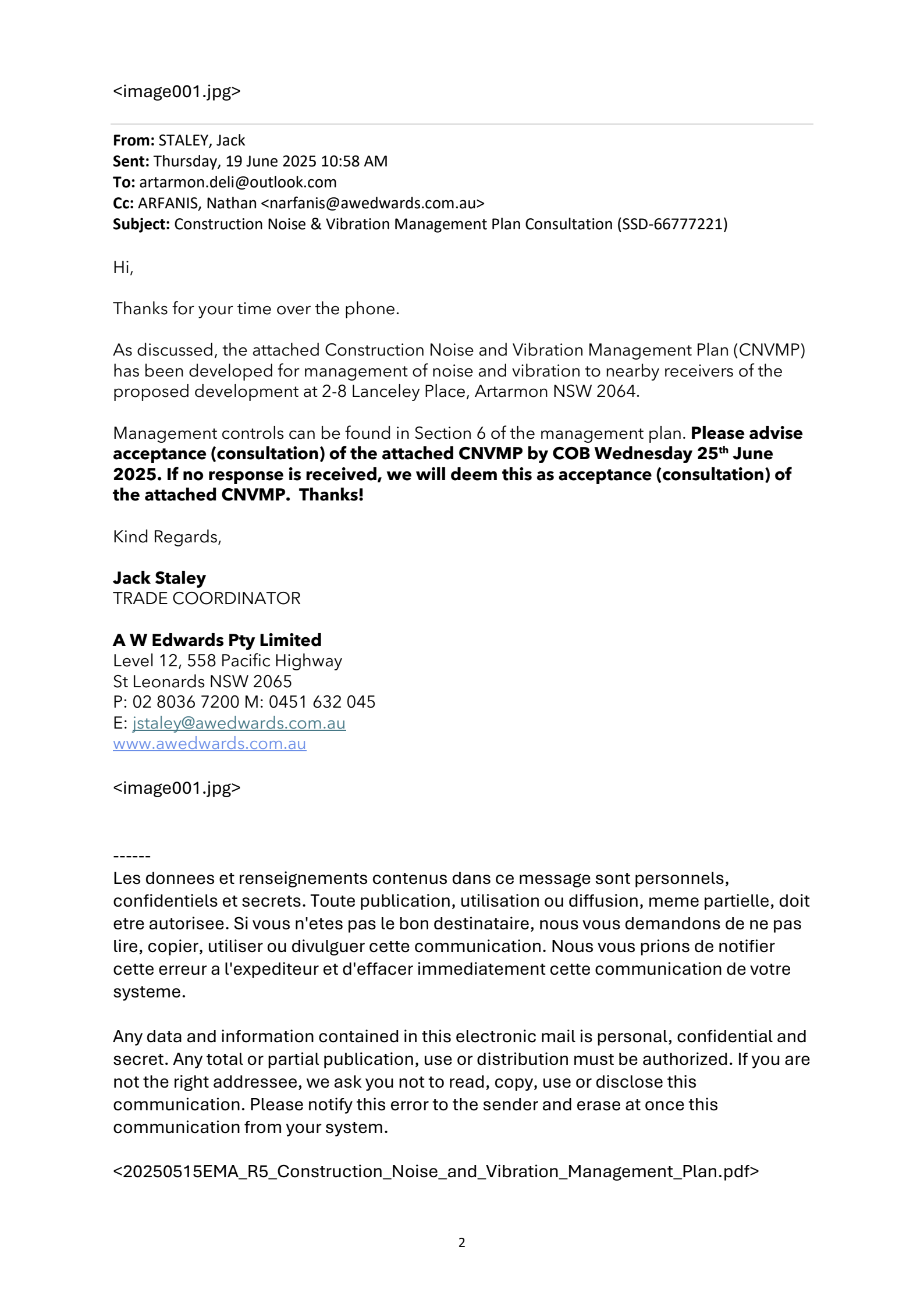
Thank you for reaching out.

King regards,

Cath

Sent from my iPhone

> On 25 Jun 2025, at 14:18, STALEY, Jack <jstaley@awedwards.com.au> wrote:
>
> Hi,
>
> Thanks for your time over the phone.
>
> As discussed, Artarmon Deli (6 Carlotta St, Artarmon NSW 2064) was consulted last Thursday 19th June 2025 via phone call and email (refer below) regarding the attached Construction Noise & Vibration Management Plan (CNVMP). Verbal acceptance of the attached CNVMP via phone call was provided today (Wednesday 25th June 2025) with no issues/comments raised in relation to the attached CNVMP by Artarmon Deli.
>
> The attached email has been provided to close out this consultation.
>
> Feel free to reach out if you have any further queries or concerns. Thanks.
>
> Kind Regards,
>
> **Jack Staley**
> TRADE COORDINATOR
>
> **A W Edwards Pty Limited**
> Level 12, 558 Pacific Highway
> St Leonards NSW 2065
> P: 02 8036 7200 M: 0451 632 045
> E: jstaley@awedwards.com.au
> www.awedwards.com.au



From: STALEY, Jack
Sent: Thursday, 19 June 2025 10:58 AM
To: artarmon.deli@outlook.com
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>
Subject: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Hi,

Thanks for your time over the phone.

As discussed, the attached Construction Noise and Vibration Management Plan (CNVMP) has been developed for management of noise and vibration to nearby receivers of the proposed development at 2-8 Lanceley Place, Artarmon NSW 2064.

Management controls can be found in Section 6 of the management plan. **Please advise acceptance (consultation) of the attached CNVMP by COB Wednesday 25th June 2025. If no response is received, we will deem this as acceptance (consultation) of the attached CNVMP. Thanks!**

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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<20250515EMA_R5_Construction_Noise_and_Vibration_Management_Plan.pdf>

STALEY, Jack

From: Driver, Andrew (Parramatta) AUS <andrew.driver@heidelbergmaterials.com>
Sent: Monday, 26 May 2025 8:33 AM
To: Etcell, Mike (Brookvale) AUS; STALEY, Jack
Cc: ARFANIS, Nathan; BAKOULIS, Jonathan
Subject: RE: Construction Noise and Vibration Management Plan Consultation - Heidelberg Materials

Hi Jack,

Further to my email below Heidelberg Materials considers the noise management plan acceptable. Should circumstances during construction change then we would appreciate notice and further consultation.

Regards,

Andrew Driver
Regional Development Manager

T +61 2 9354 2644
M +61 417 234 774
andrew.driver@heidelbergmaterials.com



www.heidelbergmaterials.com.au

From: Driver, Andrew (Parramatta) AUS
Sent: Friday, May 23, 2025 1:07 PM
To: Etcell, Mike (Brookvale) AUS <mike.etcell@heidelbergmaterials.com>; STALEY, Jack <jstaley@awedwards.com.au>
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>; BAKOULIS, Jonathan <jbakoulis@awedwards.com.au>
Subject: RE: Construction Noise and Vibration Management Plan Consultation - Heidelberg Materials

Hi Mike,

No real issues other than predictions of minor exceedances impacting I2 (the batch plant). Table 2- *Hours of Work*, incorrectly includes 'Operation- 24/7', which should not be included in a CNVMP.

Regards,

Andrew Driver
Regional Development Manager

T +61 2 9354 2644

M +61 417 234 774
andrew.driver@heidelbergmaterials.com



www.heidelbergmaterials.com.au

From: Etcell, Mike (Brookvale) AUS <mike.etcell@heidelbergmaterials.com>
Sent: Monday, May 19, 2025 10:47 AM
To: STALEY, Jack <jstaley@awedwards.com.au>
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>; BAKOULIS, Jonathan <jbakoulis@awedwards.com.au>; Driver, Andrew (Parramatta) AUS <andrew.driver@heidelbergmaterials.com>
Subject: RE: Construction Noise and Vibration Management Plan Consultation - Heidelberg Materials

Hi Jack,
I would Just like to confirm that I have received your Construction Noise and Vibration plan that you sent through.
I have forward this on to our Development manager Andrew, and he will attempt to review it this week and get back to you.
Unfortunately, he will not be able to get to it by the end of today.

Thanks

Mike Etcell
Concrete Plant Manager
Heidelberg Materials Australia

T +61 418 277 082
M +61 418 277 082

From: STALEY, Jack <jstaley@awedwards.com.au>
Sent: Friday, 16 May 2025 1:13 PM
To: Etcell, Mike (Brookvale) AUS <mike.etcell@heidelbergmaterials.com>
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>; BAKOULIS, Jonathan <jbakoulis@awedwards.com.au>
Subject: Construction Noise and Vibration Management Plan Consultation - Heidelberg Materials

IRONSCALES couldn't recognize this email as this is the first time you received an email from this sender jstaley@awedwards.com.au

Hi Mike,

Please note that I have attached the latest Construction Noise and Vibration Management Plan pertaining to the 2-8 Lanceley Place, Artarmon Data Centre Development.

We have developed the CNVMP for management of noise and vibration to nearby receivers. Management controls can be found in Section 6 of the management plan.

Heidelberg Materials – Artarmon Concrete property located at 10 Lanceley Place has been noted as a nearby receiver.

Happy for you to reach out if you have any queries or concerns regarding the attached.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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"COMMUNITY" Artwork by Raechel Saunders

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STALEY, Jack

From: STALEY, Jack
Sent: Wednesday, 25 June 2025 2:58 PM
To: sydneypostcollections@cleanaway.com.au; cssydney@cleanaway.com.au; artarmon.weighbridge@cleanaway.com.au
Cc: ARFANIS, Nathan
Subject: RE: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)
Attachments: 20250515EMA_R5_Construction_Noise_and_Vibration_Management_Plan.pdf

Hi,

Thanks for your time over the phone.

As discussed, Cleanaway Artarmon Resource Recovery Centre (12 Lanceley Pl, Artarmon NSW 2064) was consulted last Thursday 19th June 2025 via phone call and email (refer below) regarding the attached Construction Noise & Vibration Management Plan (CNVMP). Verbal acceptance of the attached CNVMP via phone call was provided today (Wednesday 25th June 2025) with no issues/comments raised in relation to the attached CNVMP by Cleanaway Artarmon Resource Recovery Centre.

The attached email has been provided to close out this consultation.

Feel free to reach out if you have any further queries or concerns. Thanks.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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"COMMUNITY" Artwork by Raechel Saunders

From: STALEY, Jack
Sent: Thursday, 19 June 2025 11:04 AM
To: artarmon.waybridge@cleanaway.com.au; sydneypostcollections@cleanaway.com.au; cssydney@cleanaway.com.au
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>
Subject: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Hi,

Thanks for your time over the phone.

As discussed, the attached Construction Noise and Vibration Management Plan (CNVMP) has been developed for management of noise and vibration to nearby receivers of the proposed development at 2-8 Lanceley Place, Artarmon NSW 2064.

Management controls can be found in Section 6 of the management plan. **Please advise acceptance (consultation) of the attached CNVMP by COB Wednesday 25th June 2025. If no response is received, we will deem this as acceptance (consultation) of the attached CNVMP. Thanks!**

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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"COMMUNITY" Artwork by Raechel Saunders

STALEY, Jack

From: STALEY, Jack
Sent: Thursday, 26 June 2025 2:27 PM
To: 'Claudia Basoria'
Cc: ARFANIS, Nathan
Subject: RE: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)
Attachments: 20250515EMA_R5_Construction_Noise_and_Vibration_Management_Plan.pdf

Hi Claudia,

Thanks for your time over the phone.

As discussed, Strata Properties located at 2-8 Campbell St, Artarmon were consulted last Thursday 19th June 2025 via phone call and email (refer below) regarding the attached Construction Noise & Vibration Management Plan (CNVMP). Verbal acceptance of the attached CNVMP via phone call was provided today (Thursday 26th June 2025) indicating no issues/comments raised in relation to the attached CNVMP by Strata Properties located at 2-8 Campbell St, Artarmon.

The attached email has been provided to close out this consultation.

Feel free to reach out if you have any further queries or concerns. Thanks.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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"COMMUNITY" Artwork by Raechel Saunders

From: Claudia Basoria <cbasoria@stratapartners.com.au>
Sent: Tuesday, 24 June 2025 2:21 PM
To: STALEY, Jack <jstaley@awedwards.com.au>
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>
Subject: RE: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Hi Jack ,

Thank you , I have passed information on to the Committee.

Kindest regards,

Claudia Basoria | Licensed Strata Manager
Office 02 9417 2366 | F 02 9417 7196
Level 1, 283 Penshurst Street, Willoughby North NSW 2068
cbasoria@stratapartners.com.au | www.stratapartners.com.au

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From: STALEY, Jack <jstaley@awedwards.com.au>
Sent: Wednesday, 18 June 2025 4:42 PM
To: Claudia Basoria <cbasoria@stratapartners.com.au>
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>
Subject: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Hi Claudia,

As discussed, to satisfy Conditions B11 and B11 (b) of SSD-66777221 we are required to notify (consult) surrounding affected owners of the Construction Noise and Vibration Management Plan (CNVMP) for the proposed data centre development located at 2-8 Lanceley Place, Artarmon.

If you could please advise all tenants located at **2-8 Campbell St, Artarmon** that:

'The attached Construction Noise and Vibration Management Plan (CNVMP) has been developed for management of noise and vibration to nearby receivers of the proposed development at 2-8 Lanceley Place, Artarmon NSW 2064.

Management controls can be found in Section 6 of the management plan. Please advise acceptance (consultation) of the attached CNVMP by COB Wednesday 25th June 2025. If no response is received, we will deem this as acceptance (consultation) of the attached CNVMP. Thanks!'

B11	The Applicant must prepare a Construction Noise and Vibration Management Plan for the development to the satisfaction of the Planning Secretary. The Plan must form part of a CEMP in accordance with condition C2 and must:
B11(b)	be prepared in consultation with Ausgrid and other surrounding affected owners.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065

P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
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STALEY, Jack

From: Chris Sibraa <chris.sibraa@bright-duggan.com.au>
Sent: Thursday, 26 June 2025 5:13 PM
To: STALEY, Jack
Subject: RE: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Thanks Jack and noted

Chris Sibraa
Strata Manager

02 9902 7100 | Chris.Sibraa@bright-duggan.com.au | www.bright-duggan.com.au
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Strata Management

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From: STALEY, Jack <jstaley@awedwards.com.au>
Sent: Thursday, 26 June 2025 2:27 PM
To: Chris Sibraa <chris.sibraa@bright-duggan.com.au>
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>
Subject: RE: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Hi Chris,

Thanks for your time over the phone.

As discussed, Strata Properties located at 82 Reserve Rd, Artarmon were consulted last Thursday 19th June 2025 via phone call and email (refer below) regarding the attached Construction Noise & Vibration Management Plan (CNVMP). Verbal acceptance of the attached CNVMP via phone call was provided today (Thursday 26th June 2025) indicating no issues/comments raised in relation to the attached CNVMP by Strata Properties located at 82 Reserve Rd, Artarmon.

The attached email has been provided to close out this consultation.

Feel free to reach out if you have any further queries or concerns. Thanks.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway

St Leonards NSW 2065
P: 02 8036 7200 M: 0451 632 045
E: jstaley@awedwards.com.au
www.awedwards.com.au

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"COMMUNITY" Artwork by Raechel Saunders

From: STALEY, Jack
Sent: Thursday, 19 June 2025 1:39 PM
To: Chris Sibraa <chris.sibraa@bright-duggan.com.au>
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>
Subject: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Hi Chris,

As discussed, to satisfy Conditions B11 and B11 (b) of SSD-66777221 we are required to notify (consult) surrounding affected owners of the Construction Noise and Vibration Management Plan (CNVMP) for the proposed data centre development located at 2-8 Lanceley Place, Artarmon.

If you could please advise all tenants located at **82 Reserve Rd, Artarmon** that:

'The attached Construction Noise and Vibration Management Plan (CNVMP) has been developed for management of noise and vibration to nearby receivers of the proposed development at 2-8 Lanceley Place, Artarmon NSW 2064.

Management controls can be found in Section 6 of the management plan. Please advise acceptance (consultation) of the attached CNVMP by COB Wednesday 25th June 2025. If no response is received, we will deem this as acceptance (consultation) of the attached CNVMP. Thanks!'

B11	The Applicant must prepare a Construction Noise and Vibration Management Plan for the development to the satisfaction of the Planning Secretary. The Plan must form part of a CEMP in accordance with condition C2 and must:
B11(b)	be prepared in consultation with Ausgrid and other surrounding affected owners.

Kind Regards,

Jack Staley
TRADE COORDINATOR

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STALEY, Jack

From: STALEY, Jack
Sent: Thursday, 26 June 2025 2:27 PM
To: 'Lauren Tracey'
Cc: ARFANIS, Nathan; Elizabeth Moustakas
Subject: RE: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)
Attachments: 20250515EMA_R5_Construction_Noise_and_Vibration_Management_Plan.pdf

Hi Lauren,

Thanks for your time over the phone.

As discussed, Strata Properties located at 5 Lanceley Place, Artarmon were consulted last Thursday 19th June 2025 via phone call and email (refer below) regarding the attached Construction Noise & Vibration Management Plan (CNVMP). Verbal acceptance of the attached CNVMP via phone call was provided today (Thursday 26th June 2025) indicating no issues/comments raised in relation to the attached CNVMP by Strata Properties located at 5 Lanceley Place, Artarmon.

The attached email has been provided to close out this consultation.

Feel free to reach out if you have any further queries or concerns. Thanks.

Kind Regards,

Jack Staley
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From: Lauren Tracey <lauren.tracey@bright-duggan.com.au>
Sent: Thursday, 19 June 2025 2:55 PM
To: STALEY, Jack <jstaley@awedwards.com.au>
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>; Elizabeth Moustakas <Elizabeth.Moustakas@bright-duggan.com.au>; Lauren Tracey <lauren.tracey@bright-duggan.com.au>
Subject: RE: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Thanks Jack. We will circulate to the residents.

Lauren Tracey
Senior Strata Manager

02 9902 7100 | lauren.tracey@bright-duggan.com.au | www.bright-duggan.com.au
For All After Hour Repairs & Emergencies, Call 1300 092 863

Bright&Duggan
Strata Management

PROFESSIONAL STRATA MANAGER
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Click here to read our email policy

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From: STALEY, Jack <jstaley@awedwards.com.au>
Sent: Thursday, 19 June 2025 2:04 PM
To: Lauren Tracey <lauren.tracey@bright-duggan.com.au>
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>
Subject: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Hi Lauren,

As discussed, to satisfy Conditions B11 and B11 (b) of SSD-66777221 we are required to notify (consult) surrounding affected owners of the Construction Noise and Vibration Management Plan (CNVMP) for the proposed data centre development located at 2-8 Lanceley Place, Artarmon.

If you could please advise all tenants located at **5 Lanceley Place, Artarmon** that:

'The attached Construction Noise and Vibration Management Plan (CNVMP) has been developed for management of noise and vibration to nearby receivers of the proposed development at 2-8 Lanceley Place, Artarmon NSW 2064.

Management controls can be found in Section 6 of the management plan. Please advise acceptance (consultation) of the attached CNVMP by COB Wednesday 25th June 2025. If no response is received, we will deem this as acceptance (consultation) of the attached CNVMP. Thanks!'

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B11(b)	be prepared in consultation with Ausgrid and other surrounding affected owners.

Kind Regards,

Jack Staley
TRADE COORDINATOR

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St Leonards NSW 2065

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STALEY, Jack

From: STALEY, Jack
Sent: Thursday, 26 June 2025 2:27 PM
To: Larissa Lane
Cc: ARFANIS, Nathan
Subject: RE: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)
Attachments: 20250515EMA_R5_Construction_Noise_and_Vibration_Management_Plan.pdf

Hi Larissa,

Thanks for your time over the phone.

As discussed, Strata Properties located at 78 Reserve Road, Artarmon & 76 Reserve Road, Artarmon were consulted last Wednesday 18th June 2025 via phone call and email (refer below) regarding the attached Construction Noise & Vibration Management Plan (CNVMP). Verbal acceptance of the attached CNVMP via phone call was provided today (Thursday 26th June 2025) indicating no issues/comments raised in relation to the attached CNVMP by Strata Properties located at 78 Reserve Road, Artarmon & 76 Reserve Road, Artarmon.

The attached email has been provided to close out this consultation.

Feel free to reach out if you have any further queries or concerns. Thanks.

Kind Regards,

Jack Staley
TRADE COORDINATOR

A W Edwards Pty Limited
Level 12, 558 Pacific Highway
St Leonards NSW 2065
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"COMMUNITY" Artwork by Raechel Saunders

From: STALEY, Jack
Sent: Wednesday, 18 June 2025 4:40 PM
To: Larissa Lane <larissal@jamesons.com.au>
Cc: ARFANIS, Nathan <narfanis@awedwards.com.au>
Subject: Construction Noise & Vibration Management Plan Consultation (SSD-66777221)

Hi Larissa,

As discussed, to satisfy Conditions B11 and B11 (b) of SSD-66777221 we are required to notify (consult) surrounding affected owners of the Construction Noise and Vibration Management Plan (CNVMP) for the proposed data centre development located at 2-8 Lanceley Place, Artarmon.

If you could please advise all tenants located at **78 Reserve Road, Artarmon** & **76 Reserve Road, Artarmon** that:

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APPENDIX E: EROSION AND SEDIMENT CONTROL PLAN

SEDIMENT BASIN CALCULATION

Site area	
	1
Total catchment area (ha)	1.424
Disturbed catchment area (ha)	1.424
Soil analysis	
% sand (fraction 0.02 to 2.00 mm	25
% silt (fraction 0.002 to 0.02 mm)	25
% clay (fraction finer than 0.002 mm)	100
Dispersion percentage	10.0
% of whole soil dispersible	11.25
Soil Texture Group	D
Rainfall data	
Design rainfall depth (days)	5
Design rainfall depth (percentile)	85
x-day, y-percentile rainfall event	38.8
Rainfall intensity: 2-year, 6-hour storm	10.5
RUSLE Factors	
Rainfall erosivity (*R*-factor)	2420
Soil erodibility (*K*-factor)	0.05
Slope length (m)	170
Slope gradient (%)	2
Length/gradient (*LS*-factor)	0.52
Erosion control practice (*P*-factor)	1.3
Ground cover (*C*-factor)	1
Calculations	
Soil loss (t/ha/yr)	82
Soil Loss Class	1
Soil loss (m^3/ha/yr)	63
Sediment basin storage volume, m^3	15

ANNUAL SOIL LOSS: 1.4024 x 82 = 114.96m3
WHICH IS LOWER THAN 150m3
A SEDIMENT BASIN IS NOT REQUIRED AT THIS SITE

EROSION AND SEDIMENT NOTES

B1. THIS PLAN IS TO BE READ IN CONJUNCTION WITH EROSION AND SEDIMENT CONTROL DETAILS AS SHOWN

B2. THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY AND TO THE SATISFACTION OF CPESC PRIOR TO THE COMMENCEMENT OF AND DURING CONSTRUCTION. NO DISTURBANCE TO THE SITE SHALL BE PERMITTED OTHER THAN IN THE IMMEDIATE AREA OF THE WORKS AND NO MATERIAL SHALL BE REMOVED FROM THE SITE WITHOUT CPESC'S APPROVAL. ALL EROSION AND SEDIMENT CONTROL DEVICES TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH STANDARDS OUTLINED IN NSW DEPARTMENT OF HOUSING'S "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION VOLUME 1 4TH EDITION, MARCH 2004".

B3. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON THE CONTOUR, AT LEAST 2 METERS AWAY FROM HAZARD AREAS SUCH AS DRAINAGE LINES, STEEP SLOPES, OR ROAD EDGES. STOCKPILES SHALL BE PROTECTED FROM UPSLOPE RUN-ON USING EARTH BANKS OR DIVERSION DRAINS AND PROTECTED FROM EROSION USING MULCHING, HYDROSEEDING, OR OTHER STABILISATION IF STOCKPILES REMAIN IN PLACE FOR MORE THAN 10 DAYS.
SEDIMENT-CAPTURING STRUCTURES SUCH AS SEDIMENT FENCES SHALL BE INSTALLED DOWNSLOPE. TOPSOIL SHALL ONLY BE RESPREAD ON AREAS DESIGNATED FOR REVEGETATION AND STABILISATION (INCLUDING FOOTPATHS, BATTERS, SITE REGRADE AREAS, BASINS, AND CATCHDRAINS) AND NOT ELSEWHERE UNLESS SPECIFIED BY THE SUPERINTENDENT.

B4. THE CONTRACTOR SHALL REGULARLY MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES AND REMOVE ACCUMULATED SILT FROM DEVICES SUCH THAT NO MORE THAN 60% OF THEIR CAPACITY IS LOST. SEDIMENT AND WASTE REMOVED FROM SEDIMENT BASINS, GROSS POLLUTANT TRAPS AND TRASH RACKS ARE DISPOSED IN STABILIZED DUMPS WHERE SOIL ABD WATER MEASURES HAVE BEEN IMPLEMENTED TO STOP OFFSITE MOVEMENT OF POLLUTANTS. DISPOSE ANY POLLUTANTS REMOVED FROM SEDIMENT BASINS IN AREAS WHERE FURTHER POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS SHOULD NOT OCCUR. THE PERIOD FOR MAINTAINING THESE DEVICES SHALL BE UNDERTAKEN:
1) AT LEAST WEEKLY
2) IMMEDIATELY AFTER RAINFALL EVENTS THAT CAUSE RUNOFF
3) IMMEDIATELY PRIOR TO SITE CLOSURE
MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES UNTIL ALL EARTHWORK ACTIVITIES ARE COMPLETED AND THE SITE IS REHABILITATED

B5. VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING CONSTRUCTION CONFINING ACCESS WHERE POSSIBLE TO NOMINATED STABILISED ACCESS POINTS.

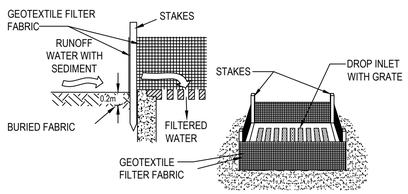
B6. THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL BY REGULAR WETTING DOWN (BUT NOT SATURATING) DISTURBED AREA.

B7. PROVIDE AND MAINTAIN SILT TRAPS AROUND ALL SURFACE INLET PITS UNTIL CATCHMENTS ARE REVEGETATED OR PAVED.

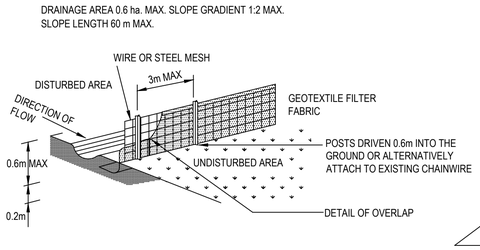
B8. REVEGETATE ALL TRENCHES IMMEDIATELY UPON COMPLETION OF BACKFILLING.

B9. ALL DRAINAGE PIPE INLETS TO BE CAPPED UNTIL :
A) DOWNPIPES CONNECTED
B) PITS CONSTRUCTED AND PROTECTED WITH SILT BARRIER

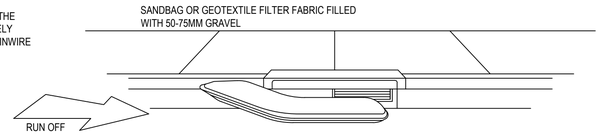
B10. SILT FENCE MAINTENANCE INSPECTION TO BE CARRIED OUT EVERY WEEK, IMMEDIATELY AFTER EACH RAINFALL EVENT AND IMMEDIATELY PRIOR TO SITE CLOSURE



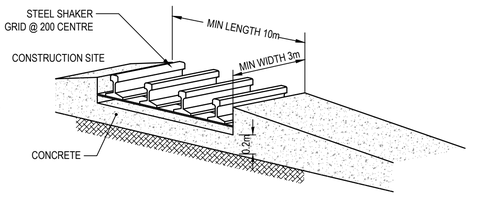
GEOTEXTILE FILTER FABRIC INLET SEDIMENT TRAP
N.T.S.



SEDIMENT CONTROL FENCE
N.T.S.



SANDBAG KERB INLET SEDIMENT TRAP
NTS



TEMPORARY CONSTRUCTION VEHICLE EXIT

REVISIONS:			
A	ISSUED FOR INFORMATION	RW	15.05.2025
No.	REVISION DESCRIPTION	DRAWN	DATE

SCALE BAR

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van der meer
LEVEL 6, 39 CHANDOS STREET
ST LEONARDS NSW 2065
Telephone 61-2-9436 0433 Fax 61-2-9436 1370
www.vandermeer.com.au
van der Meer (NSW) Pty Ltd
A.B.N. 56 158 266 301

CLIENT: Goodman

ARCHITECT: HDR
LEVEL 24, 25 MARTIN PLACE
SYDNEY NSW 2000

PROJECT TITLE
SYD01
2-8 LANCELEY PLACE
ARTARMON NSW 2064

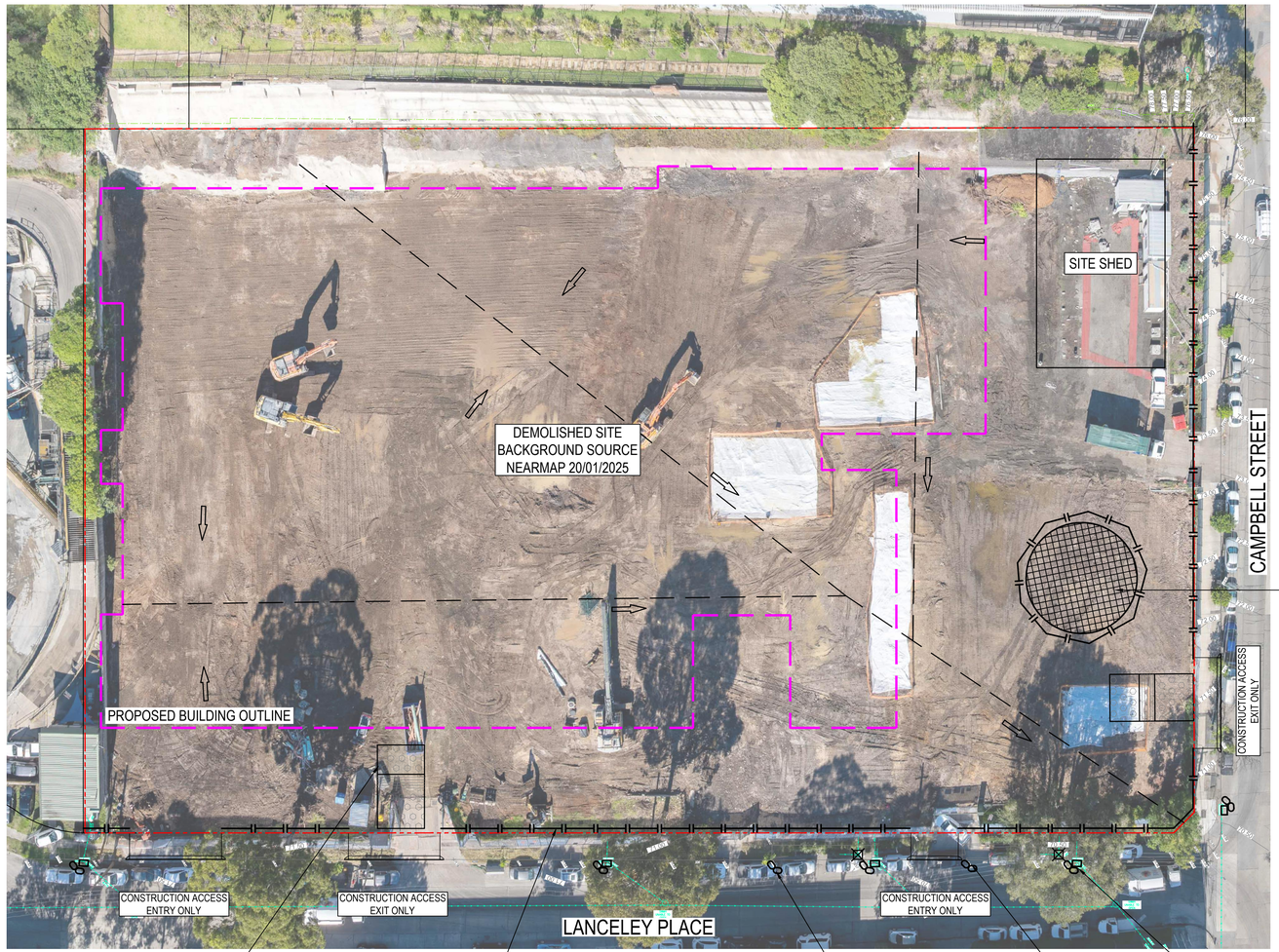
DRAWING TITLE
EROSION AND SEDIMENT CONTROL DETAILS

DRAWING STATUS
FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

PROJECT LEADER	DESIGNER	SIGNATURE	
AW	HB		
DRAFTSPERSON	SCALE	DATE	SHEET SIZE
HB	NTS	DATE DRAWN	A1
JOB No.		DRAWING No.	REVISION
SYD01-CIV-DRG-0101-01051			A

LEGEND

- TEMPORARY CONSTRUCTION VEHICLE EXIT
  REFER TO DWG C01051 FOR DETAILS
- SEDIMENT CONTROL FENCE
  REFER TO DWG C01051 FOR DETAILS
- STOCKPILE AREA
- SANDBAG KERB INLET SEDIMENT TRAP
  REFER TO DWG C01051 FOR DETAILS
- SITE BOUNDARY
- DIVERSION SWAELS
- DRAINAGE DIRECTION
- PROPOSED BUILDING OUTLINE



PLAN
SCALE 1:400

PROVIDE TEMPORARY CONSTRUCTION VEHICLE EXIT FOR EACH SITE GATE
PROVIDE TAP AND HOSE BEHIND THE FENCING
ALL TRUCK TIRES MUST BE WASH DOWN BEFORE DEPARTING

CONSTRUCT SEDIMENT CONTROL FENCE AROUND PERIMETER OF WORKS

PROVIDE SEDIMENT TRAPS BEFORE EXISTING BIO SWALE

PROVIDE SEDIMENT TRAPS BEFORE EXISTING BIO SWALE

PROVIDE SEDIMENT TRAPS AROUND EXISTING INLET PITS (TYP.)

REVISIONS:

No.	REVISION DESCRIPTION	DRAWN	DATE
D	ISSUED FOR INFORMATION	RW	15.05.2025
C	ISSUED FOR INFORMATION	RW	07.04.2025
B	ISSUED FOR INFORMATION	RW	24.03.2025
A	ISSUED FOR INFORMATION	RW	20.03.2025

SCALE BAR
0 10 20 30 40m
SCALE 1:400

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A.B.N. 56 158 266 301

CLIENT
Goodman

ARCHITECT
HDR
LEVEL 24, 25 MARTIN PLACE
SYDNEY NSW 2000

PROJECT TITLE
SYD01
2-8 LANCELEY PLACE
ARTARMON NSW 2064

DRAWING TITLE
EROSION AND SEDIMENT CONTROL PLAN

DRAWING STATUS
FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

PROJECT LEADER	DESIGNER	SIGNATURE	
AW	HB		
DRAFTSPERSON	SCALE	DATE	SHEET SIZE
HB	1:400	DATE DRAWN	A1
JOB No.		DRAWING No.	REVISION
SYD01-CIV-DRG-0101-01021			D

APPENDIX F: CONSTRUCTION WASTE MANAGEMENT PLAN

AW EDWARDS



Goodman SYD001

Construction Waste Management Plan

SYD001-AWE-CWMP-001

Prepared By:

A W EDWARDS PTY LIMITED

Author:	J Staley
Revision:	C
Status:	Draft

A W EDWARDS PTY LIMITED
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ACN: 000 045 849
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BUILDING FOR LIFE

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St Leonards NSW 2065
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MID NORTH COAST OFFICE
Unit 7/35 Merrigal Road,
Port Macquarie NSW 2444
Australia
P: 02 8036 7320

Project No.	693
Project Name	Goodman SYD001
Project Manager	Michael Galbraith
Project Location	2-8 Lanceley Place and 14 Campbell Street, Artarmon
Phone No.	02 8036 7200
Client	Goodman
DA No.	SSD-66777221
Scope of Works	The proposed development will have a maximum building height of 51.479m, with a floor space ratio of 1.91:1. The project also proposes 36 car parking spaces. The data centre will operate on a 24-hour basis with a total power supply of Eighty (80) MVA. There are 5 levels of technical data hall floor space with a single 10.4 MW data hall. Refer to section 1.2 of this report for further information.
Timing of the Works	July 25 – xxx

Revision Register:

REVISION	DATE	STATUS	AUTHOR	APPROVED BY
A	6-Mar-25	Draft	J Staley	
B	2-Apr-25	Draft	J Staley	
C	14-Apr-25	Status	J Bakoulis	
	Date	Status		
	Date	Status		
	Date	Status		

THIS DOCUMENT IS UNCONTROLLED WHEN PRINTED

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1 INTRODUCTION

1.1 PURPOSE OF THIS REPORT

This Construction Waste Management Plan (CWMP) describes how A W Edwards will manage waste generation and disposal during construction of the project. It describes legal, planning and contractual requirements and the waste management measures.

This CWMP forms part of the Construction Environmental Management Plan (CEMP) in accordance with condition C2 of development consent for the project and was prepared in accordance with:

- EPA's Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014);
- The relevant planning approvals and conditions of approval (CoA) for the project;
- Applicable legislation and regulatory requirements;
- Willoughby City Council Local Environmental Plan (LEP);
- Goodman Lanceley Place Data Centre, Artarmon contractual requirements, including the Project Deed and Scope of Work and Technical Criteria.

1.2 PROJECT OVERVIEW

The site is located at 2-8 Lanceley Place and 14 Campbell Street, Artarmon (Lanceley Place Data Centre, Artarmon). The site totals 14,024m2 in area, is zoned E4 General Industrial and has road frontages to both Lanceley Place and Campbell Street.

