CONSTRUCTION MANAGEMENT PLAN

TOLL IPEC FREIGHT TRANSPORT FACILITY

Warehouse and Distribution Facility, Bungarribee Industrial Estate

Revision: A

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CONSTRUCTION MANAGEMENT PLAN CONTROL

CMP Review and Approval

Position	Name	Sign	Date
Review			
Site Safety Officer	Arran Barker		
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Project Manager	Ben Kilby		
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Approval			
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CMP Revisions

Revision	Date	Summary Description
0	26/11/12	DA Issue

CMP Distribution

Electronic Copy	Name	Organisation
Electronic Master		Hansen Yuncken
1		
2		
Paper Copy	**Name**	**Organisation**
Signed Paper Master	Project Manager	Hansen Yuncken
1		

DEFINITIONS & ABBREVIATIONS

Definitions

The following definitions have been used in this Construction Management Plan. Further definitions are provided in referenced procedures and plans.

Client	Goodman Property Services (Aust) Pty Limited
Coolth	Used to describe cooling, the opposite of warmth.
Council	Blacktown City Council
Cradle to grave	Refers to the concept that to achieve ecological sustainability, materials and products must be assessed for their impact on the environment throughout their full life cycle, which should include their recycling or reuse.
Embodied Energy	Accounts for all non-renewable energy used by a material or product from cradle to grave.
Greenhouse gases	Refers to all the industrial by-products that contribute to the gradual warming of the earth by trapping heat in the atmosphere.
Green Waste	Includes: Manageable bundles of vines, creepers and weeds Leaves, lawn clippings, flowers, branches, pruning or trunks not greater than 20cm in diameter; Pruning tied bundles of no more than one meter in length and thirty centimeters in diameter.
Hard Waste	Includes white goods, broken furniture, electrical goods, hot water services, televisions, and mattresses up to a maximum of 1m^3 per household, but does not include car parts or building materials.
Hazardous Waste	Includes all kitchen, bathroom, workshop, garden, commercial and industrial chemicals such as pharmaceuticals, paints, poisons and motor fluids.
Liquid Waste	Includes grey water, sewerage, oil used for cooking purposes and hazardous waste that is also in a liquid form.
Recycled	To put or pass through a cycle again, as for further treatment. To extract and reuse (useful substances found in waste). Possible to use again.
Superintendent	TBA

Abbreviations

The following abbreviations have been used in this Construction Management Plan. Further abbreviations are provided in referenced procedures and plans.

ABGR	Australian Building Greenhouse Rating
CMP	Construction Management Plan(this document)
$C0_2$	Carbon Dioxide - the primary pollutant from the burning of fuel and is a major contributor to the greenhouse effect.
EMP	Environmental Management Plan
EMS	Environmental Management System
EPA	State Environment Protection Authority
ESD	Ecologically Sustainable Development. ESD can be defined as a design process that meets the needs of the present without compromising the ability of the future generations to meet their own needs. It takes into account the social, natural and economic environment.
EWMS	Environmental Work Method Statement
GBCA	Green Building Council of Australia
HSE	Health, Safety & Environment
HY	Hansen Yuncken Pty Ltd
ITP	Inspection & Test Plan
VOC	Volatile Organic Compounds, which give off toxic emissions.
WMS	Work Method Statement

INTRODUCTION

Overview

The intent of this Construction Management Plan is to demonstrate an understanding of the whole project with regards to the construction stages, traffic management, noise and general environmental issues.

This plan details the broad principles, methodologies and systems to be utilised in the delivery of the Toll IPEC Freight Transport Facility Project.

- Hansen Yuncken are aware of their statutory obligations and the need to mitigate impact on the local environment and community in the construction and commissioning of the development.

This plan sets out the following information for Council:-

- Proposed development programme
- Reviews the proposed site management arrangements, construction traffic management, , storage of machinery, areas for the delivery and stockpiling of materials, truck access, parking for employees and the like.

Outline of the Project

Toll IPEC Freight Transport Facility in Sydney is a warehouse totaling 55,160m² located on approximately 180,000m2 of land, it will be used to consolidate multiple sites in Sydney.

To support the IPEC administration there will be a need for a main office of 3,380m², this will be the entrance to the main warehouse and can be as a mezzanine or standalone building. In addition a 840m2 operations office will be constructed to accommodate staff operating and maintaining the automated conveyor system. The proposed development will comprise of the construction of a Fleet Workshop, Truck wash, Drivers Rest Area, 2 x Gate Houses, Customer Pick-up building and Staff/Visitor Entry, totaling an area of 2,255m² across various locations within the site.

The site will have an extensive conveyer system throughout requiring 2500amps of power and require 6 months of installation during the construction phase of the facility.

The site will have separate gatehouse entries for pickup and delivery vehicle (PUD) vehicles and a 2nd entry and exit point for trucks through a two storey main gatehouse of 100m² with a Ground Floor + Basement. A separate entry and exit to staff and customer car park for 740 vehicles is required. Both gate houses will have extensive awnings

CONSTRUCTION REQUIREMENTS

Design Development

The Toll IPEC Freight Transport Facility project design will be completed through External consultants and Design and Construct Subcontractors, taking into consideration methods of construction to increase efficiency, create minimal environmental impact, reduction of construction time and to promote safety on the project.

The design of this store will be based on the requirements and specification as per the TOLL IPEC Design Brief and to the satisfaction of the DA requirements of the council.

These designs will not divert from the design intent indicated on the documents submitted for development application approval.

Site Safety

Based on the requirements and specification as per the Toll IPEC Freight Transport Facility Design Brief and to the satisfaction of the DA requirements of the council, the Head Contractor will produce work method statements, hazard and risk assessments and job safety analyses, as per OH&S regulations and Workcover requirements.

The work method statements will outline the systems and controls used to undertake the works, together with full consideration for the associated safety, quality and environmental requirements. These documents will be completed with a thorough hazard and risk assessment. Both head Contractor and Subcontractors Site safety plans and Safe Work Method statements will be available on site as required.

Non-Design Related Considerations

The method of construction is predominantly governed by the constructability of the designs however there are significant external factors, which affect the method of works, such as:

- Vehicle traffic management.
- Pedestrian traffic management.
- Requirements of the Deed and DA conditions of consent.
- With regard to the above, the following constraints will be included within this Construction Management plan and implemented on site:
- Traffic flow to be maintained on streets around the site.
- Perimeter gates will remain close during construction.

CONSTRUCTION METHODOLOGY

Introduction

This section of the Construction Management Plan provides an outline construction methodology for the project. The contractor may vary the method and sequence of works when the document is updated. Any changes proposed by the contractor are to continue to address the fundamental requirements and constraints of this document and, where possible, enhance the methods or solutions outlined.

Excavation

The excavation works scope includes the general bulk earthworks which will be carried out upon completion of the early Civil Infrastructure works. Based on a benched level site handed over to HY the excavation works will involve a cut to fill methodology to achieve the designed earthworks level ready for the construction of the main warehouse slab. Following will be the detailed excavation works for the pad footings, strip footings for installation of the building structural elements.

