

Construction Environmental Management Plan (CEMP)

NSW Land and Housing Corporation
Bonnyrigg Living Communities Project
Stages 12 & 13

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DELIVERING EXCELLENCE AND VALUE EVERY TIME

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1. INTRODUCTION

1.1. Overview

J. Wyndham Prince has been engaged by NSW Land and Housing Corporation to prepare a Construction Environmental Management Plan (CEMP) for the Bonnyrigg Renewal Project. Throughout this plan, all conditions, guidelines, rules, and services needed are considered to ensure a safe and sustainable workplace.

1.2. CEMP Requirements

This CEMP has been prepared for the Bonnyrigg Renewal Project to meet the necessities of:

- Fairfield City Council
- Appropriate protection to the environment implemented on all works within the work site.
- Appropriate action taken regarding risk of injury and illness of personnel onsite, visitors to the site and members of the public.

1.3. Purpose of this Plan

This report outlines the orderly environmental management specific to the construction of this project. It includes the environmental requirements, safety, and quality specifications.

The works include demolition of structures (including dwellings, roads and services), removal of trees, pavement construction, stormwater construction, bulk excavation (cut to fill), staged superlot development, utility services construction.

In accordance with drawings and specifications, provision of project management will be taken on and actioned by the Principal Contractor.

This Construction Environmental Management Plan is valid to all employees, staff, contractors, subcontractors, and any other party involved in the construction stage of this project. On-going development of this document will be managed and discussed throughout the process by senior parties.

1.4. Project Objectives

The Project objectives include:

- Creation of 4 Super lots, later to be developed into mixed housing apartment blocks
- Creation and embellishment of 2 new open spaces/parks
- Implementation of new infrastructure services
- Landscape embellishment of parks

1.5. Project Coordination

The Project Manager is to take the lead in the coordination of the project with NSW Land and Housing Corporation, contractors and agencies working within the same area.

The Project Manager will provide necessary guidance and support during the construction phase to guarantee the achievement of objectives and goals along with delivering the final product in a timely manner.

1.6. Utility Coordination

The engaged contractor is accountable for coordination of the site activities involving utility agencies within the project. If needed, the Project Manager will assist in coordination of these agencies during the commissioning and construction phase of this project.

1.7. Working Hours

Working hours are to explicitly comply with that nominated by Council under the Development Consent. Unless nominated otherwise, the working hours are proposed as follows:

- All work be restricted to between the hours of 7.00am and 6.00pm, Monday to Friday, 8.00am to 1.00pm Saturday
- No work is to be done on Sunday or public holidays, unless advised by Council
- The contractor is to instruct subcontractors regarding working hours
- Working Hours include plant warming up and/or conversation noise levels before the nominated starting time
- Noise – any construction noise outside of working hours must have written approval by Council. Council and affected neighbouring parties must be notified in writing.

Traffic control impacts being carried out on public roads during weekdays may be restricted by Council if advised so.

Night Roadworks to avoid traffic impacts will be considered based on the site circumstances and must have written approval by the Council.

Consent to undertake deliveries/construction outside of standard working hours must have written approval from Council. This request must be made 10 days prior to the expected date of the works. A notice of the works is to be sent to all parties that may be affected by the event to ensure they are aware of the activities.

Construction outside the restricted hours may comply with the following:

- 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
- Public infrastructure works that shorten the length of the project and are supported by the affected community

Works where a proponent (environmental impact assessment) demonstrates and justifies a need to operate outside the recommended standard hours

2. ROLES AND RESPONSIBILITY

2.1. Organisational Structure

The organisational structure for this project is listed below:

2.1.1 Project Manager

The Project Manager is responsible for WHSE at the workplace with duties including:

- To implement WHSE rules and guidelines, management plan and/or Integrated Management System (IMS)
- Monitoring conformity with the WHSE rules and guidelines, management plan and/or Integrated Management System (IMS)
- Ensuring all relevant environmental safety precautions are in place and being adhered to
- Deciding and organising training they feel is needed
- Organise meetings and programs regarding WHSE
- Ensure all environmental measures and control are in place and being observed
- Coordinating accident/incident investigations within the workplace and reporting to relevant parties
- Reviewing inspections and reports, following up on instruction/guidance

2.1.2 Superintendent

The Superintendent is responsible for WHSE at the workplace with duties including:

- Enforcing the WHSE Management Plan
- Ensuring all WHSE rules and obligations are being followed
- Ensuring activities and works are carried out in an environmentally safe way
- Ensure safety of workers during the construction phase
- Setting up meetings for site inductions, review of WHSE policies and team meetings
- Issue all Traffic Control Plans (TCP) that are relevant to the works that will assist all workers on site
- Ensure that all equipment, plants, vehicles, and human resources are available and at a safe working standard
- Ensure maintenance of all materials are up-to-date and safe to use

2.1.3 Site Manager

The Site Manager is responsible for WHSE at the workplace with duties including:

- Enforcing the WHSE Management Plan
- Ensuring all WHSE rules and obligations are being followed
- Ensuring activities and works are carried out in an environmentally safe way
- Ensure safety of workers during the construction phase
- Manage roles, responsibilities and works day-to-day
- Ensure all measure, consents and permissions are in place before starting works
- Responsible for notifying and reporting incidents and near misses
- Responsible for training and enforcing emergency procedures at the workplace

2.1.4 Site Engineer

The Site Engineer is responsible for WHSE at the workplace with duties including:

- Enforcing the WHSE Management Plan
- Ensuring all WHSE rules and obligations are being followed
- Assist the Site Manager with managing roles, responsibilities and works day-to-day
- Assist the Project Manager with Stakeholder organization
- Enforce safety requirements in the workplace
- Manage and control inspections and reports throughout works
- Manage documentation and distribution

2.1.5 WHSE Officer

The WHSE Officer is responsible for WHSE at the workplace with duties including:

- Enforcing the WHSE Management Plan
- Ensuring all WHSE rules and obligations are being followed
- Provide WHSE development and advice
- Implement WHSE development when needed
- Conducting WHSE inductions
- Ensure WHSE records are kept confidential and filled correctly
- Ensuring recommendations are complete and participating in inspections
- Provide correct advice to workers about WHSE

2.1.6 Other personnel in the workplace

All other personnel are responsible for:

- Adhere to all WHSE rules and guidelines
- Always work in a safe and respectful manner
- All incidents, accidents or near misses are to be reported to the Site Supervisor
- Complying with site rules
- Ensuring all environmental measures are being used to protect the environment
- Report all faulty equipment to the Site Manager

3. COMMUNICATION

3.1. Internal Communication

The Project Manager is the direct and primary contact for all project issues, including safety, emergencies, environmental issues, and quality. If the Project Manager is absent, the site supervisor is to deal with project issues at that point in time.

The Site Supervisor is the selected 24-hour emergency contact for emergency and government authorities. The Site Supervisor has the authority to direct the required action onsite and stop all works if needed. They're also responsible for communication relayed to neighbouring residents, government authorities and other parties that are affected by the project activities.

3.1.1 Site Induction

A site induction is to take place at the beginning of the construction stage. Direct communication to all workers of what the CEMP states is compulsory at this site induction. The site induction will ensure all personal, consultants, subcontractors and visitors to the site are all acquainted with the obligations and requirements of the project.

The environmental section of the induction is project specific and relevant to all aspects of the site.

The site induction will include the following:

- Project Environmental Risks and Mitigation Measures
- Duty to Notify/General Environmental Duty
- Site Incident Reporting requirements
- Protected/Sensitive areas withing the surrounding site
- Appropriate legislation, permits, approvals and licences related to the project

3.1.2 Pre-Construction Meeting

The Pre-Construction meeting is to be held and include the key personnel involved before construction begins. The meeting should be held with an agenda in place and include:

- Introductions
- Site Rules and Regulations
- Health and Safety (WH&S)
- Lines of communication and submittals, with correspondence
- QA/QC, with forms

3.1.3 Progress Meetings

Progress Meeting should be held regularly, bi-monthly to monthly, and are essential to having a smooth process throughout the construction stage. These are essential when relaying information to all relevant parties involved within the project. It is important that:

- Prior to meetings, a record of attendees is to be recorded
- Prior to the meeting an agenda is sent out outlining information that will be spoken about during the meeting
- Meetings are to start on-time

Progress meeting minutes should be recorded and prepared by a party involved within the meeting and distributed to all attendees and those that were unable to attend but are involved with the material cover within the meeting.