The proposal will include:

- Site preparation works including demolition, bulk excavation and removal of existing structures on the site, tree and vegetation clearing, and bulk earthworks.
- Construction, fit out and operation of a 80MVA data centre with a maximum building height of 51.479m (RL 124.5) ridge height (street wall height of 50m) and total gross floor area of 57,219m2 comprising:
    - At-grade parking for 32 car parking spaces and 2 accessible car parking spaces
    - Two (2) 12.5m long vehicle Loading dock spaces
    - Five (5) levels of technical data hall floor space with a single 10.4 MW data hall
    - per floor
    - Ancillary office space
    - A lobby, offices and amenities located on the ground floor
- Provision of required utilities, including:
    - Eight (8) 95kL above-ground diesel storage tanks
    - Four (4) 1,000kL above-ground water tanks
    - Three (3) 33kV switch-rooms on site.

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- Vehicle access provided via Campbell Street and Lanceley PlacePedestrian access provided via Campbell Street Lanceley and Place
- Associated landscaping and site servicing
- Installation of services and drainage infrastructure
- A floor space ratio of 1.91:1.

1.3 OBJECTIVES

The following spoil and waste management objectives will be applied to the project:

- Minimise waste generation where possible.
- The 100% reuse or recycling (on or off-site) of usable spoil.
- Manage waste with consideration to minimising adverse traffic and transport related issues.
- Manage waste with consideration of the impacts on residents and other sensitive receivers.
- Manage waste to avoid the contamination of land and water.
- Site contamination will be managed effectively to limit the potential risk to human health and the environment.

This plan addresses and details the following issues:

- Excavation, handling, haulage, disposal and reuse, including on-site storage and stockpiling arrangements.
- Processes and procedures that will be used for the management of spoil, including those for virgin excavated natural material (VENM), excavated natural material (ENM), contaminated and unsuitable material.
- Measures that will be implemented to both reduce waste quantities and maximise the beneficial reuse of spoil that will be generated during the performance of the works.
- Nominated quantities for reuse of spoil within the construction site, for beneficial reuse of waste off site and for waste disposal.
- Processes and procedures for the management of the environmental impacts of waste/spoil transfer and reuse.

1.4 ENVIRONMENTAL MANAGEMENT STRUCTURE

This CWMP is part of A W Edward's environmental management framework for the project and is supported by other documents such as:

- Construction Environmental Management Plan (CEMP)
- Construction Traffic Management Plan (CTMP)
- Erosion and Sediment Control Plan (ESCP)
- Construction Noise and Vibration Management Plan (CNVMP)
- Community Consultation and Complaints Management Plan (CCCMP)
- Construction Flood Emergency Response Plan (FERP)
- Unexpected Finds Protocol Management Plan (UFPMP)

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2 LEGAL AND OTHER REQUIREMENTS

2.1 PLANNING APPROVALS

This CWMP has been produced to demonstrate compliance with the relevant DA CoA (Conditions of Approval) as summarised in the below Table

Table 1 - DA Conditions of Approval

ITEM	REQUIREMENT	DOCUMENT REFERENCE
B53	Prior to the commencement of construction of the development, the Applicant must prepare a Construction and Demolition Waste Management Plan for the development to the satisfaction of the Planning Secretary. The Plan must form part of a CEMP in accordance with condition C2 and must: (a) detail the quantities of each waste type generated during construction and the proposed reuse, recycling and disposal locations; and (b) be implemented for the duration of construction works.	▪ *Section 4* - Spoil Generation ▪ *Section 4.2 - Spoil and Waste Volumes* ▪ *Section 5 - Waste Streams, Classification and Management Options*
B54	The Applicant must: (a) not commence construction until the Construction Waste Management Plan is approved by the Planning Secretary. (b) implement the most recent version of the Construction Waste Management Plan approved by the Planning Secretary.	▪ *Pending approval by the Planning Secretary*
B55	Waste must be secured and maintained within designated waste storage areas at all times and must not leave the site onto neighbouring public or private properties.	▪ *Section 5 - Waste Streams, Classification and Management Options* ▪ *Section 6 - Potential Impacts* ▪ *Section 7* - Spoil and Waste Management
B56	The Applicant must assess and classify all liquid and non-liquid wastes to be taken off site in accordance with the latest version of EPA's Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014).	▪ *Section 3 - Waste Classification and Hierarchy* ▪ *Section 5 - Waste Streams, Classification and Management Options*

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B57	All waste materials removed from the site must only be directed to a waste management facility or premises lawfully permitted to accept the materials.	▪ *Section 5 - Waste Streams, Classification and Management Options* ▪ *Section 7* - Spoil and Waste Management
B58	Waste generated outside the site must not be received at the site for storage, treatment, processing, reprocessing, or disposal	▪ *Note*

2.2 LEGISLATION AND REGULATORY REQUIREMENTS

Applicable legislation is summarised in the below *Table 2*.

Table 2 - Legislation and Regulatory Requirements

LEGISLATION	DESCRIPTION	RELEVANCE
NSW *Environmental Planning and Assessment Act 1979*	This Act establishes a system of environmental planning and assessment for development of the State.	The approval conditions and obligations are incorporated into this CSMP.
NSW *Contaminated Land Management Act 1997*	This Act provides for a process to investigate and remediate land that has been contaminated and presents a significant risk of harm to human health. Section 60 of the Act is a "Duty to Report Contamination". This duty applies to owners of land and persons who become aware their activities have contaminated the land.	This plan discusses how A W Edwards will manage works to comply with this Act for any potentially contaminated spoil encountered during construction.
NSW *Protection of the Environment Operations Act 1997*	This Act includes all the controls necessary to regulate pollution and reduce degradation of the environment, provides for licensing of scheduled development work, scheduled activities and for offences and prosecution under this Act.	This plan defines how A W Edwards will manage works to comply with this Act and minimise the potential for a pollution event to occur.
NSW *Protection of the Environment Operations*	This Act includes additional provisions to protect human	This plan outlines how A W Edwards will

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LEGISLATION	DESCRIPTION	RELEVANCE
(Waste) Regulation 2014	health and the environment for a modern and fair waste industry in NSW. Changes within this regulation includes amended thresholds for environment protection licences and reforms to the waste levy system.	manage waste disposal in accordance with the new waste reforms.
NSW Waste Avoidance and Resource Recovery Act 2001	This Act includes the majority of NSW's overarching objectives and guiding principles to encourage beneficial reuse and resource recovery. Implementation of a waste hierarchy in accordance with the principle of environmentally sustainable development (ESD) is identified as a main objective of the Act, along with objectives to minimise the consumption of natural resources and waste generation.	This plan defines how A W Edwards will classify spoil within the waste hierarchy guidelines and determine the most appropriate reuse option for spoil.

2.3 GUIDELINES

Guidelines and standards relating to the management of spoil are:

- Waste Classification Guidelines: Part 1 Classifying Waste (EPA 2014).
- NSW EPA orders and exemptions: https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/resource-recovery-framework/current-orders-and-exemption.

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3 WASTE CLASSIFICATION AND HIERARCHY

3.1 WASTE MANAGEMENT HIERARCHY

The *Waste Avoidance and Resource Recovery Act 2001* ensures that resource management options are considered against a hierarchy of:

- Avoidance of unnecessary resource consumption;
- Resource recovery (including reuse, recycling, reprocessing, and energy recovery); and
- Disposal.

The preference and responsibility of the waste management hierarchy is shown in the below figure.

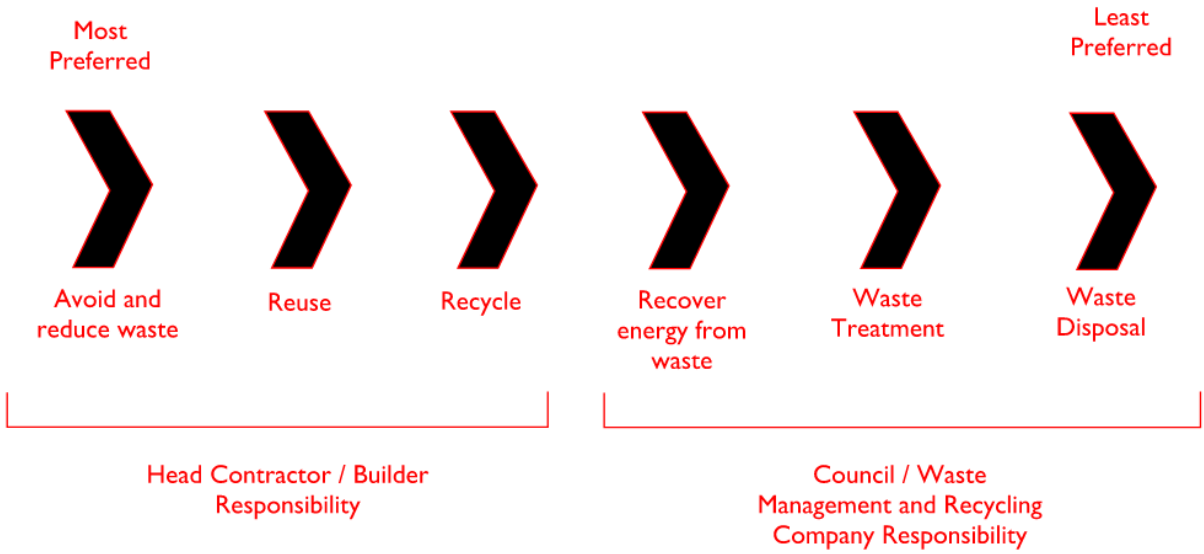


Figure 1 - Waste Hierarchy

The approach to the steps in the waste hierarchy most relevant to the project is briefly described below.

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3.1.1 AVOID AND/OR REDUCE WASTE

Reducing or avoiding the generation of waste is of primary importance to the project. The following approach will be adopted:

- Consider construction options that have a higher waste reduction capacity than alternatives;
- Good housekeeping and material storage practices;
- Order material / goods with minimal packaging or request suppliers to remove packaging from site; and
- Accurately estimate materials required to minimise wastage of product.

3.1.2 REUSE AND RECYCLING

Waste separation and segregation will be promoted on-site to facilitate reuse and recycling as a priority of the waste management program as follows:

- Segregate waste on-site – waste materials, including spoil and demolition waste, will be separated into dedicated bins / areas for either reuse on-site or collection by a waste contractor and transported to off-site facilities;
- Separate waste off-site – wastes will be deposited into one bin where space is not available for placement of multiple bins, and the waste will be sorted off-site by a waste contractor;
- Ascertain whether materials can be re-used on-site and provide a designated area for storing such materials; and
- Where feasible and reasonable, secondary waste material would be used in construction.

3.1.3 WASTE HANDLING AND STORAGE

Where waste is required to be handled and stored onsite prior to onsite reuse or offsite recycling / disposal, the following measures will apply:

- Spoil will be stockpiled on-site in allocated areas, where appropriate, and mitigation measures for dust control and surface water management will be implemented in accordance with the CEMP;
- Asbestos containing materials and waste would be investigated, managed, handled and disposed by a suitably qualified and experienced occupational hygienist. The disturbance of, handling and disposal of any asbestos containing materials would be undertaken by an appropriately licenced asbestos removal contractor in accordance applicable SafeWork NSW and EPA requirements and guidelines;
- Liquid wastes will be stored in appropriate containers in bunded areas until transported off-site. Bunded areas will have the capacity to hold 110% of the liquid waste volume for bulk storage or 120% of the volume of the largest container for smaller packaged storage;

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- Hazardous waste will be managed by the appropriately qualified and licensed contractors, in accordance with the requirements of the *NSW Contaminated Land Management Act 1997, Environmentally Hazardous Chemicals Act 1985* and the EPA waste disposal guidelines; and
- All other recyclable or non-recyclable wastes will be stored in appropriate covered receptacles (e.g. bins or skips) in appropriate locations on-site and subcontractors commissioned to regularly remove / empty the bins to approved disposal or recycling facilities.

3.1.4 WASTE CLASSIFICATION

Where waste cannot be avoided, reused or recycled it will be classified and appropriately disposed of. The classification of waste will be undertaken in accordance with the *NSW Waste Classification Guidelines Part 1: Classifying Waste* (EPA, 2014). This document identifies six classes of waste: Special, Liquid, Hazardous, Restricted Solid, General Solid (putrescible) and General Solid (non-putrescible) and describes a six-step process to classifying waste.

- If a special waste is mixed with another waste, the waste must be managed to meet the requirements of both the special wastes and the other class of waste.
- If asbestos waste is mixed with any other class of waste, all the waste must be classified as asbestos waste.
- If liquid waste is mixed with hazardous or solid waste and retains the defined characteristics of liquid waste, it remains liquid waste.
- Two or more classes of waste must not be mixed to reduce the concentration of chemical contaminants. Dilution is not an acceptable waste management option.
- Where practicable, it is desirable to separate a mixture of wastes before classifying them.

3.2 WASTE STREAMS AND CLASSIFICATION

Spoil is defined as any earthen material that is surplus to requirements or unsuitable for on-site reuse.

Spoil (other than VENM) will be sampled, analysed and characterised in accordance with the *Waste Classification Guidelines: Part 1 Classifying Waste (*EPA 2014) (the Guidelines).

There are resource recovery exemptions in place for VENM and Excavated Natural Material (ENM), which are summarised below. Topsoil is unlikely to be encountered given existing surface disturbance.

General construction waste would be minimised by accurately calculating materials brought to the site and limiting material packaging, with any related waste classified and disposed of in accordance with the Waste Classification Guidelines.

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3.2.1 VIRGIN EXCAVATED NATURAL MATERIAL

Virgin excavated natural material is defined as natural material (such as clay, gravel, sand, soil or rock fines) that has been excavated or quarried from areas that are not contaminated with manufactured chemicals or with process residues as a result of industrial, commercial, mining or agricultural activities.

The following questions will be used when classifying material as VENM:

- Are manufactured chemicals or process residues present?
- Are sulfidic ores or soil present?
- Are naturally occurring asbestos soils present?
- Is there any other waste present?

If material meets the definition of VENM it can be reused on or offsite without prior testing. However, if there is any doubt as to whether the material is VENM, the Planning and Environment Manager will arrange for sampling and analysis of the material against the excavated natural material (ENM) resource recovery order (The excavated natural material order 2014) to confirm that the material is free of contaminants.

3.2.2 EXCAVATED NATURAL MATERIAL

Spoil material which does not meet the definition of VENM is likely to be classified as ENM in accordance with the resource recovery order for ENM declared under the Protection of the Environment Operations (Waste) Regulation 2014.

ENM is defined as naturally occurring rock or soil (including but not limited to materials such as sandstone, shale, clay and soil) that has:

- Been excavated from the ground.
- Contains at least 98% by weight natural material.
- Does not meet the definition of VENM in the Act.

ENM does not include material that has been processed or contains acid sulphate soils or potentially acid sulphate soils.

To be classified as ENM, the material must be sampled and analysed in accordance with the requirements of the resource recovery order and satisfy the criteria contained within.

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3.3 OTHER WASTE CLASSIFICATIONS

Spoil not classified as either VENM or ENM due to contamination from either construction material or other sources shall be characterised in accordance with the *Waste Classification Guidelines: Part 1 Classifying Waste* (EPA 2014). This may include classification as general solid waste (Non-putrescible), restricted solid waste, hazardous waste or special waste.

3.3.1 SPECIAL WASTE

Special waste is a class of waste that has unique regulatory requirements. The potential environmental impacts of special waste need to be managed to minimise the risk or harm to the environment or human health.

Special waste is defined as any of the following:

- Clinical and related waste.
- Asbestos waste.
- Waste tyres.
- Anything classified as special waste under an EPA gazettal notice.

3.3.2 HAZARDOUS WASTE

The following waste types (other than special waste or liquid waste) have been pre-classified by the EPA as 'hazardous waste':

- Containers, having previously contained a substance of class 1, 3, 4, 5 or 8 within the meaning of the *Transport of Dangerous Goods Code*, or a substance to which Division 6.1 of the *Transport of Dangerous Goods Code* applies, from which residues have not been removed by washing or vacuuming.
- Coal tar or coal tar pitch waste (being the tarry residue from the heating, processing or burning of coal or coke) comprising of more than 1% (by weight) of coal tar or coal tar pitch waste.
- Lead-acid or nickel-cadmium batteries (being waste generated or separately collected by activities carried out for business, commercial or community services purposes).
- Lead paint waste arising otherwise than from residential premises or educational or childcare institutions.
- Any mixture of the wastes referred to above.

3.3.3 RESTRICTED SOLID WASTE

Currently, no wastes have been pre-classified by the EPA as 'restricted solid waste'. Restricted solid waste therefore only includes wastes assessed and classified as restricted solid waste in accordance with the procedures outlined under Step 5 of the *Waste*

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Classification Guidelines: Part 1 Classifying Waste (EPA 2014). That is, where waste has not been classified under steps 1-4, waste generators must chemically assess their waste to determine the most appropriate waste classification within the EPA guideline by utilising the specific contaminant concentration (SCC) and/or toxicity characteristics leaching procedure (TCLP) test values.

If the waste is not chemically assessed then the waste must be treated as hazardous waste and must be treated prior to disposal at an appropriate licenced location.

3.3.4 GENERAL SOLID WASTE (NON-PUTRESCIBLE)

General solid waste (non-putrescible) is any waste that is not classified as special waste, liquid waste, hazardous waste, restricted solid waste or general solid waste (putrescible).

3.3.5 RESOURCE RECOVERY EXEMPTIONS

The Protection of the Environment Operations (Waste) Regulation 2014 enables the EPA to issue 'resource recovery exemptions' which allow for the beneficial reuse of wastes via land application or for use as a fuel.

These exemptions enable a project to comply with the principle of 'wastes to resources for beneficial reuse' (where the wastes are fit for beneficial reuse). During the project, materials may be encountered that do not meet the VENM or ENM classification but are also not contaminated material. In these circumstances, the project team will check for existing resource recovery exemptions such as:

- The excavated public road material exemption 2014.
- The reclaimed asphalt pavement exemption 2014.
- The recovered aggregate exemption 2014.
- The Mulch Exemption 2016.

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4 SPOIL GENERATION

4.1 RE-USE OPTIONS AND TARGETS

If spoil is generated during construction, it is anticipated to be crushed sandstone and shale which would be classified as 'virgin excavated natural material' (VENM).

Note the 1:100,000 Sydney geological map (1983) indicates that the site is underlain by Ashfield Shale of the Wianamatta Group comprising black to dark-grey shale and laminate.

While the project would target 100% of beneficial re-use of the usable spoil generated during construction, it is recognised that there would be limited opportunities for onsite spoil re-use as the project has limited onsite requirements for fill and space at the site is limited.

Spoil generated by surface works such as pad footings and in ground services excavations is likely to suit classification as ENM or general solid waste and may be re-used as backfill of the excavation, however some residual spoil may be generated. Any residual spoil would be adequately tested to determine waste classification prior to disposal.

Where spoil cannot be re-used for the project, opportunities to re-use this material on other developments (preferably within the Sydney region to reduce transport distances) would be investigated.

The spoil produced by the project may have the following potential re-use opportunities:

- Clean granular fill is likely to be suitable for use as structural fill;
- Excavated moist clay and clayey sand material is likely to be suitable for use as general fill following moisture conditioning;
- Excavated weathered shale and sandstone could be suitable for use as structural fill following moisture conditioning to reduce reactivity;
- Medium strength or better-quality shale is likely to be suitable for use as non-reactive fill;
- Medium to high strength sandstone may be suitable for use as structural fill; and
- Wet clay and wet shale spoil are unlikely to be suitable for re-use on site without substantial moisture conditioning.

The geology of the spoil material, as well as its consistency and quality would determine the re-use options.

The spoil management hierarchy in *Table 3*. has been prepared with reference to the *NSW Waste Avoidance and Resource Recovery Act 2001* and the *NSW Waste Avoidance and Resource Recovery Strategy 2013-2021* to guide spoil re-use and disposal.

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Table 3 - Spoil Management Hierarchy

OPTION	DESCRIPTION	POTENTIAL FOR USE
1. Avoid and reduce spoil generation	Reduce the amount of spoil being generated through design and construction methodology.	Preferred
2. Reuse in construction	Reuse spoil for engineering fill. Reuse spoil to restore any pre-existing contaminated sites within the project site. Reuse spoil as a feed product in construction materials.	Preferred
3. Reuse on other construction projects	Reuse for engineering fill on projects within an economic transport distance from site. Reuse sand for manufacturing concrete and reuse shale for manufacturing bricks/ tiles.	Limited
4. Reuse for landfill management	Reuse to cap completed landfill cells. Reuse in daily covering of landfill waste.	Limited
5. Offsite waste disposal	Disposal of excess spoil as waste at an approved facility licenced to receive the material.	Likely but not preferred

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4.2 SPOIL AND WASTE VOLUMES

A W Edwards has estimated the project may generate up to 10,000 cubic metres of VENM and 7,400 cubic metres of general solid waste (non-putrescible) during construction.

The types of spoil and other waste that may be generated during construction are outlined in *Table 4*. This table also identifies preferred reuse, recycling and disposal methods for each waste stream.

5 WASTE STREAMS, CLASSIFICATION AND MANAGEMENT OPTIONS

Table 4 - Waste Streams, Classification and Management Options

CONSTRUCTION ACTIVITY	WASTE TYPE	WASTE CLASSIFICATION	PROPOSED STORAGE AND RE-USE /RECYCLING /DISPOSAL METHODS
Excavation	Excess spoil (unsuitable material)	VENM, ENM and/or General solid waste (non-putrescible)	**Reuse on-site -** If suitable, re-use non-contaminated spoil in backfill. **Storage/collection –** Excess spoil is to be stored within designated skip bins or segregated stockpiles) on-site for chemical assessment/waste classification, and later collection by an appropriately licenced waste management contractor. **Reuse off site –** where there is full compliance with the VENM criteria and/or ENM resource recovery exemption, the waste contractor would transport the VENM/ENM material to an appropriately licenced receiving facility permitted to accept VENM/ENM as engineering fill via an Environmental Protection Licence (EPL), or Council DA.

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CONSTRUCTION ACTIVITY	WASTE TYPE	WASTE CLASSIFICATION	PROPOSED STORAGE AND RE-USE /RECYCLING /DISPOSAL METHODS
			Disposal off-site – In the event the spoil does not satisfy the VENM and ENM exemption, the material is to be analysed and classified as general solid waste (or higher classification) and disposed by the contractor at an appropriately licensed waste facility in accordance with the premises' Environment Protection Licence
Building and construction waste	Steel reinforcing	General solid waste (non-putrescible)	**Storage/collection –** Steel waste is to be stored within designated large skip bins on-site for collection by an appropriately licenced waste management contractor. **Resource recovery off site -** the waste contractor would collect the skip bin and transport to a licenced waste management facility for reuse, recycling, reprocessing or energy recovery in accordance with the Waste Classification Guidelines.
	Conduits and pipes	General solid waste (non-putrescible)	**Storage/collection –** General solid waste is to be stored within designated skip bins on-site for collection by an appropriately licenced waste management contractor. **Resource recovery off site -** the waste contractor would collect the skip bin and transport to a licenced waste management facility for reuse, recycling, reprocessing or energy

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CONSTRUCTION ACTIVITY	WASTE TYPE	WASTE CLASSIFICATION	PROPOSED STORAGE AND RE-USE /RECYCLING /DISPOSAL METHODS
			recovery in accordance with the Waste Classification Guidelines.
	Timber formwork	General solid waste (non-putrescible)	**Storage/collection –** General solid waste is to be stored within designated skip bins on-site for collection by an appropriately licenced waste management contractor. **Resource recovery off site -** the waste contractor would collect the skip bin and transport to a licenced waste management facility for reuse, recycling, reprocessing or energy recovery in accordance with the Waste Classification Guidelines.
	Packaging materials (including wood, plastic, metal and cardboard)	General solid waste (non-putrescible)	**Storage/collection –** General solid waste is to be stored within designated skip bins on-site for collection by an appropriately licenced waste management contractor. **Resource recovery off site -** the waste contractor would collect the skip bin and transport to a licenced waste management facility for reuse, recycling, reprocessing or energy recovery in accordance with the Waste Classification Guidelines.
Sediment control maintenance	Geotextile and sandbags	General solid waste (non-putrescible)	**Storage/collection –** General solid waste is to be stored within designated skip bins on-site for collection by an

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CONSTRUCTION ACTIVITY	WASTE TYPE	WASTE CLASSIFICATION	PROPOSED STORAGE AND RE-USE /RECYCLING /DISPOSAL METHODS
			appropriately licenced waste management contractor. **Resource recovery off site -** the waste contractor would collect the skip bin and transport to a licenced waste management facility for reuse, recycling, reprocessing or energy recovery in accordance with the Waste Classification Guidelines.
	Sediment removed from sediment controls once they reach capacity.	VENM, ENM and/or General solid waste (non-putrescible)	**Reuse on-site -** If suitable, re-use non-contaminated sediment in backfill. **Storage/collection –** Excess accumulated sediment is to be stored within designated skip bins or segregated stockpiles) on-site for chemical assessment/waste classification, and later collection by an appropriately licenced waste management contractor. **Reuse off site –** where there is full compliance with the VENM criteria and/or ENM resource recovery exemption, the waste contractor would transport the VENM/ENM material to an appropriately licenced receiving facility permitted to accept VENM/ENM as engineering fill via an Environmental Protection Licence (EPL), or Council DA. **Disposal off-site –** In the event the spoil does not satisfy the VENM and ENM exemption, the material is to

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CONSTRUCTION ACTIVITY	WASTE TYPE	WASTE CLASSIFICATION	PROPOSED STORAGE AND RE-USE /RECYCLING /DISPOSAL METHODS
			be analysed and classified as general solid waste (or higher classification) and disposed by the contractor at an appropriately licensed waste facility in accordance with the premises' Environment Protection Licence
Site compound and office	Drained oil filters, rags and oil-absorbent materials that only contain non-volatile petroleum hydrocarbons and do not contain free liquids.	General solid waste (non-putrescible)	**Storage/collection –** General solid waste is to be stored within designated skip bins on-site for collection by an appropriately licenced waste management contractor. **Resource recovery off site -** the waste contractor would collect the skip bin and transport to a licenced waste management facility for reuse, recycling, reprocessing or energy recovery in accordance with the Waste Classification Guidelines.
	Containers, previously containing dangerous goods, from which residues have been removed by washing or vacuuming	General solid waste (non-putrescible)	**Storage/collection –** General solid waste is to be stored within designated skip bins on-site for collection by an appropriately licenced waste management contractor. **Resource recovery off site -** the waste contractor would collect the skip bin and transport to a licenced waste management facility for reuse, recycling, reprocessing or energy recovery in accordance with the Waste Classification Guidelines.

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CONSTRUCTION ACTIVITY	WASTE TYPE	WASTE CLASSIFICATION	PROPOSED STORAGE AND RE-USE /RECYCLING /DISPOSAL METHODS
	Food waste	General solid waste (non-putrescible)	**Storage/collection –** Food waste is to be stored within designated bins on-site for collection by an appropriately licenced waste management contractor. **Resource recovery off site -** the waste contractor would collect the bin and transport to a licenced waste management facility for reuse, recycling, reprocessing or energy recovery in accordance with the Waste Classification Guidelines.
	Wastewater from amenities	Liquid waste	**Storage/collection –** Sewage is to be extracted via sealed vacuum tanker by an appropriately licenced contractor. **Disposal –** the licenced contractor would transport the material to an appropriately licenced facility permitted to accept sewage/liquid waste for appropriate disposal.
	Paper, cardboard and plastic, glass, aluminium cans	General solid waste (non-putrescible)	**Storage/collection –** General office waste is to be stored within designated bins on-site for collection by an appropriately licenced waste management contractor. **Resource recovery off site -** the waste contractor would collect the bin and transport to a licenced waste management facility for reuse, recycling, reprocessing or energy recovery in accordance with

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CONSTRUCTION ACTIVITY	WASTE TYPE	WASTE CLASSIFICATION	PROPOSED STORAGE AND RE-USE /RECYCLING /DISPOSAL METHODS
			the Waste Classification Guidelines.
	Unwanted liquid chemicals	Liquid waste	**Storage/collection –** Chemicals are to be stored in original containers in a designated bunded and secure are for collection by an appropriately licenced contractor. **Disposal –** the licenced contractor would transport the material to an appropriately licenced facility permitted to accept liquid waste for appropriate disposal.

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6 POTENTIAL IMPACTS

Spoil and other waste material entering drainage systems or waterways via stormwater runoff or being deposited on neighbouring lands via wind erosion, can pose a threat to downstream aquatic ecology and water quality as well as the wider community.

Failure to appropriately classify, store, transport and dispose of waste can result in adverse environmental impacts as well as penalties.

The key spoil related aspects and impacts are summarised in *Table 5*.

These identified risks have been considered in the development of this plan and site-specific procedures for the works.

Table 5 - Aspects and Impacts

ASPECTS	POTENTIAL IMPACTS
Earthworks spoil disposal.	▪ Incorrect classification of waste (spoil) resulting in incorrect / illegal disposal/re-use.
Potential for discovery of unexpected contaminated spoil during construction.	▪ Health effects resulting from airborne contamination, e.g. asbestos. ▪ Complaints received from odours released during excavations. ▪ Classification of spoil is changed and disposal options altered, costs incurred associated with disposal of higher classification of waste.
Spoil re-use objectives	▪ Project requirements of 100% of spoil re-use or recycling not being met.
Noise from spoil transportation activities resulting in impact to residents and businesses.	▪ Disturbance to residents or neighbouring businesses. ▪ Potential for complaints.
Dust from spoil transportation activities resulting in impact to residents and businesses.	▪ Disturbance to residents or neighbouring businesses. ▪ Potential for complaints.
Spoil traffic disturbing public access between local roads.	▪ Disturbance to residents resulting in complaints being made, limited access, potential for delays at local road access points resulting in complaints.

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7 SPOIL AND WASTE MANAGEMENT

Table 6 outlines the practices to be implemented for the project to minimise the potential for impacts arising from spoil and waste management.

Table 6 - Spoil and Waste Management practices

MITIGATION MEASURE	TIMING	RESPONSIBILITY
All waste would be assessed, classified, managed and disposed of in accordance with the NSW Waste Classification Guidelines	During construction	Senior Project Manager, Construction Manager, Trade Coordinator
100% of the spoil that can be reused would be beneficially reused in accordance with the project spoil recovery reuse hierarchy.	During construction	Senior Project Manager, Construction Manager, Trade Coordinator
Construction waste would be minimised by accurately calculating materials brought to the site and limiting materials packaging	During construction	Senior Project Manager, Construction Manager, Trade Coordinator

7.1 SPOIL AND WASTE STORAGE

Temporary stockpiles of spoil may be produced and stored on site in skip bins or other waste receptacles while the material is classified in accordance with the *Waste Classification Guidelines* for re-use and/or disposal at a licensed waste management facility. No long-term spoil stockpiles will be created.

7.2 RE-USE AND DISPOSAL OPTIONS

Given spoil would be generated, it is necessary to identify spoil re-use and disposal locations. However, many concurrent major infrastructure projects are under construction in the wider Sydney region and there is a significant demand for waste disposal sites from multiple large construction contractors. Therefore, not all sites have been secured at the time of writing this plan and will change over time depending on time and space availabilities. Notwithstanding, spoil will be reused as much as reasonably possible in accordance with the hierarchy identified in *Table 3*.

Prior to engaging a contractor to collect, transport and dispose/re-use the waste, the Construction Manager would obtain a copy of all relevant qualifications, accreditations, permits and licences from the nominated contractor to ensure the contractor and

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receiving facility are legally permitted to accept the waste type, as required by the POEO Act. In the event that a waste is to be transported to a non-licensed facility for disposal, the Planning & Environment Manager would request for a notice under Section 143(3A) of the POEO Act to be completed and signed by the owner of the waste facility to demonstrate they are legally permitted to accept the waste type. The Section 143 notice would be provided to Goodman for approval prior to transportation of the waste material.

For a resource recovery exemption to apply, all the conditions of the exemption must be met. These conditions include, but are not limited to, sampling and testing requirements, chemical thresholds, use restrictions and record keeping requirements.

The disposal of waste is to be treated as a last resort. Waste disposal will be in accordance with the POEO Act and the Waste Avoidance and Resource Recovery Act 2001.

Table 7 identifies likely waste streams to be generated by construction of the project, and waste classification requirements for materials to be disposed of off-site. Disposal is required at fully licenced facilities, with local facilities nominated below.

Table 7 - Waste Stream Classification and Disposal

WASTE STREAM	WASTE CLASSIFICATIONS	DISPOSAL LOCATION(S)
Building and demolition waste (asphalt, concrete etc)	General solid waste (non-putrescible)	Wanless/SRP Kemps Creek
General recyclables (glass, cans, paper, cardboard)	General solid waste (non-putrescible)	Met Recycling Silverwater
Spoil	VENM / ENM	Holts at Captain Cook Drive Kurnell & Breen at Captain Cook Drive Kurnell
Spoil	General solid waste (non-putrescible)	Wanless/SRP Kemps Creek
Drilling mud	Liquid waste or treated drilling mud	Wanless/SRP Kemps Creek
Concrete slurry	Liquid waste	Wanless/SRP Kemps Creek
Asbestos containing material	Special waste	Bingo eastern Creek or Cleanaway Erskine Park or Blacktown Waste

It should be noted that the disposal locations nominated above are indicative and additional waste management facilities may be identified and used during construction of

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the project. All waste management facilities would be validated by the Construction Manager as being permitted to accept the respective waste stream prior to disposal.

7.3 UNEXPECTED CONTAMINATED LAND AND ASBESTOS FINDS PROCEDURE

The potential for substantial volumes of contaminated spoil to be generated during construction is expected to be low. Notwithstanding, there is potential to encounter contaminated soil during construction.

Construction personnel would be briefed on the potential for unexpected contamination to occur within the site and procedures to be implemented in the event contamination is identified or suspected.

If contamination is identified or suspected, all work in the vicinity of the find shall cease and the area isolated appropriately. A specialist consultant experienced in the identification, sampling and testing of contamination would be engaged to undertake an assessment of site conditions prior to re-commencement of works. The consultant should:

- Sample and analysis of soil to determine the potential existence of contaminants. Analysis must be undertaken by a NATA accredited laboratory;
- Sample, analyse and determine classification of material to be disposed and/or confirm for re-use as backfill or transportation to another development suitably licensed to accept the material; and
- Report and provide advice on management options, re-use onsite and disposal criteria.

Once waste has been classified, appropriate management options would be considered and implemented in accordance with legislated requirements.

Only bonded asbestos may be received at some premises. There may also be limits on the quantity of asbestos that can be stored on some premises at any time.

Prior to engaging a contractor to collect, transport and dispose/re-process any special or hazardous waste, the Construction Manager would obtain a copy of all relevant qualifications, accreditations, permits and licences from the nominated contractor to ensure the contractor and receiving facility are legally permitted to accept the waste type, as required by the POEO Act.

The asbestos waste is to be tracked, and all dockets and receipts retained.

Refer to the Unexpected Finds Protocol for further information SYD001-AWE-UFP-001 Rev B.

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7.4 TRANSPORT AND HAULAGE

Spoil will be transported off site by registered trucks via approved construction traffic transport routes and as per Construction Traffic Management Plan. Spoil leaving site will be document in terms of time and date, truck registration, classification, characterisation and location of disposal. The following will be recorded:

- Date.
- Docket number
- Haulage company/licence.
- Material classification.
- Quantity in tonnes.
- Truck identification number.
- Location of spoil receival site.

8 COMPLIANCE MANAGEMENT

8.1 ROLES AND RESPONSIBILITIES

The overall roles and responsibilities for A W Edwards personnel are outlined in Chapter 4 of the CEMP. The roles and responsibilities of construction personnel in terms of spoil management are described in *Table 8*.

Table 8 - Roles and Responsibilities

ROLE	RESPONSIBILITIES
Senior Project Manager	▪ Managing the delivery of the project including overseeing implementation of spoil management measures.
Construction/Site Managers, Foreman, WHSE Manager	▪ Manage the delivery of the construction process, in relation to spoil management across all sites in conjunction with the Planning and Environment Manager. ▪ Ensure that relevant spoil management requirements are considered in procuring materials and services. ▪ Oversee the implementation of all spoil management initiatives. ▪ Responsible for managing ongoing compliance with the CoA and environmental document requirements. ▪ Track and report spoil elements against sustainability targets.

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ROLE	RESPONSIBILITIES
	▪ Manage the on-ground application of spoil management measures during construction. ▪ Monitor and report on spoil management during construction.
Project Coordinator	▪ Implement spoil management activities during construction works.

8.2 TRAINING

All site personnel will be inducted and trained as required in relation to spoil and waste management. This CWMP will be continuously improved by ongoing evaluation of environmental management performance against environmental policies, objectives and targets to identify opportunities for improvement.

The training will cover the following issues such as:

- Legislative requirements (POEO Act, EPL etc.) including Section 120 (offence to pollute waters).
- Duty to notify of environmental harm (or the potential for it) including chain of reporting.
- Spill containment and management procedure.
- Contamination and unexpected finds.
- Toolbox talks will also be used to further reinforce awareness of spoil issues.

Further details regarding staff induction and training are described in Chapter 6 of the CEMP.

8.3 MONITORING AND INSPECTIONS

General requirements and responsibilities in relation to inspections and compliance monitoring are documented in Chapter 9 of the CEMP. Routine environmental inspections will include determination of compliance with this CWMP.

8.4 NON-CONFORMANCES

Non-conformances will be identified, managed and documented in accordance with Section 9.4 of the CEMP.

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8.5 COMPLAINTS

Complaints will be recorded and addressed in accordance with Section 7.4.2 of the CEMP and the Community Consultation and Complaints Handling Strategy.

8.6 RECORD MANAGEMENT

Compliance records would be maintained as detailed in Section 11.2 of the CEMP and may include the following aspects regarding heritage management:

- Inspections undertaken in relation to spoil management measures;
- Results of any spoil testing and waste classification;
- Records detailing the beneficial re-use of spoil either within the project or at off-site locations;
- Spoil volumes and disposal locations; and
- Waste register and disposal dockets.

The above records will be made available to Goodman.

9 REVIEW AND IMPROVEMENT

The CWMP will be reviewed annually to ensure compliance with legislative requirements and its suitability and effectiveness for the project.

The review may be in the form of:

- A formal management review;
- A second party audit; and/or
- Inclusion as a separate item at a site meeting.