Structures Trades & Stormwater Works

The structure for the main warehouse will comprise of concrete footings, concrete slab on ground, structural steel portal frame, incorporation precast dock retaining walls and dado panel façade. The sequencing of works for the main warehouse will involve the construction of the footings, followed by the erection of structural steel columns and primary steel room members. The precast dock panels will be installed to the perimeter of the main warehouse followed by the construction of the concrete slab on ground. Upon completion of the concrete slab on ground the perimeter precast dado panels will be erected.

Within the main warehouse in a mezzanine structure which will serve the purpose of supporting the automated conveyor system. The mezzanine has an area of 8,160m2 and will be constructed in structural steel with a suspended concrete slab placed on permanent metal formwork. The construction of the mezzanine will be sequenced in conjunction with the construction of the main warehouse structure.

The structure for the Main Office and Operations office will be constructed in a conventional concrete framed structure. Construction works for the offices will commence upon the completion of the erection of the structural steel columns.

Civil Stormwater works will be carried out concurrently during the erection of the structural steel members and works is expected to span over a period of three months.

Remaining Works

External building works such installation of external doors, roller shutters are carried out making the building structure watertight. The internal building works comprises of internal block work, metalwork, plasterboard, doors, glazing, cement rendering, vinyl floors and painting.

Services works will fit-off from the Mechanical, Hydraulic, Electrical and Fire Services Rough completed during the fit-out stage.

The finishing trade comprises of carpentry and joinery works, vinyl flooring, tiling, carpet works, floor sealing and epoxy works and painting works.

The crossovers, turning circle, external carpark works, landscape works will be completed prior to Practical Completion of the project.

Certifications will then be sought for practical completion and submission for the Occupation Certificate. This will include the Signed off Fire Engineered Solution by the NSW Fire Brigade.

TRAFFIC MANAGEMENT PLAN

Introduction

Traffix (Traffic Management Consultants) have been engaged to prepare a Traffic Management Plan for this project. The traffic management plan will primarily deal with the issues of construction traffic and its effect on the surrounding environment. The proposed traffic management plan prepared by Traffix will be submitted in a revised Construction Management Plan prepared for the Construction Certificate to satisfy any potential DA Conditions and implemented prior to commencement of construction. (Refer to Appendix C). Traffic management plan to be finalized.

Ingress & Egress of Vehicles to Site

Construction traffic will enter and exit the site as follows (Subject to Blacktown City Council Approval):

- The main entrance to the site will be situated in either William Dean Street (once completed) which will serve as the main vehicle access way, this access way may also be used for materials handling purposes.

- The existing driveway access on Huntingwood Drive is to be maintained for staff, vehicular and materials handling access during the demolition stage. It will be used for early construction deliveries until William Dean Street is completed.

Relevant statutory signage shall be erected defining the vehicle entry and exit points at all stages of construction. Signage will be supplemented by traffic controllers for major deliveries.

Loading & Unloading of Materials

Deliveries and construction activity will generally occur within the site confines which will be closed to the public. The site will be bound by temporary fencing;

- All loading and unloading operations are to comply with statutory requirements.
- No materials will be stored on public footpaths or roads.
- Any major closure of lane ways shall be in accordance with council requirements.

Truck and Vehicle Routes:

The routes for all trucks and vehicles proceeding to and exiting the project will be identified in the traffic management plan to be prepared by Traffix.

ENVIRONMENTAL CONTROL PLANS

Environmental Responsibilities & Contact List

Position	Name	Contact Number	
Review			
Project Manager	Ben Kilby	0434 187 620	
Project Engineer	Simon Quan	0427 803 562	
Site Manager	Phil Borg	0411 360 806	

Sedimentation Control Plan

Objective of the Sedimentation Control Plan

Due to the volume of demolition and excavation involved with the Toll IPEC Freight Transport Facility, the objective of this control plan is to:

- Manage the volume of sedimentation created as a result of construction-associated works.
- Control and avoid sedimentation entering the local stormwater system.

Satisfying these objectives will contribute to achieving ESD vision for HY, Trade Contractor's, and the Project Team.

Method of Assessment

Sedimentation control will be assessed by:

- Visual inspection of the sedimentation control measures utilised and the volume of silt trapped.
- Regular audits conducted by HY of the sedimentation control procedures and practices utilised (frequency to be agreed prior to commencing works)
- Review of the sedimentation control section of the Trade Contractor's EWMS and review of regular sedimentation control reports

The responsible party of a sedimentation control measure will be the Trade Contractor or site personnel who implemented the control.

All works are to be generally carried out in accordance with;

a) Local authority requirements
b) EPA – Pollution control manual for urban storm water
c) Department of conservation and land management manual – "Urban Erosion and Sediment Control".

Trade Contractor Required Output
Trade Contractor's nominated in Table 1 (Part 6) as "Responsible" will need to:

- Provide a EWMS prior to commencing work onsite that highlights the Trade Contractor's knowledge of the Sedimentation Control Plan and measures that will be used onsite to control sedimentation.
- During progress of the works, provide on a regular basis (to be agreed with HY prior to commencing works) a report that includes:
  - Photos of the sedimentation control measures being utilised.
  - Description of the works creating sedimentation.
  - Future works that will cause sedimentation and control measures that will be incorporated.

Trade Contractor's nominated in Table 1 (Part 6) as "Acknowledge" will be required to recognise the existence of the Sedimentation Control Plan and its objectives within their EWMS. However, these Trade Contractor's will not be required to define within their EWMS items such as control measures or provide additional reports on sedimentation control during construction.

Trade Contractor's are to works in accordance with Soil and Sediment Control Plan (refer Appendix 2)

Inspections and Audits
To ensure sedimentation is controlled in accordance with this Control Plan:

- HY will conduct random site inspections to ensure sedimentation control measures utilised by the Trade Contractor's are appropriate and functioning as required.
- HY will conduct audits of the sedimentation control procedures and practices put in place by the Trade Contractor to ensure they conform with both the HY Toll IPEC Freight Transport Facility EMP and the Trade Contractor's EWMS. Frequency of audits to be agreed with the Trade Contractor prior to commencement of work.

HY Monitoring of the Sedimentation Control Plan

The appointed Environmental Manager for the Hansen Yuncken Goodman Fielder project will be responsible for ensuring compliance to the developed procedures and monitoring of the effectiveness of sediment and soil erosion prevention measures installed on-site. The monitoring and control of storm water (uncontrolled water) across the site will also be the responsibility of the appointed environmental Manager.

To ensure that all site personnel adequately control the creation and flow of sediment, HY will monitor the work of Trade Contractor's and other site staff by:

- Visually viewing site works and utilising digital photos to record and witness sedimentation control measures during random site inspections
- Checking and recording silt levels following significant rain events.
- Undertaking audits on a regular basis to review sedimentation control procedures and practices

- Reporting on a monthly basis to the Project Control Group. Such reports to include:
  - Relevant Trade Contractor reports for the period
  - Other Important information / events that generated dust and how it was controlled (if not covered by the Trade Contractor reports).
  - Overall assessment of dust control practices and procedures for the month.