3.1.4 Progress Reports

Progress reports are to be prepared and distributed consistently throughout the construction progress. Progress reports should include some if not all the following:

- Safety issues and statistics
- Monthly progress and status of the works
- List of completed activities
- List of current works with estimated delivery times
- Changes to existing program with the updated changes
- Problem areas (if any)
- Expected delays or causes of delays
- Quality issues and solutions
- Any changes of design changes or modifications
- Other information if required

3.2. External Communication

3.2.1 Community and Stakeholders

The surrounding community closely effected by the works are to be informed before the works begin, of the possible effects of the project will have toward them and neighbouring sites. The nature of the project may have a direct impact on the community and the contractor will provide clear procedures to ensure that the effects on the public are minimal. Communication to the surrounding community is to be regular to ensure they are informed of the project and progress.

All communication is to be done through an elected Communication Representative. This representative can be a part of the NSW Land and Housing Corporation or a separate entity engaged by either NSW Land and Housing Corporation. All parties within the worksite will be informed of this contact at the Site Induction.

3.2.2 Media

Any contacts with media are to be through NSW Land and Housing Corporation. There is to be no communication between the media and project staff unless authorised.

3.2.3 Regulatory Authorities

Any communication involving regulatory authorities is to be through the Project Manager or Environmental Manger in concurrence with NSW Land and Housing Corporation's necessities.

4. ENVIRONMENTAL MANAGEMENT

4.1. Introduction

Environmental management will be ensured through the consistency of keeping regular updates and assessments of the site to assess the potential risks or effects of the construction site and the environment.

The activities associated with environmental risks include:

- Stockpiling
- Clearing of vegetation
- Transport of materials and spoil
- Plant and vehicle movements on site
- Sedimentation Basin decommissioning

4.2. Environmental Risk Assessment

An environmental risk assessment will describe the activities, risk level, frequency of the risk and what the consequence of the activity may be. It is to be noted within the assessment that the risks do not consider occupational exposure involving workers on site. The following are activities that may be identified during the stage of construction:

- Earthworks
- Movements of plants and vehicles
- Installation of erosion and sediment controls
- Installation of boundary fencing
- Road upgrading and pavement construction

4.3. Environmental Controls

All Guideline and measures mentioned within this section all comply to the conditions of Fairfield City Council.

4.3.1 Neighbour Notification and Engagement

To keep a healthy relationship between neighbouring residents during the construction process, it is important to ensure that communication is consistent throughout the whole process. Measures are to be put in place regarding how to relay information to these stakeholders during these times:

- Project updates issued regularly, should include timing and any potential delays
- Notifications of when the commencement to works are to begin and/or be delivered
- Any concerns made valid by residents are to be appropriately dealt with and be consolidated with the appropriate party of the workplace.

4.3.2 Dewater of Work Sites (if applicable)

A Dewater Report must be provided to verify that dewatering of the site does not impact water quality, contamination, and aquatic fauna in local areas. A dewatering plan is also required to ensure management strategies and controls are in place to mitigate effects on the local ecosystem.

Dewatering report should account for the following:

- Details of existing Dam and site (Volume, features, use, etc.)
- Process of decommissioning of existing dams
- Water quality
- Bed and wall sediment testing (Feasibility for reuse)
- Details of native fauna recovery, rescue, and relocation
- Filling and stabilization work

The following controls should be outlined in a Dewatering Plan:

- Testing and treatment water quality requirements
- Management strategies outlined regarding the decommissioning of dams
- All earthworks are tested and stabilized during the construction works. Stabilization and sediment control strategies are in place.
- Ecological requirements met to rescue and relocate fauna during works

4.3.3 Erosion, Sediment and Dust Control

Erosion, Sediment and Dust controls are processes that assist in managing products within the construction site to prevent debris or weathering from the site. The aim of erosion and sediment control is to prevent any health risks that may arise from these events happening.

Sediment control is also to be done to regulation guidelines. This is a material or device that is designed to prevent eroded soil or material from a construction site wash off into drains, rivers, lakes or streams that may be nearby.

An Erosion and Sediment Control Plan (ESCP) is required to minimise the impact of erosion of the existing environment, general safety and mitigate the overall impact of sediment on the nearby area. Erosion and sediment measures should reduce the overall impact on health and safety

Erosion and Sediment control/Soil and Water Management Plan

The ESCP must include standard notes regarding stabilisation and maintenance of sediment/ erosion control measures including:

- Sediment fencing.
- Barrier fencing and no-go zones.
- Stabilised access.
- Waste receptacles.
- Stockpile site/s.