The Construction Manager and WHSE Manager may review and update the CWMP more regularly where:

- Significant changes in design or construction activities occur;
- Where targets are not being achieved; or
- In response to lessons learned, audits and non-conformity reports.

Any changes to the CWMP will be approved by Goodman in accordance with Chapter 10 of the CEMP.

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10 APPENDICES

Number	Title
1.	Part 1: Classifying waste
2.	Part 2: Immobilising waste
3.	Part 3: Waste containing radioactive material
4.	Part 4: Acid sulfate soils
5.	Addendum to Part 1: Classifying Waste

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Waste Classification Guidelines

Part 1: Classifying waste

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Classifying wastes into groups that pose similar risks to the environment and human health facilitates their management and appropriate disposal. It is the responsibility of those who generate waste to classify that waste. To assist waste generators classify the wastes they produce, the EPA has developed the Waste Classification Guidelines ('the Guidelines') which are a step-by-step process for classifying waste.

Generators and waste facilities must carefully follow the procedures in these Guidelines to ensure they comply with applicable laws in classifying their waste and safeguard protection of the environment and human health.

The Guidelines are comprised of the following sections, of which this document is Part 1:

Overview of the Guidelines

Part 1: Classifying waste

Part 2: Immobilisation of waste

Part 3: Waste containing radioactive material

Part 4: Acid sulfate soils

All sections of the Guidelines are available for download from the EPA website at www.epa.nsw.gov.au/waste/classification.htm.

Introduction

This part of the Waste Classification Guidelines (the Guidelines) covers the classification of wastes into groups that pose similar risks to the environment and human health.

The following classes of waste are defined in clause 49 of Schedule 1 of the *Protection of the Environment Operations Act 1997* (POEO Act):

- special waste
- liquid waste
- hazardous waste
- restricted solid waste
- general solid waste (putrescible)
- general solid waste (non-putrescible).

To determine which of the above classifications applies to your waste, the following steps must be followed in the order below. Once a waste's classification has been established under a particular step, do not go to the next step[1]; the waste will be taken to have that classification and must be managed accordingly.

If an immobilisation approval applies to a waste, a generator who complies with the terms of that approval may classify that waste as set out in the approval, rather than according to these Guidelines.

Step 1: Is the waste special waste?

'Special waste' is a class of waste that has unique regulatory requirements. The potential environmental impacts of special waste need to be managed to minimise the risk of harm to the environment and human health.

Special waste means any of the following:

- clinical and related waste
- asbestos waste
- waste tyres
- anything classified as special waste under an EPA gazettal notice.

Generators of special waste do not need to make any further assessment of their waste if it falls within the definitions of special wastes below.

The only exception to this is where special waste is mixed with restricted solid or hazardous waste. In these circumstances, the waste must be classified as special waste and restricted solid or hazardous waste (as applicable), and managed as both of those classifications.

The meanings of the terms clinical and related waste, asbestos waste, and waste tyres are detailed below.

Clinical and related waste

Clinical and related waste means:

- clinical waste
- cytotoxic waste

[1] The only exception to this is where special waste is mixed with or incorporates other restricted solid waste or hazardous waste – see Step 1 for further details.

- pharmaceutical, drug or medicine waste
- sharps waste.

Clinical waste means any waste resulting from medical, nursing, dental, pharmaceutical, skin penetration or other related clinical activity, being waste that has the potential to cause injury, infection or offence, and includes waste containing any of the following:

- human tissue (other than hair, teeth and nails)
- bulk body fluids or blood
- visibly blood-stained body fluids, materials or equipment
- laboratory specimens or cultures
- animal tissue, carcasses or other waste from animals used for medical research

but does not include any such waste that has been treated by a method approved in writing by the Director-General of NSW Health.

Cytotoxic waste means any substance contaminated with any residues or preparations that contain materials that are toxic to cells principally through their action on cell reproduction.

Pharmaceutical, drug or medicine waste means waste that has been generated by activities carried out for business or other commercial purposes and that consists of pharmaceutical or other chemical substances specified in the Poisons List made under section 8 of the *Poisons and Therapeutic Goods Act 1966*.

Sharps waste means any waste collected from designated sharps waste containers used in the course of business, commercial or community service activities, being waste resulting from the use of sharps for any of the following purposes:

- human health care by health professionals and other health care providers
- medical research or work on cadavers
- veterinary care or veterinary research
- skin penetration or the injection of drugs or other substances for medical or non-medical reasons

but does not include waste that has been treated on the site where it was generated, and to a standard specified in an EPA gazettal notice.

Sharps means those things:

- that have sharp points or edges capable of cutting, piercing or penetrating the skin (such as needles, syringes with needles or surgical instruments)
- that are designed for the purpose of cutting, piercing or penetrating the skin
- that have the potential to cause injury or infection.

Asbestos waste

Asbestos means the fibrous form of those mineral silicates that belong to the serpentine or amphibole groups of rock-forming minerals, including actinolite, amosite (brown asbestos), anthophyllite, chrysotile (white asbestos), crocidolite (blue asbestos) and tremolite.

Asbestos waste means any waste that contains asbestos.

Waste tyres

Waste tyres means used, rejected or unwanted tyres, including casings, seconds, shredded tyres or tyre pieces.

Step 2: Is the waste liquid waste?

If you have established that the waste is not special waste, decide whether it is 'liquid waste'.

Liquid waste means any waste (other than special waste) that:

- has an angle of repose of less than 5 degrees above horizontal
- becomes free-flowing at or below 60 degrees Celsius or when it is transported
- is generally not capable of being picked up by a spade or shovel
- is classified as liquid waste under an EPA gazettal notice.

If the waste meets the criteria outlined above, it is classified as liquid waste, and no further assessment for classification is required.

Note: The waste generator may choose to separate the waste into its liquid and solid fractions so that the solid fraction can be further classified in accordance with these Guidelines.

Step 3: Is the waste pre-classified?

If the waste is neither special nor liquid waste, establish whether the waste has been pre-classified by the EPA.

Some commonly generated waste types have been pre-classified as hazardous waste, general solid waste (putrescible) or general solid waste (non-putrescible). These pre-classifications are contained in the definitions of those classifications in Schedule 1 of the POEO Act.

The following wastes have already been pre-classified by the EPA. The EPA may also pre-classify other waste types as either hazardous waste, restricted solid waste, general solid waste (putrescible) or general solid waste (non-putrescible) by a notice published in the *NSW Government Gazette*. All currently gazetted special, liquid and pre-classified wastes are listed on the EPA website at: Types of waste.

Once a waste's classification has been established under a particular pre-classification below, do not go to the next classification; the waste has that classification and must be managed accordingly.

Hazardous waste

The following waste types (other than special waste or liquid waste) have been pre-classified by the EPA as 'hazardous waste':

- containers, having previously contained a substance of Class 1, 3, 4, 5 or 8 within the meaning of the Transport of Dangerous Goods Code, or a substance to which Division 6.1 of the Transport of Dangerous Goods Code applies, from which residues have not been removed by washing2 or vacuuming
- coal tar or coal tar pitch waste (being the tarry residue from the heating, processing or burning of coal or coke) comprising of more than 1% (by weight) of coal tar or coal tar pitch waste
- lead-acid or nickel-cadmium batteries (being waste generated or separately collected by activities carried out for business, commercial or community services purposes)
- lead paint waste arising otherwise than from residential premises or educational or child care institutions
- any mixture of the wastes referred to above.

[2] The cleaning method used must be as good as or better than the triple-rinsing method outlined in Appendix 2.

Transport of Dangerous Goods Code means the document called the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition), approved by the Ministerial Council for Road Transport and published by the Commonwealth Government from time to time.

Restricted solid waste

Currently, no wastes have been pre-classified by the EPA as 'restricted solid waste'. Restricted solid waste therefore currently only includes wastes assessed and classified as restricted solid waste in accordance with the procedures in Step 5 of this guide.

General solid waste (putrescible)

The following wastes (other than special waste, liquid waste, hazardous waste or restricted solid waste) have been pre-classified by the EPA as 'general solid waste (putrescible)':

- household waste that contains putrescible organics
- waste from litter bins collected by or on behalf of local councils
- manure and night soil
- disposable nappies, incontinence pads or sanitary napkins
- food waste
- animal waste
- grit or screenings from sewage treatment systems that have been dewatered so that the grit or screenings do not contain free liquids
- any mixture of the wastes referred to above.

In assessing whether waste has been pre-classified as general solid waste (putrescible), the following definitions apply:

Animal waste includes dead animals and animal parts and any mixture of dead animals and animal parts.

Food waste means waste from the manufacture, preparation, sale or consumption of food but does not include grease-trap waste.

Manure includes any mixture of manure and biodegradable animal bedding, such as straw.

General solid waste (non-putrescible)

The following wastes (other than special waste, liquid waste, hazardous waste, restricted solid waste or general solid waste (putrescible)) are pre-classified as 'general solid waste (non-putrescible)':

- glass, plastic, rubber, plasterboard, ceramics, bricks, concrete or metal
- paper or cardboard
- household waste from municipal clean-up that does not contain food waste
- waste collected by, or on behalf of, local councils from street sweepings
- grit, sediment, litter and gross pollutants collected in, and removed from, stormwater treatment devices and/or stormwater management systems, that has been dewatered so that they do not contain free liquids
- grit and screenings from potable water and water reticulation plants that has been dewatered so that it does not contain free liquids
- garden waste
- wood waste
- waste contaminated with lead (including lead paint waste) from residential premises or educational or child care institutions

- containers, previously containing dangerous goods, from which residues have been removed by washing[3] or vacuuming
- drained oil filters (mechanically crushed), rags and oil-absorbent materials that only contain non-volatile petroleum hydrocarbons and do not contain free liquids
- drained motor oil containers that do not contain free liquids
- non-putrescible vegetative waste from agriculture, silviculture or horticulture
- building cavity dust waste removed from residential premises or educational or child care institutions, being waste that is packaged securely to prevent dust emissions and direct contact
- synthetic fibre waste (from materials such as fibreglass, polyesters and other plastics) being waste that is packaged securely to prevent dust emissions, but excluding asbestos waste
- virgin excavated natural material
- building and demolition waste
- asphalt waste (including asphalt resulting from road construction and waterproofing works)
- biosolids categorised as unrestricted use, or restricted use 1, 2 or 3, in accordance with the criteria set out in the *Biosolids Guidelines* (EPA 2000)
- cured concrete waste from a batch plant
- fully cured and set thermosetting polymers and fibre-reinforcing resins
- fully cured and dried residues of resins, glues, paints, coatings and inks
- any mixture of the wastes referred to above.

In assessing whether waste has been pre-classified as general solid waste (non-putrescible), the following definitions apply:

Building and demolition waste means unsegregated material (other than material containing asbestos waste or liquid waste) that results from:

- the demolition, erection, construction, refurbishment or alteration of buildings other than
    - chemical works
    - mineral processing works
    - container reconditioning works
    - waste treatment facilities
- the construction, replacement, repair or alteration of infrastructure development such as roads, tunnels, sewage, water, electricity, telecommunications and airports

and includes materials such as:

- bricks, concrete, paper, plastics, glass and metal
- timber, including unsegregated timber, that may contain timber treated with chemicals such as copper chrome arsenate (CCA), high temperature creosote (HTC), pigmented emulsified creosote (PEC) and light organic solvent preservative (LOSP)

but does not include excavated soil (for example, soil excavated to level off a site prior to construction or to enable foundations to be laid or infrastructure to be constructed).

Garden waste means waste that consists of branches, grass, leaves, plants, loppings, tree trunks, tree stumps and similar materials, and includes any mixture of those materials.

[3] The cleaning method must be as good as or better than the triple-rinsing method outlined in Appendix 2.

Virgin excavated natural material means natural material (such as clay, gravel, sand, soil or rock fines):

- that has been excavated or quarried from areas that are not contaminated with manufactured chemicals, or with process residues, as a result of industrial, commercial, mining or agricultural activities
- that does not contain sulfidic ores or soils, or any other waste,

and includes excavated natural material that meets such criteria for virgin excavated natural material as may be approved from time to time by a notice published in the *NSW Government Gazette*.

Wood waste means sawdust, timber offcuts, wooden crates, wooden packaging, wooden pallets, wood shavings and similar materials, and includes any mixture of those materials, but does not include wood treated with chemicals such as copper chrome arsenate (CCA), high temperature creosote (HTC), pigmented emulsified creosote (PEC) and light organic solvent preservative (LOSP).

Step 4: Does the waste possess hazardous characteristics?

If a waste has not been classified under Steps 1–3, it must be classified as 'hazardous waste' if it is a dangerous good under any of the following classes or divisions of the *Transport of Dangerous Goods Code*

- Class 1: Explosives
- Class 2: Gases (compressed, liquefied or dissolved under pressure)
- Division 4.1: Flammable solids (excluding garden waste, natural organic fibrous material and wood waste, and all physical forms of carbon such as activated carbon and graphite)
- Division 4.2: Substances liable to spontaneous combustion (excluding garden waste, natural organic fibrous material and wood waste, and all physical forms of carbon such as activated carbon and graphite)
- Division 4.3: Substances which when in contact with water emit flammable gases
- Class 5: Oxidising agents and organic peroxides
- Division 6.1: Toxic substances
- Class 8: Corrosive substances.

For further information on the test methods to establish whether the waste exhibits any of the above characteristics, please refer to the *Transport of Dangerous Goods Code*.

Step 5: Determining a waste's classification using chemical assessment

Waste generators must chemically assess their waste in accordance with Step 5 to determine the waste's classification where it has not been classified under Steps 1–4 of the Guidelines.

If the waste generator does not undertake chemical assessment of the waste, the waste must be classified as hazardous waste. Waste classified as hazardous waste cannot be disposed of in NSW and must be treated prior to disposal.

The chemical assessment process is based around the waste's potential to release chemical contaminants into the environment through contact with liquids, which leads to the production of leachates.

Testing of contaminants as set out below, however, is not necessary where the waste generator knows the processes which produced the waste and the maximum possible levels of contaminants it contains. In order to classify the waste, the generator must be certain that

the maximum possible levels of contaminants in the waste do not exceed the specific contaminant concentration (SCC) and/or toxicity characteristics leaching procedure (TCLP) test values for that classification (see *Measurable properties of waste* below). In these cases, the generator must ensure that the reasons for not undertaking the chemical assessment are documented and records of the decision are retained for three years.

Guidance on sampling and analytical methods is provided in Appendix 1. Where waste generators are unsure of the appropriate sampling or analytical methods for a particular waste, they are strongly encouraged to seek expert help, either from a laboratory that specialises in waste analysis or someone specialising in waste management issues, or both.

Measurable properties of waste

The two measurable properties of chemical contaminants used to classify waste are:

- the SCC of any chemical contaminant in the waste, expressed as milligrams per kilogram (mg/kg)
- the leachable concentration of any chemical contaminant using TCLP, expressed as milligrams per litre (mg/L).

Generators of waste must select the chemical contaminants that are known to be present, or are likely to be present in the waste. This may be informed by the site activities, site history, or the processes which produced the waste. Generators of waste must be able to justify the chemical contaminants selected for testing and keep records of that decision for three years.

If a waste generator reasonably suspects that a waste contains chemical contaminants that are not listed in Tables 1 and 2 below, the waste generator must test for these contaminants and contact EPA's Waste and Resource Recovery Branch for advice.

Classifying a waste using the SCC test

The first test which must be used to chemically assess waste is the SCC test.

The SCC test acts as an initial screening test for the classification of a waste. Based on SCC alone, the test value for each contaminant must be less than or equal to the contaminant threshold (CT) value specified for that contaminant in Table 1, and if so it will fall into one of the following classes:

- general solid waste ≤CT1
- restricted solid waste ≤CT2.

If a waste's SCC test value exceeds the contaminant threshold value set for general solid waste (CT1), further assessment using the TCLP test may be used.

Where the contaminant threshold value set for restricted solid waste (CT2) is exceeded, a TCLP test must be carried out to determine the leachable concentration of that contaminant and the class of waste.

For waste assessment and classification, it is recommended that the sample mean, the sample standard deviation and the 95% upper confidence limit (UCL) of the mean concentration is calculated for each contaminant to ensure that the 95% UCL for the mean concentration is less than or equal to the CT limit value specified for that contaminant.

Classifying a waste using the SCC and TCLP tests

To establish the waste's classification using both SCC and TCLP, the test values for each chemical contaminant must be compared with the threshold values set in Table 2, and the classification is then determined as follows:

Classification	SCC value	TCLP value
General solid waste	≤SCC1	≤TCLP1
Restricted solid waste	≤SCC2	≤TCLP2
Hazardous waste	>SCC2	>TCLP2

If any of the SCC or TCLP threshold values specified in Table 2 are exceeded for general solid waste, the waste must be classified as restricted solid waste. If any of the SCC or TCLP threshold values specified in Table 2 are exceeded for restricted solid waste, the waste must be classified as hazardous waste. Detailed interpretative guidance regarding the use of both SCC and TCLP values to establish a waste's classification is provided in Table 3.

For waste assessment and classification, it is recommended that the sample mean, the sample standard deviation and the 95% UCL of the mean concentration is calculated for each contaminant to ensure that the 95% UCL for the mean concentration is less than or equal to the SCC or TCLP limit value specified for that contaminant.

Table 1: CT1 & CT2 values for classifying waste by chemical assessment without the TCLP test

For disposal requirements for organic and inorganic chemical contaminants not listed below, contact the EPA. Aluminium, barium, boron, chromium (0 and III oxidation states), cobalt, copper, iron, manganese, vanadium and zinc have not been listed with values in this table and need not be tested for.

	Maximum values of *specific contaminant concentration* (SCC) for classification without TCLP		
	General solid waste[1]	**Restricted solid waste**	
Contaminant	**CT1 (mg/kg)**	**CT2 (mg/kg)**	**CAS Registry Number**
Arsenic	100	400	
Benzene	10	40	71-43-2
Benzo(a)pyrene[2]	0.8	3.2	50-32-8
Beryllium	20	80	
Cadmium	20	80	
Carbon tetrachloride	10	40	56-23-5
Chlorobenzene	2,000	8,000	108-90-7
Chloroform	120	480	67-66-3
Chlorpyrifos	4	16	2921-88-2
Chromium (VI)[3]	100	400	
m-Cresol	4,000	16,000	108-39-4
o-Cresol	4,000	16,000	95-48-7
p-Cresol	4,000	16,000	106-44-5
Cresol (total)	4,000	16,000	1319-77-3
Cyanide (amenable)[4]	70	280	
Cyanide (total)	320	1,280	
2,4-D	200	800	94-75-7
1,2-Dichlorobenzene	86	344	95-50-1
1,4-Dichlorobenzene	150	600	106-46-7
1,2-Dichloroethane	10	40	107-06-2
1,1-Dichloroethylene	14	56	75-35-4
Dichloromethane	172	688	75-09-2
2,4-Dinitrotoluene	2.6	10.4	121-14-2
Endosulfan[5]	60	240	See below[5]
Ethylbenzene	600	2,400	100-41-4
Fluoride	3,000	12,000	
Fluroxypyr	40	160	69377-81-7
Lead	100	400	

Contaminant	Maximum values of *specific contaminant concentration* (SCC) for classification without TCLP		CAS Registry Number
	General solid waste[1]	Restricted solid waste	
	CT1 (mg/kg)	CT2 (mg/kg)	
Mercury	4	16	
Methyl ethyl ketone	4,000	16,000	78-93-3
Moderately harmful pesticides[6] (total)	250	1,000	See below[6]
Molybdenum	100	400	
Nickel	40	160	
Nitrobenzene	40	160	98-95-3
C6–C9 petroleum hydrocarbons[7]	650	2,600	
C10–C36 petroleum hydrocarbons[7]	10,000	40,000	
Phenol (non-halogenated)	288	1,152	108-95-2
Picloram	60	240	1918-02-1
Plasticiser compounds[8]	20	80	See below[8]
Polychlorinated biphenyls[9]	<50	<50	1336-36-3
Polycyclic aromatic hydrocarbons (total)[10]	200	800	
Scheduled chemicals[11]	<50	<50	
Selenium	20	80	
Silver	100	400	
Styrene (vinyl benzene)	60	240	100-42-5
Tebuconazole	128	512	107534-96-3
1,2,3,4-Tetrachlorobenzene	10	40	634-66-2
1,1,1,2-Tetrachloroethane	200	800	630-20-6
1,1,2,2-Tetrachloroethane	26	104	79-34-5
Tetrachloroethylene	14	56	127-18-4
Toluene	288	1,152	108-88-3
1,1,1-Trichloroethane	600	2,400	71-55-6
1,1,2-Trichloroethane	24	96	79-00-5
Trichloroethylene	10	40	79-01-6
2,4,5-Trichlorophenol	8,000	32,000	95-95-4
2,4,6-Trichlorophenol	40	160	88-06-2
Triclopyr	40	160	55335-06-3

Contaminant	Maximum values of *specific contaminant concentration* (SCC) for classification without TCLP		CAS Registry Number
	General solid waste[1]	Restricted solid waste	
	CT1 (mg/kg)	CT2 (mg/kg)	
Vinyl chloride	4	16	75-01-4
Xylenes (total)	1,000	4,000	1330-20-7

Notes

1. Values are the same for general solid waste (putrescible) and general solid waste (non-putrescible).
2. There may be a need for the laboratory to concentrate the sample to achieve the TCLP limit value for benzo(a)pyrene with confidence.
3. These limits apply to chromium in the +6 oxidation state only.
4. Analysis for cyanide (amenable) is the established method for assessing potentially leachable cyanide. The EPA may consider other methods if it can be demonstrated that these methods yield the same information.
5. Endosulfan (CAS Registry Number 115-29-7) means the total of Endosulfan I (CAS Registry Number 959-98-8), Endosulfan II (CAS Registry Number 891-86-1) and Endosulfan sulfate (CAS Registry Number 1031-07-8).
6. The following moderately harmful pesticides are to be included in the total values specified:

Moderately harmful pesticides (total)			
Name	CAS Registry Number	Name	CAS Registry Number
Atrazine	1912-24-9	Imidacloprid	138261-41-3
Azoxystrobin	131860-33-8	Indoxacarb	173584-44-6
Bifenthrin	82657-04-3	Malathion (Maldison)	121-75-5
Brodifacoum	56073-10-0	Metalaxyl	57837-19-1
Carboxin	5234-68-4	Metalaxyl-M	70630-17-0
Copper naphthenate	1338-02-9	Methidathion	950-37-8
Cyfluthrin	68359-37-5	3-Methyl-4-chlorophenol	59-50-7
Cyhalothrin	68085-85-8	Methyl chlorpyrifos	5598-13-0
Cypermethrin	52315-07-08	N-Methyl pyrrolidone	872-50-4
Deltamethrin	52918-63-5	2-octylthiazol-3-one	26530-20-1
Dichlofluanid	1085-98-9	Oxyfluorfen	42874-03-3
Dichlorvos	62-73-7	Paraquat dichloride	1910-42-5
Difenoconazole	119446-68-3	Parathion methyl	298-00-0
Dimethoate	60-51-5	Permethrin	52645-53-1
Diquat dibromide	85-00-7	Profenofos	41198-08-7
Emamectin benzoate	137515-75-4 & 155569-91-8	Prometryn	7287-19-6
Ethion	563-12-2	Propargite	2312-35-8
Fenthion	55-38-9	Pentachloronitrobenzene (Quintozene)	82-68-8
Fenitrothion	122-14-5	Simazine	122-34-9
Fipronil	120068-37-3	Thiabendazole	148-79-8

Moderately harmful pesticides (total)			
Name	**CAS Registry Number**	**Name**	**CAS Registry Number**
Fluazifop-P-butyl	79241-46-6	Thiamethoxam	153719-23-4
Fludioxonil	131341-86-1	Thiodicarb	59669-26-0
Glyphosate	1071-83-6	Thiram	137-26-8

7. Approximate range of petroleum hydrocarbon fractions: petrol C6–C9, kerosene C10–C18, diesel C12–C18, and lubricating oils above C18. Laboratory results are reported as four different fractions: C6–C9, C10–C14, C15–C28 and C29–C36. The results of total petroleum hydrocarbons (TPH) (C10–C36) analyses are reported as a sum of the relevant three fractions. Please note that hydrocarbons are defined as molecules that only contain carbon and hydrogen atoms. Prior to TPH (C10–C36) analysis, clean-up may be necessary to remove non-petroleum hydrocarbon compounds. Where the presence of other materials that will interfere with the analysis may be present, such as oils and fats from food sources, you are advised to treat the extract that has been solvent exchanged to hexane with silica gel as described in *USEPA Method 1664A* (USEPA 2000).
8. Plasticiser compounds means the total of di-2-ethyl hexyl phthalate (CAS Registry Number 117-81-7) and di-2-ethyl hexyl adipate (CAS Registry Number 103-23-1) contained within a waste.
9. Polychlorinated biphenyls must be managed in accordance with the EPA's polychlorinated biphenyl (PCB) chemical control order 1997, which is available on the EPA website at Polychlorinated Biphenyl (PCB) Chemical Control Order 1997.
10. The following polycyclic aromatic hydrocarbons (PAHs) are assessed as the total concentration of 16 USEPA Priority Pollutant PAHs, as follows:

Polycyclic aromatic hydrocarbons (total)			
PAH name	**CAS Registry Number**	**PAH name**	**CAS Registry Number**
Acenaphthene	83-32-9	Chrysene	218-01-9
Acenaphthylene	208-96-8	Dibenzo(a,h)anthracene	53-70-3
Anthracene	120-12-7	Fluoranthene	206-44-0
Benzo(a)anthracene	56-55-3	Fluorene	86-73-7
Benzo(a)pyrene	50-32-8	Indeno(1,2,3-cd)pyrene	193-39-5
Benzo(b)fluoranthene	205-99-2	Naphthalene	91-20-3
Benzo(ghi)perylene	191-24-2	Phenanthrene	85-01-8
Benzo(k)fluoranthene	207-08-9	Pyrene	129-00-0

11. Scheduled chemicals must be managed in accordance with the EPA's scheduled chemical wastes chemical control order 2004, which is available on the EPA website at Scheduled Chemical Wastes Chemical Control Order 2004.

    The following scheduled chemicals are to be included in the total values specified:

Scheduled chemicals (total)			
Name	**CAS Registry Number**	**Name**	**CAS Registry Number**
Aldrin	309-00-2	Heptachlor	76-44-8
Alpha-BHC	319-84-6	Heptachlor epoxide	1024-57-3
Beta-BHC	319-85-7	Hexachlorobenzene	118-74-1
Gamma-BHC (Lindane)	58-89-9	Hexachlorophene	70-30-4
Delta-BHC	319-86-8	Isodrin	465-73-6

Scheduled chemicals (total)			
Name	**CAS Registry Number**	**Name**	**CAS Registry Number**
Chlordane	57-74-9	Pentachlorobenzene	608-93-5
DDD	72-54-8	Pentachloronitrobenzene	82-68-8
DDE	72-55-9	Pentachlorophenol	87-86-5
DDT	50-29-3	1,2,4,5-Tetrachlorobenzene	95-94-3
Dieldrin	60-57-1	2,3,4,6-Tetrachlorophenol	58-90-2
Endrin	72-20-8	1,2,4-Trichlorobenzene	120-82-1
Endrin aldehyde	7421-93-4	2,4,5-Trichlorophenoxyacetic acid, salts and esters	93-76-5

Table 2: TCLP and SCC values for classifying waste by chemical assessment

For disposal requirements for organic and inorganic chemical contaminants not listed below, contact the EPA. Aluminium, barium, boron, chromium (0 and III oxidation states), cobalt, copper, iron, manganese, vanadium and zinc have not been listed with values in this table and need not be tested for.

	Maximum values for *leachable concentration* and *specific contaminant concentration* when used together				
	General solid waste[1]		**Restricted solid waste**		
	Leachable concentration	**Specific contaminant concentration**	**Leachable concentration**	**Specific contaminant concentration**	
Contaminant	**TCLP1 (mg/L)**	**SCC1 (mg/kg)**	**TCLP2 (mg/L)**	**SCC2 (mg/kg)**	**CAS Registry Number**
Arsenic	5.0[2]	500	20	2,000	
Benzene	0.5[2]	18	2	72	71-43-2
Benzo(a)pyrene[3]	0.04[4]	10	0.16	23	50-32-8
Beryllium	1.0[5]	100	4	400	
Cadmium	1.0[2]	100	4	400	
Carbon tetrachloride	0.5[2]	18	2	72	56-23-5
Chlorobenzene	100[2]	3,600	400	14,400	108-90-7
Chloroform	6[2]	216	24	864	67-66-3
Chlorpyrifos	0.2	7.5	0.8	30	2921-88-2
Chromium (VI)[6]	5[2]	1,900	20	7,600	
m-Cresol	200[2]	7,200	800	28,800	108-39-4
o-Cresol	200[2]	7,200	800	28,800	95-48-7
p-Cresol	200[2]	7,200	800	28,800	106-44-5
Cresol (total)	200[2]	7,200	800	28,800	1319-77-3
Cyanide (amenable)[7, 8]	3.5[7]	300	14	1,200	
Cyanide (total)[7]	16[7]	5,900	64	23,600	
2,4-D	10[2]	360	40	1,440	94-75-7
1,2-Dichlorobenzene	4.3[2]	155	17.2	620	95-50-1
1,4-Dichlorobenzene	7.5[2]	270	30	1,080	106-46-7
1,2-Dichloroethane	0.5[2]	18	2	72	107-06-2
1,1-Dichloroethylene	0.7[2]	25	2.8	100	75-35-4
Dichloromethane	8.6[2]	310	34.4	1,240	75-09-2
2,4-Dinitrotoluene	0.13[2]	4.68	0.52	18.7	121-14-2
Endosulfan[9]	3	108	12	432	See below[9]

Contaminant	Maximum values for *leachable concentration* and *specific contaminant concentration* when used together				CAS Registry Number
	General solid waste[1]		Restricted solid waste		
	Leachable concentration	Specific contaminant concentration	Leachable concentration	Specific contaminant concentration	
	TCLP1 (mg/L)	SCC1 (mg/kg)	TCLP2 (mg/L)	SCC2 (mg/kg)	
Ethylbenzene	30[10]	1,080	120	4,320	100-41-4
Fluoride	150[10]	10,000	600	40,000	
Fluroxypyr	2	75	8	300	69377-81-7
Lead	5[2]	1,500	20	6,000	
Mercury	0.2[2]	50	0.8	200	
Methyl ethyl ketone	200[2]	7,200	800	28,800	78-93-3
Moderately harmful pesticides[11](total)	N/A[12]	250	N/A[12]	1,000	See below[11]
Molybdenum	5[10]	1,000	20	4,000	
Nickel	2[10]	1,050	8	4,200	
Nitrobenzene	2[2]	72	8	288	98-95-3
C6–C9 petroleum hydrocarbons[13]	N/A[12]	650	N/A[12]	2,600	
C10–C36 petroleum hydrocarbons[13]	N/A[12]	10,000	N/A[12]	40,000	
Phenol (non-halogenated)	14.4[14]	518	57.6	2,073	108-95-2
Picloram	3	110	12	440	1918-02-1
Plasticiser compounds[15]	1	600	4	2,400	See below[15]
Polychlorinated biphenyls[12]	N/A[12]	< 50	N/A[12]	< 50	1336-36-3
Polycyclic aromatic hydrocarbons (total)[16]	N/A[12]	200	N/A[12]	800	
Scheduled chemicals[17]	N/A[12]	< 50	N/A[12]	< 50	See below[17]
Selenium	1[2]	50	4	200	
Silver	5.0[2]	180	20	720	
Styrene (vinyl benzene)	3[10]	108	12	432	100-42-5
Tebuconazole	6.4	230	25.6	920	107534-96-3
1,2,3,4-Tetrachlorobenzene	0.5	18	2	72	634-66-2

Contaminant	Maximum values for *leachable concentration* and *specific contaminant concentration* when used together				CAS Registry Number
	General solid waste[1]		Restricted solid waste		
	Leachable concentration	Specific contaminant concentration	Leachable concentration	Specific contaminant concentration	
	TCLP1 (mg/L)	SCC1 (mg/kg)	TCLP2 (mg/L)	SCC2 (mg/kg)	
1,1,1,2-Tetrachloroethane	10[2]	360	40	1,440	630-20-6
1,1,2,2-Tetrachloroethane	1.3[2]	46.8	5.2	187.2	79-34-5
Tetrachloroethylene	0.7[2]	25.2	2.8	100.8	127-18-4
Toluene	14.4[14]	518	57.6	2,073	108-88-3
1,1,1-Trichloroethane	30[2]	1,080	120	4,320	71-55-6
1,1,2-Trichloroethane	1.2[2]	43.2	4.8	172.8	79-00-5
Trichloroethylene	0.5[2]	18	2	72	79-01-6
2,4,5-Trichlorophenol	400[2]	14,400	1,600	57,600	95-95-4
2,4,6-Trichlorophenol	2[2]	72	8	288	88-06-2
Triclopyr	2	75	8	300	55335-06-3
Vinyl chloride	0.2[2]	7.2	0.8	28.8	75-01-4
Xylenes (total)	50[18]	1,800	200	7,200	1330-20-7

Notes

1. Values are the same for general solid waste (putrescible) and general solid waste (non- putrescible).
2. See *Hazardous Waste Management System: Identification and Listing of Hazardous Waste – Toxicity Characteristics Revisions, Final Rule* (USEPA 2012b) for TCLP levels.
3. There may be a need for the laboratory to concentrate the sample to achieve the TCLP limit value for benzo(a)pyrene with confidence.
4. Calculated from *Hazardous Waste: Identification and Listing* (USEPA 2012a).
5. Calculated from 'Beryllium' in *The Health Risk Assessment and Management of Contaminated Sites* (DiMarco & Buckett 1996).
6. These limits apply to chromium in the +6 oxidation state only.
7. Taken from the *Land Disposal Restrictions for Newly Identified and Listed Hazardous Wastes and Hazardous Soil: Proposed Rule* (USEPA 1993).
8. Analysis for cyanide (amenable) is the established method used to assess the potentially leachable cyanide. The EPA may consider other methods if it can be demonstrated that these methods yield the same information.
9. Endosulfan (CAS Registry Number 115-29-7) means the total of endosulfan I (CAS Registry Number 959-98-8), endosulfan II (CAS Registry Number 891-86-1) and endosulfan sulfate (CAS Registry Number 1031-07-8).
10. Calculated from *Australian Drinking Water Guidelines* (NHMRC 2011).
11. The following moderately harmful pesticides are to be included in the total values specified:

Moderately harmful pesticides (total)			
Name	**CAS Registry Number**	**Name**	**CAS Registry Number**
Atrazine	1912-24-9	Imidacloprid	138261-41-3
Azoxystrobin	131860-33-8	Indoxacarb	173584-44-6
Bifenthrin	82657-04-3	Malathion (Maldison)	121-75-5
Brodifacoum	56073-10-0	Metalaxyl	57837-19-1
Carboxin	5234-68-4	Metalaxyl-M	70630-17-0
Copper naphthenate	1338-02-9	Methidathion	950-37-8
Cyfluthrin	68359-37-5	3-Methyl-4-chlorophenol	59-50-7
Cyhalothrin	68085-85-8	Methyl chlorpyrifos	5598-13-0
Cypermethrin	52315-07-08	N-Methyl pyrrolidone	872-50-4
Deltamethrin	52918-63-5	2-octylthiazol-3-one	26530-20-1
Dichlofluanid	1085-98-9	Oxyfluorfen	42874-03-3
Dichlorvos	62-73-7	Paraquat dichloride	1910-42-5
Difenoconazole	119446-68-3	Parathion methyl	298-00-0
Dimethoate	60-51-5	Permethrin	52645-53-1
Diquat dibromide	85-00-7	Profenofos	41198-08-7
Emamectin benzoate	137515-75-4 & 155569-91-8	Prometryn	7287-19-6
Ethion	563-12-2	Propargite	2312-35-8
Fenthion	55-38-9	Pentachloronitrobenzene (Quintozene)	82-68-8
Fenitrothion	122-14-5	Simazine	122-34-9
Fipronil	120068-37-3	Thiabendazole	148-79-8
Fluazifop-P-butyl	79241-46-6	Thiamethoxam	153719-23-4
Fludioxonil	131341-86-1	Thiodicarb	59669-26-0
Glyphosate	1071-83-6	Thiram	137-26-8

12. No TCLP analysis is required. Moderately harmful pesticides, petroleum hydrocarbons, polychlorinated biphenyls, polycyclic aromatic hydrocarbons and scheduled chemicals are assessed using SCC1 and SCC2.

    Polychlorinated biphenyls must be managed in accordance with the EPA's polychlorinated biphenyl (PCB) chemical control order 1997, which is available on the EPA website at Polychlorinated Biphenyl (PCB) Chemical Control Order 1997.

13. Approximate range of petroleum hydrocarbon fractions: petrol C6–C9, kerosene C10–C18, diesel C12–C18, and lubricating oils above C18. Laboratory results are reported as four different fractions: C6–C9, C10–C14, C15–C28 and C29–C36. The results of total petroleum hydrocarbons (C10–C36) analyses are reported as a sum of the relevant three fractions. Please note that hydrocarbons are defined as molecules that only contain carbon and hydrogen atoms. Prior to TPH (C10–C36) analysis, clean-up may be necessary to remove non-petroleum hydrocarbon compounds. Where the presence of other materials that will interfere with the analysis may be present, such as oils and fats from food sources, you are advised to treat the extract that has been solvent exchanged to hexane with silica gel as described in USEPA *Method 1664A* (USEPA 2000).
14. Proposed level for phenol and toluene in *Hazardous Waste Management System: Identification and Listing of Hazardous Waste – Toxicity Characteristics Revisions, Final Rule* (USEPA 2012b).