Actions to be undertaken by the site team to Reduce the Effects of Sedimentation

To reduce the environmental effects of erosion and sedimentation the following measures are to be utilised by Trade Contractor's and site staff:

- Sedimentation control is to be carried out using a combination of silt fences, hay bales and sand or gravel bags.
- Silt fences are to be placed around the perimeter of the work area.
- Sand, hay bales or gravel bags require being used to protect inlets and direct flow.
- Sediment collected on silt fences or around sandbags will be disposed within site landscaping or in another suitable locations as directed by the HY management.
- Vehicles must enter and leave the site on the access driveway to limit the tracking of mud and/or soil on to public roads
- Muddy or dirty vehicles must go through the site washout bay before leaving site to limit the tracking of mud and/or soil on to public roads.
- Preserve as much grassed or vegetated area as possible to filter sedimentation from stormwater runoff
- All soil, sand and cement stockpiles should be placed wholly on the construction site and behind a sediment barrier. These stockpiles should also be covered at the end of each day if rain or excessive wind is likely.
- Activities that generate surplus wastewater with sediment (such as brick cutting) must only be carried out on site. This wastewater should be recycled or discharged into a contained area for drying by soakage.
- Should dirt and/or mud traffic onto public roads and footpaths, site staff must sweep rather than hose off the sediment.
- Undertake dewatering of trenches, excavations (etc.) when necessary, ensuring that the water is taken away from site and disposed at a location approved by the EPA and/or relevant authorities. This water cannot be deposited into the local stormwater system.

Trade Contractor's are encouraged to utilise sedimentation control measures that they believe will meet the objectives of the Sedimentation Control Plan and the HY TOLL IPEC – CMP & EMP.

Sequencing of Works

1. Prior to commencement of excavation the following soil management devices must be installed
   a. Construct site fences below the site and across all potential runoff areas.
   b. Construct temporary construction entry / exit and divert all runoff to suitable control systems
   c. Construct sedimentation traps / basins including outlet control and overflow

d. Construct turf lined swales where required
e. Provide sandbag sediment traps around pits where required.

Sequencing of Works

The Project Manager is responsible to ensure that the contractor implements the works in accordance with the contractor including the drawings and specifications. To ensure that the contractor is aware of his obligations, the Project manager will hold a Contractor Start Up Meeting immediately following appointment of the Contractor.

In addition, Councils Building Inspector will regularly inspect the works. On completion of construction, the Civil Engineer will certify that the civil works have been constructed in accordance with the plans and specifications.

The following check list will be made available to the Contractor for checking prior to the commencement of the works on site.

Objectives of the Storm Water and Sediment Control Matrix is to;

- Prevent contamination of, damage to, storm water drains and prevent contamination to the existing Creek to the south.

- Ensure that sediment from the building on site is retained onsite during construction works.

Required Measures

	Stormwater and Sediment Requirements	Yes	No	N/A	Outline details	Shown on plan?
	Stormwater Measures					
1	How is stormwater to be prevented from entering adjoining properties?				Provide details:	Yes / No
2	How is upslope water to be diverted to prevent it travelling through the site?				Provide details:	Yes / No
3	Are down pipes to be connected as soon as any roof is installed onsite?					Yes / No
4	Specify how stormwater will be filtered before being pumped to a legal point of discharge?				Provide details:	Yes / No
	Excavation Work					
5	Has the location and extent of excavations been provided in the Stormwater Plan of the site at Appendix A?				Provide details:	Yes / No
6	Will the site area need to be cleared?				Provide details:	Yes / No
7	Has excavation and topsoil stripping been avoided until the site is ready for construction?				Provide details:	Yes / No
8	Has consent been obtained for excavations that occur within three metres of a road?				Provide details:	Yes / No
9	Has consent been obtained for excavations that occur within a 45 degree angle of				Provide details:	Yes / No

	Site Entries					
10	Has the location of site entries been specified on the Plan?				Provide drawing and give details:	Yes / No
11	Are the site entry and traffic routes to be stabilised?				Provide details:	Yes / No
12	Are rumble grids or similar to be provided to collect mud from vehicles leaving the site?				Provide drawing and give details:	Yes / No
13	Is a cleaning plan specified for rumble grids?				Provide details:	Yes / No
14	Is a grated drain provided at the entrance of the site to prevent uncontrolled run-off?				Provide details:	Yes / No
	Drainage and Sediment Control					
15	Will the site be properly drained to prevent site water retention that may cause structural damage to excavations or retaining walls?				Provide details:	Yes / No
16	Will provisions be made to pump out any water collected at bottom of excavation sites? Will water with greater than 50mg/L of total suspended solids be pumped to the sewer with the necessary approvals?				Provide details:	Yes / No
17	Have natural falls of the site and sediment controls been identified in the Stormwater Plan?				Provide details:	Yes / No
18	Is there a maintenance program to replace sediment barriers when sediment controls become ineffective?				Provide details:	Yes / No
19	Will drains on and near the site have sediment traps or filters around them? Will these be checked daily?				Provide details:	Yes / No
20	How will any loose materials such as soil, sand and gravel be managed to prevent displacement?				Provide details:	Yes / No

21	Are vehicle wash down areas provided near site entries? Do they capture and treat water prior to discharge?				Provide details:	Yes / No
22	Do wash down areas use more than 3000 litres per day of recycled water?				Provide details:	Yes / No
23	Are facilities in place to enable paint brushes, rollers and spray equipment to be cleaned without discharge of by-product into stormwater systems?				Provide details:	Yes / No
	Vegetation					
24	Is vegetation retained where possible to absorb water flows and minimise dust?				Provide details:	Yes / No
25	Will vegetation be reinstated as soon as possible on completion of works?				Provide details:	Yes / No

Dust Control Plan

Objective of the Dust Control Plan
The objective of the Dust Control Plan is to:

- Manage and minimise the amount of dust generated as a result of construction-associated works.
- Reduce the nuisance that dust may cause to the community and site personnel so as to ensure all live/work in a contaminate free environment.
- Ensure dust is controlled in accordance with the EPA Guidelines so as to minimise its impact on air quality.

Satisfying these objectives will contribute to achieving the overall project objective and the ESD vision for HY, Trade Contractor's, and the Project Team.

Method of Assessment
Dust control will be assessed by:

- Visual inspection of controls will be conducted by the Site Mnager to ensure that a reduction of the amount of dust generated onsite by construction and associated work.
- Regular audits conducted by HY of the dust control procedures and practices utilised (frequency to be agreed prior to commencing works).
- Review of the dust control section of the Trade Contractor's EWMS and review of regular dust control reports.

Please note that the responsible party of a dust control measure will be the Trade Contractor or site personnel who implemented the control.

Trade Contractor Required Output
Trade Contractor's nominated in Table 1 (Part 6) as "Responsible" will need to:

- Provide an EWMS prior to commencing work onsite that highlights the Trade Contractor's knowledge of the Dust Control Plan and measures that will be used onsite to control dust.
- During progress of the works, provide on a regular basis (to be agreed with HY prior to commencing works) a report that includes:
  - Photos of the dust control measures being utilised.
  - Description of the works creating dust.
  - Future works that will cause dust and control measures that will be incorporated.

Trade Contractor's nominated in Table 1 (Part 6) as "Acknowledge" will be required to recognise the existence of the Dust Control Plan and its objectives within their EWMS. However, these Trade Contractor's will not be required to define within their EWMS items such as control measures or provide additional reports on dust control during construction.