A soil and water management plan (SWMP) is also required as the development exceeds 2,500 square meters. Note that a SWMP is required for both drawings and accompanying commentary (including calculations) addressing erosion controls, sediment controls, maintenance notes, stabilisation requirements and standard drawings.

A site-specific Dust Management Plan (DMP) must be prepared by a suitably qualified/experienced construction consultant with the civil contractor. The DMP must show how dust management controls will be regularly monitored, reviewed, and amended. The purpose of the DMP is to minimise the impact of dust on the greater area. Following written approval of the DMP granted by a Council Manager. Works may

commence.

The DMP must address the following controls as per ***Dust Management Plan***

Water carts must be used to regularly wet down exposed areas. The number of water carts on site at all times (and additional carts available on demand) must be nominated and justified.

- Additives that can be mixed with the water to aid dust suppression.
- A dust cloth must be installed along the perimeter of the site.
- A sprinkler/ misting system along the perimeter of the site.
- Dust control at source, such as machine mounted sprinklers, ground mounted water cannons where material is being excavated, loaded and placed and measures to ensure loads are covered.
- Heavy vehicle speed control on haul routes.
- Stockpile management such as location, orientation, volume and height must be carefully considered to minimise impacts on neighbouring properties. Covering of stockpiles with tarpaulins or vegetation should also be considered where warranted by the duration of the stockpile. Stockpiles expected to be in place for longer than 14 days are considered non-temporary.
- Interim seeding and/ or hydro mulching of exposed areas as work progresses.
- Final topsoil placement and planting or seeding exposed areas as soon as possible.
- Jute matting of the core riparian zone within the creek/ riparian corridor.
- Weather forecast systems to predict adverse weather conditions and allow for early action for dust management and to avoid dust generating activities when weather conditions are unfavourable.
- Education of all site personnel on reducing dust.
- Complaints management and community engagement plan.
- Community engagement plan and complaints management system demonstrating how dust complaints will be received, recorded, resolved, and responded to.

4.3.4 Air Quality (Plant Emissions and Other Discharges to Air)

Air Quality is a measure of how clean or polluted the area is. During the construction process it is a must to keep the air quality at a steady and healthy level to ensure no health risk is made due to emissions or releases to the air. Control Measures will include:

- Vehicles and machinery to be maintained regularly and serviced to the manufacturer's specifications.
- If smoke is visible after 10 to 15 seconds of engine start-up or during normal operation, the vehicle may need to be serviced

Vegetation, building materials are not to be burned off. Vegetation is to be mulched. Construction materials such as timber are to be recycled.

4.3.5 Noise and Vibration

To ensure noise and vibration is at a minimum during the works. We will provide guidelines and measures around certain machine and power usage that may create a large amount of disturbance to neighbouring residents. A noise impact assessment must be produced to illustrate compliance with the Interim Construction Noise Guidelines (2009) published by the Department of Environment and Climate Change (DECC). Construction noise should be mitigated to reduce the impacts on the local environment and local occupant health.

Recommended control measures to minimize construction noise:

- Work hours consistent with local laws and DECC Interim Construction Noise Guidelines (2009)
- Personal protective equipment such as earmuffs should be used
- Worker's exposure to a maximum noise exposure level of 85 dB(A) averaged over an 8-hour period
- Worker's exposure to a maximum (peak noise level of 140 dB(C)).
- No machine or plant to be used outside of the working hours provided by Fairfield City Council within the approved DA and DECC Interim Construction Noise Guidelines (2009)

- Residents are to be advised when works involving loud noise or intense vibrations are to occur

Note that outside of standard work hours for float deliveries will need to have RMS written approval, and Council and affected neighbors must be notified in writing.

4.3.6 Traffic Management and Control

A Traffic Control Plan (TCP) will be prepared by a qualified Roads and Maritime Services accredited work site traffic designer. This must be submitted to the Principal/Superintendent for approval. Authorisation for each individual traffic arrangement, rearrangement, configuration, and sequence duration is required to be staged with progression of the works. TCP's are to be prepared and submitted for approval prior to works, on an ongoing basis.