15. Plasticiser compounds means the total of di-2-ethyl hexyl phthalate (CAS Registry Number 117-81-7) and di-2-ethyl hexyl adipate (CAS Registry Number 103-23-1) contained within a waste.
16. The following polycyclic aromatic hydrocarbons are assessed as the total concentration of 16 USEPA Priority Pollutant PAHs, as follows:

Polycyclic aromatic hydrocarbons (total)			
PAH name	**CAS Registry Number**	**PAH name**	**CAS Registry Number**
Acenaphthene	83-32-9	Chrysene	218-01-9
Acenaphthylene	208-96-8	Dibenzo(a,h)anthracene	53-70-3
Anthracene	120-12-7	Fluoranthene	206-44-0
Benzo(a)anthracene	56-55-3	Fluorene	86-73-7
Benzo(a)pyrene	50-32-8	Indeno(1,2,3-cd)pyrene	193-39-5
Benzo(b)fluoranthene	205-99-2	Naphthalene	91-20-3
Benzo(ghi)perylene	191-24-2	Phenanthrene	85-01-8
Benzo(k)fluoranthene	207-08-9	Pyrene	129-00-0

17. Scheduled chemicals must be managed in accordance with the EPA's scheduled chemical wastes chemical control order 2004, which is available on the EPA website at Scheduled Chemical Wastes Chemical Control Order 2004.

    The following scheduled chemicals are to be included in the total values specified:

Scheduled chemicals (total)			
Name	**CAS Registry Number**	**Name**	**CAS Registry Number**
Aldrin	309-00-2	Heptachlor	76-44-8
Alpha-BHC	319-84-6	Heptachlor epoxide	1024-57-3
Beta-BHC	319-85-7	Hexachlorobenzene	118-74-1
Gamma-BHC (Lindane)	58-89-9	Hexachlorophene	70-30-4
Delta-BHC	319-86-8	Isodrin	465-73-6
Chlordane	57-74-9	Pentachlorobenzene	608-93-5
DDD	72-54-8	Pentachloronitrobenzene	82-68-8
DDE	72-55-9	Pentachlorophenol	87-86-5
DDT	50-29-3	1,2,4,5-Tetrachlorobenzene	95-94-3
Dieldrin	60-57-1	2,3,4,6-Tetrachlorophenol	58-90-2
Endrin	72-20-8	1,2,4-Trichlorobenzene	120-82-1
Endrin aldehyde	7421-93-4	2,4,5-Trichlorophenoxyacetic acid, salts and esters	93-76-5

18. Calculated from *Guidelines for Drinking Water Quality* (WHO 2011).

Table 3: Summary of criteria for chemical assessment to determine waste classification

Waste classification	Criteria[1] for classification by chemical assessment (any of the alternative options given)	Comments
General solid waste	1. SCC test values ≤ CT1	TCLP test not required
	2. TCLP test values ≤ TCLP1 and SCC test values ≤ SCC1	
	3. TCLP test values ≤ TCLP1 and SCC test values > SCC1[2]	Classify as restricted solid or hazardous (as applicable) If immobilisation approval applies, classify in accordance with that approval
Restricted solid waste	1. SCC test values ≤ CT2	TCLP test not required
	2. TCLP1 < TCLP test values ≤ TCLP2 and SCC test values ≤ SCC2	
	3.TCLP test values ≤ TCLP2 and SCC1 < SCC test values ≤ SCC2	
	4. TCLP1 < TCLP test values ≤ TCLP2 and SCC test values > SCC2[2]	Classify as hazardous. If immobilisation approval applies, classify in accordance with that approval
Hazardous waste	1. TCLP test values > TCLP 2	
	2. TCLP test values ≤ TCLP2 and SCC test values > SCC2	Classify as hazardous if no immobilization approval applies

Notes

1. These criteria apply to each toxic and ecotoxic contaminant present in the waste (see Tables 1 and 2).
2. In certain cases the EPA will consider specific conditions, such as segregation of the waste from all other types of waste in a monofill or monocell in order to achieve a greater margin of safety against a possible failure of the immobilisation in the future. Information about the construction and operation of a monofill/monocell is available in the *Draft Environmental Guidelines for Industrial Waste Landfilling* (EPA 1998).

Step 6: Is the waste putrescible or non-putrescible?

Where chemical assessment of a waste under Step 5 results in classification of the waste as general solid waste, further assessment may be undertaken to determine whether the waste can be classified as 'general solid waste (putrescible)' or 'general solid waste (non-putrescible)'.Otherwise (for example, if the waste generator does not wish to undertake this chemical assessment), the waste must be classified as 'general solid waste (putrescible)'.

General solid waste may only be classified as non-putrescible if:

- it does not readily decay under standard conditions, does not emit offensive odours and does not attract vermin or other vectors (such as flies, birds and rodents), or
- it has a specific oxygen uptake of less than 1.5 milligrams O_2 per hour per gram of total organic solids at 20 degrees Celsius, or
- it is such that, during composting (for the purpose of stabilisation), the mass of volatile solids in the organic waste has been reduced by at least 38%, or
- it has been treated by composting for at least 14 days, during which time the temperature of the organic waste must have been greater than 40 degrees Celsius and the average temperature greater than 45 degrees Celsius.

Non-putrescible materials typically do not:

- readily decay under standard conditions
- emit offensive odours
- attract vermin or other vectors (such as flies, birds and rodents).

Wastes that are generally not classified as putrescible include soils, timber, garden trimmings, agricultural, forestry and crop materials, and natural fibrous organic and vegetative materials.

Output from Alternative Waste Technology facilities (AWTs) that requires disposal must be assessed in accordance with the above to determine its putrescibility.

Appendix 1: Chemical assessment

Sampling and analytical methods

Sampling identifies the average levels of contaminants in the waste being assessed. While the following is provided as a guide, it is not possible to recommend sampling methods for all waste types. Appropriate sampling depends on how consistent any tested property is throughout a batch of waste. It is the waste generator's responsibility to ensure that the sampling and analytical methods used are appropriate for the contaminants they are testing for.

Where the property being tested for is highly consistent throughout the waste, sampling is relatively straightforward and useful guidance can be found in the following Australian Standards:

- *AS 1199.0–2003: Sampling Procedures for Inspection by Attributes – Introduction to the ISO2859 Attribute Sampling System* (Standards Australia 2003)
- *AS 1141.3.1–2012: Methods for sampling and testing aggregates – Sampling – Aggregates* (Standards Australia 2012a) is useful for sampling wastes such as aggregates, foundry sand, furnace slag or mining waste.

It is more difficult to accurately sample waste that consists of many different types of waste materials or has chemical contaminants that are not distributed evenly throughout the batch. In such situations, keeping different waste types separate, or separating portions of waste that contain high levels of contaminants from the rest, can be of great benefit.

If unsure of the appropriate sampling or analytical methods for a particular waste, waste generators are strongly encouraged to seek expert help, either from a laboratory that specialises in waste analysis or an appropriately qualified person specialising in such waste management issues, or both. Since most incorrect chemical assessments of waste are due to poor sampling, it is essential that the sampling regime and analytical method used ensure the results are representative of all components and their variability in the waste.

Test methods for determining SCC and TCLP

The reference test methods for determining both the SCC and TCLP values are as described in the United States Environmental Protection Agency's *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (USEPA 2007) and Updates I, II, IIIA, IIIB, IVA and IVB, available at Hazardous Waste Test Methods / SW-846 – US EPA.

The following procedures for leachate preparation are recommended:

- *AS 4439.1–1999: Wastes, Sediments and Contaminated Soils – Preparation of Leachates, Preliminary Assessment* (Standards Australia 1999)
- *AS 4439.3–1997: Wastes, Sediments and Contaminated Soils – Preparation of Leachates, Bottle Leaching Procedure* (Standards Australia 1997a)
- *AS 4439.2–1997: Wastes, Sediments and Contaminated Soils – Preparation of Leachates, Zero Headspace Procedure* (Standards Australia 1997b).

The standard pH for the leaching solutions used must be either 4.93 ± 0.05 if the pH of the waste sample is less than 5.0, or 2.88 ± 0.05 if the pH of the waste sample is greater than 5.0.

To determine the pH of the waste sample, use the test method specified in Clause 7.5 (Selection of Leaching Fluid) of AS 4439.3–1997 (Standards Australia 1997a).

In some instances the EPA may permit the use of leachates with a pH different from those specified above. EPA authorisation to use an alternative must be sought in writing and will only be provided with adequate justification for the proposed variation. An example might be the testing of a non-putrescible waste for disposal into a monofill or monocell which it can be

shown will not be penetrated by acidic leachate or groundwater. For further assistance, contact the EPA's Waste and Resource Recovery Branch.

Precision in chemical analyses

It is important that the test methods and instruments used in analysing a waste are capable of measuring the concentration of each chemical contaminant with enough confidence to assure correct classification.

It is recommended that the upper limit of the combined confidence interval of sampling and analysis (at a probability of 95%) is used for comparison with the maximum values specified in Tables 1 and 2. This approach should give the assessor confidence that a correct classification has been made.

Who can do the chemical analysis and leaching tests?

Analytical laboratories accredited by the National Association of Testing Authorities (NATA) must be used to perform these analyses and tests. If accredited laboratories are not available locally, contact the EPA's Waste and Resource Recovery Branch for advice.

Frequency of testing

There may be situations in which frequent testing of the waste for an initial period establishes that the characteristics of the waste are consistent enough to give the waste generator confidence to reduce the frequency of testing.

On the other hand, some waste streams may show such large variations in properties that every load of waste would need to be tested before classification.

It is the responsibility of the waste generator to ensure that frequency of testing provides representative samples for all contaminants in that waste.

Appendix 2: Triple-rinsing procedure for cleaning containers

Containers, having previously contained a substance of Class 1, 3, 4, 5 or 8 within the meaning of the *Transport of Dangerous Goods Code*, or a substance to which Division 6.1 of the *Transport of Dangerous Goods Code* applies, from which residues have not been removed by washing or vacuuming, are pre-classified as hazardous waste.

The triple rinsing procedure outlined below is for effective washing of empty chemical containers in an effort to change the waste classification of such containers from hazardous waste to general solid waste (non-putrescible). Rinsing must be done immediately after emptying the container, as residues on the walls are more difficult to remove when dry. It is acceptable to use other rinsing treatments, such as pressure rinsing, integrated rinsing or vacuuming, if the results achieved are equal to or better than those from the triple-rinse procedure.

Triple-rinsing (a three-stage rinsing process)

1. Empty the contents into the spray tank and allow the container to drain for an extra 30 seconds after the flow reduces to drops.
2. Fill the container with clean water to between 20% and 25% of its capacity and replace the cap securely.
3. Shake, rotate, roll or invert the container vigorously for at least 30 seconds, so that the rinse reaches all inside surfaces.
4. Empty the rinsate from the container into the spray tank. Let it drain for an extra 30 seconds after the flow reduces to drops.
5. Repeat until the container has been rinsed three times.

Follow these procedures after rinsing the container

After rinsing the container, check the container thread and outside of the container and, if contaminated, rinse with a hose into the spray tank. Rinse the cap separately in a bucket of water and empty the rinsate into the spray tank.

To ensure that it is fully drained, puncture the container from the inside, for example using a crowbar through the container opening. Allow the container to dry completely and store it in a dry place awaiting disposal.

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Waste classification guidelines

Part 3: Waste containing radioactive material

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Classifying wastes into groups that pose similar risks to the environment and human health facilitates their management and appropriate disposal. It is the responsibility of those who generate waste to classify that waste. To assist waste generators classify the wastes they produce, the EPA has developed the Waste Classification Guidelines ('the Guidelines') which are a step-by-step process for classifying waste.

Generators and waste facilities must carefully follow the procedures in these Guidelines to ensure they comply with applicable laws in classifying their waste and safeguard protection of the environment and human health.

The Guidelines are comprised of the following sections, of which this document is Part 3:

Overview of the Guidelines

Part 1: Classifying waste

Part 2: Immobilisation of waste

Part 3: Waste containing radioactive material

Part 4: Acid sulfate soils

All sections of the Guidelines are available for download from the EPA website at www.epa.nsw.gov.au/waste/classification.htm.

Who should use this part of the Guidelines?

This part of the EPA Waste Classification Guidelines (the Guidelines) should be used by waste generators to assist in identifying the classification and management requirements for solid and liquid wastes containing radionuclides.

Classification of wastes containing radioactive material

Wastes containing any natural or artificial substance that emits ionising radiation spontaneously must be classified on the basis of both their radioactive and other characteristics, according to the step-by-step procedure outlined below.

Step 1: Assessing the level of radioactivity

The radioactivity of the waste must be assessed in accordance with the *Radiation Control Act 1990* and the Radiation Control Regulation 2013.

Step 2: Identifying hazardous wastes

Liquid or non-liquid wastes with a specific activity greater than 100 becquerels per gram and consisting of, or containing more than, the prescribed activity of a radioactive element in Schedule 1 of the Radiation Control Regulation 2013, whether natural or artificial, must be classified as *hazardous* wastes.

Step 3: Calculating the total activity ratio and specific activity ratio

For liquid or non-liquid wastes with a specific activity of 100 becquerels per gram or less and/or consisting of, or containing, the prescribed activity or less of a radioactive element in Schedule 1 of the Radiation Control Regulation 2013, whether natural or artificial, the *total activity ratio* and *specific activity ratio* must be calculated according to the mathematical expressions below:

Total activity ratio is calculated using the expression:

$$\text{Total activity ratio} = (A1 \times 10^{-3}) + (A2 \times 10^{-4}) + (A3 \times 10^{-5}) + (A4 \times 10^{-6})$$

where A1 to A4 are the total activity of Group 1 to Group 4 radionuclides, as set out in Column 1 of Schedule 1 of the Radiation Control Regulation 2013.

Specific activity ratio is calculated using the expression:

$$\text{Specific activity ratio} = SA1 + (SA2 \times 10^{-1}) + (SA3 \times 10^{-2}) + (SA4 \times 10^{-3})$$

where SA1 to SA4 are the specific activity (of the material) of Group 1 to Group 4 radionuclides, as set out in Column 1 of Schedule 1 of the Radiation Control Regulation 2013.

Specific activity is defined in the *Code of Practice for the Safe Transport of Radioactive Materials*[1] as follows:

'Specific activity of a radionuclide shall mean the activity per unit mass of that nuclide. The specific activity of a material shall mean the activity per unit mass of the material in which the radionuclides are essentially uniformly distributed.'

The Code is referred to in clause 36 of the Radiation Control Regulation 2013.

[1] Australian Radiation Protection and Nuclear Safety Agency 2008, *Code of Practice for the Safe Transport of Radioactive Materials*, Radiation Protection Series Publication No. 2, Australian Radiation Protection and Nuclear Safety Agency, Yallambie, VIC.

Total activity of a material means the activity of the whole of the material in which the radionuclides are essentially uniformly distributed (determined using 1-kilogram representative samples of the whole material).

Step 4: Total activity ratio or specific activity ratio greater than one

Where the specific activity ratio or total activity ratio is greater than one, the waste must be classified as follows:

Liquid wastes must be managed on a case-by-case basis. Advice on the appropriate management of such materials should be sought from the EPA on (02) 9995 5959.

Non-liquid wastes must be classified as *restricted solid waste* **unless**:

- other characteristics of the waste mean that it must be classified as *hazardous waste* (for example, it may be pre-classified as hazardous waste in accordance with Step 3 of Part 1 of the Guidelines

or

- it may contain chemical contaminants that will lead to its assessment as *hazardous waste* (see Step 5 of Part 1 of the Guidelines).

Step 5: Total activity ratio and specific activity ratio less than or equal to one

Where the specific activity ratio and total activity ratio are equal to or less than one, the waste must be classified according to its other characteristics in line with Part 1 of the Guidelines.

Notes

The principal legislation for the control of radioactive materials in NSW is the *Radiation Control Act 1990* (the Radiation Act) and Radiation Control Regulation 2013. The Radiation Act requires those who use or sell radioactive substances to hold a licence for all high activity sources that, when requiring disposal, correspond to the types of sources classified as *hazardous waste* in these guidelines. The Radiation Act also controls the disposal of such sources. Any person handling radioactive sources in this category requires a Radiation Act licence to do so.

In the case of liquid radioactive wastes, the *hazardous waste* criteria used in these guidelines have been extended downwards in activity by a factor of 100 to reflect the additional risk associated with these wastes. The corresponding classification for non-liquid radioactive wastes is *restricted solid waste*. In both cases the Radiation Act does not directly control the disposal of these low-level radioactive wastes; rather, a system of licence conditions and a ‘consent to dispose’ are attached to a licence, either under the Radiation Act or the *Protection of the Environment Operations Act 1997*.

Radioactive material that has very low levels of activity (including materials with naturally occurring background levels) is recognised as being ‘below regulatory concern’. The criteria adopted in these guidelines for the levels of radioactivity that permit wastes to be classified in the general solid waste categories closely relate to the international criteria used to assess radioactive materials as being ‘below regulatory concern’. Disposal of such materials does not require formal approval, but advice should be sought in the case of liquid wastes to ensure compliance with other requirements (for example, trade waste agreements).



Waste classification guidelines

Part 4: Acid sulfate soils

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Classifying wastes into groups that pose similar risks to the environment and human health facilitates their management and appropriate disposal. It is the responsibility of those who generate waste to classify that waste. To assist waste generators classify the wastes they produce, the EPA has developed the *Waste Classification Guidelines* ('the Guidelines') which are a step-by-step process for classifying waste.

Generators and waste facilities must carefully follow the procedures in these Guidelines to ensure they comply with applicable laws in classifying their waste and safeguard protection of the environment and human health.

The Guidelines are comprised of the following sections, of which this document is Part 4:

Overview of the Guidelines

Part 1: Classifying waste

Part 2: Immobilisation of waste

Part 3: Waste containing radioactive material

Part 4: Acid sulfate soils

All sections of the Guidelines are available for download from the EPA website at www.epa.nsw.gov.au/waste/classification.htm.

Introduction

Acid sulfate soils (ASS) are those naturally occurring sediments and soils which contain sulfides, mainly iron sulfide and iron disulfide or their precursors. Exposure of these sulfides in the soil to oxygen – often as a result of drainage or excavation – can produce sulfuric acid, which may have a significant impact on the environment. Leaching of sulfuric acid into waterways can cause serious water quality problems, resulting in fish kills and damage to infrastructure, such as floodgates and bridges.

ASS are most commonly found in NSW along the coast and they need to be managed appropriately to avoid major environmental damage.

The NSW *Acid Sulfate Soils Manual*[1] (the ASS Manual) provides 'best practice' guidance for planning, assessing and managing activities in areas prone to developing ASS. The manual is available from the NSW Department of Planning: phone 1300 305 695.

Using this part of the Guidelines

This part of the EPA Waste Classification Guidelines (the Guidelines) applies to acid sulfate soils which are unable to be managed on-site. In these cases, off-site disposal to landfill is often the most appropriate management option.

Waste generators need to assess the status of ASS at their point of generation, using the techniques outlined in the ASS Manual. The ASS Manual also provides guidance for on-site management, while this part of the Waste Classification Guidelines details disposal requirements for ASS that need to be transported and managed off-site.

This document has advice on dealing with both 'potential' ASS and 'actual' ASS. The two types are often found together in the same soil profile, with actual ASS generally overlying potential ASS horizons.

Potential acid sulfate soils

Potential ASS are soils that contain iron sulfides or sulfidic materials that have not been exposed to air and thus are not oxidised. The pH of these soils in their undisturbed state is 5.5 or more, making them neutral or slightly alkaline. If not managed appropriately, potential ASS pose a considerable environmental risk: disturbance and exposure to air may render them severely acidic.

Handling potential acid sulfate soils prior to disposal

Potential ASS must be kept wet at all times during excavation and subsequent handling, transport and storage, until they can be disposed of safely. They must be received at the proposed disposal point within 16 hours of being dug up.

[1] Stone Y, Ahem, CR and Blunden, B 1998. *Acid Sulphate Soils Manual 1998*. Acid Sulphate Soils Management Advisory Committee (ASSMAC), Wollongbar, NSW.

Disposal of potential acid sulfate soils *below* the water table

Potential ASS may be disposed of in water below the permanent water table, provided:

- this occurs before they have had a chance to oxidise, i.e. within 24 hours of excavation

and

- they meet the definition of 'virgin excavated natural material' (VENM) under the *Protection of the Environment Operations Act 1997*, even though they contain sulfidic ores or soils.

Landfills must be licensed by the EPA to dispose of potential ASS below the water table. EPA's Environment Line has details on facilities able to accept this waste: phone 131 555.

Potential ASS must be disposed of within 8 hours of their receipt at a landfill and kept wet at all times until their burial at least two metres below the lowest historical level of the water table at the disposal site.

Documentation must be provided to the occupier of the landfill for each truckload of potential ASS received, indicating that the soil's excavation, transport and handling have been in accordance with the ASS Manual, thus preventing the generation of acid.

The occupier of the disposal site must also test the pH of each load of soil received immediately prior to its placement under water using the test method(s) in the ASS Manual (Methods 21A and/or 21Af). These details, together with the pH of the soil recorded at the time of its extraction, must be retained by the occupier of the landfill site.

The disposal site's licence will outline what documentation needs to be kept and for how long.

Soil that has dried out, undergone any oxidation of its sulfidic minerals, or which has a pH of less than 5.5 must be treated by neutralisation and disposed of at a landfill that can lawfully accept it (see **Disposal of actual acid sulfate soils** below).

The pH of the water at the landfill into which the potential ASS is placed must not be less than 6.0 at any time. Landfill licence conditions require the occupiers of potential ASS disposal sites to regularly monitor the pH of ground and surface waters at their premises.

Disposal of potential acid sulfate soils *above* the water table

Where potential ASS cannot be classified as VENM or a suitable underwater disposal site at a landfill is not available, the soil must be treated in accordance with the neutralising techniques in the ASS Manual. After treatment the soil should be chemically assessed in accordance with Step 5 in Part 1 of the Waste Classification Guidelines, available at www.epa.nsw.gov.au/waste/classification.htm. This will determine whether any other contaminants are present in the material. When the classification has been established, the soil should be disposed of to a landfill that can lawfully accept that class of waste.

Actual acid sulfate soils

Actual ASS contain highly acidic soil horizons or layers resulting from the aeration of soil materials that are rich in sulfides, primarily iron sulfide. This oxidation produces more hydrogen ions than the sediment is able to neutralise, resulting in soils with a pH of 5.5 or less when measured in dry season conditions. These soils can usually be identified by the presence of pale yellow mottles and coatings of jarosite.

Treatment of actual acid sulfate soils prior to disposal

Actual ASS must be treated by the generator of the waste before they can be considered for disposal. Treatment should be in accordance with the neutralising techniques outlined in the ASS Manual.

Disposal of actual acid sulfate soils

Following neutralisation, the generator of the waste must chemically assess the soil in accordance with Step 5 of Part 1 of the Waste Classification Guidelines. This will determine whether there are any other contaminants that may affect how the waste is classified for disposal.

Once classified, the waste must be taken to a landfill licensed to accept that class of waste.

Prior arrangements should be made with the occupier of the landfill to ensure that it is licensed to accept the waste. The landfill should be informed that the actual ASS has been treated in accordance with the neutralising techniques outlined in the ASS Manual and that the waste has also been classified in accordance with Part 1 of the Waste Classification Guidelines.

Waste classification guidelines
Part 2: Immobilisation of waste



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Introduction

Certain wastes have properties that make them hazardous and potentially harmful to human health or the environment. New South Wales has established a stringent regulatory regime for managing harmful wastes at their source, during transport and when they are treated or disposed of.

As a first measure, industries generating waste must classify the waste in order to assess its properties and determine appropriate avenues for handling, transporting and disposing of it. Waste is classified in accordance with the *Protection of the Environment Operations Act 1997* and as outlined in 'Part 1: Classifying waste' in these *Waste Classification Guidelines* (also known as the 'Waste Guidelines'). These are available from the EPA Environment Protection Authority (EPA) website at www.epa.nsw.gov.au/waste/classification.htm.

Waste classified as 'hazardous' in accordance with the Waste Guidelines or otherwise exhibit properties harmful to human health and/or the environment because of the high levels of contaminant(s) it contains is not suitable for disposal to landfill in NSW.

However, sometimes the contaminants are able to be 'immobilised' so that they will not be released into the landfill leachate at levels of concern. In these cases, EPA may grant an immobilisation approval. Immobilisation of a contaminant in waste is a measure of how securely that contaminant is fixed or locked-up in the waste for the long term. EPA issues immobilisation approvals in accordance with clause 50 of the Protection of the Environment Operations (Waste) Regulation 2005. The approval granted under this clause may be a 'general immobilisation approval' (GIA) or a 'specific immobilisation approval' (SIA).

An immobilisation approval enables a waste to be reassessed and reclassified. Conformity with an immobilisation approval would enable a waste to be disposed of at a landfill appropriate to its reclassification.

Immobilisation Approvals are applicable to **non-liquid waste only**. The non-liquid criteria contained in Step 3 of Part 1 of the *Waste Classification Guidelines* applies to:

- a naturally immobilised waste that is subject to a GIA,
- a natural immobilised waste that is subject to a SIA or
- a non-naturally immobilised waste that is required to be treated under a SIA,

In granting an immobilisation approval for a given waste, the EPA may attach special conditions and/or disposal restrictions to the Approval in accordance with the hazardous and/or toxic properties of the waste.

Who should use this guide?

This guide should be used by waste generators and treatment facilities who:

- classify their waste as hazardous under the Waste Guidelines because of its high levels of contaminants
- establish that it is not possible to reuse, recycle or reprocess the waste by specific treatment to remove or destroy the contaminants
- need to dispose of the waste
- establish that the contaminants of concern can be immobilised so that they will not be released into landfill leachate at levels of concern.

How to use this guide

This guide provides an overview of the immobilisation of contaminants in waste and explains how to receive EPA approval to enable legal disposal of immobilised waste to landfill.

It also explains the two types of immobilisation approvals issued by EPA, and the assessment process that supports immobilisation approvals.

Applicants for a specific immobilisation approval should read these guidelines before downloading the application form available at: www.epa.nsw.gov.au/waste/ApplyforSpecificImmobApp.htm. The application form provides more detail in Section B on information that needs to be provided to EPA in an application.

How is immobilisation achieved?

There are several ways to immobilise contaminants in waste:

- **Natural immobilisation** where the contaminant(s) are already present in an immobilised form and the waste is suitable for landfilling without additional treatment
- **Chemical fixation** where the contaminant(s) are chemically converted to a stable form
- **Micro-encapsulation** where the waste is treated to physically lock up the contaminant(s) in the structure of the treated waste
- **Macro-encapsulation** where an enduring physical barrier is placed between the contaminated waste and the surrounding landfill environment.

Treatment of waste

A waste may be subject to suitable treatment and processing to achieve fixing of the contaminants of concern. The waste treatment process plant and equipment to be used for the purposes of achieving immobilisation of contaminants in waste must be technologically safe and sound. Where mixing of chemical reagents during treatment, it must meet the EPA's mixing policy as described in the Technical Notes www.epa.nsw.gov.au/waste/technicalnotesimmobilisation.htm.
Prior to disposal off site, check that the subject waste has no free liquids meeting of the following Non-Liquid Criteria:

- it has an angle of repose greater than of 15 degrees (15º), see attached reference
- it has no free liquids when tested in accordance with the USEPA Paint Filter Liquid Test – Method 9095 (USEPA 1986), and
- it liberates no free liquids when transported.

Dilution without achieving the immobilisation of contaminants is **NOT** an acceptable waste treatment option.

Immobilisation approvals

Immobilisation approvals may specify conditions relating to the subsequent storage, treatment or disposal of the waste. The two types of immobilisation approvals issued by EPA are discussed below to provide the waste generator with a clear understanding of how the immobilisation approval will be issued by EPA.

General immobilisation

EPA has published a number of general immobilisation approvals on its website. These approvals are for commonly generated hazardous wastes. EPA has assessed these commonly generated hazardous wastes as either being naturally immobilised or able to be immobilised using well-established treatment technology. Setting up general immobilisation approvals helps to streamline the disposal process for these commonly generated wastes.

General immobilisation approvals specify:

- the waste to which the approval applies
- for waste that is not naturally immobilised, the treatment required to immobilise the waste
- any other conditions, such as testing, record keeping and waste tracking, which are required
- how waste subject to the approval may be classified for disposal.

Generally, a person who generates waste that has the same properties described in a general immobilisation approval does not have to apply to EPA to dispose of this waste. It should be noted however that some general immobilisation approvals might require the generator to advise EPA if they intend to dispose of waste. A generator should check the details within the approval. A list of general immobilisation approvals is published on the EPA website at www.epa.nsw.gov.au/waste/genimmobilisationapp.htm.

Specific immobilisation

Where no general immobilisation approval exists, EPA may issue a specific immobilisation approval for a certain hazardous waste. The person generating the waste would need to apply to EPA for a specific immobilisation approval and comply with the conditions in that approval before this waste could be disposed of to landfill. Applicants should follow the ‘specific immobilisation approval’ application process outlined in the following section.

Applying for a specific immobilisation approval

Things to check before you apply to EPA

Before applying for a specific immobilisation approval:

1. Ensure that the waste has no free liquids and you have characterised the waste through assessment and testing as required under the Waste Guidelines, identifying contaminants of concern and their variability. Immobilisation is only necessary where waste is classified under the Waste Guidelines as ‘hazardous’ or ‘restricted solid waste’ .
2. Investigate alternatives to immobilisation. Specific immobilisation approvals will only be issued where it is not practical to reuse, recycle or reprocess the waste. Where feasible, treatment to remove or destroy the contaminants is preferable to immobilisation.

3. Check the EPA website to see whether there is a general immobilisation approval for your waste already granted by EPA at: www.epa.nsw.gov.au/waste/genimmobilisationapp.htm.

Important note: A general immobilisation approval will only be applicable if the waste is the same as that described in the approval, including any restrictions, such as its method of formation, and the contaminants listed in the approval include all the contaminants of concern in the waste. Also, if the waste is not covered by, but is similar to, a waste covered by a general immobilisation approval, contact EPA as it may be possible to submit an abridged application based on the general immobilisation approval.

Information to be provided as part of an application

Ensure that you have followed the above checklist before downloading the application form at: www.epa.nsw.gov.au/waste/ApplyforSpecificImmobApp.htm. The application may take longer to process if EPA has to go back to the applicant for additional information before it can complete its assessment. The application form includes details of where to send the form and the fee payable to EPA.

Section A of the application form asks for general information such as the applicant's contact details (ABN number for a corporate entity) and, where applicable, licensee details; where the waste is stored; and the proposed disposal facility the waste will be sent to.

Section B of the application form asks the applicant to address the proposed treatment and immobilisation mechanism in the form of a report. Information to be provided includes evidence that it is not possible to reprocess the waste in order to reuse or recycle it. Details on quantity, form, background information and chemical composition of the waste should be provided. The applicant should also describe the proposed treatment methods or process, if applicable, to be used, the equipment to be used and evidence of quality assurance/quality control.

Applicants will need to provide details about 'treatability', including total concentration of the contaminants and the leaching performance based on 'toxicity characteristics leaching procedure' (TCLP) tests or other relevant tests. It should be noted, however, that TCLP results alone are not generally accepted as proof of immobilisation. The scientific basis and relevant reaction chemistry for claiming immobilisation must also be included in an application for a specific immobilisation approval. Where appropriate conduct additional leaching test such as the USEPA Multiple Extraction Procedure Test Method 1320 (MEP Test) to demonstrate long term leaching performance of the contaminants of concern.

Where the waste is not naturally immobilised or is being macro-encapsulated, it may be necessary to undertake treatment trials to determine the effectiveness of the proposed treatment. Attention should be paid to addressing scale-up issues between laboratory trials and the actual treatment. Laboratory trials, for example, often do not reproduce the conditions needed to achieve effective mixing during full scale treatment. Refer to EPA's technical note on mixing for more information available at: www.epa.nsw.gov.au/waste/technicalnotesimmobilisation.htm.

The most important part of Section B is providing scientific justification for the proposed immobilisation method or process. More information on proving scientific justification is provided in the following section.

Additional information to support an application should also be attached to an application. This additional information may include test results and articles from reputable scientific journals that support the successful immobilisation of contaminants.

Providing scientific justification to EPA

Section B of a specific immobilisation approval application asks the applicant to explain the scientific basis that underpins the process by which immobilisation of contaminants in waste will be achieved. This is the most important part of the report and should include a summary of the following as relevant:

1. Demonstrate the means by which the contaminants of concern are immobilised (including formation of chemical compounds during treatment which are claimed to result in the immobilisation of some or all of the contaminants):

- for natural immobilisation, identify the chemical compounds of the contaminants of concern present in the waste
- for chemical fixation, identify the chemical reactions which convert the contaminants of concern into an immobilised form
- for micro-encapsulation, identify the mechanism by which the contaminants of concern are micro-encapsulated and provide supporting Unconfined Compression Strength (UCS) test data as appropriate (See EPA Technical Notes 'Cement Fixation of Organic Chemicals in Waste' http://www.epa.nsw.gov.au/waste/technicalnotesimmobilisation.htm.)
- for macro-encapsulation, describe the nature of the physical barrier to be established between the waste and the surrounding landfill environment.

2. Demonstrate that the means by which the contaminants are immobilised will be maintained over time in the landfill environment.
3. For chemical fixation or micro-encapsulation, confirm that any other substances present in the waste will not interfere with the chemical fixation or micro-encapsulation, as well as that any untreated reagent will not present an environmental problem.
4. For macro-encapsulation, demonstrate that no other form of immobilisation is viable.
5. Confirm, with TCLP results, that the contaminants of concern are immobilised in the waste to be landfilled (not necessary for macro-encapsulation). In some cases, multiple extraction procedure (MEP Test) results will also be required to demonstrate long-term stability in the landfill environment.

Addendum to the Waste Classification Guidelines (2014) – Part 1: classifying waste

October 2016

Amendment to Table 2 to include toxicity characteristics leaching procedure (TCLP) and specific contaminant concentration (SCC) values for perfluorooctane sulfonate (PFOS), perfluorohexane sulfonate (PFHxS) and perfluorooctanoic acid (PFOA) chemicals.

Table 2: TCLP and SCC values for classifying waste by chemical assessment

Contaminant[1]	Maximum values for leachable concentration and specific contaminant concentration when used together			
	General solid waste[2]		Restricted solid waste	
	Leachable concentration	Specific contaminant concentration	Leachable concentration	Specific contaminant concentration
	TCLP1 (mg/L)	SCC1 (mg/kg)	TCLP2 (mg/L)	SCC2 (mg/kg)
PFOS + PFHxS	0.05	1.8	0.2	7.2
PFOA	0.50	18.0	2.0	72.0

1. PFOS and PFHxS are to be summed for comparison against the TCLP and SCC values.
2. Values are the same for general solid waste (putrescible) and general solid waste (non-putrescible).

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Report pollution and environmental incidents
Environment Line: 131 555 (NSW only) or info@environment.nsw.gov.au
See also www.epa.nsw.gov.au

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APPENDIX G: COMMUNITY CONSULTATION AND COMPLAINTS HANDLING

AW EDWARDS



Lanceley Place Data Centre

Community Consultation & Complaints Handling Strategy

SYD001-AWE-CCCHS-001

Prepared By:

A W EDWARDS PTY LIMITED

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Revision:	03
Status:	Draft

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Project No.	693
Project Name	Lanceley Place Data Centre
Project Manager	Michael Galbraith
Project Location	2-8 Lanceley Place, Artarmon
Phone No.	02 8036 7200
Client	Goodman Group
DA No.	SSD-66777221
Scope of Works	The proposed development will have a maximum building height of 51.479m, with a floor space ratio of 1.91:1. The project also proposes 36 car parking spaces. The data centre will operate on a 24-hour basis with a total power supply of Eighty (80) MVA. There are 5 levels of technical data hall floor space with a single 10.4 MW data hall.
Timing of the Works	July 25 – 2027

Revision Register:

REVISION	DATE	STATUS	AUTHOR	APPROVED / REVIEWED BY
01	6-Mar-25	Draft	Nathan Arfanis	
02	4-Apr-25	Draft	Nathan Arfanis	
03	1-May-25	Draft	Nathan Arfanis	
	Date	Status		
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	Date	Status		

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3 INTRODUCTION

3.1 Document Purpose

This Community Consultation and Complaints Handling Strategy (CC&CHS) has been developed to detail how AWE will manage stakeholder, community and business liaison during the construction of Lanceley Place Data Centre. It is guided by the Conditions of Consent and the Urbis Engagement Report.

3.2 Objectives

Objectives of this CC&CHS are to:

- Comply with Project planning approvals
- Identify and implement appropriate communication tools and activities for a range of stakeholders
- Support Goodman Group in the delivery of a coordinated and consistent approach to communications and stakeholder engagement
- Identify and appropriately address stakeholder, business and community issues
- Ensure stakeholders, businesses and the community are well informed and understand the activities to be undertaken by AWE, the project objectives, benefits, potential impacts and expected outcomes
- Mitigate, where possible, project impacts on stakeholders and the community including sensitive receivers and vulnerable persons
- Enhance and protect the reputation of the project, Goodman Group and AWE

3.3 Compliance

This CC&CHS has been prepared to address the relevant community and stakeholder requirements set out in the Conditions of Consent & Urbis Engagement Report. This CC&CHS will be submitted for approval at least one month before commencement of any work and will be implemented throughout the duration of construction.

Construction works will not commence until this CC&CHS has been approved.

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3.4 Review Mechanisms and Accountability

AWE's Senior Project Manager is accountable for this CC&CHS, including the authorisation and monitoring of the document, and delegation of responsibilities to implement this CC&CHS.

This CC&CHS will be reviewed every 12 months and updated as necessary to reflect:

1. Changes in design and construction program
2. Community interests and issues
3. Lessons learnt

Updates to this CC&CHS will be submitted to Goodman Group for review and approval.

3.5 Interface with Other Plans

This CC&CHS sits within the Construction Environmental Management Plan and has been prepared in line with the Projects Conditions of Consent to ensure a coordinated approach to stakeholder, business and community liaison throughout the entire program of work.

This strategy interfaces with other AWE management plans and statements including the Construction Environment Management Plan (CEMP), Construction Noise and Vibration Management Plan (CNVMP), Construction Waste Management Plan (CWMP), Unexpected Finds Protocol (UFP) and Construction Traffic Management Plan (CTMP).