Inspections and Audits
To ensure dust is controlled in accordance with this Control Plan:

- HY will conduct random site inspections to ensure dust control measures utilised by the Trade Contractor's are appropriate and functioning as required.
- HY will conduct audits of the dust control procedures and practices put in place by the Trade Contractor to ensure they conform with both this CMP and the Trade Contractor's EWMS. Frequency of audits to be agreed with the Trade Contractor prior to commencement of work.

HY Monitoring of the Dust Control Plan
To ensure that all site personnel adequately control the creation and spread of dust, HY will monitor the work of Trade Contractor's and other site staff by:

- Visually viewing site works and utilising digital photos to record and witness dust control procedures during random site inspections
- Undertaking audits on a regular basis to review dust control procedures and practices
- Reporting on a monthly basis to the Project Control Group. Such reports to include:
  - Relevant Trade Contractor reports for the period
  - Other Important information / events that generated dust and how it was controlled (if not covered by the Trade Contractor reports).
  - Overall assessment of dust control practices and procedures for the month.

Actions to Reduce Dust

During dry conditions, on-site construction activities have the potential to generate dust. The following activities are those identified as a specific potential source of dust generation as a result of the above works:

- Earthmoving activities including clearing of topsoil;
- Movement of vehicles and construction machinery, both within and off the
- Stockpiling of materials; and
- Build-up of material around erosion and sedimentation controls.

To reduce the environmental nuisance of dust generation, Trade Contractor's and site staff should implement the following measures:

- In the event of dust levels on site becoming a nuisance or unacceptable, introduce controls such as ground watering.
- Cover trucks transporting material from the site immediately after loading to prevent wind blown dust
- Where or whenever necessary, erect appropriate barriers to control dust generated as a result of construction-associated works.

Trade Contractor's are encouraged to utilise dust control measures that they believe will meet the objectives of the Dust Control Plan and this CMP.

Module 3: Guidelines for Managing Air Pollution (hereafter, "Module 3") of the NSW Department of Environment and Climate Change's (DECC) 2007 Local Government Air Quality Toolkit details air pollution control techniques for a range of industries and processes. Module 3 identifies a range of general dust suppression techniques to alleviate the impact of an operation's emissions on the surrounding environment.

Module 3 (NSW DECC, 2007) identifies the use of water to raise the moisture content of surfaces as a key method for the suppression of dust generation. Wetting often results in a degree of agglomeration and weak cementation of loose particles in an unconsolidated surface, with or without the addition of chemicals to promote such bonding. Further, Module 3 (NSW DECC, 2007) note that spraying increases moisture content and bonding, and, even on drying, wind entrainment will be minimised by the weak cementation or 'crusting' which results.

Water can be applied through the use of mobile water spray vehicles, fixed spray systems and hand-held watering devices, depending on ease of access to source.

Noise Control Plan

Objective of the Noise Control Plan

Given the location of the site, construction noise impacts from the site should not adversely affect adjoining sites.

The objective of the Noise Control Plan is to:

- Manage and minimise the level of noise generated as a result of construction-associated works.
- Minimise noise disturbance to adjacent property owners and the public in accordance with the EPA Guidelines.

As outlined within the Acoustic Investigation produced by ERM Australia, the Construction noise is explicitly excluded from the EPA's INP, and the assessment criteria for construction noise set out in the Environmental Noise Control Manual ENCM (EPA, 1994) will be used.

- for construction sound power levels periods of between four and 12 weeks, the $L_{10,15min}$ Sound Power Levels should range between 103 dB(A) & 115 dB(A) in accordance with Table 4.4 of the ERM (Noise Assessment Report)

- for construction periods of six (6) months and under, the $L_{10,15min}$ noise level due to the construction site should not exceed 45dB(A) in accordance with Table 4.4 of the ERM (Noise Assessment Report)

Construction noise will be controlled by standard noise mitigation measures, as required;

- Hansen Yuncken will be implementing the ERM (Noise Assessment Report) Section 5.0- Recommendations & Mitigation.

- The contractor will, where reasonable and feasible, apply best practice noise mitigation measures including:
  - Maximising the offset distance between noisy plant items and nearby noise sensitive areas.
  - Avoiding the coincidence of noisy plant working simultaneously close together.
  - Orienting equipment away from noise sensitive areas.
  - Carrying out loading and unloading away from noise sensitive areas.
  - The contractor will take reasonable steps to control noise from all plant and equipment.

The proposed construction duration is estimated for 6months, the hours will be 7am to 6pm Monday to Friday and 7am to 1pm Saturdays or in accordance with local authority requirements.

Method of Assessment
Noise control will be assessed by:

- Visual inspection of controls to reduce the amount of noise generated by construction and associated work.
- Regular audits conducted by HY of the dust control procedures and practices utilised (frequency to be agreed prior to commencing works).
- Review of the noise control section of the Trade Contractor's EWMS and review of regular noise control reports.

Please note that the responsible party of a noise control measure will be the Trade Contractor or site personnel who implemented the control.

Trade Contractor Required Output
Trade Contractor's nominated in Table 1 (Part 6) as "Responsible" will need to:

- Provide an EWMS prior to commencing work onsite that highlights the Trade Contractor's knowledge of the Noise Control Plan and measures that will be used onsite to control noise levels.
- During progress of the works, provide on a regular basis (to be agreed with HY prior to commencing works) a report that includes:
  - Photos of the noise control measures being utilised.
  - Description of the works creating excessive noise.
  - Future works that will cause excessive noise and control measures that will be incorporated.

Trade Contractor's nominated in Table 1 (Part 6) as "Acknowledge" will be required to recognise the existence of the Noise Control Plan and its objectives within their EWMS. However, these Trade Contractor's will not be required to define within their EWMS items such as control measures or provide additional reports on noise control during construction.

Inspections and Audits
To ensure noise is controlled in accordance with this Control Plan:

- HY will conduct random site inspections to ensure noise control measures utilised by the Trade Contractor's are appropriate and functioning as required.
- HY will conduct audits of the noise control procedures and practices put in place by the Trade Contractor to ensure they conform with both this CMP and the Trade Contractor's EWMS. Frequency of audits to be agreed with the Trade Contractor prior to commencement of work.

HY Monitoring of the Noise Control Plan
To ensure that all site personnel adequately control noise creation and levels, HY will monitor the work of Trade Contractor's and other site staff by:

- Visually viewing site works and utilising digital photos to record and witness noise control procedures during random site inspections
- Undertaking audits on a regular basis to review noise control procedures and practices
- Daily site inspections will be performed by the onsite SM / EM to ensure adverse noise impacts are minimised.
- Reporting on a monthly basis to the Project Control Group. Such reports to include:
  - Relevant Trade Contractor reports for the period
  - Other important information / events that generated excessive noise and how levels were controlled (if not covered by the Trade Contractor reports).
  - Overall assessment of noise control practices and procedures for the month.
  - summarising noise level observations will be prepared by the Environmental Manager for submission to the Site Manager and Project Controller.