TCP requires engagement with the following stakeholders but not limited to:

- Council
- Roads and Maritime Services (RMS)
- Service providers
- Bus company
- Adjacent property owners

The traffic control plan will address both internal and external traffic management including:

- Safety Management Plan outlines on site communication
- No compromise of access for businesses
- Controls to ensure safe access for pedestrians
- Controls provided for Emergency Vehicles will be always given free uninterrupted access through the work area.
- TCP promote safety of workers, including state safety requirements including Work Health and Safety (WH&S)
- Roads and Maritime Services requirements satisfied
- Traffic control devices provide provisions for warnings and advice for road users
- Capacity will be provided on site to provide basic emergency traffic control that may be required at an incident. Such items will include cones and signs.
- Dry absorbent materials and a Spill Kit will be available on site to clean up spills from work and traffic incidents.
- TCP outlines location of temporary barriers in accordance with RMS requirements
- The haul routes will be maintained by a road sweeper and water cart where necessary to prevent Foreign Object Damage (FOD) on the routes.
- Emergency escape routes for traffic controllers.

4.3.7 Waste and Contamination Management, Stockpiles and Storage

Waste Management is used to dispose of solid waste from the site and disposed of in a sensible and appropriate manner. Waste Management will be controlled under the following measures:

- Any waste stored onsite is to be stored in an approved stockpile or in a designated area
- Solid waste is to be removed off site and disposed of in an appropriate manner in regard to the material and classification of the waste
- No vegetation burning is to occur at any time before, during or after the construction works. Vegetation is to be mulched, chipped, reused, or disposed of appropriately.
- Designated tip sites with specific categories are to be made available for waste disposal.
- Recycle all materials that can be recycled (i.e., steel, timber, concrete, plastic etc)
- Continuous site clean-up

Management of site remediation or contamination measures, if applicable, are to be in accordance with the recommendations of the Development Consent and Detailed Site Investigation. Measures and supplementary reports may include, but are not limited to, Remedial Action Plans (RAP) and Asbestos Management Plan (APM).

The civil works or demolition contractor is to produce an Unexpected Finds Protocol prior to civil works commencing to address any potential unexpected contamination encountered during construction works.

Stockpiles are to be approved on plans before starting the construction phase. No stockpile is to be created without consent of NSW Land and Housing Corporation, Superintendent, and Fairfield City Council. Stockpiles are to be managed and examined regularly to prevent any dust or sediment that may be created. Measures are to be put in place to ensure that run-off does not occur. The management of both temporary and non-temporary stockpiles must be considered in the DMP and ESCP. The objective is to reduce and manage the impact of sediment run-off in soil stockpiles. The following control measures should be accounted for in the DMP, ESCP and approved plans:

- Stockpile location & orientation management
- Stockpile volume, height, and slope management
- Non temporary tarpaulin and vegetation controls
- Stockpile stabilisation controls
- Stockpiles of topsoil, sand, aggregate or other material capable of being moved by water shall be stored clear of any drainage line, easement, natural watercourse, footpath, kerb or roadside.

Note that Stockpiles expected to be in place for longer than 14 days are considered non-temporary.

Materials, plants and machinery, chemicals and fuels stored on site are to be stored in the appropriate conditions to the machine or substance. Storage of these products and materials are only to be available to those using the product or material, under no circumstance is anyone not authorised to engage with these. Measure to ensure these include:

- Differing products and chemicals are to be stored separately with clear labelling of what they are and what they are to be used for
- Chemicals and fuels stored onsite are to be at a minimum to reduce any risk of spillage or contamination
- A Material Safety Data Sheet is to be kept on file of all Materials used onsite and updated regularly
- All areas where materials and products are stored are to be locked and only available to those with authorisation.

4.3.8 Vegetation/Tree Protection

The objective of vegetation and tree protection is to minimise the impact of construction works on local flora.

A Vegetation Management Plan (VMP), if applicable, must be produced to show vegetation rehabilitation and management. The objective of tree and vegetation protection plans are to minimise the impact of construction works on the vegetative environments.

Arboricultural Impact Assessment CPS dated Oct 2022)

Tree preservation and removal is to be in accordance with the recommendations of the site Arboricultural Impact Assessment.

Vegetation Management Plan

The plan must be prepared strictly in accordance with Council's Vegetation Management Plan Guideline (available on Fairfield City Council's website). The Plan must also be prepared by a suitably qualified bush regenerator or restoration ecologist with a minimum Certificate IV in Conservation Land Management.