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4 PROJECT DESCRIPTION

4.1 Project Overview

The construction, fit out and commissioning of an 7-story Data Centre, with a maximum building height of 51.479m and total gross floor area of 26, 769m2 comprising of:

- 5 levels of technical data hall floor space
- Ancillary office space
- A lobby, offices and amenities located on the ground floor
- Two 12.5m long vehicle loading dock spaces
- At grade parking, including accessible parking spaces

4.2 Key Construction Phases & Activities

The Data Centre construction is expected to be commenced during the month of July 2025 with a completion time of 2027.

Table 1 below outlines the key work phases and activities.

Table 1 - Key Work Phases and Activities

SHELL & CORE + PHASE 1	CONSTRUCTION ACTIVITIES
Site Establishment	Hoarding, tower crane and other plant erection. Establishment of temporary facilities including amenities.
Civil & Substructure Works	Excavation of tanks, pits and footings. Utility adjustments. Installation of footings, services and foundations. Construction of base slab.
Construction of above ground structure and fit out	Construction of above ground structure including: -Installation of precast walls and columns -Construction of concrete decks -Installation of roof plant -Installation of services, equipment, fixtures and finishes Fit out of Level 1 Data Hall.
Precinct/public domain works	Utility service adjustments. Road pavement and footpath upgrades. Civil and landscaping work.

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SHELL & CORE + PHASE 1	CONSTRUCTION ACTIVITIES
Commissioning	Commissioning of all services associated with Phase 1.

PHASE 2	CONSTRUCTION ACTIVITIES
Phase 2 Fit out	Hoarding, tower crane and other plant erection. Establishment of temporary ancillary facilities. Fit out of Level 2 Data Hall and Installation of roof plant Commissioning of all services associated with Phase 2.

PHASE 3	CONSTRUCTION ACTIVITIES
Phase 3 Fit out	Hoarding, tower crane and other plant erection. Establishment of temporary ancillary facilities. Fit out of Level 3 Data Hall and Installation of roof plant. Commissioning of all services associated with Phase 3.

PHASE 4	CONSTRUCTION ACTIVITIES
Phase 4 Fit out	Hoarding, tower crane and other plant erection. Establishment of temporary ancillary facilities. Fit out of Level 4 Data Hall and Installation of roof plant. Commissioning of all services associated with Phase 4.

PHASE 5	CONSTRUCTION ACTIVITIES
Phase 5 Fit out	Hoarding, tower crane and other plant erection. Establishment of temporary ancillary facilities. Fit out of Level 5 Data Hall and Installation of roof plant. Commissioning of all services associated with Phase 5.

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5 PROJECT DELIVERY TEAM

The AWE Project Delivery Team will ensure effective management of all stakeholder issues, communication and engagement activities. This will support Goodman Groups objective to build confidence in its project, and commitment to provide proactive and positive interactions with all stakeholders throughout its delivery.

5.1 Roles and Responsibilities

The key community and stakeholder roles and responsibilities for the project team are described in Tables 2 and 3.

Table 2 - Key Community and Stakeholder Roles and Responsibilities

ROLE	COMMUNITY AND STAKEHOLDER RESPONSIBILITIES
Senior Project Manager	▪ Develop, proactively manage and implement stakeholder and community engagement requirements of Goodman Group including interfacing with other relevant contractors and stakeholders and the implementation of this CC&CHS. ▪ Ensure compliance with the planning approval. ▪ Review and approve all public communication material. ▪ Oversee the development, management, coordination and delivery of all communication and engagement activities. ▪ Work with the project team to support the delivery of key project milestones and targets. ▪ Maintain collaborative and consultative strategic partnerships with the Goodman Group delivery team to ensure integrated engagement and communication.
Community Place Coordinator (Trade Coordinator)	▪ Be the key contact for residents and businesses. ▪ Be available to meet with community members on request. ▪ Be the key contact for key stakeholders and point of escalation for complaints. ▪ Prepare public communication material. ▪ Proactively notify stakeholders, businesses and the community of current and upcoming construction activities. ▪ Manage complaints, enquiries and feedback in accordance with requirements, ensuring all records are filed within required timeframes, and issues are escalated as required. ▪ Identify, pre-empt, manage and report community and stakeholder issues to minimise impacts on the community.

Table 2

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5.2 Other Roles with Stakeholder Responsibilities

The strategy is supported by the Managers, and their respective teams.

Table 3 - Key Community and Stakeholder Roles and Responsibilities

ROLE	COMMUNITY AND STAKEHOLDER RESPONSIBILITIES
Construction Manager, Site Manager, Senior Project Engineers and Team	▪ Ensure communication requirements and timeframes are understood by the construction team and embedded into program. ▪ Participate in key stakeholder meetings, events, site visits and forums as required. ▪ Minimise impacts of construction on the community as much as possible. ▪ Promote commitment to community and stakeholder policies, protocols and procedures. ▪ Ensure safe access around the site and work areas.
Work, Health and Safety Manager and Team	▪ Participate in key stakeholder meetings, events, site visits and forums as required. ▪ Ensure safe access around the site and work areas. ▪ Ensure community communication requirements are explained at site inductions. Participate in key stakeholder meetings, events, site visits and forums as required. ▪ Investigate complaints relating to environmental aspects (noise, dust, vibration etc.). ▪ Provide guidance to satisfy various environmental obligations e.g. mitigation measures required for out of hours works etc.

5.2.2.1 Project Team Inductions and Training

All AWE staff (including contractors and subcontractors) will be made aware of stakeholder and community relations requirements through mandatory project inductions, toolbox talks, pre-start meetings and other internal meetings and training events. This will include at a minimum:

- Key stakeholder and community issues and mitigation measures
- Specific communications and engagement requirements and responsibilities
- Community contact protocols and procedures

Site induction and training material will be updated regularly to address any actions taken in response to stakeholder and community issues or changes to this strategy.

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6 OUR COMMUNICATION AND ENGAGEMENT APPROACH

Consistent with the Goodman Group approach to successful project delivery through effective communication, AWE has developed a targeted approach to communicating and engaging with stakeholders, businesses and community members impacted by the Project. This approach is informed by:

- Identification of key stakeholders
- Analysis of stakeholder interests and issues
- Determining communication tools to inform and engage with identified stakeholders
- Identifying and implementing mitigation measures for key issues.

AWE's communication and engagement approach aims to ensure that stakeholders and the community are kept well informed of construction activities and expected impacts to avoid any surprises. Key to this will be proactive engagement and ongoing consultation with residents, businesses and other interested stakeholders.

AWE has developed this strategy and implementation plan to ensure adequate, accessible information is released ahead of key construction activities and milestones and that known and emerging issues are identified and addressed.

6.1 Our guiding principles

AWE understands the significance of effective communication and engagement in successful project delivery and is committed to driving this through:

- Establishing genuine, trusting relationships with stakeholders and the community
- Ensuring stakeholders and the community are well informed, and fully understand the activities to be undertaken by AWE, their potential impacts and benefits
- Communicating early, openly and inclusively.
- Providing adequate and coordinated stakeholder and community consultation that identifies and addresses issues in a timely manner
- Supporting and working cooperatively with Goodman Group to provide a coordinated and consistent approach to stakeholder and community engagement.

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7 COMMUNITY PROFILE, STAKEHOLDER IDENTIFICATION AND ANALYSIS

The site is located in Cammeraygal Land and is in the Artarmon industrial area within the Willougby Council Government area. It is bounded by Campbell Street to the North and Lanceley Place to the East and has immediate frontages with a concrete batching plant to the South-east, and several buildings including NextDC Data Centre to the West.

7.1 Stakeholder Analysis

A broad range of stakeholders with interest in the Project have been identified. The industrial precinct comprises relatively new commercial and industrial developments and has been subject to several separate DAs which has increased the densities in the area. Other notable nearby land users include the Home HQ shopping centre, the Artarmon Bunnings Warehouse, Artarmon Business Centre, the Royal North Shore Hospital and the North Shore Private Hospital.

The closest residential uses include residential flat buildings on the Western side of Pacific Highway (approximately 300m West from the Site).

AWE recognises that diverse engagement and communication is needed to ensure all stakeholders are informed about the project's current and upcoming construction activities.

Stakeholders and the community will be informed of significant events or changes that affect or may affect individual properties, residences and businesses. These include:

- key milestones
- changes to traffic conditions and access arrangements for road users and the affected public
- construction operations which will have an impact on stakeholders and the community including noisy works, interruptions to utility services or construction work outside of standard work hours.

Table 4 identifies key stakeholders, their interests and/or potential issues and communication tools to engage and consult with them. Table 5 summarises key stakeholder issues and mitigation measures.

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Table 4 - Key Stakeholder Interests, Issues and Communication

KEY STAKEHOLDERS	DETAIL	ISSUES/INTEREST	COMMUNICATION	TIMING
GOVERNMENT				
Emergency Services.	NSW Ambulance. Fire and Rescue NSW Police Area Command. State Emergency Services.	Access for emergency vehicles. Traffic changes impacting vehicle routes. Traffic congestion. Impact to emergency response times.	Project briefings. Updates and notifications. Council liaison.	Prior to commencing work. Ongoing, as required.
SERVICE PROVIDERS				
Utility service providers.	Sydney water. Ausgrid. Jemena. Telstra. NBN. Optus.	Impact on assets. Impact to customers.	Meetings and briefings. Service authority/provider notification of planned work. Correspondence with Service Manager.	Prior to commencing work. Ongoing, as required.
COMMUNITY				
Local Residents (owners and tenants)	Pacific Highway. Herbert Street. Hotham Road. Gore Hill Freeway. Campbell Street. Lanceley Place.	Keeping informed. Noise, vibration and dust. Traffic, parking and access impacts. Service interruptions (utility outages, Garbage collection etc.). Public domain works including noise, vibration and dust impacts, access and	Newsletters, notifications and progress updates. Wayfinding/ directional signage.	As required.

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KEY STAKEHOLDERS	DETAIL	ISSUES/INTEREST	COMMUNICATION	TIMING
		temporary pedestrian detours, temporary loss of parking, disruptions to services. Health and safety concerns.		
Local businesses within work impact zone.	Artarmon Progress Association. Royal North Shore Hospital. Papilio Early Learning Artarmon. Explore and Develop Artarmon. Bradfield Senior. Europcar. Artarmon Mazda. NextDC. Ausgrid. Artarmon Business Centre. Storage King. Hanson Yard. Resource Recovery Centre. National Storage.	Keeping businesses informed. Property impacts. Complaints from tenants. Cumulative impacts from multiple developments in the area. Construction fatigue. Construction noise, vibration and dust. Public domain works including noise, vibration and dust impacts, access and temporary pedestrian detours, temporary loss of parking, disruptions to services. Traffic changes. Parking impacts (impact to local street parking and public carparks). Access for deliveries, customers and waste services. Service interruptions. Visual impact – businesses overlooking/ adjacent to the site.	Individual/ group meetings and community forums. Newsletters, notifications and progress updates. Wayfinding/ directional signage.	Prior to commencing work. Ongoing, as required.

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7.2 Stakeholder Liaison

A range of communication tools and activities will be used to implement a robust and coordinated approach to stakeholder liaison. AWE will record all stakeholder interactions and respond to stakeholder enquiries and complaints. This will form and maintain collaborative relationships and strategic partnerships with all stakeholders identified in this plan, whilst managing day to day interactions as required. Refer to Table 5 for communication techniques during disruptive works.

8 KEY ISSUES AND MITIGATION MEASURES

AWE will proactively consult potentially affected stakeholders to determine the effectiveness of measures put in place to respond to issues and minimise construction impacts.

Key stakeholder issues for construction of the Lanceley Place Data Centre were initially identified in Urbis Engagement Report. These have been incorporated into our key issues. Corresponding measures the project team will implement in response to these issues is provided in Table 5 below.

The management of issues and implementation of mitigation measures is supported by a number of AWE Management Plans including the CEMP, CNVP and the CTMP. Project personnel will be informed about key issues, mitigation measures and responsibilities through site inductions and training.

Table 5 - Key Issues and Communication & Mitigation Measures

ISSUE	DETAIL	COMMUNICATION AND MITIGATION MEASURES
Keeping stakeholders and the community informed.	▪ Lack of information about construction activities can lead to uncertainty and inability to plan and manage daily life and business operations around construction activities.	▪ Early consultation and communication about construction activities (including timing, duration, likely impacts and mitigation measures). ▪ Issue regular notifications and updates prior to work starting and at other critical times as required. ▪ Undertake doorknocks as required. ▪ Use of other communication tools as appropriate.
Keeping residential and business	▪ Coordination of information to relevant parties as needed.	▪ Identify relevant strata/building managers, property managers, owners and tenants.

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property owners, tenants and / owners corporation/ strata managers informed.		▪ Strata/building managers and owners notified of work before it starts as required.
Construction noise and vibration (including Out of Hours Work - OOHW).	▪ Effects of noise on quiet enjoyment and sleep. ▪ Effects of noise and vibration on sensitive receivers (day care, medical practices and education).	▪ Early and ongoing engagement and consultation with impacted stakeholders on likely noise and vibration impacts, with focus on noise and vibration sensitive receivers. ▪ Notification and updates to inform of planned work, working hours and what to expect. ▪ Use of mitigation measures in the CNVMP. ▪ Noise reduction strategies to be implemented with consideration to business hours of operation and sensitive periods as required. ▪ Use of appropriate plant, tools, construction techniques and programming as required. ▪ High impact noise works staged with respite periods as required by planning approvals. ▪ Staff inductions, toolbox talks and pre-start meetings to inform of mitigation measures including inappropriate behaviour. ▪ Noise and vibration monitoring. ▪ Offer of property condition survey where eligible.
Dust.	▪ Dust generated from construction activities.	▪ Dust minimised by using water carts, water sprayers, street sweepers and other measures as needed.
Access and parking.	▪ Maintaining access to residential and business driveways.	▪ Issue notifications detailing changes to access/ road, cycle and footpath detours and removal of on-street parking. ▪ Coordination of work with business deliveries and priorities wherever possible.

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	▪ Impacts to local street parking. ▪ Works affecting road, footpath or cycleway access. ▪ Significant detours and diversions.	▪ Installation of wayfinding signage to direct pedestrians, delivery drivers, cyclists and customers where appropriate. ▪ Traffic controllers/ wayfinding personnel redirecting pedestrians and cyclists as required. ▪ Encourage site workers to utilise public transport and ride sharing wherever possible. ▪ Construction vehicle drivers directed as to access requirements.
Impact to business operations.	▪ Businesses adjacent to and surrounding the site may be exposed to construction noise, dust and potential vibration. ▪ Access for deliveries and customers and other impacts such as removal of on-street parking. ▪ Public domain works have potential to cause additional impacts to business	▪ Specific and ongoing consultation carried out with impacted businesses to identify and develop measures to manage specific construction impacts. ▪ Compliance with respite periods. ▪ Inspections of footpaths and pedestrian detour signage. ▪ Encourage workers to shop and buy food and beverages from local businesses. ▪ Ensure shop fronts are kept clean and tidy when working directly adjacent.
Traffic changes, congestion and delays.	▪ Driver confusion. ▪ Increased travel time/ delays for residents, businesses, commuters, and emergency services.	▪ Implement Traffic Management Plan and Traffic Control Plans including minimising traffic movements in peak periods, where possible. ▪ Coordinate traffic management with Willoughby Council and the Transport Management Centre. ▪ Out of hours deliveries to minimise impacts of oversized vehicles on local roads. ▪ Issue regular notifications and updates in advance of changes.

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		▪ Installation of appropriate signage. ▪ Advertisement for major traffic changes as required.
Property impacts.	▪ Potential residential and business property damage due to the works.	▪ Property Condition Surveys offered where eligible. ▪ Vibration monitoring.
Service interruptions.	▪ Disruption to property services (power, water, gas, telecommunications, garbage collection).	▪ Issue notifications to inform of outages required for work. Service provider to inform impacted properties. ▪ Detailed briefings for businesses potentially affected. ▪ Seek opportunities to time works to minimise potential impacts in consultation with relevant service providers.
Visual amenity and visibility.	▪ Adjacent resident and business visibility into the site. ▪ Adjacent resident and business visual impacts from scaffolding. ▪ Potential exposure to light glare/ spill from night-time activities. ▪ Plant and equipment visible over hoardings. ▪ Graffiti/ vandalism of hoarding and fencing.	▪ Hoarding designed and replaced in line with Goodman Group Brand Style Guidelines. ▪ Hoardings and buildings regularly inspected and kept clean. ▪ Prompt graffiti removal from hoarding and buildings. ▪ Plant and surroundings kept well maintained and clean. ▪ Lighting would be oriented to minimise light spill to adjacent properties where practicable.

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Health and Safety – general.	▪ Safety of road users, cyclists and pedestrians, particularly near site entrance/exit points. ▪ Worker behaviour e.g. reckless driving, having regard for nearby residents and businesses. ▪ Noise, light spill, dust and vibration from construction activities may impact on health and wellbeing of occupants of buildings nearest to the site.	▪ Consultation and communication with impacted stakeholders about timing and duration of construction activities likely to generate noise, dust, vibration etc., mitigation measures the project will implement, road safety requirements. ▪ Inductions for all workers and subcontractors. ▪ Implementation of Traffic Management Plans. ▪ Vehicle "spotters" to be used when reversing as required. ▪ Signage placed around the site to alert pedestrians and cyclists as to truck movements.

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9 FURTHER MANAGEMENT RESPONSIBILITIES

9.1 Management of Enquiries, Complaints and Feedback

Community and stakeholder complaints, enquires and feedback must be effectively managed and recorded. They provide a mechanism for tracking issues and interests and for evaluating the effectiveness of mitigation measures and communication tools used.

To ensure effective management of complaints and enquires related to Lanceley Place Data Centre works, AWE will record, manage, and respond to all complaints, enquiries, and feedback accurately and in accordance with Project requirements.

9.2 Enquiries

An enquiry is an act of a community member or stakeholder asking for information relating to the project. AWE will respond to all any relevant enquiries associated with the Project, otherwise, if necessary, will direct the enquiry to Goodman Group for their action.

9.3 Complaints

A complaint is an interaction with a community member or stakeholder who expresses dissatisfaction with the project, its policies, AWE services, staff members, activities or proposed activities. AWE will respond to all Lanceley Place Data Centre complaints received via phone, face to face, email or letter.

A dedicated call line and email address have been established for the lodgement of complaints and should be the first point of contact for all community or stakeholder concerns. https://au.goodman.com/property-lease-site/2-8-lanceley-place.

Email – community@contactlanceleyplace.com
Contact Number – 1800 718 531.

Table 6 - Complaint Types & Subsequent Response Times

COMPLAINT TYPE	RESPONSE TIME
Telephone or face to face	▪ Answer all complaints received in person during construction hours. ▪ Initiation of investigation upon receipt. ▪ Verbal update within 24 hours unless complainant agrees otherwise.
Written - email	▪ Initiate investigation upon receipt of complaint.

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	▪ Verbal response within 24 hours (if telephone contact details are recorded). ▪ Written response within 48 hours of receipt.
Written - letter	▪ Initiate investigation upon receipt of complaint. ▪ Verbal response within 24 hours (if telephone contact details are recorded). ▪ Written response within 48 hours of receipt.
Social media	▪ Initiate investigation upon receipt of complaint. ▪ Response provided to Goodman Group within 24 hours of receiving the complaint.

10 COMPLAINT HANDLING PROCESS

The Project delivery team will ensure a customer focused approach to complaints handling by being open to feedback and suggestions and showing commitment to resolving complaints by taking all reasonable action. To this end, actions will be implemented to prevent complaint recurrence. The Community Coordinator will be principally responsible for the management of complaints about Lanceley Place Data Centre construction activities and will be available to receive and respond to all complaints during the noted timeframes.

Should a complainant be unsatisfied with the Community Coordinators response to their complaint, the complainant will be escalated to the Senior Project Manager. If the complainant remains unsatisfied, they will then be escalated to Goodman Group

Complaint handling responsibilities are summarised in the table below.

Table 7 - Complaint Type and Responsibility

COMPLAINT TYPE	RESPONSIBILITY
Complaints about construction activities during business hours	Community Coordinator
Complaints about construction activities after hours	Community Coordinator
Complaints unrelated to Lanceley Place Data Centre	AW Edwards refer to relevant organisation.
Complaints that are not resolved by the AWE Team	Escalated to Goodman Group

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10.1 Feedback

Feedback is defined as information or statements of opinion obtained from stakeholders about the project, its policies, AWE services, staff members, activities or proposed activities. Feedback may be received via phone, face to face, in writing or via social media.

Feedback will be recorded and passed onto the construction team and Goodman Group to inform continuous improvement.

10.2 Recording Enquiries, Complaints and Feedback

All enquiries and feedback will be recorded in AW Edwards internal database, through An enquiries and feedback register. Detail will include how each was managed and closed out. Records will be input into the database within 48 hours for enquiries and feedback.

A Complaints Register will also be maintained by AWE to record information on all complaints received during construction. Records will be input into the database within 24 hours for complaints.

The Complaints Register at a minimum will record:

- Number of complaints received
- Number of people affected in relation to the complaint
- Nature of the complaint and means by which the complaint was addressed (whether resolved using mediation or without)
- Determination as to whether the complaint was avoidable or unavoidable.

The Complaints Register will be provided to Goodman Group monthly and on request. This information will also be made available via the website.

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11 COMMUNITY COMMUNICATION IMPLEMENTATION PLAN

Table 8 - Community Communication Implementation Plan

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PROJECT PHASE/ KEY ACTIVITIES	TOOLS/ACTION	STAKEHOLDERS
Site establishment	▪ Doorknocks as required. ▪ Information board installed on hoarding. ▪ Consultation with sensitive receivers.	▪ Local businesses within work impact zone. ▪ Adjacent residents, businesses and sensitive receivers. ▪ Pedestrians, cyclists, motorists and commuters. ▪ Local council and traffic authorities. ▪ Neighbouring construction projects.
Construction of above ground structure	▪ Doorknocks as required. ▪ Signage for pedestrians, cyclists and motorists. ▪ Key stakeholder presentations and briefings. ▪ Coordination with council waste services.	▪ Local businesses within work impact zone. ▪ Noise and vibration sensitive receivers. ▪ Pedestrians, cyclists, motorists and commuters. ▪ Strata managers and building owners.
Precinct (Public domain) works	▪ Doorknocks as required.	▪ Noise and vibration sensitive receivers – business neighbouring residents on streets directly affected by works. ▪ Local businesses within work impact zone. ▪ Pedestrians, cyclists, motorists and commuters. ▪ Strata managers and building owners

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Key activities throughout construction		
▪ Crane deliveries and other Out of Hour's work	▪ Consultation with any noise sensitive receivers. ▪ Doorknock adjacent properties. ▪ Provide for any agreed additional mitigation measures as required.	▪ Local businesses within work impact zone. ▪ Affected Sensitive receivers.
▪ Road and footpath closures	▪ Traffic Management Plan, notifications, road and pedestrian detours, signage. ▪ Traffic controllers deployed to manage pedestrians, cyclists, and motorists through the changes. ▪	▪ Local businesses within work impact zone. ▪ Pedestrians, cyclists, motorists and commuters.
▪ Utility works (relocation, installation and protection)	▪ Notification and doorknock – noise, detours, access, service disruptions. ▪ Notice to and coordination with utility providers. Utility provider to issue notification for any service disruptions to impacted properties. ▪ Directional signage to inform pedestrian and vehicle detours. ▪ Traffic controllers deployed as required to manage pedestrian/ commuter/vehicle interface with vehicles.	▪ Local businesses within work impact zone. ▪ Service providers. ▪ Pedestrians, cyclists, motorists and commuters.
▪ Emergency work	▪ Notification via doorknock/ email/ telephone call.	▪ Affected properties.
▪ Daily activities	▪ Toolbox briefings. ▪ Signage and footpath safety check. ▪ Graffiti check. ▪ Contact mechanisms and Consultation Manager management	▪ Those affected by daily construction or requiring information from the project team.

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APPENDIX H: FLOOD EMERGENCY RESPONSE PLAN

FLOOD EMERGENCY RESPONSE PLAN

CONSTRUCTION PHASE

PROPOSED DATA CENTRE

2-8 Lanceley Place

Artarmon 2064

BRISBANE	Level 1, 51 Alfred Street, Fortitude Valley QLD 4006	**P** 07 3021 6600	**E** QLD-enquiries@vandermeer.com.au
CANBERRA	Level 9, 2 Phillip Law Street, Canberra ACT 2601	**P** 02 6243 4839	**E** ACT-enquiries@vandermeer.com.au
MELBOURNE	Level 6, 379 Collins Street, Melbourne VIC 3000	**P** 03 8614 5555	**E** VIC-enquiries@vandermeer.com.au
NEWCASTLE	Level 1, 17 Bolton Street, Newcastle NSW 2300	**P** 02 4910 4035	**E** NC-enquiries@vandermeer.com.au
SYDNEY	Level 6, 39 Chandos Street, St Leonards NSW 2065	**P** 02 9436 0433	**E** NSW-enquiries@vandermeer.com.au

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Approved by:	Andrew Wallis
Position:	Associate Director
Signed:	
Date:	15 May 2025
Job No.	SY241016

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Recipients are responsible for eliminating all superseded documents in their possession.

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This document and its contents are intended for the addressee only and contains opinions held by the Author based on material available at the time and expresses those opinions for the purposes of consideration by the Addressee and not for general publication without written consent.

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1. Introduction

van der Meer Consulting has been commissioned by AW Edwards to prepare a Construction Flood Emergency Response Plan (CFERP) for a proposed multi-stage industrial data centre development located at 2-8 Lanceley Place and 14 Campbell Street, Artarmon NSW 2064. The site located within Willoughby Council local Government area (LGA).

The site is zoned E4 General Industrial and has road frontages to both Lanceley Place and Campbell Street with the area of 14,024sqm.



Figure 1: Location f the subject site

The proposed development will include Site preparation works, Construction of a six-storey 80MVA data centre, onsite parking, loading docks, as well as an office building, which will be detailed throughout this report along with the construction staging program.

The purpose of this CFERP is ensure the safety of all employees and contractors involved in the construction of the data centre in the event of a flood emergency.

This CFERP has been developed to supplement the Construction Environmental Management Plan (CEMP), as part of the development consent conditions.

1.1 Condition Compliance Table

Table 1 below outlines the development conditions relevant to the updated CFERP of this site, and the relevant section of the report addressing the condition is outlined below.
The operational phase of Flood Emergency Response Plan (OFERP) to be prepared prior to the occupation certificate.

Table 1: Condition Compliance Table

Condition	Addressed in this document
Flood Management	
B32. Prior to the commencement of construction of the development, the Applicant must prepare a Construction Flood Emergency Response Plan (CFERP). The CFERP must form part of the CEMP required by condition C2 and must:	
(a) be prepared by a suitably qualified and experienced person(s);	
(b) address the provisions of the Floodplain risk management manual (DPE, 2023) and Support for emergency management planning (DPE, 2023); and	Section 4
(c) include details of:	
(i) the flood emergency responses for both construction and operation phases***** of the development.	Section 4&5
(ii) predicted flood levels.	
(iii) flood warning time and flood notification.	Section 4.3, 4.4, 4.6
(iv) assembly points and evacuation routes	Section 4.5
(v) evacuation and refuge protocol	Section 4.5
(vi) Awareness training for employees and contractors	Section 4.2
B33. The applicant must:	
(a) Not commence construction until the CFERP required by condition B32 is submitted to the Planning Secretary; and	ALL
(b) Implement the most recent version of the CFERP submitted to the Planning Secretary for the duration of the development	ALL

***NOTE: This plan is for Construction Phase ONLY and operation phase will be addressed in separated plan prior Occupation Certificate (OC).**

1.2 Relevant Legislation

Table 2 details the legislation, planning instruments and guidelines considered during development of this sub-plan.

Table 2: Relevant Legislation

Legislation	Description	Relevance to this plan
Environmental Planning and Assessment Act 1979	This Act establishes a system of environmental planning and assessment of development proposals for the State.	The development conditions and obligations are incorporated into this CFERP.
State Emergency and Rescue Management Act 1989	This Act is applicable to all emergencies as defined below: In this Act: "Emergency" means an emergency due to an actual or imminent occurrence (such as fire, **flood**, storm, earthquake, explosion, accident, epidemic or warlike action) which: a) endangers, or threatens to endanger, the safety or health of persons in the State; or b) destroys or damages, or threatens to destroy or damage property in the State, being an emergency which requires a significant and co-ordinated response.	The development conditions and obligations are incorporated into this CFERP.

1.3 Guidelines

Guidelines that have specific requirements relating to the Construction Flood Emergency Response include:

- Flood Emergency Response Planning Classification of Communities, Floodplain Risk Management Guideline, Department of Environment & Climate Change (DECC), 2007.
- Flood risk management manual, Department of Planning and Environment (DPE), 2023
- Support for emergency management planning, DPE, 2023
- New South Wales State Flood Plan (EMPLAN), State Emergency Management Committee, dated 2nd December 2021
- Shelter-in-Place Guidelines For Flash Flooding. NSW Government 2024
- Bureau of Meteorology - Service Level Specification for Flood Forecasting and Warning Services for New South Wales – Version 3.15, 2024
- NSW SES - The Application of Timelines to Evacuation Planning, Steve Opper, dated February 2004
- Australian Emergency Manuals Series, Manual 20: Flood Preparedness, Commonwealth of Australia 2009.
- Australian Emergency Manuals Series, Manual 21: Flood Warning, Commonwealth of Australia 2009.
- Australian Emergency Manuals Series, Manual 22: Flood Response, Commonwealth of Australia 2009.
- Willoughby City Council (2018) Flat Rock Creek Floodplain Risk Management Study and Plan (FRMSP) – WMA Water
- Willoughby City Council (2020) Flat Rock Creek Floodplain Risk Management Study and Plan (FRMSP)
- Willoughby City Council (2023) Development Control Plan (DCP) – Part I – Stormwater Management
- Willoughby City Council (2012) Local Environmental Plan (LEP) Claude 5.21 – Flood Planning (https://legislation.nsw.gov.au/view/html/inforce/current/epi-2012-0679#sec.5.21)
- TTW (2024) Final SSFA Civil Engineering Report Incorporating Water Management Plan
- TTW (2024) Flood Impact and Risk Assessment

2. Background and Scope

2.1 Site Description

The site is located on Cammeraygal Land and is in the Artarmon industrial area within the Willoughby Local Government Area (LGA). It is bounded by Campbell Street to the north and Lanceley Place to the east and has immediate frontages with a concrete batching plant to the south-east, and several buildings including the NextDC Data Centre to the west.

Artarmon Industrial Precinct comprises relatively new commercial and industrial developments and has been subject to several separate DAs which have increased the densities in the area. Other notable nearby land uses include the Home HQ shopping centre, the Artarmon Bunnings Warehouse, the Royal North Shore Hospital and the North Shore Private Hospital.

The site comprises 14,024sqm.

The site was subject to a SSDA application in 2023 which proposed an industrial warehouse and distribution centre (SSD-48478458). The site is currently vacant. The closest residential uses include residential flat building on the western side of Pacific Highway (approximately 300m west from the site) and in Artarmon (approximately 500m north of the site).

The site is well serviced by transport, and is within close proximity of the Pacific Highway, M1, M2 and the Lane Cove tunnel with bus services linking the area with North Sydney and the Sydney CBD. St Leonards Station, which provides T9 Northern Line and T1 North Shore and Western Line train services, is within a 1km walk of the site. The Crows Nest Metro station is located approximately 1.4km from the site which will deliver high frequency metro services across Sydney and is expected to be opened in 2024.

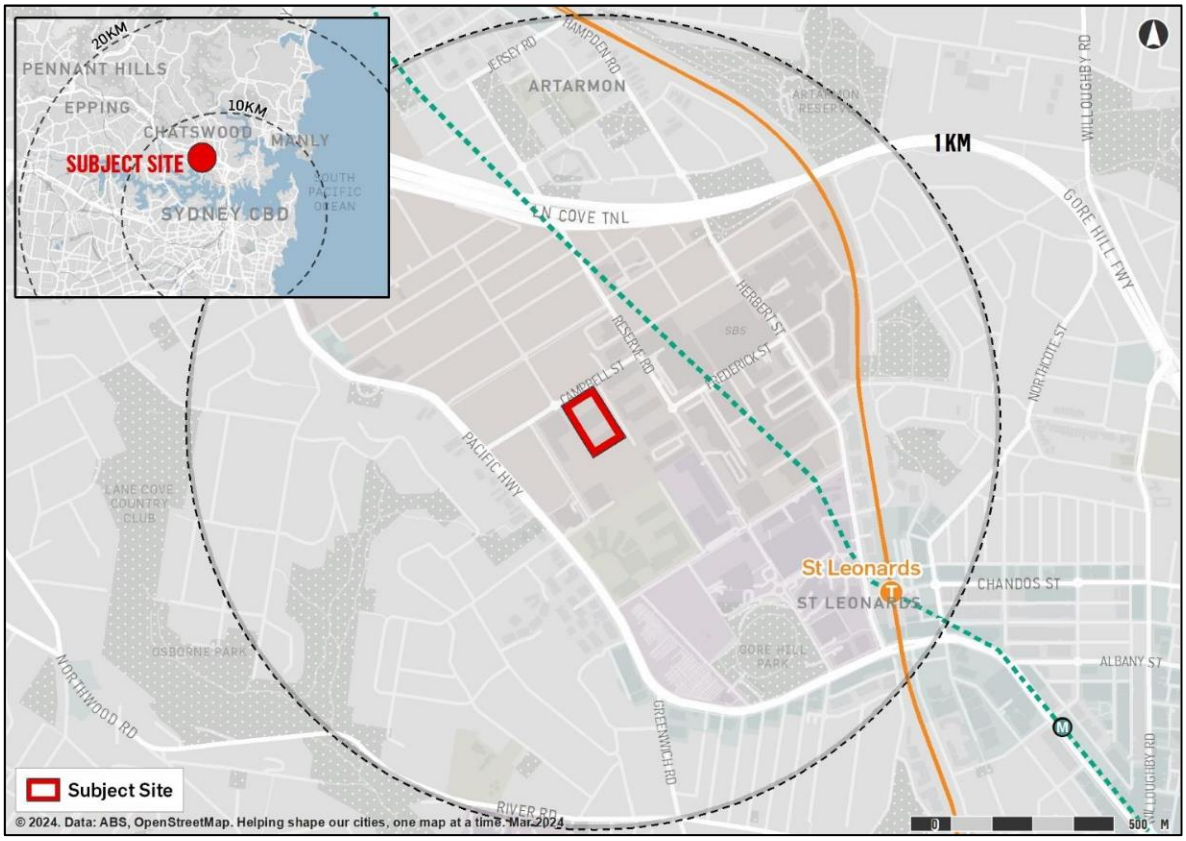


Figure 2: Local Context

2.2 Proposed construction work

The proposed development will include Site preparation works,

- Construction, fit out and operation of a six-storey, 80MVA data centre with a maximum building height of 51.479m (RL 124.5) ridge height (street wall height of 50m) and total gross floor area of 26,769m2 comprising:
    - At -grade parking for 39 car parking spaces and 2 accessible car parking spaces
    - Two (2) 12.5m long vehicle loading dock spaces
    - Five (5) levels of technical data hall floor space with (4) data halls per floor
    - Ancillary office space
    - A lobby, offices and amenities located on the ground floor
- Provision of required utilities, including:
    - Eight (8) 95,000L above ground diesel storage tanks
    - Four (4) 1,100kL above-ground water tanks
    - Three (3) 33kV switch-rooms on site
- Vehicle access provided via Campbell Street and Lanceley Place
- Pedestrian access provided via Campbell Street and Lanceley Place
- Associated landscaping and site servicing
- Installation of services and drainage infrastructure
- A floor space ratio of approximately 1.91:1. Given this exceeds the Willoughby Local Environmental Plan 2012 (WLEP) control, a request to vary the control for the development under Claude 4.6 of the WLEP will be included with the SSDA.

2.3 Site Access

Vehicular access to the site is available at four points to the site during construction. through Campbell Street and Lanceley Place, as shown in the figure below.

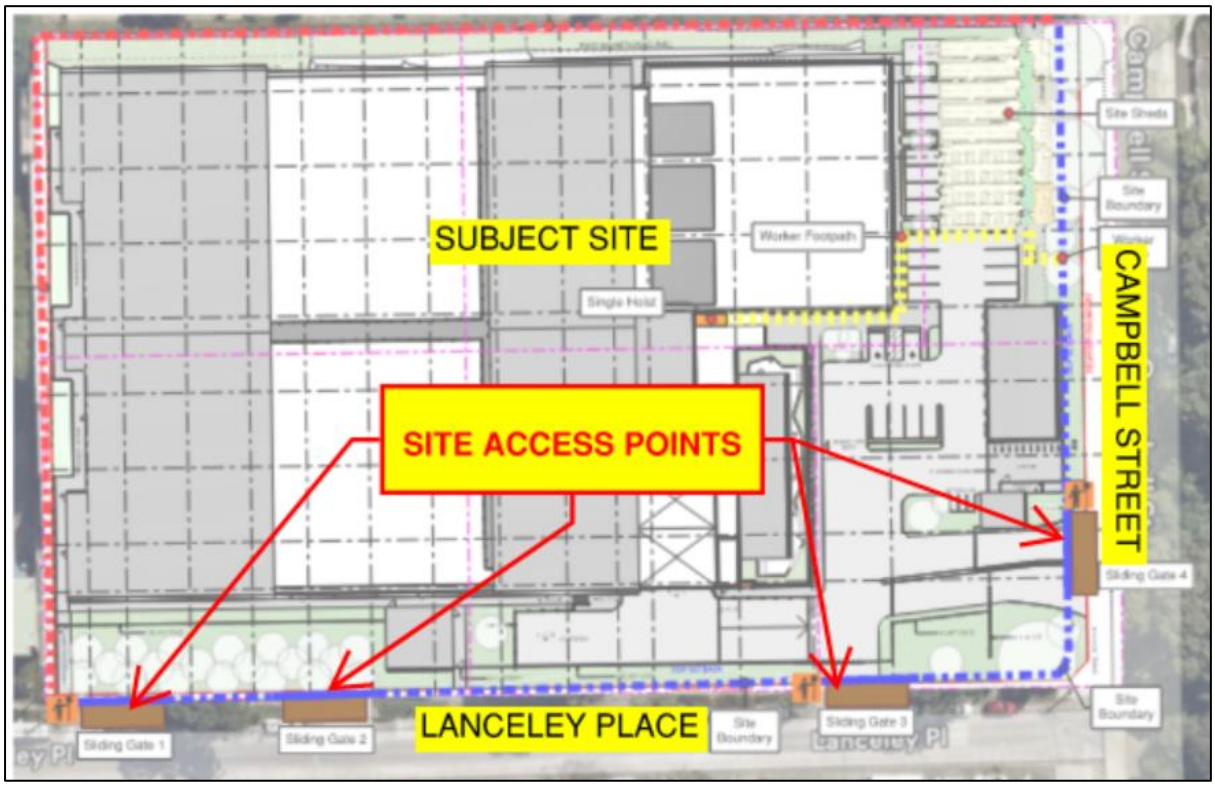


Figure 3: Subject site access point during construction

One entrance is shown from Campbell Street at northeast of the site and three Entrance are designated via Lanceley Place at northeast, east and southeast and the south as shown in the figure below.
entrances to the site are located on the western end of the northern boundary and Two (2) entrance is located on the eastern end of the northern boundary, shown below in Figure 5.