Actions Available to Reduce the Environmental Effect of Noise

To reduce the environmental effects of noise the following measures should be undertaken by Trade Contractor's and site staff:

- Where practicable excessive noise-causing work (beyond recommended dB levels) should be scheduled in less sensitive hours of the day or week, with due regard to the commercial and residential properties adjoining.
- Utilise equipment and work procedures that will contribute to reducing the level of noise generated by construction works.
- To limit the additional noise impact of industrial waste collection vehicles, waste should be collected within the approved working hours for the project.

Please note, this is a list of suggestions only and as a result is not exhaustive. Trade Contractor's are encouraged to utilise noise control measures that they believe will meet the objectives of the Noise Control Plan and this CMP.

Vibration Control Plan

Objective of the Vibration Control Plan

The objective of the Vibration Control Plan is to:

- Manage the amount of vibration generated as a result of construction-associated works in order to minimise disturbance to adjacent property owners and the public.
- Prevent damage to adjacent properties due to vibration from construction activities.

Method of Assessment

Vibration control will be assessed by:

- Visual inspection of controls to reduce vibrations generated onsite by construction and associated work.

- Regular audits conducted by HY of the vibration control procedures and practices utilised (frequency to be agreed prior to commencing works).
- Review of the vibration control section of the Trade Contractor's EWMS and review of regular vibration control reports.

Please note that the responsible party of a vibration control measure will be the Trade Contractor or site personnel who implemented the control.

Trade Contractor Required Output
Trade Contractor's nominated in Table 1 (Part 6) as "Responsible" will need to:

- Provide an EWMS prior to commencing work onsite that highlights the Trade Contractor's knowledge of the Vibration Control Plan and measures that will be used onsite to control vibration.
- During progress of the works, provide on a regular basis (to be agreed with HY prior to commencing works) a report that includes:
  - Photos of the vibration control measures being utilised.
  - Description of the works creating vibration.
  - Future works that will cause vibrations and control measures that will be incorporated.

Trade Contractor's nominated in Table 1 (Part 6) as "Acknowledge" will be required to recognise the existence of the Vibration Control Plan and its objectives within their EWMS. However, these Trade Contractor's will not be required to define within their EWMS items such as control measures or provide additional reports on vibration control during construction.

Inspections and Audits
To ensure vibrations are controlled in accordance with this Control Plan:

- HY will conduct random site inspections to ensure vibration control measures utilised by the Trade Contractor's are appropriate and functioning as required.
- HY will conduct audits of the vibration control procedures and practices put in place by the Trade Contractor to ensure they conform with both this CMP and the Trade Contractor's EWMS. Frequency of audits to be agreed with the Trade Contractor prior to commencement of work.
- Vibration tests will be conducted by ERM Consultant (at times designated by HY) to determine if vibration levels are within the required range.

HY Monitoring of Vibration
To ensure that all site personnel adequately control the creation and spread of dust, HY will monitor the work of Trade Contractor's and other site staff by:

- Visually viewing site works and utilising digital photos to record and witness vibration control procedures during random site inspections
- Undertaking audits on a regular basis to review vibration control procedures and practices
- Reporting on a monthly basis to the Project Control Group. Such reports to include:

- Relevant Trade Contractor reports for the period
- Other Important information / events that generated excessive levels of vibration and how these were controlled (if not covered by the Trade Contractor reports).
- Overall assessment of vibration control practices and procedures for the month.

Concrete Pump, Truck and Traffic Control Plan

Objective of the Concrete Pump, Truck and Traffic Control Plan
The objective of the Concrete Pump, Truck and Traffic Control Plan is to ensure:

- Concrete and aggregate do not enter the local stormwater system, therefore reducing the contamination of waterways.
- Concrete and aggregate contamination is kept to one area of the site.
- All concrete pumps, trucks and vehicles leaving the construction site are clean of mud and debris before driving on public roads and/or access ways.

Method of Assessment
Measures to control the environmental impact of concrete pumps, trucks and vehicles will be assessed by:

- Visual inspection of concrete pumps and trucks prior to them leaving the construction site.
- Regular audits conducted by HY of the measures used to control the environmental impact of concrete pumps and trucks (frequency to be agreed prior to commencing works).
- Review of the concrete pumps and trucks control section of the Trade Contractor's EWMS and review of regular concrete pump and truck control reports.

Trade Contractor Required Output
Trade Contractor's nominated in Table 1 (Part 6) as "Responsible" will need to:

- Provide an EWMS prior to commencing work onsite that highlights the Trade Contractor's knowledge of the Concrete Pumps, Trucks and Traffic Control Plan and measures that will be used onsite to control their environmental impact.
- During progress of the works, provide on a regular basis (to be agreed with HY prior to commencing works) a report that includes:
  - Photos and description of the concrete pump and truck control measures utilised.

Trade Contractor's nominated in Table 1 (Part 6) as "Acknowledge" will be required to recognise the existence of the Vibration Control Plan and its objectives within their EWMS. However, these Trade Contractor's will not be required to define within their EWMS items such as control measures or provide additional reports on vehicle control during construction.

Inspections and Audits
To ensure the environmental impacts of concrete pumps, trucks and vehicles are managed in accordance with this Control Plan:

- HY will conduct random site inspections to ensure control measures utilised by the Trade Contractor's are appropriate and functioning as required.
- HY will conduct audits of the control procedures and practices put in place by the Trade Contractor to ensure they conform with both this CMP and the Trade Contractor's EWMS. Frequency of audits to be agreed with the Trade Contractor prior to commencement of work.

HY Monitoring of Concrete Pump, Truck and Traffic Control Plan
To ensure that all site personnel adequately control the environmental impact of concrete pumps, trucks and vehicles HY will monitor the work of Trade Contractor's and other site staff by:

- Visually viewing concrete pumps, trucks and vehicles leaving the site and utilising digital photos to record and witness control procedures during random site inspections
- Undertaking audits on a regular basis to review control procedures and practices
- Reporting on a monthly basis to the Project Control Group. Such reports to include:
  - Relevant Trade Contractor reports for the period
  - Other Important information / events in regard to the environmental impact of concrete pumps and trucks and how these were controlled (if not covered by the Trade Contractor reports).
  - Overall assessment of control practices and procedures for the month.

Actions Available to Control the Environmental Impact of Concrete Pumps, Trucks and Vehicles
To reduce the environmental effects of concrete, aggregate, dirt and mud contamination, the following measures should be undertaken by Trade Contractor's and site staff:

- Trucks, concrete pumps and other vehicles should enter and exit the site from the designated areas as indicated by HY site management.
- Excess concrete should be taken back to the batch plant and not dumped onsite
- Upon leaving the construction site all trucks, concrete pumps and vehicles will need to be washed in the designated wash bay prior to driving onto public roads.

Please note, this is a list of suggestions only and as a result is not exhaustive. Trade Contractor's are encouraged to utilise concrete pump, truck and vehicle control measures that they believe will meet the objectives of the Concrete Pump, Truck and Traffic Control Plan and this CMP.

Site Amenities Control Plan

Objective of the Site Amenities Control Plan
The objective of the Site Amenities Control Plan is to:

- Ensure site amenities encourage the implementation of sound environmental practices
- Ensure site amenities provide adequate shelter, toilets and facilities that promote a healthy and productive environment.
- Encourage the use of site amenities that incorporate technologies, incentives and solutions that promote the minimisation of waste and reduction of water and energy consumption.