The Vegetation Management Plan must also include details relating to:

- The wording and erection of signage at key locations.
- The location and type of the required temporary and permanent bushland protection fencing

Tree Protection Plan (TPP) must be prepared to manage and reduce the ramifications of construction works on Tree Protection Zones (TPZ). Any works commencing within a TPZ must have tree retention fencing around subjected trees or groups of trees. Plan should acknowledge requirements in AS4970: Tree Protection on Development Sites

Tree Protection Fencing

- Stockpiling of materials within TPZ
- Placement of fill within TPZ
- Parking of vehicles within the TPZ
- Compaction of soil within the TPZ
- Cement washout and other chemical or fuel contaminants within TPZ; and
- Damage to tree crown.

Tree Protection Signage

Prior to any works commencing on site a Tree Protection Zone sign must be attached to the Tree Protection Fencing Stating Tree Protection Zone No Access (the lettering size on the sign shall comply with Authority Ruling). Access to this area can only be authorised by the project arborist or site manager.

Mulching within Tree Protection Zone

Prior to any works commencing on site all areas within the Tree Protection Zone are to be mulched with composted leaf mulch to a depth of 100mm.

Trenching within Tree Protection Zone

Any trenching for installation of drainage, sewerage, irrigation, or any other services shall not occur within the Tree Protection Zone of trees identified for retention without prior notification to Council (72 hours' notice) or under supervision of a project arborist.

If supervision by a project arborist is selected, certification of supervision must be provided to the Certifying Authority within 14 days of completion of trenching works.

4.3.9 Fauna (and fauna habitat) protection, recovery, and relocation

The introduction of construction and development work is likely to disrupt local fauna. A fauna action plan will be prepared to manage, mitigate, and promote the protection, recovery, and relocation of displaced fauna due to construction works.

Controls:

Fauna Action Plan

- The fauna action plan must contain relevant details for preclearance surveys and fauna protection, rescue, and relocation relevant to each precinct. The plan must be prepared by a suitably qualified and experienced ecological consult with relevant experience in flora and fauna survey and rescue.

Tree Removal and Fauna Protection

- Tree preservation and removal is to be in accordance with the recommendations of the site Arboricultural Impact Assessment.
- During any tree removal, an ecologist is to be present to re-locate any displaced fauna that may be disturbed during tree/vegetation clearing and/or removal of old buildings. Any injured fauna is to be appropriately cared for and released on site when re-habilitated.
- Trees must be lopped in a way that the risk of injury or mortality to fauna is minimised, such as top-down lopping, with lopped sections gently lowered to the ground, or by lowering whole trees to the ground with the “grab” attachment of a machine.
- Any injured fauna is to be placed into the hands of a wildlife carer (please note only appropriately vaccinated personnel are to handle bats).
- In addition to the above, the procedures within the approved Fauna Action Plan are to be always followed and adhered to.

4.3.10 Heritage and Archaeology

During the construction stage the importance of recognising and protecting heritage items and objects is at a high. A heritage item may be significant due to its social, historic, aesthetic, technical or spiritual reasons. The project superintendent should be notified immediately of the find. Should any items be uncovered, during the demolition stages of a project, appropriate heritage consultants can be contacted to ensure any historical artefact, item or object is tested and determined how significant it is.

If an object is uncovered, the contractor is to take the following initial steps:

1. Use caution to not disturb the site or remove any artefacts or objects
2. Make a record of the site or object by taking photographs, recording the position and write a description of the find.
3. Report the find to the project superintendent

4.4. Monitoring and Review

Environmental Management activities and controls are to be consistently reviewed and altered to suit the works taking place. Compliance to all acts, measures and provisions is a must and is to be monitored by the Project Manager, Superintendent and Site Manger.

All Environmental activities are to be monitored and controlled on a regular basis, this includes noise, dust, and contaminant control.

4.5. Summary of Environmental Management

The table below highlights the key ideas of each aspect from this section:

Item	Environmental Management Aspect	Controls	Page No.
4.2	Environmental Risk Assessment	Describes the activities, risk level, frequency of the risk and what the consequence of the activity may be. It is to be noted within the assessment that the risks do not consider occupational exposure involving workers on site.	9
4.3	Environmental Controls	All Guideline and measures mentioned within this section all comply to the conditions of the Fairfield City Council.	9
4.3.1	Neighbour Notifications	To keep a healthy relationship between neighbouring residents during the construction process, it is important to ensure that communication is consistent throughout the whole process. Including: <ul style="list-style-type: none"> • Project updates issued regularly, should include timing and any potential delays • Notifications of when the commencement to works are to begin and/or be delivered • Any concerns made valid by residents are to be appropriately dealt with and be consolidated with the appropriate party of the workplace. 	9
4.3.2	Dewater of Sites	A Dewater Report must be provided to verify that de-watering of the site does not impact water quality, contamination, and aquatic fauna in local areas. A dewatering plan is also required to ensure management strategies and controls are in place to mitigate effects on the local ecosystem.	10
4.3.3	Erosion, Sediment and Dust Control	Erosion, Sediment and Dust controls are processes that assist in managing products within the construction site to prevent debris or weathering from the site. The aim of erosion and sediment control is to prevent any health risks that may arise from these events happening.	10
4.3.4	Air Quality	Air Quality is a measure of how clean or polluted the area is. During the construction process it is a must to keep the air quality at a steady and healthy level to ensure no health risk is made due to emissions or releases to the air.	11
4.3.5	Noise and Vibration	To ensure noise and vibration at all a minimum during the works we will provide guidelines and measures around certain machine and power usage that may create a large amount of distribution to neighbouring residents.	12
4.3.6	Traffic Management and Control	A traffic control plan (TCP) will be prepared by a suitably qualified Roads and Maritime Services accredited work site traffic designer. TCP's are to be prepared and submitted for approval prior to works, on an ongoing basis.	13

Item	Environmental Management Aspect	Controls	Page No.
4.3.7	Waste Management, Stockpiles and Storage	<p>Waste Management is used to dispose of solid waste from the site and disposed of in a sensible and appropriate manner. Waste Management will be controlled under the following measures:</p> <p>Stockpiles are to be approved on plans before starting the construction phase. No stockpile is to be created without consent of NSW Land and Housing Corporation, J. Wyndham Prince and the Fairfield City Council. Stockpiles are to be managed and examined regularly to prevent any dust or sediment that may be created. Measure are to be put in place to ensure that run-off does not occur. The management of both temporary and non-temporary stockpiles must be considered in the in DMP and ESCP. The objective is to reduce and manage the impact of sediment run-off in soil stockpiles.</p> <p>Materials, plants and machinery, chemicals and fuels stored on site are to be stored in the appropriate conditions to the machine or substance. Storage of these products and materials are only to be available to those using the product or material, under no circumstance is anyone not authorised to engage with these.</p>	14
4.3.8	Vegetation/Tree Protection	<p>The objective of vegetation and tree protection is to minimise the impact of construction works on local flora.</p> <p>Vegetation Management Plan (VMP) must be produced to show vegetation rehabilitation and management. The objective of tree and vegetation protection plans are to minimise the impact of construction works on the vegetative environments.</p> <p>Tree protection plan (TPP) must be prepared to manage and reduce the ramifications of construction works on tree protection zones (TPZ). Any works commencing within a TPZ must have tree pretention fencing around subjected trees or groups of trees.</p>	15
4.3.9	Fauna Protection, Recovery and Relocation	<p>The introduction of construction and development work is likely to disrupt local fauna. A fauna action plan will be prepared to manage, mitigate, and promote the protection, recovery, and relocation of displaced fauna due to construction works.</p>	16
4.3.10	Heritage and Archaeology	<p>A heritage item may be significant due to its social, historic, aesthetic, technical or spiritual reasons. An Archaeologist is to be available at all times, practically in the demolition stages of a project, to ensure any historical artifice, item or object is tested and determined how significant it is.</p>	16
4.4	Monitoring and Review	<p>Environmental Management activities and controls are to be consistently reviewed and altered to suit the works taking place. Compliance to all acts, measures and provisions is a must and is to be monitored by the Project Manager, Superintendent and Site Manger.</p> <p>All Environmental activities are to be monitored and controlled on a regular basis, this includes noise, dust, and contaminant control.</p>	16

5. MATTERS TO BE MEASURED

5.1. Public Safety and Amenity

Public wellbeing and the security of amenities are essential to guarantee that the neighbours, the more extensive public, and different partners are shielded from exercises related with the advancement period of the site. The Contractor is to consider techniques to ensure a safe and secure workplace and guarantee that public security and wellbeing is appropriately maintained.

The impact of a task to the residents surrounding should be taken into consideration during the construction phase. Any noise or movement that may impact the surrounding public is to be carefully examined and made aware of to those directly affected.