3. Existing Flood Behaviour

The site during construction can be affected by the following types of flooding during PMF events:

- Overland flow is the primary source of flooding
- Localised flooding due to short, intense rainfall.

The above flooding mechanisms can occur independently or more rarely, concurrently. When occurring concurrently, in most cases they will reach their peak at different times. It is however not uncommon to have overland flooding caused by intense rain just before floodwaters rise from the nearby creek.

3.1 Mainstream Flooding

Flood Studies

Flood levels and extents for the Construction phase of the site are provided from the flood study titled “Flat Rock Creek Catchment Flood Study” by Wiloughby City Council issued in 2018. This study used a TUFLOW model to undertake the first stage of the Catchment Management Plan for the Flat Rock Creek catchment.

3.2 Catchment Description

The site is located within the urbanised Flat Rock Creek catchment, which is approximately 7 sqkm in area, including the suburbs of Artarmon, Cammeray, Willoughby, St Leonards, and Naremburn. The catchment drains from west to east from its headwaters around the Pacific Highway to where it discharges into Long Bay.

The catchment predominantly comprises low to medium density residential development on the eastern side of the North Shore Railway, with pockets of higher density residential and commercial development located adjacent to the Artarmon railway Station and along Willoughby Road. West of the North Shore Railway, the portion of he catchment that is located to the south of the Gore Hill Freeway predominantly comprises commercial and industrial type development, while the portion to its north predominantly comprises high density residential development.

Given the urban environment of this region, it is necessary to review the risks associated with stormwater and overland flow within the site, as the associated increase in impervious surfaces typically results in concentrated flow paths, and impacts to roads are common. In addition to the high urbanisation of the catchment, the catchment is also steep, resulting in minimal flood storage and increased runoff and runoff velocities.

Catchment details are given below in Figure 4:

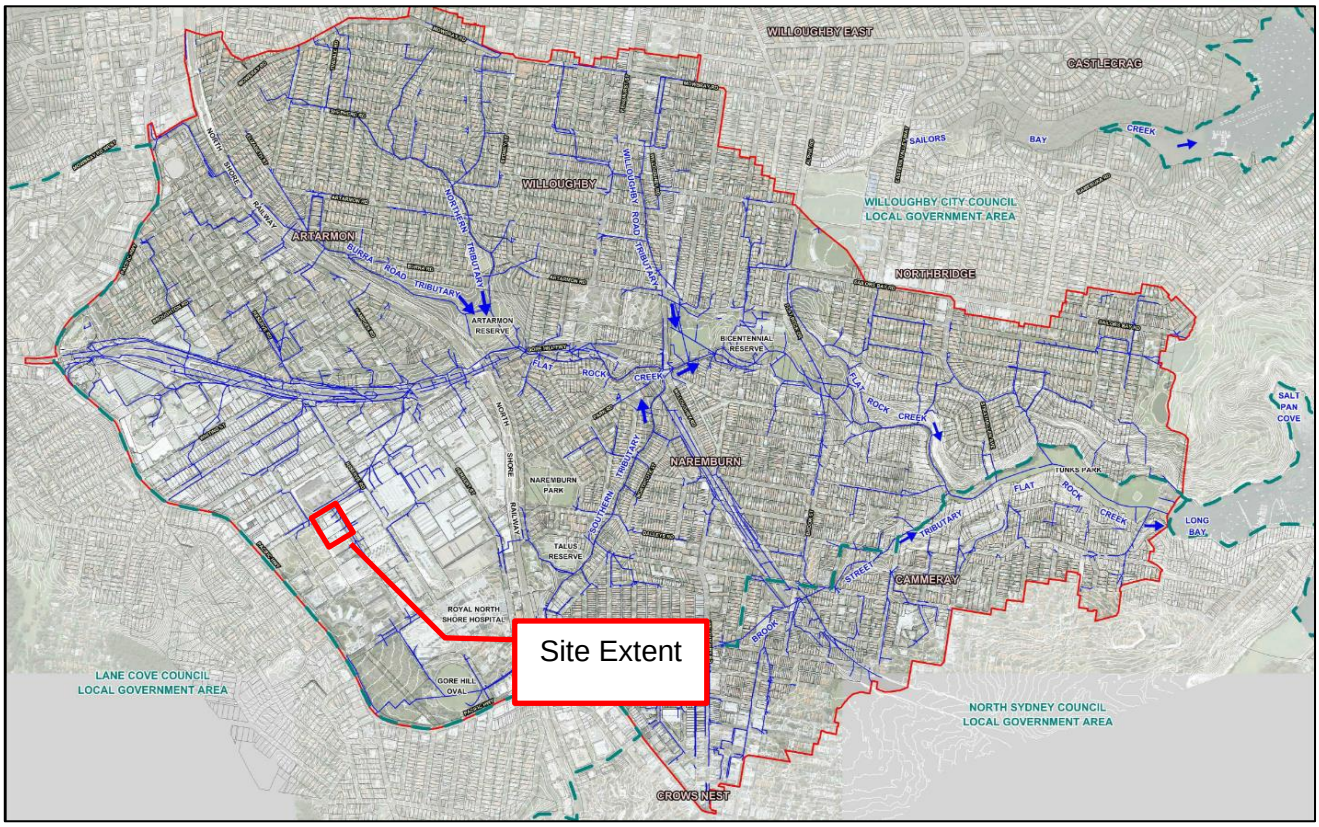


Figure 4: Catchment overview (Source: Flat Rock Creek Catchment Flood Study, 2018)

The main watercourses in the catchment include Flat Rock Creek, two tributaries on its southern side (the Brook Street Tributary and the Southern Tributary), and three northern tributaries (Burra Road Tributary, Willoughby Road Tributary, and the Northern Tributary).

3.3 Existing Flood Hazard classification

In the existing condition the site is slightly flood affected with less that 100mm flood depth along the northern and eastern boundaries. Since majority of the site is above 1%AEP flood level, and flood effected area in existing condition is shallow and limited along the boundaries above the 1% AEP flood levels, the site condition is considered generally safe during 1%AEP storm events.

Also, the is considered safe is safe from a PMF event because of a higher elevation compared to Lanceley PL. Pre-development peak flood extents and flood hazard classification for the 1% AEP event are given in Figure 5 to & Figure 8. Refer to Table 5for further details regarding the flood classification.

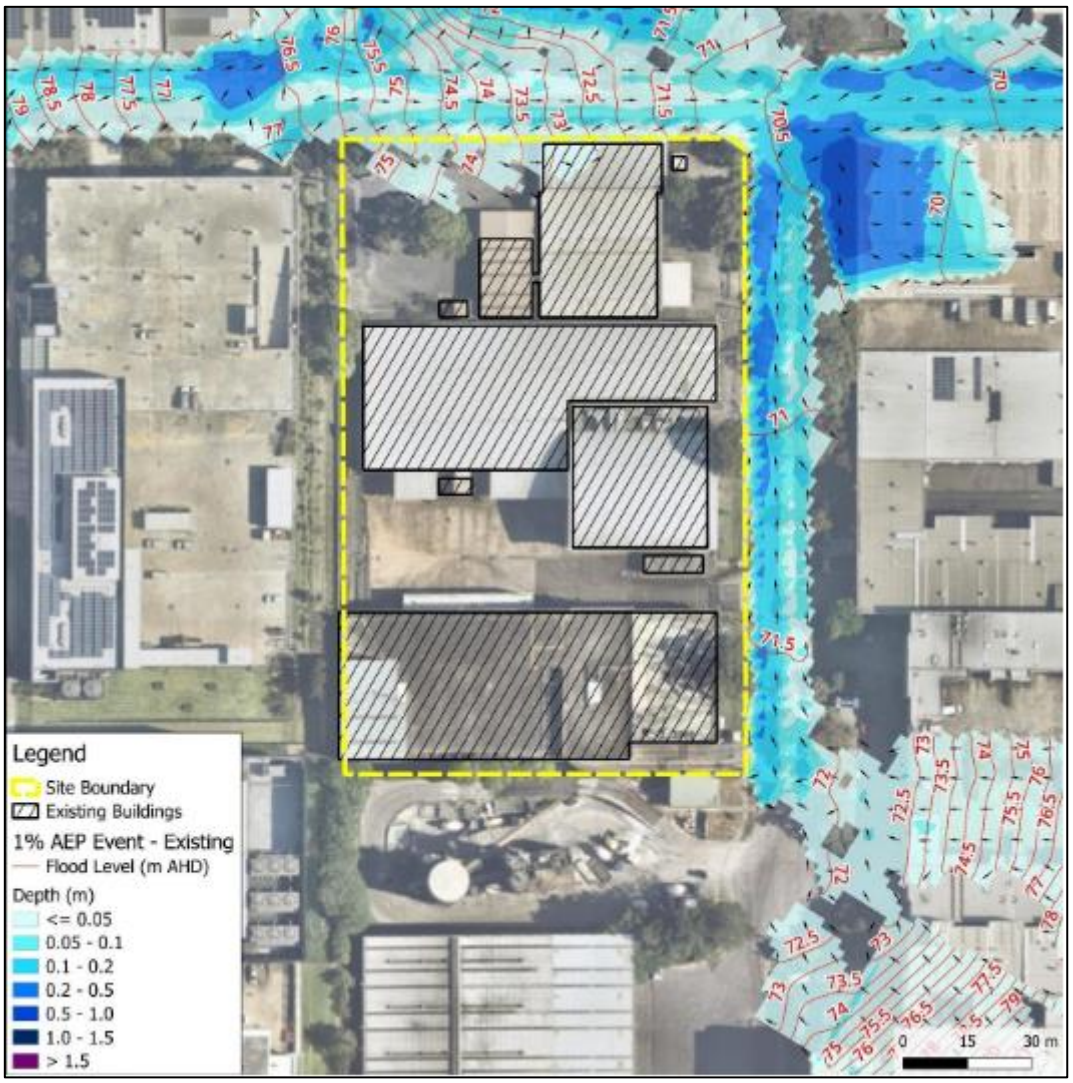


Figure 5: 1% AEP flood extend – existing condition (Source: Flat Rock Creek Catchment Flood Study, 2018)

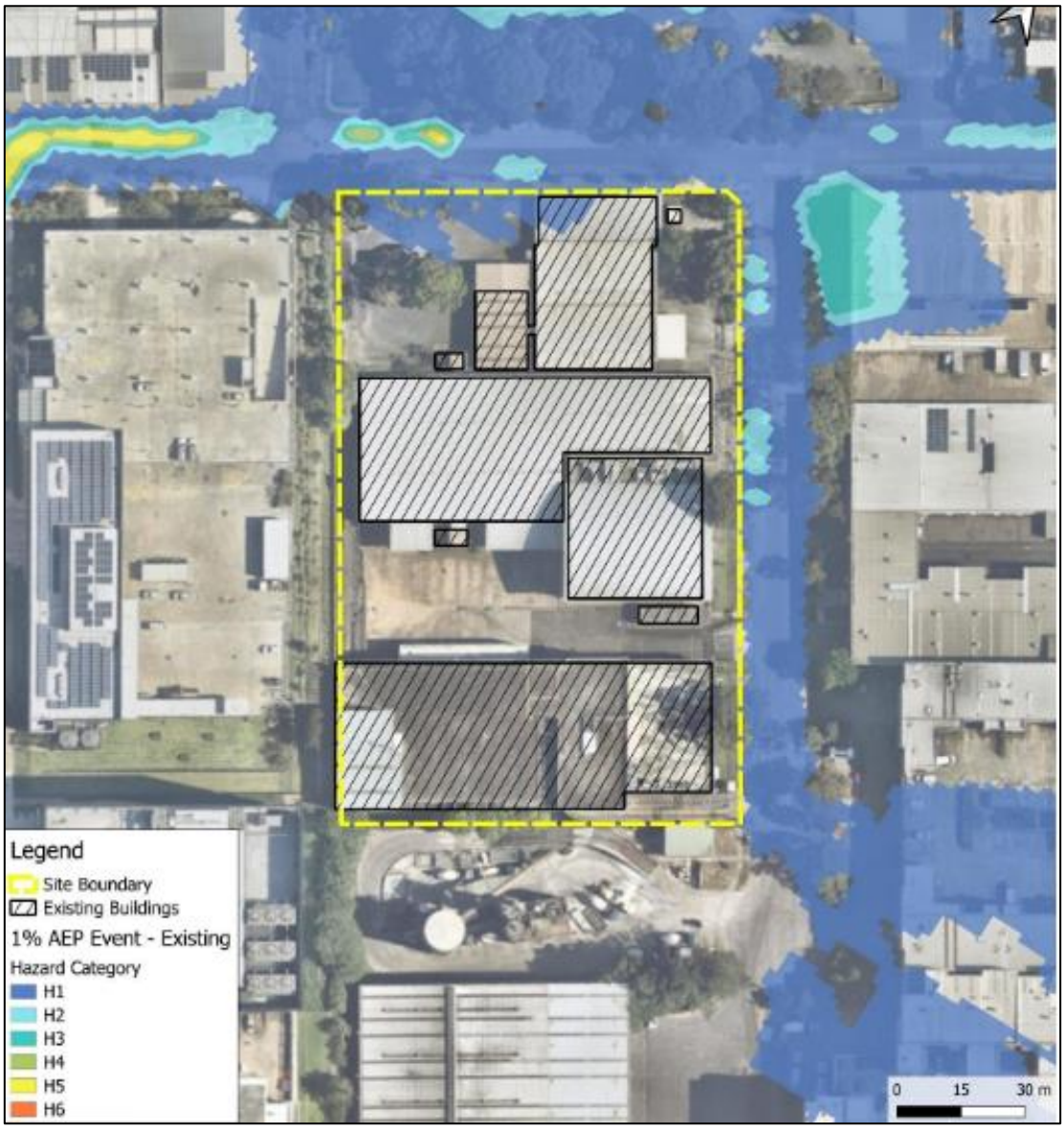


Figure 6: 1% AEP flood hazard classification – existing condition (Source: Flat Rock Creek Catchment Flood Study, 2018)

Pre-development peak flood extents for the PMF event are given in Figure 7 & Figure 8:

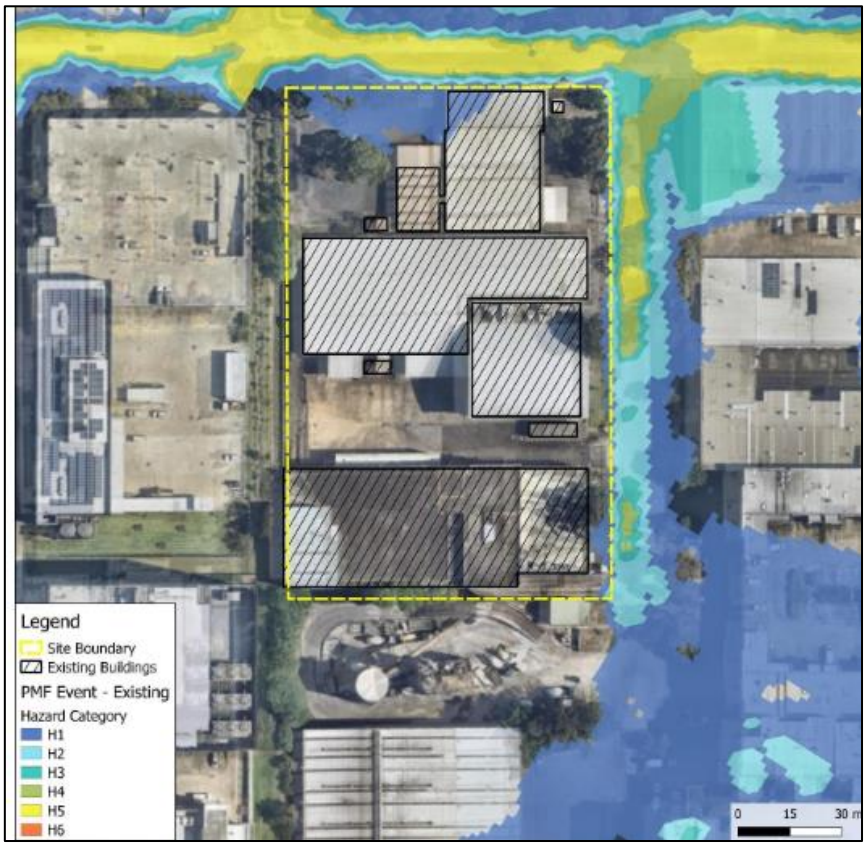


Figure 7: PMF flood extend – existing condition (Source: Flat Rock Creek Catchment Flood Study, 2018)

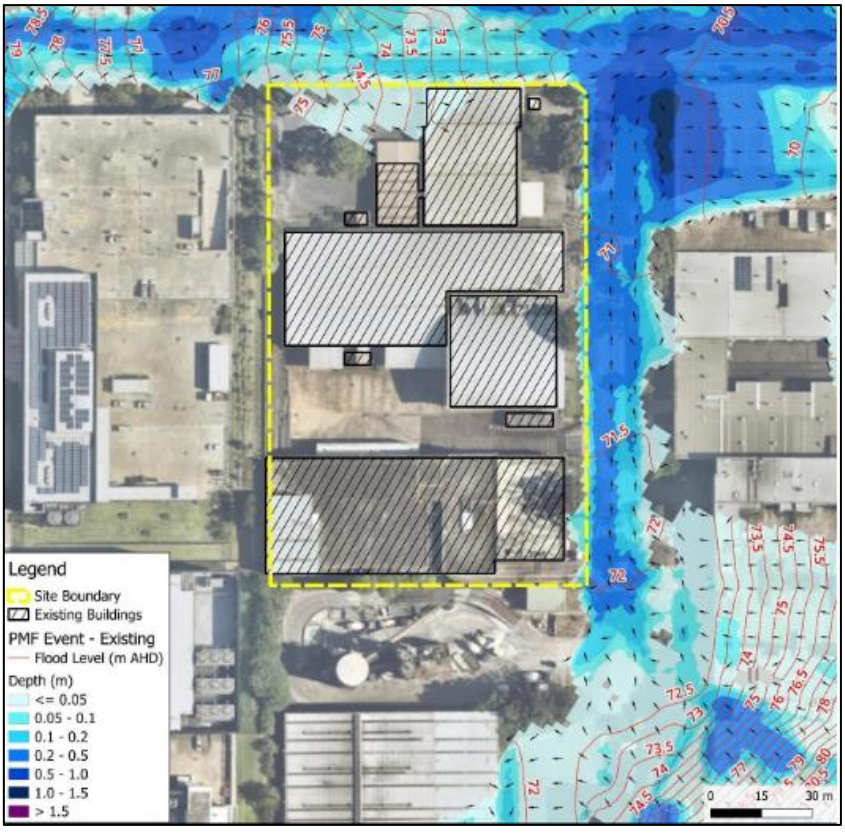


Figure 8:PMF flood hazard classification – existing condition (Source: Flat Rock Creek Catchment Flood Study, 2018)

3.4 Flood Levels & Depths

As shown in Figure 5 the Site is not generally impacted by the 1% AEP flood event. Although Lanceley Place (to the east) and Campbell Street (to the north) are impacted by minor overland flows with depths generally between 200-500mm. Peak depths reach a maximum of 500-1000mm at the sag point at the junction between Campbell Street and Clarendon Street. There is an area of high depth (approx. 600-700mm) east of the site, although these high depths are contained within the property adjacent to Lanceley Place, and do not impact the road itself.

In the PMF event, Lanceley Place and Campbell Street are impacted by overland flows (reaching 700mm in depth at the junction between Campbell and Lanceley), but these do not overtop onto the site. The grading of site means it is elevated above both Campbell Street and Lanceley Place and hence is protected from the overland flows across these roads.

Table 3: PMF Critical storm duration (Source: TTW Flood Risk Assessment 2024)

Event	Storm Duration Assessed (mins)	Critical Duration
10% AEP	25, 60, 90	25 minutes
1% AEP	25, 60 90 120	25 Minutes
0.2% AEP	25, 60, 90	25 Minutes
PMF	15, 30, 45	15 Minutes

3.5 Provisional Flood Risk Precincts

Flood risk mapping was prepared based on the interpretation of the PMF peak depth and velocity grids as per outlined in the Willoughby City Councils DCP.

Table 4: Flood Risk Precinct Characteristics (TTW, Flood Risk Assessment 2024)

Risk Precinct	Description
H1	Generally safe for people, vehicles and buildings
H2	Unsafe for small vehicles
H3	Unsafe for vehicles, children and the elderly
H4	Unsafe for people and vehicles
H5	Unsafe for vehicles and people. All buildings vulnerable to structural damage. Some less robust building types vulnerable to failure
H6	Unsafe for vehicles and people. All building types considered vulnerable to failure

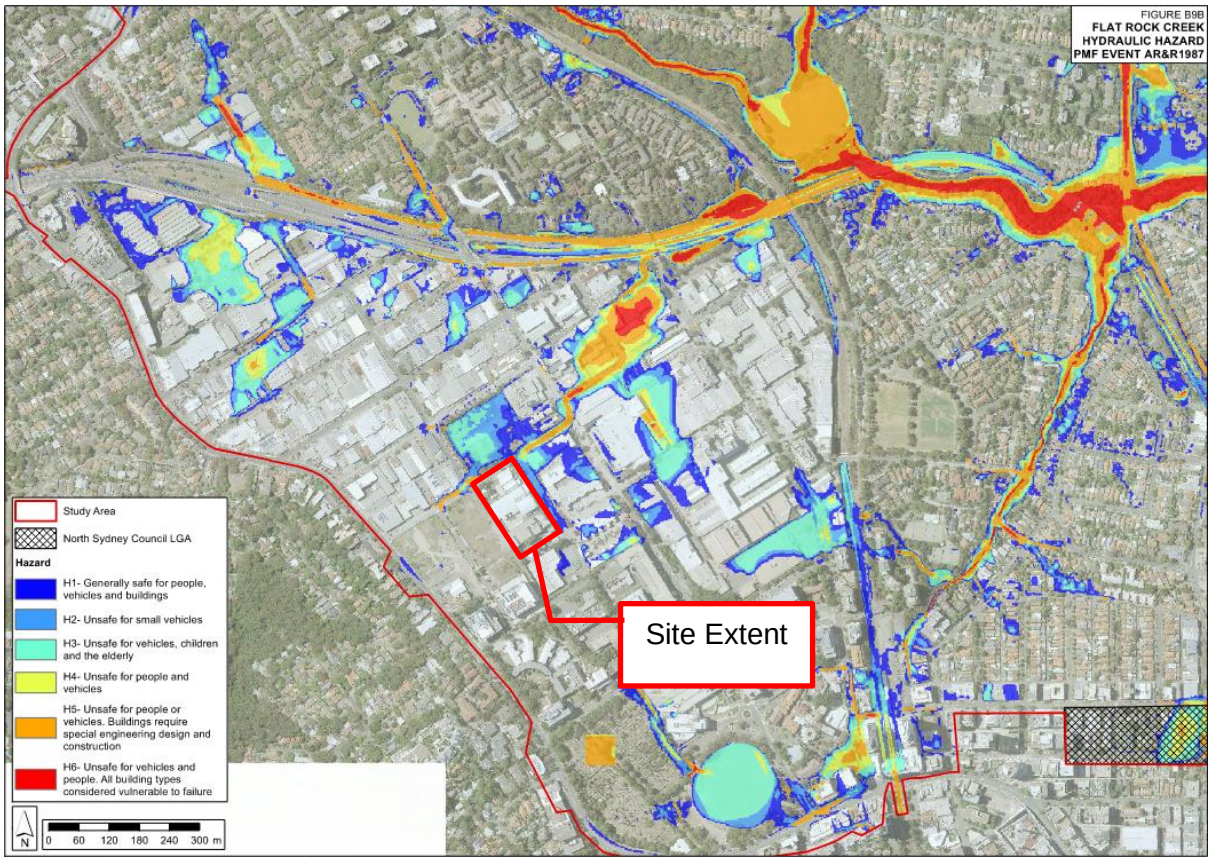


Figure 9: Provisional Flood Risk Precincts during PMF event (Source: Flat Rock Creek Catchment Flood Study, 2018)

3.6 Localised Flooding

Localised overland flooding can result for high intensity, short duration. These are controlled by the following on-site measures (See Appendix B below for plans):

- Roof drains and downpipes (Refer to Hydraulic plans and documentation).
- surface drains and pipes along driveways (Refer to van der Meer Drawing SY242-016-DAC401 for more details).

Refer to Appendix A for further details on the existing flooding levels and risk classification sounding the subject site.

3.7 Flood Warning along Flat Rock Creek

There is no specific flood warning system for small catchments such as Flat Rock Creek. Severe Weather Warnings are issued by the BoM and evacuation warnings are issued by the SES. The SES is the legislated combat agency for floods in NSW and is responsible for the control of flood response operations.

4. Construction Emergency Response Considerations

4.1 Emergency Response Types:

The main types of responses to a flood emergency are the following:

- Evacuation
- Shelter in place

During extreme flood events, evacuation is typically the main response strategy to ensure the safety of personnel on-site. In the case of a Probable Maximum Flood (PMF) event, evacuation procedures would involve:

Early Warning and Monitoring:

- Regular weather and flood warnings from relevant authorities (e.g., Bureau of Meteorology, local council) should be monitored.
- Site personnel should be notified immediately if flood risks escalate.

Evacuation Route Planning:

- Designated evacuation routes should be identified to ensure a safe and efficient exit from the site.
- Evacuation should direct personnel to areas outside the flood-prone zones, ensuring they are not exposed to overland flows or rising water levels.

Emergency Assembly Areas:

- Safe assembly points should be pre-identified at locations with higher elevations.
- These areas should be accessible and well-equipped with emergency supplies if required.

Site Shutdown Procedures:

- In the event of an evacuation, non-essential equipment should be secured to prevent damage or debris flow.
- Essential services (e.g., electricity, hazardous material storage) should be managed according to emergency protocols.

Despite the standard approach of evacuation in flood-prone sites, an evacuation plan is not required for this specific site due to its elevation and protection from floodwaters. The majority site is situated above the 1% Annual Exceedance Probability (AEP) flood level and remains unaffected even during a Probable Maximum Flood (PMF) event. While Lanceley Place and Campbell Street experience overland flow with depths reaching up to 700mm, the water does not overtop onto the site. As a result, the site is isolated by highly hazardous floodwater on both roads, and it is therefore recommended that the SES be consulted for advice on flood emergency management. However, the site's grading ensures that floodwater is directed away from the area rather than pooling within it, making it a naturally protected location.

Evacuating personnel would require movement through flood-affected roads, which could pose a greater risk than sheltering in place. With peak flood depths of up to 700mm in surrounding areas, evacuation routes could be compromised by strong currents and potential

debris. Given that the site itself remains a safe refuge, a shelter-in-place strategy is the most appropriate response, ensuring that personnel stay in an elevated area while waiting for floodwater to recede.

Shelter in Place

Shelter in place (SIP) within the site and wait until floodwaters have receded and the emergency has passed. Given the subject site condition during 1% AEP and PMF events, the SIP response strategy is preferred over site evacuation due to the high risk posed by the flooded access roads.
SIP requires flood-free access to a suitable shelter above the PMF level. The shelter must be protected from the weather, be structurally stable in a PMF and have sufficient floor area for all people likely to be on site at any one time. This is the preferred response for this site as recommended by the SES and DECC and evacuation is impossible from the site as surrounding roads are flooded.

4.2 Training

Training for all occupants is to be conducted through a site induction led by the Area Warden. This induction is to be undertaken by all new employees and contractors on the site. These include but are not limited to:

- Awareness and importance of an "Emergency Response Management Sub-plan inclusive of Flood Response aligned with this plan" to all occupants
    - Nature of flooding risks to this site
    - Dangers of navigating floodwaters (e.g. adopting a "*if it's flooded, forget it*" approach. Reference: Australian Journal of Emergency Management, 2019)

Extra training is to be provided to the Area Warden and Construction Manager on the following for each construction stages:

- Conducting site inductions.
- 6 months of flood emergency scenarios as scheduled. This will allow for the alarm system to be tested and conduct a drill of a shelter-in-place procedure as follows:

    - Step 1: An alarm and warning will sound to direct all occupants to immediately make their way to assembly point/shelter in place location and await further instructions.
    - Step 2: Area wardens shall check the ground floor to make sure it has been fully vacated.
    - Step 3: Sound a message over the PA system/radio that the drill has concluded, and all staff and occupants may safely return to the building.

In addition, the SES will employ public education strategies to raise flood awareness to people within the locality of this site. These include but are not limited to:

- Dissemination of emergency kits, flood-related brochures, booklets and locally tailored flood action guides in flood liable areas, including this site.
- Talks (including public meetings and FloodSafe unity Information Nights) and visual displays (including photographs and video) oriented to the community
- Publicity given to this plan and to flood-orientated SES activities through local media outlets, including articles in local newspapers about the flood threat and appropriate responses

5. Flood Response Strategy and stages

Flood response operations will begin on receipt of Bureau of Meteorology advice, or when warning signs and warning leads to an expectation of flooding, as detailed in Table 5.

Table 5: Flood Response Strategy and stages

Response Stage	Response Item	Action	Procedures	Responsibility
Before Flood	Monitor	Daily weather (intense heavy rainfall) / precipitation forecast monitoring	Monitor Bureau of Meteorology (BOM) on daily basis.	Site Manager/ Construction Manager
Before Flood	Consult Local Warnings	Checking the Bureau of Meteorology's (BOM) Warnings for NSW at the following website: http://www.bom.gov.au/products/warn_nsw.shtml.	Checking the warning specifically related to Flat Rock Creek	Site Manager/ Construction Manager
Alert Before Flood	Flood Alert	Increase level of alert	Notify all on-site supervisors of flood alert, watch or advice. Monitor Bureau of Meteorology (BOM) website.	Site Manager/ Construction Manager
Alert Before Flood	Flood Watch	Increase level of alert. prepare for activation of CFERP	Notify all on-site supervisors of flood alert, watch or advice	Site Manager/ Construction Manager
Alert Before Flood	Severe Weather Warning for flash flooding	Increase level of alert. prepare for activation of CFERP	Notify all on-site supervisors of flood alert, watch or advice	Site Manager/ Construction Manager
Alert Before Flood	Severe Thunderstorm Warning for flash flooding	Increase level of alert. prepare for activation of CFERP	Notify all on-site supervisors of flood alert, watch or advice. Monitor Bureau of Meteorology (BOM) website.	Site Manager/ Construction Manager

During Flood	**ACTIVATION** Occurrence of localised intense rainfall with associated observation of rising water levels on-site or adjacent waterways.	Mobilise site personnel to designated emergency shelter area. Close site to external visitors	Immediately notify all personnel of the activation of flood emergency response plan.	Site Manager/ Construction Manager
After Flood	Safe return to the site	Follow an "all clear" message from SES which is to be conveyed in the same manner as a flood warning message	Assess the Likelihood of: flood damage on site and review of CFERP for a safe return to the site	Site Manager/ Construction Manager

5.1 Before Flood:

Within 24 hours prior to a predicted flood impacting the Project site, the requirements set out in the CFERP will be implemented including the following general requirements:

- All staff to be alerted of the impending flood conditions.
- Mobile construction equipment, excess material, skips and hazardous substances will be removed from the flood prone area to areas of higher ground, generally to the east of the site.
- Flood risk and areas of the site would be revised and inspected on a case-by-case basis. In the event there poses a large flood risk, or the particular area of a work site is assessed risk of large flooding impact, power would be turned off in areas as deemed required by the Work Health Safety and Environment (WHSE) manager.
- Power will be turned off in the event of flooding until it is deemed safe to turn it back on - Site toilets to be pumped out into tankers.
- Loose materials to be moved out of flood prone area or secured.
- Emergency erosion and sediment controls will be implemented. This may include temporary bunds to divert water around key areas such as stockpiles and reduce risk to surrounding properties which might otherwise be affected.
- Shelter-in-Place during Flash flooding events as elaborated in the section below

Monitoring of BoM will continue throughout this process to ensure up to date information is available.

5.2 During flood

5.2.1 Shelter in Place (SIP)

Shelter-in-Place involves relocating site occupants to an area within the building located above the PMF level. In the event of flash flooding onsite or if the roads connected to the site are blocked due to flood inundation, Shelter-in-Place is the designated flood response management strategy for this site, as evacuation is not possible during PMF events.

To determine if Shelter-in-Place is an appropriate emergency management strategy for the site, the following considerations must be addressed:

- The Shelter-in-Place strategy must align with existing emergency management plans for the area, as determined through the flood risk management process and in consultation with the NSW SES.
- The development includes medical centres, emergency services, community facilities, and sensitive or hazardous land uses, some of which may not be suitable for a Shelter-in-Place strategy
- Shelter-in-Place is not supported for greenfield developments
- Consider whether government-developed flood warning systems are in place, providing advanced and detailed forecasts of flash flooding, to allow sufficient time to evacuate to the proposed refuge location.
- Assess the ability to effectively inform the community about the risks associated with the chosen emergency management strategy.

Registered by-laws must include a requirement for respective lot owners to maintain appropriate minimum resources for occupants during the site construction phase.

The requirements for a shelter-in-place refuge are listed as below:

- The floor level must be at or above the PMF level.
- At least 1 m² of floor space must be provided per person for short-duration (<6 hours) flood events.
- The refuge must be accessible to all individuals onsite, clearly visible, self-directing, and provide sufficient access capacity for all occupants without reliance on elevators
- A Flood Emergency Kit should be prepared before a flood event and regularly checked to ensure supplies are sufficient and in working condition. The kit should include:
    - Radio with spare batteries.
    - Torch with spare batteries.
    - First aid kit and other medicines.
    - Candles and waterproof matches.
    - Waterproof bags.
    - A copy of the Site Emergency Management Plan; and
    - Emergency contact numbers.

As the flood response type is Shelter-in-Place (SIP), all occupants and visitors must gather at the designated shelter area. The shelter area must be located:

- Above the (PMF) level.
- As close as possible to the access road to ensure emergency vehicles can reach the site both before and after a PMF event.

If the shelter area requires relocation during the construction phases, the change must be confirmed and documented in an updated Construction Flood Emergency Response Plan (CFERP).

According to the construction staging plans provided by AW Edwards, the site will be developed in three stages. Throughout all stages, the site shed & accommodation area will serve as the designated emergency shelter during a PMF storm event. The shelter locations for each construction stage are shown in Figure 9, Figure 10 and Figure 11.