- Promote the use of site amenities that are an example of the Toll IPEC Freight Transport Facility environmental ethos.

Satisfying these objectives will contribute to achieving the overall project objective of a 5-star Green Star and ABGR rating. Similarly, achieving the objectives will contribute to obtaining the ESD vision for HY, Trade Contractor's, and the Project Team.

Method of Assessment
The appropriate environmental control of Site Amenities will be assessed by:

- Visual inspection of controls to reduce the amount of materials, energy and water consumed and the volume of recycled waste as a resulting from construction and associated work.
- Separate energy and mains water metering of site amenities and construction activities.
- Monitoring the amount of stormwater retained for use onsite.

Trade Contractor Required Output
Trade Contractor's nominated in Table 1 (Part 6) as "Responsible" will need to:

- Provide an EWMS prior to commencing work onsite that highlights the Trade Contractor's knowledge of the Site Amenities Control Plan and measures that will be utilised to make the site amenities more environmentally friendly.
- During progress of the works, provide on a regular basis (to be agreed with HY prior to commencing works) a report that includes:
  - Photos of the environmental initiatives being utilised.
  - Description of environmental initiatives.
  - Additional environmental initiatives that could be incorporated
  - If known, the amount of water and energy saved as a result of environmental initiatives.

Trade Contractor's nominated in Table 1 (Part 6) as "Acknowledge" will be required to recognise the existence of the Dust Control Plan and its objectives within their EWMS. However, these Trade Contractor's will not be required to define within their EWMS items such as control measures or provide additional reports on dust control during construction.

Inspections and Audits
HY will be undertaking regular inspections of all HY and Trade Contractor site amenities to ensure environmental initiatives are being utilised wherever possible. Similarly, environmental audits will be conducted on a quarterly basis to ensure all control procedures are in order.

HY Monitoring of the Site Amenities Control Plan
To ensure the adequate environmental control of the site amenities the following monitoring procedures will be undertaken by HY:

- Regular visual inspection of the site amenities to ensure all environmental initiatives are operating
- Photos of the environmental initiatives in use throughout the duration of the project
- Accumulation of energy and water readings to tabulate consumption and savings.

Proposed Actions Available to Reduce the Environmental Effect of Site Amenities

To reduce the environmental effect of site amenities, the following measures should be considered by HY and Trade Contractor's providing their own site amenities:

- Incorporate features that save on energy and water consumption, such as waterless urinals, occupant sensor controlled lighting to lunch sheds and site sheds that have higher insulating properties.
- Investigate alternative energy solutions to run some appliances and the use of 'green power' from utility companies for site amenities and construction activities
- Provide a paint brush facility that utilises collected stormwater from site sheds

Please note, this is a list of suggestions only and as a result is not exhaustive. Trade Contractor's are encouraged to utilise other initiatives that they believe will meet the objectives of the Site Amenities Control Plan and this CMP.

Water Management Control Plan

Objective of the Water Management Control Plan
The purpose of this procedure is to ensure that:

- Onsite water consumption is considerably reduced during the construction process as a result of water saving practices and technologies implemented by HY and Trade Contractor's

Method of Assessment
The appropriate method of assessment for water saving initiatives initiated by either HY or Trade Contractor's will be:

- The measurement of consumption through submetering
- Visual inspection of the water saving measures implemented by either HY or the Trade Contractor's.

Trade Contractor Required Output
Trade Contractor's nominated in Table 1 (Part 6) as "Responsible" will need to:

- Provide an EWMS prior to commencing work onsite that highlights the Trade Contractor's knowledge of the Water Management Control Plan and measures that will be used onsite to control water consumption.
- During progress of the works, provide on a regular basis (to be agreed with HY prior to commencing works) a report that includes:
  - Photos of the water saving measures implemented by the Trade Contractor.
  - Description of the water saving measure(s).
  - Future water saving initiatives that may be utilised by the Trade Contractor as works progress.

Trade Contractor's nominated in Table 1 (Part 6) as "Acknowledge" will be required to recognise the existence of the Water Management Control Plan and its objectives within their EWMS. However, these Trade Contractor's will not be required to define within their EWMS items such as control measures or provide additional reports on water management.

Inspections and Audits
To ensure water consumption is controlled in accordance with this Control Plan:

- HY will conduct random site inspections to ensure water management measures utilised by the Trade Contractor's are appropriate and functioning as required.
- HY will conduct audits of the water management procedures and practices put in place by the Trade Contractor to ensure they conform with both this CMP and the Trade Contractor's EWMS. Frequency of audits to be agreed with the Trade Contractor prior to commencement of work.

HY Monitoring of the Water Management Control Plan
To ensure that all site personnel adequately control the consumption of water, HY will monitor the work of Trade Contractor's and other site staff by:

- Visually viewing site works and utilising digital photos to record and witness water management procedures during random site inspections
- Undertaking audits on a regular basis to review water control procedures and practices
- Reporting on a monthly basis to the Project Control Group. Such reports to include:
  - Relevant Trade Contractor reports for the period
  - Other Important information / events that reduced water consumption (if not covered by the Trade Contractor reports).
  - Overall assessment of water management practices and procedures for the month.

Proposed Actions Available to Reduce Water Consumption and Recycle Water
To increase the environmental benefits of reducing water consumption, the following measures should be undertaken by HY and Trade Contractor's:

- Rainwater collection for use when washing down concrete pumps, trucks and other vehicles leaving site
- Introduce waterless urinals to the site amenities
- Educate site workers about water consumption and simple measures to save water (e.g. utilise collected rainwater for cleaning equipment, ensure taps are not left running etc.)
- Submetering of water consumption

Please note, this is a list of suggestions only and as a result is not exhaustive. Trade Contractor's are encouraged to utilise initiatives that they believe will meet the objectives of the Water Management Control Plan and this CMP.

Waste Management Control Plan

Objective of the Waste Management Control Plan
The purpose of this procedure is to ensure that:

- Both HY and Trade Contractor's considerably reduce onsite waste during the construction process as a result of waste recycling and reuse practices.

Method of Assessment
The appropriate method of assessment for waste reducing initiatives initiated by either HY or Trade Contractor's will be:

- Measurement by volume / weight of the materials recycled, reused or taken to landfill
- Visual inspection of the waste management procedures implemented by either HY or the Trade Contractor's.

Trade Contractor Required Output
Trade Contractor's nominated in Table 1 (Part 6) as "Responsible" will need to:

- Provide an EWMS prior to commencing work onsite that highlights the Trade Contractor's knowledge of the Waste Management Control Plan and measures that will be used onsite to reduce waste.
- During progress of the works, provide on a regular basis (to be agreed with HY prior to commencing works) a report that includes:
  - Photos of the waste management procedures implemented by the Trade Contractor.
  - Description of the waste management procedures utilised.
  - Future waste reducing initiatives that may be utilised by the Trade Contractor as works progress.

Trade Contractor's nominated in Table 1 (Part 6) as "Acknowledge" will be required to recognise the existence of the Waste Management Control Plan and its objectives within their EWMS. However, these Trade Contractor's will not be required to define within their EWMS items such as control measures or provide additional reports on waste management.