5.2. Protection of Public Assets

Preventative measures are to be undertaken to minimise potential damage to public assets due to construction works. Examples of public assets include reserves, parks, laneways, streets, footpaths signage, etc. The commencement or authorisation of construction works are not to start until Council have been notified in conjunction with the relevant Development Application (DA) consent. All assets damaged during construction works must be rectified. Immediate rectification works must be conducted in the case of damage impeding public safety. A construction liability period will apply during the duration of works, where the responsibility of damage incurred in this period will be with the contractor or relevant party conducting the construction works.

The interest of public asset protection is to:

- Protect public safety and persons working, residing, or passing within the area of construction work
- Maintain and protect public infrastructure

5.3. Construction Waste on Public Land

Construction Waste on Public Land is not to occur. Construction waste is to be stored onsite in a designated area, sorted into disposable categories. If a skip bin or large waste bin is needed to be stored on public land, a permit is to be obtained. Authorities ensure that public wellbeing and security is always protected, and no damage is to be caused to private or council property. All waste is to be disposed of correctly and in the safest way possible.

5.4. Onsite Construction Waste

Onsite construction waste is to be stored and sorted on-site in a designated location and manner that does not present a risk to workers. There is to be a Waste Management Plan put in place to ensure that the act of waste removal is done correctly and carefully. All measures put in place are to be in effect from the beginning of construction works to the end, when the site is both occupied and unoccupied. All materials stored on site are to be examined before being disposed of, to ensure they are being disposed correctly.

5.5. Removal of Hazardous Materials

Removal of Hazardous or Dangerous Materials from the site are to be disposed of in accordance with the EPA Act and Remediation Action Plan (RAP), if applicable. Removal of dangerous materials is to be done by a professional if wellbeing is at risk.

5.6. Managing Complaints

Any complaints that are brought to attention are to be dealt with in a professional manner. All complaints are to be recorded with the issues, why it was raised, who raised it and what the solution was. Any action taken is to be recorded and filed to be referred to, if needed, later. The Project Manager is to deal with complaints or issues risen. The Project Manager is to ensure that the complaint is taken care of in a respectful manner with a resolution as to how they are to action the complaint.

6. PROJECT WRAP UP

6.1. Work as Executed (WAE) Drawings and Certification's

All Work as Executed (WAE) Plans are to be completed during the construction period or no later than (30) days after completion of works. These are to be forwarded to all relevant persons for review, comment, and approval.

6.2. Handing-Over Procedures

Handing-over is to include a minimum of the following:

- All project record documents and warranties
- All operation and maintenance manuals and inspection procedures
- A final clean-up of the site

The Project Manager is to ensure all steps are completed before the final handover.

6.3. Practical Completion

Before requesting an inspection to determine partial completion for a site, the contractor is to complete the following, if needed, with help from the Project Manager:

- A list of items to be completed or resolved, reasons as to why they need to be or not to be completed and the value of items
- Submit all warranties, final certifications, maintenance service agreements, workmanship bonds and similar documents
- Obtain and submit releases permitting unrestricted use of works, access to site and tools, services, and utilities – include all related documents
- All maintenance records, project reports, damage or settlement surveys, final completion photographs of site, and other relevant documents are to be prepared and submitted
- All materials such as tools, spare parts or extra materials are to be delivered to area/s directed by the Project Manager. All items are to be labelled appropriately
- Start-up testing of systems is to be completed
- All construction amenities, facilities and tools are to be removed from the site
- Complete all final clean-up/touch-up duties where needed

If the inspection is not successful, all uncompleted or unsatisfactory identified is to be completed or amended before requesting a second inspection.

6.4. Final Completion

Before requesting a final inspection for the site, the Contractor is to complete the following, if needed, with help from the Project Manager:

- A final submission application for payment of release of security
- Submit evidence of final, insurance requirements being complied
- Completion of defect list provided, certified copy of the list is to state that each item is completed, resolved, and accepted.

All items are to be submitted by the contractor to request a Final Inspection for Acceptance.

7. KEY CONTACT PERSONNEL

Project Details	
Principal Contractor Details:	_____
Directors Name:	_____
Company Name:	_____
Company Business Address:	_____
Company Contract Number:	_____
Contract Details of Person Responsible for Compliance with CEMP	
Name:	_____
Contact Number:	_____
After Hours Contact Number:	_____
Contact Person in Control of Site	
Name:	_____
Contact Number:	_____
After Hours Contact Number:	_____

Internal Contacts		
Position	Name	Phone
Project Manager		
Superintendent		
Site Manager		
Site Engineer		
WHSE Officer		
Other		
Other		