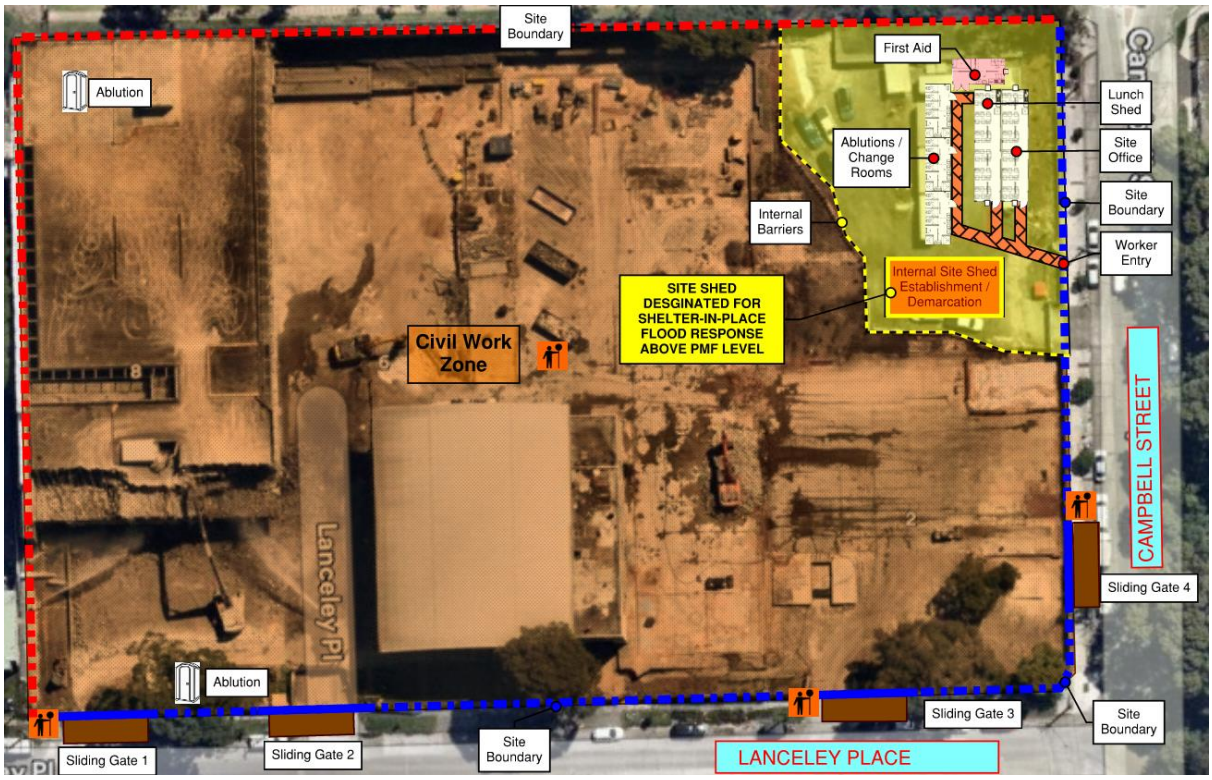


Figure 9:Construction Stage 1 Site shed, to be used for SIP area

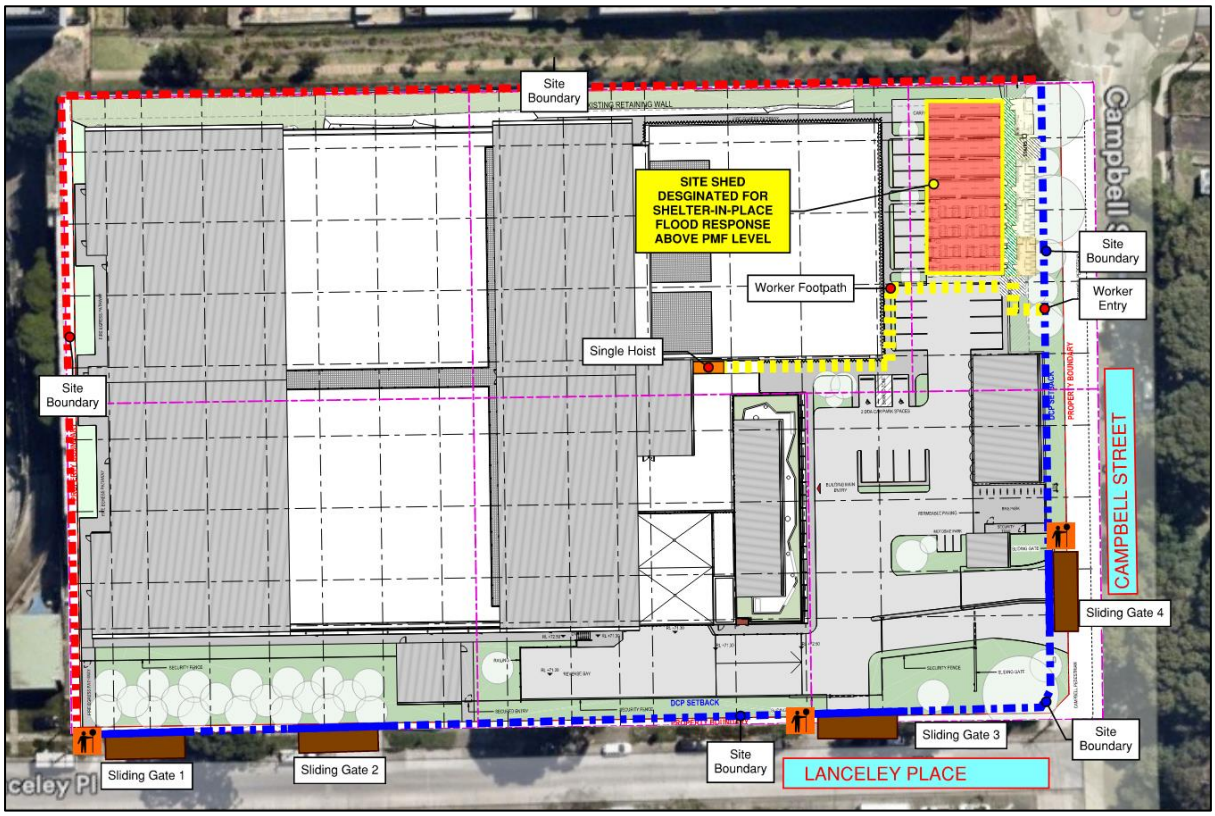


Figure 10: Construction Stage 2 Site shed, to be used for SIP area

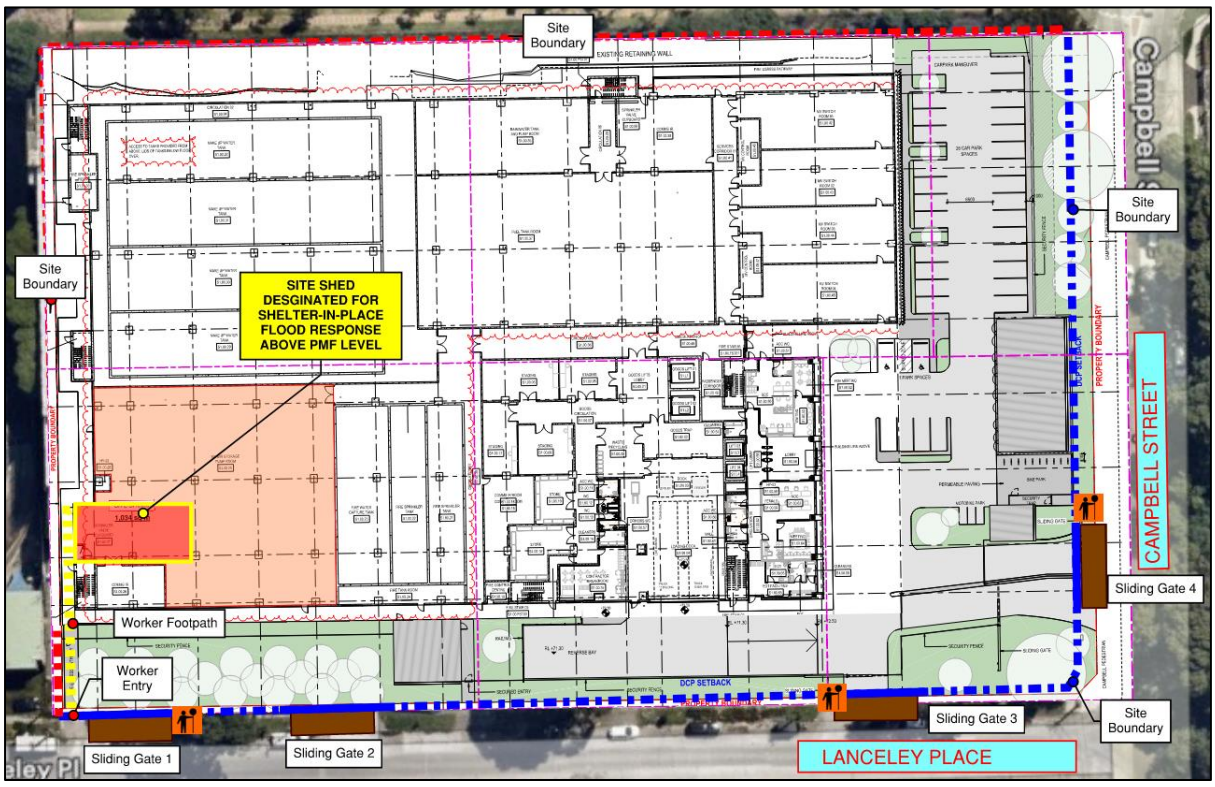


Figure 11: Construction Stage 3 Site shed, to be used for SIP area

For further details regarding the Shelter-in-Place guidelines provided by the NSW Government, refer to Appendix D.

Construction compounds and stockpile areas are to be located in elevated regions in accordance with Section 3 of this report, in order to mitigate the impact of potential flooding during construction. The proposed development flooding is controlled by site drainage.

The location of these construction compounds is flexible, on the condition that they are above the flood level stated above. The Flood Extents of the predeveloped site are shown in Section 3 and the Appendices of this report.

5.3 Post-Storm Response During Construction Phase

Following flooding of the site, the initial response will be to determine whether it is safe to return to the site. A safety walk through is to be conducted by senior staff including the safety representative, the Project Director, Construction Manager, and a qualified electrician to identify danger areas. The team will assess the following:

- Likelihood of flood damage to access roads.
- Determine if flood waters have receded.
- The electrician is to check any inundated or water affected power boxes and electrical equipment.
- The power is to remain off until assessed by the electrician.

Once it is deemed safe to return to site, the following are to be undertaken:

- Any equipment, materials or debris moved by the flood water should be returned to rightful area or discarded if damaged beyond repair/use.
- Check stockpiles for erosion or losses. Restore erosion and sediment control devices as per the relevant Erosion and Sediment Control Plan.
- Temporary onsite structures or partly constructed structures should be checked for erosion or other water damage prior to entering them or continuing work.
- Check portable wastewater systems on site and schedule maintenance/servicing.
- Determine whether any water held in excavations can be pumped to sediment basins/holding tanks for treatment prior to discharge. Undertake water testing/sampling in line with the Soil and Water Management Plan.

5.3.1 Notification during Construction Phase

The contractor will inform the client and relevant statutory and regulatory authorities (such as the EPA) in the event of an incident as necessary.

Environmental emergencies will be handled by the contractor in accordance with the Safety Health and Environmental Management System (SHEMS) and CFERP as follows:

- Immediately report all incidents to the Project Manager / Construction Manager, who is to assess the situation and manage the following steps:
    - Immediately take all reasonable steps to contain further damage or danger to personnel and the environment.
- Inform relevant authorities in accordance with the regulatory requirements.
- Contact emergency service personnel as necessary (e.g., fire dept., spill clean-up services, etc.). Site emergency response team will also be contacted.
- Where there is potential for the community to be impacted by an incident, any response or notification required will be undertaken in coordination with the appropriate emergency services.
- Inform the Client's Representative as necessary and in accordance with contractual requirements.
- Complete a detailed report of the emergency incident.
- Liaise with the Client's Representative regarding corrective and preventive actions required and the timeframes within which these actions must occur.
- The designated personnel will undertake corrective and preventive actions. Information on the handling of hazardous materials is contained in the Safety Data Sheet (SDS) register.

Additionally, the SES will issue the following:

- An "all clear" message which is to be conveyed in the same manner as a flood warning message.

6. Roles and Responsibilities for Construction Phase

The roles and responsibilities are listed below in Table 6:

Table 6: Roles and responsibilities

Organisation/Agency	Responsibilities
NSW State Emergency Service (SES)	The NSW SES is the designated Combat Agency for floods, storms, and tsunamis, responsible for controlling response operations. Its roles and responsibilities in relation to floods are detailed in the New South Wales State Flood Plan.
Australian Government Bureau of Methodology	The roles and responsibilities of the Australian Government Bureau of Meteorology are outlined in the NSW State Flood Plan as follows: – **Preparedness** • Maintain, coordinate, and deliver 24-hour operational weather and flood warning services to the NSW community, in line with the LGA and the Bureau's Service Level Specification for NSW. • Undertake community education activities and contribute to community engagement and capacity-building programs organized by the NSW SES. • Develop warning systems in collaboration with the NSW SES and other state and local agencies. • Provide flood warnings, systems, and procedures to ensure timely and accurate communication. – **Response** • Act as the flood prediction agency for non-flash flood catchments, in accordance with the Bureau's Service Level Specification for NSW. • Provide weather and flood information directly to the NSW SES, SEMC, and other relevant agencies. • Collect, collate, and publish official forecasts and warnings, including NSW SES safety messages within the warnings.
Willoughby City Council	• Provide information to site occupants about flooded roads. • Determine road closures for local roads
NSW Police	• Enforce evacuation orders issued by the SES. • Guide traffic along the evacuation corridors for a safe and orderly evacuation. • Close flooded roads and roads as ordered by the RMS and council.
Construction Manager	• Appoint Area wardens to be on site during operational hours. • Assist with the Area warden in Shelter in Place (SIP) procedures on site.

	• Maintain a register of all the personnel and visitors on site for assembly and ensure all persons are within the shelter area as designated within the site • Secure the site equipment before the flood as elaborated in Section 4 of this report. • Assess post-flooding impacts on site and determine whether to return to site or not.
Area Warden	• Monitor and issue flood warnings from the BoM/SES to site occupants and visitors. • Lead Shelter in Place procedures for all occupants and visitors on site. • Maintain communication with external stakeholders and emergency services (SES, council, police) • Ensure that the site flood management measures and infrastructure are functional • Lead site inductions on flood awareness and annual drills of the flood emergency response procedures • Participate in a review of this CFERP annually and following a flood event
First Aid Officer	• Prepare and maintain Flood Emergency Kit (SIP support systems),
Staff and Visitors	• Maintain calm and follow directions provided by the Area Warden and Construction Manager.

7. Emergency Contacts

List of emergency contacts are below in Table 7:

Table 7: Emergency contacts

Contact Name	Telephone number	Address
Wiloughby City Council	(02) 9777 1000	Ground Level, 31 Victor St, Chatswood NSW 2067
NSW State Emergency Service (SES) – Willoughby Unit	(02) 9439 7766	25 Station St, Naremburn NSW 2065
Emergency Services General	000	N/A
Hospital – Royal North Shore Hospital	(02) 9926 7111	Reserve Rd, St Leonards NSW 2065
NSW Police – Chatswood Police Station	(02) 9414 8499	63 Archer St, Chatswood NSW 2067
Fire and Rescue NSW Willoughby Fire Station	(02) 9493 1040	53 Laurel St, Willoughby NSW 2068
Bureau of Meteorology – NSW Flood Warning Centre	(02) 9296 1511	N/A
Additional Contact Numbers		
Area Warden: Nathan Arfanis	0405 338 722	Level 12, 558 Pacific Highway St Leonards NSW 2065
Construction Manager: Rauiri McAllister	0409 069 060	Level 12, 558 Pacific Highway St Leonards NSW 2065
Construction Health & Safety Manager: Brad Cassar	0433 614 519	Level 12, 558 Pacific Highway St Leonards NSW 2065

8. Conclusion

This Construction Flood Emergency Response Plan provides information and guidelines shelter-in-place procedures that need to be taken in the event of major flooding at the proposed Data Centre at 2-8 Lanceley Place, Artarmon NSW 2064.

Appendix A – Flat Rock Creek Floodplain Study, Willoughby City Council 2018

FIGURE 6
FLOOD EMERGENCY CLASSIFICATION
1987 AR&R, PMF EVENT

EVACUATION CENTRE
25 STATION STREET
NAREMBURN

Artarmon
Willoughby
Brand St
Elizabeth St
Rail Corridor
Weedon Rd
Smith Rd
Godfrey Rd
Sydney St
Penkivil St
Julian St
Borlaise St
Gorman St
Tulloh St
Salisbury Ln
Bendey St
Small St
Artarmon Rd
Flat Rock Dr
Willoughby Rd
George Pl
Baron Rd
Lane Cove Tunnel
Reserve Rd
Hampden Rd
Gore Hill Freeway
Olympia Rd
Grandview St
Park Rd
Station St
Waters Rd
Garland Rd
Market St
Cliff Av
Marana Rd
Muray Ln
Taylor Ln
Dickson Ave
Cleg St
Frederick St
Dalleys Rd
Talus St
Francis St
Herbert St
Waters Rd
North Cote st
Herbert St
Reserve Rd

N

Study Area
PMF Extent

Flood Emergency Classification

Rising Road Acess
Low Flood Island
Overland Escape Route

0 0.125 0.25 0.5 0.75 1 km

J:\Jobs\118080\ArcArcMap\Report\Main_Report\Figure06_Flood_Emergency_Response_Classifications_ARR1987.mxd

FIGURE B7B
FLAT ROCK CREEK
HYDRAULIC HAZARD
1% AEP EVENT AR&R1987

Study Area

North Sydney Council LGA

Hazard

H1- Generally safe for people, vehicles and buildings

H2- Unsafe for small vehicles

H3- Unsafe for vehicles, children and the elderly

H4- Unsafe for people and vehicles

H5- Unsafe for people or vehicles. Buildings require special engineering design and construction

H6- Unsafe for vehicles and people. All building types considered vulnerable to failure

N

0 60 120 180 240 300 m

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FIGURE B9B
FLAT ROCK CREEK
HYDRAULIC HAZARD
PMF EVENT AR&R1987

Study Area

North Sydney Council LGA

Hazard

H1- Generally safe for people, vehicles and buildings

H2- Unsafe for small vehicles

H3- Unsafe for vehicles, children and the elderly

H4- Unsafe for people and vehicles

H5- Unsafe for people or vehicles. Buildings require special engineering design and construction

H6- Unsafe for vehicles and people. All building types considered vulnerable to failure

N

0 60 120 180 240 300 m

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Appendix B – Civil Plan

AUSGRID ARTARMON DEPOT

HEIDELBERG MATERIAL

PROPOSED DATA CENTRE FFL 72.50

FRENCH DRAIN 500mm WIDE MIN 300mm DEPTH 1% FALL

INGROUND OSD TANK 1 WITH FILTER CARTRIDGES
IL 70.50 TWL 71.70
STORAGE DEPTH 1.2 m
MIN. STORAGE 420 m³
MIN AREA 350 m²

INGROUND OSD TANK 2 WITH FILTER CARTRIDGES
IL 70.50 TWL 71.70
STORAGE DEPTH 1.2 m
MIN. STORAGE 230 m³
MIN AREA 192 m²

STORMWATER DISCHARGE #3

STORMWATER DISCHARGE #2

STORMWATER DISCHARGE #1

CAMPBELL STREET

LANCELEY PLACE

PLAN
SCALE 1:250

REVISIONS:			
A	ISSUED FOR APPROVAL	HB	XX.XX.25
No.	REVISION DESCRIPTION	DRAWN	DATE

SCALE BAR
0 1 2 3 4 5 10m 15 20m
SCALE 1:250

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CLIENT: Goodman

ARCHITECT: HDR
25 MARTIN PLACE, SYDNEY NSW, 2000

PROJECT TITLE: SYD001
2-8 LANCELEY PLACE
ARTARMON NSW 2064

DRAWING TITLE: PRELIMINARY SITE GRADING

DRAWING STATUS: **APPROVAL ISSUE**
NOT TO BE USED FOR CONSTRUCTION

PROJECT LEADER	DESIGNER	SIGNATURE	
AW	HB		
DRAFTSPERSON	SCALE	DATE	SHEET SIZE
HB	1:250	DATE DRAWN	A1
JOB No.		DRAWING No.	REVISION
SY242-016		DA-C401	A

Appendix C – SYD242-016 Data Centre Staging Methodology 100%

STAGE 1 - INITIAL ESTABLISHMENT



STAGE 2 - GENERATOR BUILDING
CAR PARK

AW EDWARDS OFFICE - OFFSITE

Broadcast Way

Site Boundary

EXISTING RETAINING WALL

Site Sheds

Site Boundary

Worker Footpath

Worker Entry

Single Hoist

EXTERNAL WORK ZONE

PROPERTY BOUNDARY

DCP SETBACK

2 DDA CAR PARK SPACES

BUILDING MAIN ENTRY

PERMEABLE PAVING

BIKE PARK

MOTORBIKE PARK

SLIDING GATE

SECURITY FENCE

RAILING

REVERSE BAY

SECURED ENTRY

FIRE EGRESS PATHWAY

Sliding Gate 4

Site Boundary

Site Boundary

Lanceley Pl

Sliding Gate 1

Sliding Gate 2

EXTERNAL WORK ZONE

Site Boundary

Sliding Gate 3

Lanceley Pl

Campbell St

STAGE 3 - WATER STORAGE ROOM

AW EDWARDS OFFICE - OFFSITE

Broadcast Way

Site Boundary

EXISTING RETAINING WALL

FIRE EGRESS PATHWAY

CARPARK MANEUVER

26 CAR PARK SPACES

Campbell St

Site Boundary

Site Boundary

Lanceley Pl

Lanceley Pl

PROPERTY BOUNDARY

SITE SHEDS

1,034 sq m

WATER STORAGE PUMP ROOM

Worker Footpath

SECURITY FENCE

RAILING

REVERSE BAY

SECURED ENTRY

DCP SETBACK

PROPERTY BOUNDARY

EXTERNAL WORK ZONE

PERMEABLE PAVING

BIKE PARK

MOTORBIKE PARK

SLIDING GATE

Sliding Gate 4

Sliding Gate 3

Sliding Gate 2

Sliding Gate 1

Worker Entry

CAMPBELL PEDESTRIAN

Appendix D – Shelter-in-Place Guideline for Flash Flooding – NSW Government

Shelter-in-place guideline for flash flooding

This guideline aims to assist consent authorities to undertake site specific, risk-based assessment to assess if shelter-in-place is a suitable emergency management strategy for development proposed in flash flood environments. This is achieved by balancing the merits, risks, and impacts of a proposal. The guideline also aims to inform considerations about whether appropriate measures are in place to limit potential flash flood related impacts on affected proposals and public safety.

Introduction

Keeping people safe during floods requires understanding an area's flood risk. Good planning, awareness, preparedness and the adoption of appropriate risk management and mitigation strategies will help achieve this objective. Infrastructure, how development is designed and whether the proposal provides for safe occupation and efficient and effective evacuation during flood events are important considerations.

The NSW Independent Flood Inquiry, led by Professor Mary O'Kane AC and Michael Fuller APM reviewed the preparation for, causes of, response to, and recovery from the significant flooding experienced across NSW in early 2022. The Inquiry identified the need for a consistent framework for consent authorities when considering whether shelter-in-place could form part of the emergency response for a site.

What is shelter-in-place?

Shelter-in-place is the internal movement of a building's occupants to an area within the building above the probable maximum flood (PMF) level before their property becomes inundated by flood waters.

Shelter-in-place is not a design or safety solution free from risk. When considering shelter-in-place, secondary risks such as the impact of a flood on people's access to water and electricity, the availability of food, management of medical emergencies, building fire and their health and well-being should also be addressed.

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What is flash flooding?

Flash flooding is "flooding that occurs within 6 hours of the precipitating weather event, and often involves rapid water level changes and flood water velocity".[1] This includes overland, creek and riverine flooding sources.

Flash flooding can be more dangerous than long duration flooding. This is largely due to the rapid changes in velocities and depths of water, and very short or minimal warning time providing limited opportunity for communities to respond to a flood threat in an appropriate and timely manner.

There may be minimal time between the start of rainfall that causes flood and the flooding of roads, property and potentially buildings. Warnings to the community are often limited to severe weather warnings or flood watches for the general area, often with no specific forecasts or advice available on the local impacts of flash flooding. Flash flooding locations often do not have water level gauges that can provide information to the public about the potential scale of the flood's impacts.

Intent of guideline

This guideline considers shelter-in-place where flash flooding is the only flood risk present at the site and where people can safely shelter above the PMF level.

The intent of the guideline is to:

- guide proponents on where shelter-in-place may be considered in land use planning
- provide consent authorities guidance on matters that may be considered in assessing planning proposals and development applications where shelter-in-place is proposed
- assist councils when considering the role of shelter-in-place within their own local guidelines, policies, and development control plans.

Evacuation is the primary emergency management strategy for flooding in NSW

Evacuation off-site is the primary emergency management strategy for flooding in NSW. Flooding may displace individuals, require people to relocate or disrupt essential services to communities for hours, days or weeks. Before a flood, getting people to evacuate off-

[1] Flash flooding as defined in *Emergency Planning and Response to Protect Life in Flash Flood Events* (2018) AFAC (Australasian Fire and Emergency Service Authorities Council).

site to an area not affected by flooding is considered the best way to keep people safe and reduce the impacts of an emergency on a community. Evacuation involves moving people threatened by a flood to a safer location and, typically, their eventual safe and timely return.

The NSW State Emergency Service (SES) is the lead agency for flooding and determines the emergency management strategy for flood events. Generally, the most appropriate primary emergency management strategy is self-evacuation of people off-site to an area not affected by flooding, as detailed in the NSW State Flood Plan and Local Flood Plans.

Constraints to evacuation

Evacuation off-site may not always be possible. This is amplified in high-density urban areas where a significant number of people would need to evacuate, and where the capacity of evacuation routes may be constrained.

There may be little to no warning time in locations that experience flash flooding, meaning evacuation may pose a higher risk than sheltering-in-place for a short period of time. In this circumstance, the incorporation of suitable refuge facilities in a proposed development may be considered to reduce the potential risks.

Understanding the full range of flood behaviour at a site can help identify evacuation constraints. This should be considered through the Floodplain Risk Management process. This process can also assist councils to identify appropriate flood risk management strategies including emergency management strategies for specific areas which may include shelter-in-place.

Considerations for shelter-in-place

Understanding flood behaviour

Understanding the full range of flood behaviour up to, and including the PMF, accounting for climate change scenarios and secondary risks, is essential for planning for flood emergencies.

An understanding of flood behaviour can be informed by the following documents:

- Flood studies (consistent with the Flood Risk Management Manual 2023)
- Floodplain Risk Management Studies (consistent with the Flood Risk Management Manual 2023)
- Flood plans (NSW SES)

- Flood Impact and Risk Assessment (FIRA) (consistent with Flood Impact and Risk Assessment Guideline (LU01)) if insufficient flood behaviour information is unavailable.

Strategic decision-making about shelter-in-place

For councils considering emergency management strategies (such as shelter-in-place) in strategic decision-making, the following guidelines may assist:

- Support for Emergency Management Guideline (EM01) which provides advice on the application of emergency management considerations to minimise residual risks to occupants and sets out recommended emergency management issues for councils to consider in strategic decision-making
- Understanding and Managing Flood Risk Guideline (FB01) provides advice to councils on considering flood behaviour when preparing flood risk management studies and plans, including considering land use planning responses to flooding.

Shelter-in-place considerations

When considering shelter-in-place, consent authorities should take a risk-based approach that is informed by the proposal's scale and establishes controls and mitigation measures that reflect the duration and depth of modelled flooding up to the PMF. The Support for Emergency Management Guideline (EM01) (table 12) provides advice on the application of emergency management considerations to minimise residual risks to occupants. In addition to this, the following will help guide consent authority when initially assessing if shelter-in-place is an appropriate emergency management strategy for the site:

1. does shelter-in-place align with existing emergency management strategies for the area, as determined through the flood risk management process and by the NSW SES
2. has evacuation off-site (the primary emergency management strategy) been investigated and determined to be unachievable
3. does the development include medical centres, emergency service and community facilities, and sensitive and hazardous land uses, some of which may not be suitable for shelter-in-place
4. shelter-in-place for greenfield development is not supported

5. whether there is existing government developed flood warning systems that give advanced detailed forecasts of flash flooding to allow sufficient time to evacuate to the proposed refuge locations[2]
6. can the community effectively be informed of the risks associated with the emergency management strategy

Following satisfactory consideration of the above issues, the Flood Impact and Risk Assessment (FIRA) being undertaken for the site must provide advice for the consent authority to consider the suitability of the site for shelter-in-place. The FIRA should include:

7. detailed assessment of evacuation off-site (the primary emergency management strategy) to determine that evacuation off-site is not achievable.
8. the flood behaviour at the site, with consideration of climate change and assessment of the potential maximum duration of isolation up to and including the PMF to identify that:
    a. flash flooding is the only flood risk present at the site, whether it be from overland flooding, local creek or riverine flooding, and
    b. the flooding occurs within less than 6 hours from the commencement of causative rain and the duration of shelter-in-place due to isolation by floodwaters is less than 12 hours from the commencement of rainfall, and
    c. the development is not subject to high hazard flooding (e.g. floodways, high hazard H5 or H6 areas) or surrounding roadways are not subject to high hazard flooding.[3]

Following consideration of items 1 to 7, and if items 8a, b and c are met, and the consent authority considers shelter-in-place is an appropriate emergency response strategy the following items must also be considered through a FIRA:

9. how shelter-in-place will be:
    a. used as part of the site's emergency management response, including actions before, during and after sheltering-in-place, and
    b. communicated to occupants and visitors of the building and how this communication will be maintained for the life of the development.

[2] Flash flood warning systems are not failsafe and should not be the only mechanism to get people to shelter-in-place.

[3] Flood Risk Management Guideline FB03 Flood Hazard, DCCEEW, 2023.

10. an understanding of the secondary risks and how the proponent proposes they will be managed is outlined in the FIRA. Secondary risks include medical emergencies, building fire, health and wellbeing.
    a. Table 12 of EM01 should be used to consider whether the risks could be effectively managed.

The consent authority should reflect the following design criteria (I to III) in relevant conditions of consent:

I. the floor level of the shelter-in-place part of the development be above the PMF, and
II. structural soundness for conditions in a PMF event, considering flood and debris forces, be verified by a suitably qualified structural engineer, and
III. area and access to the area does not rely on access to electricity, is self-directing, and have clearly marked internal access for all people on site, including consideration of access for potential occupants and/or visitors.

The consent authority may also consider the following design criteria (IV to X) when setting relevant conditions of consent depending on the scale and type of development:

IV. protection from weather and appropriate heating and cooling
V. access to personal hygiene facilities such as a toilet
VI. a minimum floor space of 2 m^2 per person
VII. items for self-sufficiency that are stored, maintained and are regularly updated in an accessible location above the PMF, including sufficient drinking water and food for occupants, fire extinguishers, radios and torches with spare batteries, and a first aid kit with an automated external defibrillator (AED)
VIII. centralised communal shelters may be considered but must be freely accessible internally at all times and externally accessible during events
IX. access is provided to onsite systems that generate power of the shelter-in-place location during and after the event for a full range of flood events up to the PMF
X. detail how these requirements will be maintained and enforced for the life of the development.

Additional considerations for councils

It is suggested that councils establish a register for development approvals and occupation certificates that rely on shelter-in-place as part of their emergency management response.

Councils should include any additional information on flood risk including emergency response strategies such as sites or dwellings approved to shelter-in-place on the relevant planning certificate under section 10.7(5) of the *Environmental Planning and Assessment Act 1979*.

Community engagement to support shelter-in-place implementation

Ongoing community engagement is important to ensure that the community is aware of actions they must take before, during and after sheltering-in-place and the key triggers that require shelter-in-place. If shelter-in-place is proposed there should be ongoing community engagement campaigns for the areas and/or developments utilising shelter-in-place. NSW SES should be involved in the development of these campaigns as the lead agency for emergency management of floods in NSW. However, NSW SES is not responsible for developing Flood Emergency Response Plans for individual developments.

Shelter-in-place like other flood risk management strategies requires clear, consistent and regular communication, strong community awareness and acceptance of what may be required to allow individuals to understand their level of risk and the triggers for associated actions, including for vulnerable populations.

Glossary

Evacuation off-site is evacuation of people to an area outside of the effects of flooding that has adequate facilities to maintain the safety of the community (NSW SES).

Flash flooding is flooding that occurs within 6 hours of the precipitating weather event, and often involves rapid water level changes and flood water velocity (AFAC, 2018).

Flood Risk Management process as defined in Figure 2 of the Floodplain Risk Management Manual (2023).

Full range of flooding is all flooding up to and including the PMF.

Sensitive and hazardous uses as defined in Standard Instrument – Principal Local Environmental Plan, clause 5.22(5).

Shelter-in-place is the movement of occupants of a building to an area within the building above the PMF, before their property becomes inundated by flood waters.

Probable Maximum Flood (PMF) is the largest flood that could conceivably occur at a particular location, usually estimated from probable maximum precipitation (PMP), and where applicable snow melt, coupled with the worst flood-producing catchment conditions (Flood Risk Management Manual, 2023).

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APPENDIX I: UNEXPECTED FINDS PROTOCOL

AW EDWARDS



Goodman SYD01

Unexpected Finds Protocol

SYD01-AWE-UFP-001

Prepared By:

A W EDWARDS PTY LIMITED

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Revision:	D
Status:	Draft

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Goodman SYD01

SYD01-AWE-UFP-001

Project No.	693
Project Name	Goodman SYD01
Project Manager	Michael Galbraith
Project Location	2-8 Lanceley Place and 14 Campbell Street, Artarmon
Phone No.	02 8036 7200
Client	Goodman Group
DA No.	SSD-66777221
Scope of Works	The proposed development will have a maximum building height of 51.479m, with a floor space ratio of 1.91:1. The project also proposes 41 car parking spaces. The data centre will operate on a 24-hour basis with a total power supply of Eighty (80) MVA. There are 5 data halls proposed.
Timing of the Works	July 25 – xxx

Revision Register:

REVISION	DATE	STATUS	AUTHOR	APPROVED BY	
A	24-Feb-25	Draft	J Kwan		Initial Draft
B	28-Mar-25	Draft	J Kwan		Minor amendments following client review
C	29-Apr-25	Draft	J Kwan		Updated in line with independent reviewer comments
D	12-May-25	Draft	J Kwan		Added third part – Non-contaminated and Non-heritage Unexpected Finds as requested by client
	Date	Status			
	Date	Status			

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1 INTRODUCTION

1.1 BACKGROUND

This protocol has been prepared for the proposed development of a data centre at 2-8 Lanceley Place and 14 Campbell Street, Artarmon, for the Lanceley Place Data Centre project (SSD-66777221).

The development is in the Willoughby Local Government Area (LGA) within the Artarmon Industrial Area and zoned 'IN1 - General Industrial'.

The site is located at 2-8 Lanceley Place and 14 Campbell Street, Artarmon incorporating the following lots (see Figure 1):

- Lot 15 DP233037 14 Campbell Street
- Lot 14 DP233037 2 Lanceley Place
- Lot 13 DP233037 4 Lanceley Place
- Lot 12 DP233037 6 Lanceley Place
- Lot 11 DP 606737 8 Lanceley Place

The site area is approximately 5 kilometres (km) north of the Sydney Central Business District (CBD), 12 km north of Sydney Airport and 16 km north of Port Botany. The site is also located centrally between several strategic centres in the North District including St Leonards, Chatswood, North Sydney and Macquarie Park. The site area is 14,006 square metres (m2) and is legally described as Lots 11-15 in DP 233037. The site has a frontage to Lanceley Place and Campbell Street and is within close proximity to the arterial road network, including the Pacific Highway, M1, M2 and Lane Cove Tunnel.

1.2 ENVIRONMENTAL MANAGEMENT STRUCTURE

This Unexpected Finds Protocol (UFP) is part of A W Edwards' environmental management framework for the project, and is supported by other documents such as:

- Construction Environmental Management Plan (CEMP);
- Erosion and Sediment Control Plan (ESCP);
- Construction Noise and Vibration Management Plan (CNVMP); and
- Community Consultation & Complaints Handling Strategy (CCCHS).

1.3 APPROVAL

This UFP will be reviewed by Goodman and submitted to the Secretary of DPHI for approval in accordance with the Conditions of Approval.

Construction will not commence until the CEMP and sub-plans (including this UFP) have been approved.

2 PART 1: UNEXPECTED CONTAMINATED FINDS

2.1 PURPOSE

This Unexpected Contaminated Finds Protocol has been developed to meet the requirements of the DA Conditions of Approval (CoA) B59.

The purpose of this Unexpected Contaminated Finds Protocol (UCFP) is to detail the actions to be taken when potential contaminated soil and/or materials is unexpectedly encountered during excavation or construction activities. This Protocol describes a procedure to ensure that any contaminated material is identified and disposed of in such a way as to avoid harm to human health and the environment.

There is the potential for previously unidentified contaminants to be uncovered during construction of the Project. Unexpected finds may include the discovery of hazardous materials, such as asbestos, Asbestos Containing Material (ACM), or contaminants that are not known to be occurring in that location. In the event that contaminated materials are discovered, this Protocol will be implemented.

This UCFP forms part of the Construction Environmental Management Plan (CEMP) for the Project and was prepared in accordance with:

- The relevant planning approvals and conditions of approval (CoA) for the project;
- Applicable legislation and regulatory requirements;
- The NSW Environment Protection Authority (EPA) contamination management guidelines; and
- The Protection of the Environment Operations (POEO) Act and its associated regulations.

2.2 OBJECTIVES

The following unexpected contaminated finds management objectives, will be applied to the project:

- Discovery and disposal of any unexpected finds will be managed effectively to identify any contamination and limit potential risk to human health and environment

3 LEGAL AND APPROVAL REQUIREMENTS

3.1 APPROVALS

This UCFP has been produced to demonstrate compliance with the relevant DA CoA (Conditions of Approval) as summarised in Table 3.1

Table 3.1: DA Conditions of Approval

ITEM	REQUIREMENT	DOCUMENT REFERENCE
B59	Prior to the commencement of construction, the Applicant must prepare an unexpected contamination finds procedure to ensure that potentially contaminated material is appropriately managed. The procedure must form part of the CEMP in accordance with condition C2 and must ensure any material identified as contaminated is managed in accordance with the POEO Act and its associated regulations. Details of the final management approach and the results of any associated testing must be submitted to the Planning Secretary within six weeks of the Applicant becoming aware of the contamination find, or as otherwise agreed to by the Planning Secretary.	This document – Section 4.2 Unexpected Contaminated Finds Procedure – General Contamination, and Section 4.3 Unexpected Contaminated Finds – Asbestos or Asbestos Containing Materials

3.2 LEGISLATION AND REGULATORY REQUIREMENTS

Legislation relevant to the management of unexpected contaminated finds is summarised in Table 3.2 below:

Table 3.2: Legislation and regulatory requirements

LEGISLATION	DESCRIPTION	RELEVANCE
NSW *Environmental Planning and Assessment Act 1979*	This Act establishes a system of environmental planning and assessment for development of the State.	The approval conditions and obligations are incorporated into this UFP.
NSW *Contaminated Land Management Act 1997*	This Act provides for a process to investigate and remediate land that has been contaminated and presents a	This protocol discusses how A W Edwards will manage works to comply with this Act

	significant risk of harm to human health. Section 60 of the Act is a "Duty to Report Contamination". This duty applies to owners of land and persons who become aware their activities have contaminated the land.	for any potentially contaminated finds encountered during construction.
NSW *Protection of the Environment Operations Act 1997*	This Act mandates the identification, assessment, reporting, and mitigation of environmental risks associated with unexpected contamination. It ensures that construction activities are conducted in an environmentally responsible manner, safeguarding public health and the environment.	This protocol defines how A W Edwards will manage works to comply with this Act and manage the risk of potential contamination unearthed during construction works.
NSW *Work Health and Safety Regulation 2017*	This regulation contains provisions that apply to managing risks associated with hazardous substances, including a PCBU's duty to identify hazardous substance risks and implement the necessary control measures to minimise or avoid harm to human health or environment.	This protocol outlines how A W Edwards will implement the necessary control measures to minimise or avoid harm to human health and the environment in the event of unexpected contaminant finds.