As well as the output required from Trade Contractor's, the Firm(s) responsible for recycling and waste collection will be required to supply data that details the amount, type and percentage of waste recycled, reused or sent to landfill.

Inspections and Audits
To ensure waste management is controlled in accordance with this Control Plan:

- HY will conduct random site inspections to ensure waste management measures utilised by the Trade Contractor's are appropriate and functioning as required.
- HY will conduct audits of the waste management procedures and practices put in place by the Trade Contractor to ensure they conform with both this CMP and the Trade Contractor's EWMS. Frequency of audits to be agreed with the Trade Contractor prior to commencement of work.

HY Monitoring of the Waste Management Control Plan
To ensure that all site personnel adequately control waste, HY will monitor the work of Trade Contractor's and other site staff by:

- Visually viewing site works and utilising digital photos to record and witness waste management procedures during random site inspections
- Undertaking audits on a regular basis to review waste management procedures and practices
- Reporting on a monthly basis to the Project Control Group. Such reports to include:
  - Relevant Trade Contractor reports for the period

- Other Important information / events that reduced waste (if not covered by the Trade Contractor reports).
- Overall assessment of waste management practices and procedures for the month.

Actions Available to Reduce Waste and Increase Recycled Materials

To increase the environmental benefits of reducing waste, the following measures should be undertaken by HY and Trade Contractor's:

- Separate waste generated during the construction process into the appropriate recycling containers / bins provided. (e.g. timber, steel, plasterboard, plastic, cardboard and general waste)
- Return unnecessary and/or unwanted packaging back to the supplier so as they become aware that such packaging is not required

Please note, this is a list of suggestions only and as a result is not exhaustive. Trade Contractor's are encouraged to utilise initiatives that they believe will meet the objectives of the Waste Management Control Plan and this CMP.

APPENDICES

Appendix 1 – Environmental Audit Template

TRADE SUBCONTRACTOR:……

ABN:……

TRADE PACKAGE:……

TRADE SUBCONTRATOR REPRESENTATIVE:……

DATE & TIME:……

AUDIT CONDUCTED BY:……

Number	Environmental Issue / Control Plan	Yes	No	Not Applicable
1	**Sedimentation Control**			
1.1	Was an EWMS provided prior to commencing work onsite?	☐	☐	☐
1.2	Did the EWMS adequately highlight the Trade Subcontractors knowledge of the Sedimentation Control Plan and measures that will be used onsite to control sedimentation? (If no, must be resubmitted)	☐	☐	☐
1.3	Has the Trade Subcontractor utilised control methods to manage the volume of sedimentation created as a result of construction & associated works? Is so what measures?	☐	☐	☐

1.4	Has the Trade Subcontractor managed to control and avoid sedimentation entering the local stormwater system? If so how? If not why?	☐	☐	☐

1.5	During the progress of works, has the Trade Subcontractor provided provided on a regular basis a report that includes:			
1.5.1	o Photos of the sedimentation control measures being utilised.	☐	☐	☐
1.5.2	o Description of the works creating sedimentation.	☐	☐	☐
1.5.3	o Future works that will cause sedimentation and control measures that will be incorporated.	☐	☐	☐
2	**Dust Control**			
2.1	Was an EWMS provided prior to commencing work onsite?	☐	☐	☐
2.2	Did the EWMS adequately highlight the Trade Subcontractors knowledge of the Dust Control Plan and measures that will be used onsite to control dust? (If no, must be resubmitted)	☐	☐	☐
2.3	Has the Trade Subcontractor used procedures to manage and minimise the amount of dust generated as a result of construction & associated works? If so what measures?	☐	☐	☐

2.4	During the progress of works, has the Trade Subcontractor provided provided on a regular basis a report that includes:			
2.4.1	o Photos of the dust control measures being utilised.	☐	☐	☐

2.4.2	o Description of the works creating dust.	☐	☐	☐
2.4.3	o Future works that will cause dust and control measures that will be incorporated.	☐	☐	☐

3 Noise Control

3.1	Was an EWMS provided prior to commencing work onsite?	☐	☐	☐
3.2	Did the EWMS adequately highlight the Trade Subcontractors knowledge of the Noise Control Plan and measures that will be used onsite to control noise? (If no, must be resubmitted)	☐	☐	☐
3.3	Has the Trade Subcontractor implemented measures to manage and minimise the level of noise generated as a result of construction-associated works? Is so what measures?	☐	☐	☐

3.4	Do noise levels exceed ……at the property boundaries?	☐	☐	☐
3.5	During the progress of works, has the Trade Subcontractor provided on a regular basis a report that includes:			
3.5.1	o Photos of the excessive noise control measures being utilised	☐	☐	☐
3.5.2	o Description of the works creating excessive noise.	☐	☐	☐
3.5.3	o Future works that will cause excessive noise and control measures that will be incorporated.	☐	☐	☐

4 Vibration Control

4.1	Was an EWMS provided prior to commencing work onsite?	☐	☐	☐
4.2	Did the EWMS adequately highlight the Trade Subcontractors knowledge of the Vibration Control Plan and measures that will be used onsite to control vibration? (If no, must be resubmitted)	☐	☐	☐
4.3	Has the Trade Subcontractor implemented measures to manage the amount of vibration generated as a result of construction-associated works? Is so what measures?	☐	☐	☐

4.4	Do vibrations exceed a ground acceleration of……mm/second?	☐	☐	☐
4.5	During the progress of works, has the Trade Subcontractor provided on a regular basis a report that includes:			
4.5.1	o Photos of the vibration control measures being utilised.	☐	☐	☐
4.5.2	o Description of the works creating vibration.	☐	☐	☐
4.5.3	o Future works that will cause vibration and control measures that will be incorporated.	☐	☐	☐

5 Endangered Species Control

5.1	Have endangered species been encountered on the Project?	☐	☐	☐
5.2	If so have the discoveries been reported in accordance with the SA Water EMP?	☐	☐	☐

6 Concrete Pump and Truck Control

6.1	Was an EWMS provided prior to commencing work onsite?	☐	☐	☐
6.2	Did the EWMS adequately highlight the Trade Subcontractors knowledge of the Concrete Pump and Truck Control Plan and measures that will be used onsite to control concrete pump and trucks? (If no, must be resubmitted)	☐	☐	☐
6.3	Is concrete and aggregate contamination kept to one area of the site.	☐	☐	☐
6.4	Does the Trade Subcontractor ensure excess concrete is taken back to the batch plant and not dumped onsite?	☐	☐	☐
6.5	Is concrete, aggregate, dirt and mud prevented from being carried out of the site onto public roads and footpaths? If so how?	☐	☐	☐

6.6	During the progress of works, has the Trade Subcontractor provided on a regular basis a report that includes:			
6.6.1	o Photos and description of the concrete pump and truck control measures utilised.	☐	☐	☐

7 Contamination Control

7.1	Was an EWMS provided prior to commencing work onsite?	☐	☐	☐
7.2	Did the EWMS adequately highlight the Trade Subcontractors knowledge of the COntamination Control Plan and measures that will be used onsite to control contamination? (If no, must be resubmitted)	☐	☐	☐
7.3	Has contaminated soil been discovered by the Trade Subcontractor?	☐	☐	☐

Please complete the following only if a contaminate has been discovered

7.4	Did the Trade Subcontractor provide a report prior to commencing remediation or removal that includes:			
7.4.1	o Photos and description contaminate.	☐	☐	☐
7.4.2	o Test results of the contaminate	☐	☐	☐
7.4.3	o How the contaminate will be remediated or removed (in accordance with the HY SA Water EMP and the Trade Subcontractor EWMS).	☐	☐	☐
7.5	Did the Trade Subcontractor provide a report(s) during remediation or removal of the contaminate that included:			
7.5.1	o Photos and description contaminate.	☐	☐	☐
7.5.2	o Updated test results to determine when the contaminated area / material / substance would be environmentally safe.	☐	☐	☐

8 Archaeological Artifacts and Aboriginal Heritage Control

8.1	Have archaeological artifacts and/or items of aboriginal heritage been encountered or discovered on the Project Site?	☐	☐	☐
8.2	If so have the discoveries been reported in accordance with the SA Water EMP?	☐	☐	☐

9 Site Amenities Control Plan

9.1	Was an EWMS provided prior to commencing work onsite?	☐	☐	☐
9.2	Did the EWMS adequately highlight the Trade Subcontractors knowledge of the Site Amenities Control Plan and measures that will be used make the site amenities for environmentally friendly? (If no, must be resubmitted)	☐	☐	☐
9.3	During the progress of works, has the Trade Subcontractor provided on a regular basis a report that includes:			
9.3.1	o Photos of the environmental initiatives being utilised.	☐	☐	☐
9.3.2	o Description of environmental initiatives.	☐	☐	☐
9.3.3	o Additional environmental initiatives that could be incorporated	☐	☐	☐
9.3.4	o If known, the amount of water and energy saved as a result of environmental initiatives.	☐	☐	☐
9.4	Does the Trade Subcontractor encourage the use of site amenities that incorporate technologies, incentives and solutions that promote the minimisation of waste and reduction of water and energy consumption? If so how?	☐	☐	☐

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10 House Keeping Control Plan

10.1	Was an EWMS provided prior to commencing work onsite?	☐	☐	☐

10.1	Did the EWMS adequately highlight the Trade Subcontractors knowledge of the Housekeeping Control Plan and measures that will be used onsite to control environmental impact of housekeeping activities? (If no, must be resubmitted)	☐	☐	☐
10.2	During the progress of works, has the Trade Subcontractor provided on a regular basis a report that includes:	☐	☐	☐
10.2.1	o Photos of the environmental initiatives being utilised.	☐	☐	☐
10.2.2	o Description of environmental initiatives.	☐	☐	☐
10.2.3	o Additional environmental initiatives that could be incorporated	☐	☐	☐
10.3	Has the Trade Subcontractor contributed any initiatives or technologies to reduce the environmental impact of housekeeping activities? If so what are they?	☐	☐	☐

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11 Energy Consumption Control Plan

11.1	Was an EWMS provided prior to commencing work onsite?	☐	☐	☐
11.2	Did the EWMS adequately highlight the Trade Subcontractors knowledge of the Energy Consumption Control Plan and measures that will be used onsite to control energy use? (If no, must be resubmitted)	☐	☐	☐
11.3	During the progress of works, has the Trade Subcontractor provided on a regular basis a report that includes:			
11.3.1	o Photos of the energy saving measures implemented by the Trade Subcontractor.	☐	☐	☐
11.3.2	o Description of the energy saving measure(s).	☐	☐	☐
11.3.3	o Future energy saving initiatives that may be utilised by the Trade Subcontractor as works progress.	☐	☐	☐
11.4	What energy saving initiatives have been utilised by the Trade Contractor?	☐	☐	☐

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12 Water Management Control Plan

12.1	Was an EWMS provided prior to commencing work onsite?	☐	☐	☐
12.2	Did the EWMS adequately highlight the Trade Subcontractors knowledge of the Water Management Control Plan and measures that will be used onsite to control water consumption? (If no, must be resubmitted)	☐	☐	☐
12.3	During the progress of works, has the Trade Subcontractor provided on a regular basis a report that includes:			
12.3.1	o Photos of water saving measures implemented by the Trade Subcontractor.	☐	☐	☐
12.3.2	o Description of the water saving measure(s).	☐	☐	☐
12.4	What water saving initiatives have been utilised by the Trade Contractor?	☐	☐	☐

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13 Waste Management Control Plan

13.1	Was an EWMS provided prior to commencing work onsite?	☐	☐	☐
13.2	Did the EWMS adequately highlight the Trade Subcontractors knowledge of the Waste Management Control Plan and measures that will be used onsite to control waste? (If no, must be resubmitted)	☐	☐	☐
13.3	During the progress of works, has the Trade Subcontractor provided on a regular basis a report that includes:			
13.3.1	o Photos of waste management measures implemented by the Trade Subcontractor.	☐	☐	☐

13.3.2	o Description of the waste management measure(s).	☐	☐	☐
13.3.3	o Future waste management initiatives that may be utilised by the Trade Subcontractor as works progress.	☐	☐	☐
13.4	Does the Trade Subcontractor adequatley separate waste generated during the construction process into the appropriate recycling containers / bins provided?	☐	☐	☐
13.5	Does the Trade Subcontractor return unnecessary and/or unwanted packaging back to the supplier?	☐	☐	☐

APPENDIX 2 – SITE MANAGEMENT PLAN

LEGENDS

- Hansen Yuncken Site Office
- Goodman Site Office
- Site Amenities
- First Aid
- Changeroom Aid
- Lunchroom
- Meeting Room
- Sediment Control Fence
- Perimeter Fencing
- Entry/Exit Gates
- Construction Traffic
- Materials Handling & Storage Area

EXCAVATION STOCKPILE LOCATION

Car Entry/Exit

Car Entry/Exit

Cust. Entry 85 sqm

Entry 45 sqm

Fuel Tanks

Weighbridge

Office (2 levels) 3,380 sqm

BBQ

Pallet Storage Area (1,500 Pallets - 3 high)

Warehouse 47,000 sqm

Operations Office (2 lvls) 840 sqm

Staff Carparking (250)

Potential Expansion Area

Pallet Storage Area (3,000 Pallets - 5 high)

Pallets

DG

Potential Expansion Area

T

P

T

Cab Parking (12)

Drivers Rest Area 400 sqm

Gatehouse 30 sqm

SITE ENTRY 1

PUD Entry Only

SITE ENTRY 2

MATERIALS HANDLING & STORAGE AREA

HY MAIN OFFICE

GOODMAN OFFICE

LUNCHROOM

LUNCHROOM

LUNCHROOM

LUNCHROOM

LUNCHROOM

MEETING ROOM

MEETING ROOM

CHANGE ROOM

CHANGE ROOM

CHANGE ROOM

FIRST AID

AMENITIES

AMENITIES

AMENITIES

hansen yuncken
BUILDING VALUE

SITE MANAGEMENT PLAN

APPENDIX 3 – TRAFFIC MANAGEMENT PLAN LAYOUT

TO BE FINALISED