3.3 GUIDELINES

Guidelines relevant to the management of unexpected contaminated finds are listed below:

- OHS/OSH/WHS Act - OHS/OSH/WHS Regulations
- Protection of the Environment Operations (Waste) Regulation 2014
- Australian Standard 1319: 1994 Safety Signs for the Occupational Environment
- Australia/New Zealand Standard 1715: 1994 Selection Use and Maintenance of Respiratory Protective Devices
- Australia/New Zealand Standard 1716: 2003 Respiratory Protective Devices
- Australian Standard 3544: 1988 Industrial Vacuum Cleaners for Particulates Hazardous to Health
- Australian Standard 4260: 1997 High Efficiency Particulate Air (HEPA) Filters – Classification, Construction and Performance

- SafeWork NSW Code of Practice – How to Safely Remove Asbestos December 2022
- SafeWork NSW Code of Practice – How to Manage and Control Asbestos in the Workplace December 2022
- AS 2601-2001 Demolition of Structures
- Environmental Protection Act
- Environmental Protection Regulations
- Planning and Development Act
- Public Health Act
- COP for the safe removal of asbestos (NOHSC)
- COP for the management & control of asbestos in workplaces (NOHSC)
- COP How to safely remove asbestos (NSW)

4 UNEXPECTED CONTAMINATED FINDS PROCEDURES

4.1 UNEXPECTED CONTAMINATION IDENTIFICATION

If any uncharacteristic material (e.g. soil, sediment, slurry, water or other foreign material) is discovered, it should be treated as a potential unexpected find, and works in the vicinity of the discovery should cease.

Unexpected contaminated finds may include, but are not limited to, the following:

- Distinctively different to other soils on-site – in texture, colour, smell and moisture content
- Underground tanks and structures (e.g. former fuel tanks)
- Appear to be concentrated to a localised area (i.e. waste burial pits)
- Stained, oil soaked or containing a petroleum sheen.
- Includes other products such as batteries etc.
- May contain offensive odours, including sulphur-based leachate impacts or sewerage, including acid sulfate soils
- Buried building products and debris/waste or other anthropogenic materials
- May contain potential asbestos containing materials
- May contain buried animal carcasses or evidence of decomposition including potential remains.

In the event of an Unexpected Contaminated Find, following the immediate cessation of works in the vicinity, the steps in this Procedure should be followed to ensure effective management of the find.

4.2 UNEXPECTED CONTAMINATED FINDS PROCEDURE – GENERAL CONTAMINATION (NOT ASBESTOS)

This procedure is to be followed in the event of contamination being unearthed during excavation or construction works, to minimise human health and environmental risks from the disturbance of contaminants during the works, and to ensure that contaminated material is managed, handled and/or transported appropriately.

This protocol outlines the procedure to be followed on discovery of all potential contaminated finds, which include discoloured soil, odours and/or unexpected structures. For the management and disposal of asbestos or Asbestos Containing Materials (ACM), please refer to Section 4.3 of this plan.

The following procedure outlines the necessary actions required of A W Edwards in the event that potential contamination is discovered on site during excavation or earthworks. This procedure is applicable to all personnel and subcontractors if suspected contaminated finds are encountered at any location of the site. The procedure is as follows:

Table 4.2: Unexpected Contaminated Finds Procedure – General Contamination (Not Asbestos)

STEP	ACTION
1	Potential unidentified contamination is observed on site. *(Note: this includes all potential contamination except asbestos/ACM – for suspected asbestos/ACM contaminated finds procedure, please refer to Section 4.3 of this plan).*
2	Workers must immediately cease work in the area and contact AWE Site Supervisor or Site Manager.
3	Workers to establish exclusion measures to prevent unauthorised access (eg. barrier mesh with signage).
4	AWE Site Manager/Supervisor to photograph the find in the area it was located (only if safe to do so), mark on a site plan the location it was found, and complete the Unexpected Finds Register.
5	AWE Site Manager contacts AWE Project Manager and WHS Manager. AWE Project Manager to notify Client/Client's Representative.
6	AWE Project Manager or WHS Manager to notify local Council or EPA (if applicable).
7	AWE WHS Manager to notify SafeWork NSW (if applicable).
8	AWE WHSE Coordinator to prepare incident report.
9	AWE Site Manager delivers Toolbox Talk to all workers on site regarding contamination, no access areas, and any further instructions/controls.
10	Qualified Environmental Consultant to design a sampling strategy for each unexpected find, based on its type and extent. The strategy should follow EPA-approved guidelines and aim to identify the substance, determine if it is hazardous, and assess any risk to human health or the environment.
11	Based on sampling results, Qualified Environmental Consultant to issue report advising test results (nature, extent and location of the contaminant), with removal or decontamination procedures and controls to avoid further disturbance or exposure. After managing each unexpected find, a clearance/validation letter to be prepared by the Qualified Environmental Consultant. This letter will follow relevant EPA published or endorsed guidelines and document the work carried out.
12	AWE Project Manager or QS Manager to submit details of the final management approach and the results of any associated testing to the Planning Secretary within six weeks of becoming aware of the contamination find, or as otherwise agreed to by the Planning Secretary (if applicable).

4.3 UNEXPECTED CONTAMINATED FINDS PROCEDURE – ASBESTOS OR ASBESTOS CONTAINING MATERIALS

The following procedure outlines the necessary actions required of A W Edwards in the event that potential asbestos/ACM contamination is unearthed on site during excavation or earthworks. This procedure is applicable to all personnel and subcontractors if suspected asbestos/ACM are encountered at any location of the site.

The procedure, in the event of potential ACM contamination being unearthed is as follows:

Table 4.3: Unexpected Contaminated Finds Procedure – Asbestos or Asbestos Containing Materials

STEP	ACTION
1	Potential asbestos/ACM contamination is observed during the course of the work.
2	Workers must immediately cease work in the area and contact AWE Site Supervisor or Site Manager.
3	Workers to establish exclusion measures to prevent unauthorised access (eg. barrier mesh with signage). Workers to turn off any fans in the immediate vicinity of the potential asbestos/ACM contamination to prevent the spread of any dust.
4	AWE Site Supervisor to view and photograph the area where ACM contamination is detected, mark on a plan the location it was found and complete the Unexpected Finds register.
5	AWE Site Manager to deliver Toolbox Talk to all workers on site regarding potential asbestos/ACM contamination, no access areas, and any further instructions/controls.
SCENARIO A	**EIGHT OR MORE PIECES OF BONDED ACM OR SUSPECTED FRIABLE MATERIAL PRESENT**
6A	If eight or more pieces of bonded ACM in an isolated area or suspected friable material is present, Site Supervisor to contact Certified Occupational Hygienist (COH)/Environmental Consultant to assess the area. *(If there are less than eight pieces of bonded ACM in an isolated area, and no suspected friable material is present, proceed to Scenario B.)*
7A	The Occupational Hygienist/Environmental Consultant to recommend if an ASA or ASB contractor will be required for removal works. A clearance certificate of removal will be required prior to recommencement of works.

8A	Licensed Asbestos Assessor/COH to inspect area and suspected material, and take samples for laboratory testing.
9A	Licensed Asbestos Assessor/COH to issue report advising test results (nature, extent and degree of any contamination), with removal or decontamination procedures and controls to avoid further disturbance or exposure.
10A	Licensed Asbestos Removalist or other specialised removal contractor (for non-ACM) engaged, in line with advice from the COH/Licensed Asbestos Assessor. AWE WHS Manager to notify SafeWork NSW five (5) calendar days prior to commencing licensed asbestos removal work.
11A	Asbestos Removal Control Plan (ARCP)/Remediation Action Plan (RAP) prepared for works, and removal area established in line with test report and NSW Code of Practice.
12A	Before asbestos removal work commences, AWE Project Manager to inform employees in the immediate and adjacent areas of the workplace of the proposed removal work.
13A	Asbestos removal works conducted in accordance with ARCP/RAP.
14A	Clearance inspection (and certificate provided) post removal works, and prior to recommencing construction/demolition works.
SCENARIO B	**LESS THAN EIGHT PIECES OF BONDED ACM AND NO SUSPECTED FRIABLE MATERIAL PRESENT**
6B	If less than eight pieces of bonded ACM is present in an isolated area, and no suspected friable material is present, AWE Site Supervisor may direct safe removal of the potential ACM by trained asbestos removal workers only. The workers performing the removal works must wear the following Personal Protective Equipment (PPE): • Disposable half-face particulate respirator (P1/P2 rated); & • Disposable nitrile/latex gloves.
7B	ACM bonded fragments should be collected, taking care to avoid damage, and placed in heavy duty 200-micron polythene bags. These bags should be clearly marked as asbestos waste. Bags marked for asbestos waste should not be used for any other purpose.
8B	When the ACM fragments have been collected, used gloves and respirators are to be placed in similarly marked asbestos waste bags.
9B	The opening of the bags are to be twisted tightly, folded over and the neck secured in the folded position with adhesive tape in a gooseneck knot.

10B	The waste bags should be placed in the designated asbestos waste bin. The bin is to be lined with 200-micron or thicker builders' plastic. The bin is permitted to remain on site for no longer than six (6) weeks at any one time.
11B	Prior to removal, the plastic lining in the bin is to be folded over the top of the contents and taped using duct tape or equivalent. The bin is to be photographed prior to leaving the site. The contents of the bin are to be disposed of by licensed asbestos removal contractors appropriately. Ensure waste disposal documents are received.

4.4 WASTE MANAGEMENT

All waste associated with unexpected finds will be managed in accordance with the Construction Waste Management Sub Plan (CWMP), with all waste:

- Appropriately segregated and stored;
- Classified in accordance with the NSW EPA Waste Classification Guidelines (2014);
- Tracked by the Project and evidence of receipt at an appropriately licensed waste facility.

Once waste has been classified, appropriate management options would be considered and implemented in accordance with legislated requirements.

Only bonded asbestos may be received at some premises. There may also be limits on the quantity of asbestos that can be stored on some premises at any time.

Prior to engaging a contractor to collect, transport and dispose/re-process any special or hazardous waste, the Construction Manager would obtain a copy of all relevant qualifications, accreditations, permits and licences from the nominated contractor to ensure the contractor and receiving facility are legally permitted to accept the waste type, as required by the POEO Act.

The asbestos waste is to be tracked, and all dockets and receipts retained.

5 PART 2: UNEXPECTED HERITAGE FINDS

5.1 PURPOSE

This Unexpected Heritage Finds Protocol has been developed to meet the requirements of the DA Conditions of Approval (CoA) B46, B47, B48, B49, B50, B51.

The purpose of this Unexpected Heritage Finds Protocol (UHFP) is to detail the actions to be taken when potential heritage items are unexpectedly encountered during excavation or construction activities. This Protocol describes a procedure to ensure that any heritage items are identified and managed consistently with any obligations under the Heritage Act 1977 (NSW), National Parks and Wildlife Act 1974 (NSW), and the Aboriginal and Torres Strait Islander Heritage Protection Act 1984.

This procedure assumes that an appropriate level of Aboriginal and non-Aboriginal heritage assessment has been completed before work commences on site. Despite appropriate and adequate investigation, unexpected heritage items may still be discovered during construction works. When this happens, this procedure must be followed. In the event that heritage items are discovered, this Protocol will be implemented.

This UHFP forms part of the Construction Environmental Management Plan (CEMP) for the Project and was prepared in accordance with:

- The relevant planning approvals and conditions of approval (CoA) for the project;
- Applicable legislation and regulatory requirements;
- The Heritage Act 1977 (NSW);
- National Parks and Wildlife Act 1974 (NSW); and
- Aboriginal and Torres Strait Islander Heritage Protection Act 1984.

5.2 OBJECTIVES

The following unexpected heritage finds management objectives, will be applied to the project:

- Discovery and identification of any unexpected heritage finds will be managed effectively so as not to harm, modify or otherwise impact any Aboriginal or non-Aboriginal heritage finds.

6 LEGAL AND APPROVAL REQUIREMENTS

6.1 APPROVALS

This UHFP has been produced to demonstrate compliance with the relevant DA CoA (Conditions of Approval) as summarised in Table 6.1 below:

Table 6.1: DA Conditions of Approval

ITEM	REQUIREMENT	DOCUMENT REFERENCE
B46	All reasonable steps must be taken to avoid harm, modification, or other impact to Aboriginal objects except as authorised by this approval.	This document – Section 8.2 – Unexpected Heritage Finds Procedure - Aboriginal
B47	The Registered Aboriginal Parties must be kept informed about the SSD. The Registered Aboriginal Parties must continue to be provided with the opportunity to be consulted about the Aboriginal Heritage management requirements of the SSD.	Community Consultation and Complaints Handling Plan (CCCHP)
B48	If any item or object of Aboriginal heritage significance is identified on site: (a) all work in the immediate vicinity of the suspected Aboriginal item or object must cease immediately; (b) a 10 m wide buffer area around the suspected item or object must be cordoned off; and (c) Heritage NSW must be contacted immediately.	This document – Section 8.2 – Unexpected Heritage Finds Procedure - Aboriginal
B49	Work in the immediate vicinity of the Aboriginal item or object may only recommence in accordance with the provisions of Part 6 of the National Parks and Wildlife Act 1974.	This document – Section 8.2 – Unexpected Heritage Finds Procedure - Aboriginal
B50	If any non-Aboriginal archaeological relics are uncovered during any works being carried out for the development: (a) all work in the immediate vicinity of the suspected relic(s) must cease immediately; (b) Heritage NSW must be contacted immediately; and (c) the suspected relic(s) must be evaluated, recorded and, if necessary, excavated by a suitably qualified and experienced expert in accordance with the requirements of Heritage NSW.	This document – Section 8.3 – Unexpected Heritage Finds Procedure – Non-Aboriginal

B51	Work in the immediate vicinity of any suspected non-Aboriginal archaeological relic(s) must not recommence until this has been authorised by Heritage NSW.	This document – Section 8.3 – Unexpected Heritage Finds Procedure – Non-Aboriginal

6.2 LEGISLATION AND REGULATORY REQUIREMENTS

Legislation relevant to the management of unexpected heritage finds is summarised in Table 6.2 below:

Table 6.2: Legislation and regulatory requirements

LEGISLATION	DESCRIPTION	RELEVANCE
Heritage Act 1977 (NSW)	This Act provides for the care, protection and management of heritage items in NSW.	This protocol discusses how A W Edwards will manage works to comply with this Act for any potential heritage finds encountered during construction.
Environmental Planning and Assessment Act 1979 (EP&A Act)	This Act requires heritage to be considered within the environmental impact assessment of projects.	The approval conditions and obligations are incorporated into this UHFP.
National Parks and Wildlife Act 1974 (NSW)	This Act defines what an Aboriginal object is and provides the basis for the care, protection and management of Aboriginal objects and places in NSW.	This protocol outlines how A W Edwards will implement the necessary control measures to minimise or avoid harm in the event of unexpected heritage finds.
Aboriginal and Torres Strait Islander Heritage Protection Act 1984	This Act protects areas or objects of significance to Aboriginal and Torres Strait Islander people when unexpected heritage finds occur.	This protocol covers how A W Edwards will fulfil the notification requirements of this Act in the event of the discovery of any unexpected heritage finds.
Environment Protection and Biodiversity Conservation Act 1999	This Act provides a legal framework for the protection of heritage sites and requires consideration of potential impacts on them in the event of unexpected heritage finds.	This protocol discusses how A W Edwards will manage works to comply with this Act for any potential heritage finds encountered during construction works.
Native Title Act 1993	This Act outlines specific procedures for managing	The management procedures are

unexpected heritage finds, primarily within the context of native title rights and interests.	incorporated into this protocol. Notification obligations to Registered Aboriginal Parties are addressed in the CCCHP.

6.3 GUIDELINES

Guidelines relevant to the management of unexpected heritage finds are listed below:

- Procedure for Aboriginal Cultural Heritage Consultation and Investigation (Roads and Maritime Services 2011);
- Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW 2010) (for reference only);
- Altering Heritage Assets (Heritage Office and DUAP 1996);
- Assessing Heritage Significance (NSW Heritage Office 2001);
- Roads and Maritime Cultural Heritage Guidelines (November 2015);
- Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (November 2015);
- Archaeological Assessment Guidelines (NSW Heritage Office and NSW Department of Urban Affairs and Planning 1996);
- NSW Government Policy on Aboriginal Participation in Construction (released 1 May 2015,updated 1 August 2016);
- Statements of Heritage Impact (Heritage Office and Department of Urban Affairs & Planning1996, revised 2002); and
- Assessing Significance for Historical Archaeological Sites (Heritage Branch, Department of Planning, 2009).

7 HERITAGE CONTEXT AND POTENTIAL IMPACTS

An Aboriginal Cultural Heritage Assessment Report (ACHAR) and Environmental Impact Statement have been prepared to meet the SSDA Secretary Environmental Assessment Requirements (SEARs) summarized in Table 7 below:

Table 7: SSDA SEARs Requirements

ITEM	REQUIREMENT	DOCUMENT REFERENCE
19	Aboriginal Cultural Heritage: Provide an Aboriginal Cultural Heritage Assessment Report prepared in accordance with relevant guidelines, identifying, describing and assessing any impacts on any Aboriginal cultural heritage values on the land.	Aboriginal Cultural Heritage Assessment Report
20	Environmental Heritage: Where there is potential for direct or indirect impacts on the heritage significance of environmental heritage, provide a Statement of Heritage Impact and Archaeological Assessment (if potential impacts to archaeological resources are identified), prepared in accordance with the relevant guidelines, which assesses any impacts and outlines measures to ensure they are minimised and mitigated.	Environmental Impact Statement – Lanceley Place

The Aboriginal Cultural Heritage Assessment Report (ACHAR) documents the process of investigation, Aboriginal community consultation and assessment with regard to both Aboriginal cultural heritage and archaeology. The consultation for the ACHAR commenced on 1 July 2022 requesting the details of Aboriginal people who may hold cultural knowledge relevant to determining the Aboriginal significance of Aboriginal objects and/or places within the local area.

Following the assessment the ACHAR confirmed that the study area as having nil-low potential to retain intact archaeological deposits that may contain Aboriginal artefacts based on the following:

- An extensive search of the Aboriginal Heritage Information Management System (AHIMS) which did not identify any sites listed in the study area
- No previously unrecorded Aboriginal sites or objects were identified within the study area during the site inspection.
- In depth background research and assessment following an archaeological survey
- Historical images support a history of extensive disturbance in the study area as a result of its location within a brick works and quarry which operated since at least the 1930s to the 1960s.
- Since the 1960s buildings have been demolished and replacements built over the study area, and new roads constructed around it, all of which would have further impacted the ground surface.

- The detrimental effects to soil integrity due to continued quarrying and later construction works has augmented already high levels of disturbance of the soil profile such that the study area and its surrounds are classified as "disturbed terrain".
- The predictive model for the study area does not support the likelihood of archaeological sensitivity being present because of extensive disturbance.
- The site officer of the Metropolitan LALC was in agreement that the study area was highly disturbed.
- As there are no archaeological values in the site, there is no scientific significance.
- The completion of the consultation process with RAPs who were supportive of the project.

7.1 MITIGATION MEASURES

Based on the above findings and in accordance with the Aboriginal heritage guidelines stipulated within the SEARS the report ultimately detailed the following recommendations:

- As the study area was found to be disturbed and to have a nil-low potential for Aboriginal objects to be located within it, it is recommended that further assessment is not required.
- As neither Metropolitan LALC site officer nor the RAPs identified any socio/cultural, historic or aesthetic significance associated with the heritage study area, further assessment is not required.
- If changes are made to the proposal that may result in impacts to areas not assessed by this ACHAR further assessment would be required
- Unexpected Aboriginal objects remain protected by the National Parks and Wildlife Act 1974. If any such objects, or potential objects, are uncovered in the course of the activity, all work in the vicinity should cease immediately. A qualified archaeologist should be contacted to assess the find and Heritage NSW and Metropolitan LALC must be notified.
- If human remains, or suspected human remains, are found in the course of the activity, all work in the vicinity should cease, the site should be secured, and the NSW Police and Heritage NSW should be notified.

Ultimately, based on the above assessment and findings, the proposal is considered acceptable subject to enacting the above mitigation measures during the construction and operation phases of the project if unexpected Aboriginal objects are to be found.

7.2 HISTORICAL HERITAGE

The site is not identified as containing any items of heritage significance under the WLEP 2012 or the Heritage Act 1977 as shown in Figure 1.

Figure 1: Heritage Map



The Site is located within the vicinity of several local heritage items but not any State heritage items. The proposed development is not anticipated to have any adverse impacts on the heritage significance of the identified local heritage items.

The ACHAR, whilst specific to Aboriginal Heritage, confirmed that the site has a history of extensive disturbance as a result of its location within a brick works and quarry which operated since at least the 1930s to the 1960s. The detrimental effects to soil integrity due to continued quarrying and later construction works has augmented already high levels of disturbance of the soil profile such that the study
area and its surrounds are classified as "disturbed terrain".

Given the above and the continued use of the Site for industrial and commercial use, it is highly unlikely that the Site has potential to contain any archaeological items or European heritage items. As such, a Statement of Heritage Impact is not required as the proposed development does not pose any direct or indirect impacts on the heritage significance of the area or any listed heritage items. As such the proposal is not expected to have any impacts from a heritage perspective.

8 UNEXPECTED HERITAGE FINDS PROCEDURES

8.1 HERITAGE FIND IDENTIFICATION

An 'unexpected heritage find' can be defined as:

- any unanticipated discovery of an Aboriginal object or archaeological work or relic, for which there is no approval to disturb and/or is not covered under an existing management process or plan;
- a find that has not been identified or assessed in a project assessment or document related to heritage;
- a find that is not referenced in an archaeological research design (ARD) or archaeological method statement (AMS); or
- a find that is not covered by an existing approval under the NPW Act or Heritage Act.

Unexpected heritage finds are categorised as either:

- Aboriginal objects; or
- Historic (non-Aboriginal) heritage items.

An Aboriginal object is defined as any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

Historic (non-Aboriginal) heritage items include archaeological 'relics', defined under the Heritage Act as any deposit, artefact, object or material evidence that: (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and (b) is of State or local heritage significance.

Some historic heritage items are not considered to be 'relics', but are instead referred to as works, buildings, structures or movable objects. Examples of these items that may be encountered include culverts, historic pavements, retaining walls, tramlines, rail tracks, turn tables, timber sleepers, cisterns, fences, sheds, buildings and conduits.

8.2 UNEXPECTED HERITAGE FINDS PROCEDURE – ABORIGINAL

This procedure is to be followed in the event of unexpected heritage finds, archaeological features or unidentified archaeological relics being unearthed or otherwise discovered during construction of the project, to minimise disturbance and avoid any harm to any heritage items, and ensure that they are managed, preserved and reported appropriately.

This protocol outlines the procedure to be followed on discovery of unexpected heritage finds which are suspected to be Aboriginal objects. For the management of Historic (non-Aboriginal) heritage finds, please refer to Section 8.3 of this plan.

The following procedure outlines the necessary actions required of A W Edwards in the event that potential Aboriginal heritage finds are discovered on site during construction. This procedure is applicable to all personnel and subcontractors if suspected heritage finds are encountered at any location of the site. The procedure is as follows:

Table 8.2: Unexpected Heritage Finds Procedure – Aboriginal

STEP	ACTION
1	Potential unidentified heritage find is observed on site. *(Note: this procedure covers Aboriginal unexpected heritage finds, for non-Aboriginal heritage finds please refer to Section 8.3 of this plan).*
2	All construction will cease in the affected area and workers will contact AWE Site Supervisor or Site Manager.
3	Workers will establish a 10m wide buffer zone to prevent unauthorized access and protect the 'find'.
4	AWE Site Manager/Site Supervisor to photograph the find in the area it was located (only if safe to do so), mark on a site plan the location it was found, and complete the Unexpected Finds Register.
5	AWE Site Manager contacts AWE Project Manager and WHS manager. AWE Project Manager to immediately notify client/clients representative. AWE Project Manager or WHS Manager to immediately notify Heritage NSW.
6	AWE Communications personnel to notify and consult with any Registered Aboriginal Parties about the suspected find, as outlined in the Community Consultation and Complaints Handling Plan.
7	A suitably qualified and experienced heritage advisor or consultant will evaluate the find and determine its significance.
8	If the find is determined to be of significance, then it is to be recorded and, if necessary, excavated by a suitably qualified and experienced expert in accordance with the requirements of Heritage NSW.
9	A mitigation strategy is developed with heritage advisor or consultant – this mitigation strategy to consider if 'find' is damaged.
10	If the 'find' warrants notification to a relevant authority, then the relevant authority will be notified and relevant regulatory requirements will be undertaken.
11	Mitigation strategy is implemented (addressing any regulatory requirements).

THIS DOCUMENT IS UNCONTROLLED WHEN PRINTED

12	Work in the immediate vicinity of the Aboriginal item or object is only to recommence in accordance with the provisions of Part 6 of the National Parks and Wildlife Act 1974.

8.3 UNEXPECTED HERITAGE FINDS PROCEDURE – NON-ABORIGINAL

The following procedure outlines the necessary actions required of A W Edwards in the event that potential non-Aboriginal heritage finds are discovered on site during construction. This procedure is applicable to all personnel and subcontractors if suspected heritage finds are encountered at any location of the site.

The procedure is as follows:

Table 8.3: Unexpected Heritage Finds Procedure – Non-Aboriginal

STEP	ACTION
1	Potential unidentified heritage find is observed on site.
2	All construction will cease in the affected area and workers will contact AWE Site Supervisor or Site Manager.
3	Workers will establish a 10m wide buffer zone to prevent unauthorized access and protect the 'find'.
4	AWE Site Manager/Site Supervisor to photograph the find in the area it was located (only if safe to do so), mark on a site plan the location it was found, and complete the Unexpected Finds Register.
5	AWE Site Manager contacts AWE Project Manager and WHS manager. AWE Project Manager to immediately notify client/clients representative. AWE Project Manager or WHS Manager to immediately notify Heritage NSW.
6	A suitably qualified and experienced heritage advisor or consultant will evaluate the find and determine its significance.
7	If the find is determined to be of significance, then it is to be recorded and, if necessary, excavated by a suitably qualified and experienced expert in accordance with the requirements of Heritage NSW.
8	A mitigation strategy is developed with heritage advisor or consultant – this mitigation strategy to consider if 'find' is damaged.
9	If the 'find' warrants notification to a relevant authority, then the relevant authority will be notified and relevant regulatory requirements will be undertaken.
10	Mitigation strategy is implemented (addressing any regulatory requirements).

11	Work in the immediate vicinity of any suspected heritage finds to be recommenced only after authorisation by Heritage NSW or the fulfillment of any regulatory requirements.

9 PART 3: NON-CONTAMINATED AND NON-HERITAGE UNEXPECTED FINDS PROCEDURE

This procedure is to be followed in the event that non-contaminated, non-heritage unexpected finds (such as footings, unidentified pipelines, and miscellaneous inground objects) are discovered during construction works.

This procedure is applicable to all personnel and subcontractors if non-contaminated and non-heritage unexpected finds are encountered at any location of the site. The procedure is as follows:

Table 1.4: Non-Contaminated and Non-Heritage Unexpected Finds Procedure

STEP	ACTION
1	Unexpected find is observed on site and categorised as both non-contaminated and non-heritage. *(Note: For unexpected finds that are suspected to be contaminated, refer to Section 4. For unexpected finds that are suspected to be heritage, refer to Section 8.).*
2	Workers must immediately cease work in the area and contact AWE Site Supervisor or Site Manager.
3	Workers to establish exclusion measures to prevent unauthorised access (eg. barrier mesh with signage).
4	AWE Site Manager/Supervisor to photograph the find in the area it was located (only if safe to do so), mark on a site plan the location it was found, and complete the Unexpected Finds Register.
5	AWE Site Manager contacts AWE Project Manager and WHS Manager. AWE Project Manager to notify Client/Client's Representative.
6	Appropriately qualified personnel to assess the find to determinate its nature and potential significance.
7	AWE Project Manager to contact relevant authority (if needed) and follow their guidance.
8	Resume work only after a decision on how to proceed, and after ensuring the find is adequately addressed.

APPENDIX J: CONTINGENCY PLAN

Key Elements	Trigger/ Response	Condition Green	Condition Amber	Condition Red
Traffic Management Plan				
• Traffic Noise	• Trigger	• Noise levels do not exceed imposed noise constraints, as outlined within the NIA, nor has there been a traffic-related noise complaint.	• Noise levels marginally (<10dBA) in excess of imposed noise constraints or receipt of a single traffic-related noise complaint.	• Noise levels greatly (>10dBA) in excess of imposed noise constraints or consistent traffic-related noise complaints.
	• Response	• No response required.	• Undertake all feasible and reasonable mitigation and management measures to minimise noise impacts.	• Undertake all feasible and reasonable mitigation and management measures to ensure noise levels are below Highly Noise Affected criteria. • As with Condition Amber, if noise levels cannot be kept below applicable limits, then a different construction method or equipment must be utilised. • Response to also be consistent with the NVMP.
• Traffic Guidance Scheme (TGS)	• Trigger	• No observable traffic issues caused by construction traffic.	• Minor inconsistencies with TGS to onsite operations (e.g. covered signs, missing signs and fallen cones).	• Near miss or incident occurring regardless of/as a result of TGS being implemented.
	• Response	• No response required. • Continue monitoring TGS implementation under CTMP.	• Traffic Controller to amend TGS on site and to keep a log of all changes.	• Stop work until an investigation has been undertake into the incident. • Amend the TGS to ensure that the safety of all workers and community members are addressed.
• Queuing	• Trigger	• No queuing identified.	• Queuing identified within site, but not on to public road.	• Queuing identified on the public road.
	• Response	• No response required. • Continue monitoring program.	• Review the delivery schedule prepared by the contractor. If drivers are not following the correct schedule, then they should be provided with additional training and an extra copy of the Drivers' Code of Conduct	• As with Condition Amber, plus: — Review and investigate construction activities — If it is concluded that construction activities were directly responsible for the exceedance, submit an incident report to government agencies — Temporary halting of activities and resuming when conditions have improved — Stop all transportation into and out of the site — Review CTMP and update where necessary, provide additional training.
Air Quality				
• Dust Emissions	• Trigger	• Daily inspections show that there is no visible dust leaving the site.	• Daily inspections show that there is visible dust leaving the site.	• Daily inspections show that there is visible dust leaving the site multiple times during a day OR from multiple locations within the site.
	• Response	• Monitor weather conditions and stop works if dust generation is excessive. • Continue implementation measures of the CEMP	• During periods of unsuitable weather (high winds and high temperatures), avoid or minimise dust generating activities where possible, or increase frequency of dust suppression activities. • Remove, suppress, stabilise or cover materials that have a potential to produce dust as soon as possible, unless being used on site.	• Where possible, locate high dust generating activities away from sensitive receivers. • Record any exceptional events that cause dust and/or air emissions on or off site and note action taken to resolve situation.
• Dust Complaints	• Trigger	• No complaints received during construction.	• An air-quality related complaint is received from a nearby resident.	• Further complaints are received after the additional mitigation measures have been implemented.
	• Response	• Monitor weather conditions and stop works if dust generation is excessive. • Continue implementation measures of the CEMP	• During periods of unsuitable weather (high winds and high temperatures), avoid or minimise dust generating activities where possible, or increase frequency of dust suppression activities. • Remove, suppress, stabilise or cover materials that have a potential to produce dust as soon as possible, unless being used on site.	• Where possible, locate high dust generating activities away from sensitive receivers. • Record any exceptional events that cause dust and/or air emissions on or off site and note action taken to resolve situation.
Noise and Vibration				

Key Elements	Trigger/ Response	Condition Green	Condition Amber	Condition Red
• Noise Impacts at Sensitive Receiver	• Trigger	• Noise levels do not exceed noise management levels.	• Noise levels exceed applicable noise management levels.	• Noise levels exceed Highly Noise Affected threshold at a sensitive receiver. • Noise complaints received.
	• Response	• Continue implementing existing measures in accordance with the NVMP.	• Implement every practical and logical mitigation and management strategy to keep noise levels below the Highly Noise Affected threshold.	• Implement every practical and logical mitigation and management strategy to reduced noise levels below the Highly Noise Affected threshold. • If noise levels cannot be kept below the imposed restrictions, an alternative construction method or equipment will be used.
• Vibration Impacts at Sensitive Receivers	• Trigger	• Vibration-intensive tasks carried out beyond the equipment's recommended working distance.	• Vibration intensive works undertaken within minimum working distance for the specific equipment in use.	• Vibration levels exceed applicable vibration limits.
	• Response	• Continue to implement existing measures in accordance with NVMP.	• Undertake vibration monitoring for the duration of the works to confirm vibration levels.	• Stop work. Undertake all feasible and reasonable mitigation and management measures to ensure vibration levels are below applicable limits. • If vibration levels cannot be kept below applicable limits then a different construction method or equipment will be utilised.
Unexpected Finds				
• Unexpected Contamination Find	• Trigger	• No contamination uncovered during earthworks.	• Areas of possible contamination uncovered during earthworks.	• Areas of potentially hazardous substance identified during earthworks.
	• Response	• Continue to implement existing measures in accordance with CEMP.	• Implement Contamination Unexpected Finds Protocol	• Implement Contamination Unexpected Finds Protocol
• Unexpected Heritage Find	• Trigger	• No Aboriginal or historical artefacts found	• Unanticipated archaeological items uncovered	• Potential human remains discovered
	• Response	• No action.	• Implement mitigation measures H1-H6 in the CEMP as relevant.	• Implement mitigation measures H1-H6 (including H4) in the CEMP as relevant.
Waste Management				
• Waste	• Trigger	• Inspections identified no waste from demolition and construction generated outside of dedicated bins and stockpiles.	• Inspections identified minimal waste from demolition and construction generated outside of dedicated bins and stockpiles.	• Inspections identified large quantities of waste from demolition and construction generated outside of dedicated bins and stockpiles. • Complaints received regarding waste management.
	• Response	• Continue to implement existing measures in accordance with CDWMP	• Clean up the waste immediately and dispose according to CDWMP requirements. • Toolbox talk with all workers to discuss waste management requirements.	• Clean up the waste immediately and dispose according to CDWMP requirements. • Toolbox talk with all workers to discuss waste management requirements.
Erosion and Sediment Control				
• Erosion	• Trigger	• No evidence of erosion	• Minor gully or tunnel erosions or rilling. Evidence of sediment leaving the site	• Significant gully or tunnel erosions present or rolling. Evidence of sediment leaving site
	• Response	• Continue to implement existing measures in accordance with ESCP.	• Site manager will inspect the site every rainfall event and at least weekly. • Construct additional erosion and sediment control works to ensure desired protection	• Environmental consultant to inspect the site. • Review of erosion and sediment structures and ESCP. • Remediate as soon as practical
Community				

Key Elements	Trigger/ Response	Condition Green	Condition Amber	Condition Red
• Submission	• Trigger	• General feedback/comment (no complaint or query).	• Enquiry made by formal or informal channels.	• Complaint made by formal or informal channels.
	• Response	• Implement CCCHS	• Implement CCCHS	• Implement CCCHS

APPENDIX K: ENVIRONMENTAL INCIDENT PROCEDURE

Environmental Incident Response Flow Chart

If there is an incident that causes concern for the health and safety of workers, the public and/or the environment

ENVIRONMENTAL INCIDENT

In the affected area:

STOP WORK !!!

Assess the situation:

- Identify the severity
- (If necessary) evacuate

Do not enter an area that could be unsafe for you

For **Class 1** incident contact

- Site Manager
- HSR
- Project Manager
- HSE Manager
- OEH/EPA

And:

- Emergency Services / 000
- Act on their instructions

For **Class 2 or 3** incident contact:

- Head Office
- Site Manager
- HSR
- Project Manager

Landslip

- Isolate (turn off) water mains that could discharge into the area;
- Obtain specialist advice BEFORE attempting to rescue people or equipment - zone of the landslip is likely to be unstable;
- Once the source is contained or the discharge has stopped, determine whether clean-up is likely to be required;
- The Site Manager in consultation with the Project Manager, determines the most suitable process for clean-up and disposal of materials.

Disturbance of Heritage items

- The method selected must be carefully considered in light of the scale & nature of the problem;
- The Site Manager, in consultation with the Project Manager, determines the most suitable corrective actions.
- Notify OEH if a heritage item is discovered the Project Manager to be notified firstly who will then notify OEH etc. appropriately

Release of Waste

- Cease activity causing the release of wastes off-site;
- The method selected must be carefully considered in light of the scale and type of problem;
- The Site Manager in consultation with the Project Manager, determines the most suitable process for cleaning up.

Odours and dust

- Apply odour / dust suppression agents (including water mists, soil, chemicals);
- Consider carefully which option to select in light of the scale and type of problem;
- The Site Manager in consultation with the Project Manager determines the most suitable corrective actions.

Spills / escape of polluted water

- Contain the spill - ensure that no further escape occurs, especially off-site;
- Determine whether clean-up is likely to be required - recover spilt material;
- The Site Manager, in consultation with the Project Manager, determines the most suitable process for clean-up and disposal of contaminated materials.

Incident Class

When assessing the risk involved with each incident, the following Classes shall be used:

Class 1

- People – Causes or has the potential to cause damage which permanently alters the future of the individual (fatality, quadriplegia, amputee, disabled or psychological disturbance).
- Environment – Causes or has the potential to cause permanent environmental damage and results in remediation costs of > $50,000.
- Plant / Equipment / Property – Causes or has the potential to cause damage to plant / equipment and / or property > $50,000.

Class 2

- People – Causes or has the potential to cause an injury or disease resulting in temporary disability or time lost from work of one or more complete days or shifts.
- Environment – Causes or has the potential to cause damage to the environment which can be rectified and results in remediation costs of > $10,000 and < $50,000.
- Plant / Equipment / Property – Causes or has the potential to cause damage to plant / equipment and / or property > $10,000 and < $50,000.

Class 3

- People – Causes or has the potential to cause an injury which inconveniences the individual such as minor cuts or sprains, but allows the person to continue to carry out normal duties.
- Environment – Causes or has the potential to cause damage to the environment which can be easily rectified and results in remediation costs of < $10,000.
- Plant / Equipment / Property – Causes or has the potential to cause damage to plant / equipment and / or property < $10,000.

APPENDIX L: TEST AND DISCHARGE PROCESS

