



Activity Approval

Division 5.1 of the Environmental Planning & Assessment Act 1979

Hunter Water, a determining authority under Section 5.1 of the *Environmental Planning and Assessment Act 1979*, approves the activity referred to in Schedule 1 below, subject to the conditions included in Schedules 4 to 7.

Schedule 1		
1	Proposal name	Pinny Beach 2 Reservoir
2	Land on which proposal is located	Lot 131 DP 604167, Lot 2 DP 1240365, Lot 549 DP 40411, Lot 8 DP 1240365 and unformed road reserve of the corner of Old Pacific Highway and Scenic Drive.
3	Developer works deed no.	2020-1392
4	Applicant	Wakefield Ashurst Developments Pty Ltd and Northern Managers Construction Pty Ltd
5	Accredited design consultant	ADWJ Pty Ltd
6	REF consultant	ADWJ Pty Ltd
7	REF revision no.	C
8	REF date	8/3/2024 - received by HWC on 12/3/2024

Schedule 2		
1	Approval to operate from	23/04/2024
2	Approval to lapse on	23/04/2026
3	Approval Extension available until (upon application to Hunter Water)	23/04/2027

Schedule 3			
	Name	Role	Date
1	Alison Ford	Environmental Planner	23/04/2024
2	Shaunna Giffin	Design Assurance Engineer	23/04/2024
3	Angus Seberry	Group Manager	23/04/2024
4	N/A	Executive Manager (Executive Manager sign-off required for projects >\$5million)	

1.0 Definitions

Activity	The activity as described in the REF in Schedule 1
AHIP	Aboriginal Heritage Impact Permit
Applicant	Person or organisation who seeks to carry out the approved activity
ASS	Acid Sulphate Soils
ASSMP	Acid Sulphate Soils Management Plan
CEMP	Construction Environmental Management Plan
EEC	Endangered Ecological Community
ESCP	Erosion and Sediment Control Plan
Incident	A set of circumstances that causes or threatens to cause material harm to the environment
IMP	Incident Management Plan
Non-compliance	An occurrence, set of circumstances or development that is a breach of this approval but is not an incident
NPW Act	National Parks and Wildlife Act 1974
NRAR	Natural Resources Access Regulator
OOHW	Out of Hours Work
Proposal	The activity assessed in the REF included in Schedule 1.

PVA	Polyvinyl Acetate
REF	Review of Environmental Factors
TMP	Traffic Management Plan
TPZ	Tree Protection Zone
VENM	Virgin Excavated Natural Material

2.0 Administrative Conditions

2.1 Obligation to minimise harm to the environment

The Applicant must implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the activity.

2.2 Terms of Approval

1. The Applicant must carry out the activity:
 - (a) generally in accordance with the REF specified in Schedule 1, and
 - (b) in accordance with the approval conditions included in Schedules 4 to 7.
2. In the event of any inconsistency between the conditions of approval and the REF specified in Schedule 1, the conditions of approval shall prevail to the extent of that inconsistency.
3. A copy of the REF included in Schedule 1, together with a copy of the activity approval, must be retained at the proposal site for the duration of works.

3.0 Environmental Management and Reporting

3.1 Construction Environmental Management Plan

Prior to commencing the activity, the Applicant must prepare a Construction Environmental Management Plan (CEMP) for the activity. The CEMP must:

- (a) provide the strategic framework for environmental management of the activity;
- (b) identify the statutory approvals that apply to the activity;
- (c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the activity;
- (d) describe the procedures that would be implemented to:
 - i. keep the local community and relevant agencies informed about the environmental performance of the activity;
 - ii. receive, handle, respond to, and record complaints;
 - iii. resolve any disputes that may arise;
 - iv. respond to any non-compliance;
 - v. respond to emergencies; and
- (e) include:
 - i. references to any documents referenced under the conditions of this approval; and
 - ii. a clear plan depicting all the monitoring to be carried out in relation to the activity.

The Applicant must provide a copy of the CEMP to Hunter Water prior to commencement of construction works and must implement the CEMP for the duration of works.

3.2 Induction

All workers must be inducted on the sensitivities of the work site and the mitigation measures included in Schedules 6 and 7.

3.3 Changes to Proposed Activity

1. The Applicant must advise Hunter Water of any changes to the proposal as described in the REF in Schedule 1, prior to any changes being implemented on site.
2. If required by Hunter Water, the REF must be updated to reflect the revised proposal and submitted to Hunter Water.
3. If required, Hunter Water will issue a revised activity approval, which must be complied with during construction of the revised proposal.

3.4 Incident Notification

Hunter Water must be notified in person (phone) and in writing immediately after the Applicant becomes aware of an environmental incident. The notification must identify the activity (including the location and developer works deed number), and specify the nature of the incident.

3.5 Non-Compliance Notification

Hunter Water must be notified in writing within 7 days after the Applicant becomes aware of any non-compliance with the conditions of this approval.

The notification must identify:

- (a) the development and the development works deed number
- (b) set out the condition of approval that the development is non-compliant with
- (c) the way in which it does not comply
- (d) the reasons for the noncompliance (if known)
- (e) what actions have been done, or will be, undertaken to address the noncompliance.

3.6 Inspections and Audits

Hunter Water reserves the right to conduct inspections and audits of the activity to assess whether the activity complies with the requirements of this approval. The Applicant must arrange access to the construction site and provide resources for any interviews and site inspections. The Applicant must review any inspection or audit reports provided by Hunter Water, and implement the recommendations to the satisfaction of Hunter Water.

Schedule 4			
Reference	Notification Requirements	Responsibility	Timing
N1	No notification requirements.	N/A	N/A

Schedule 5			
Reference	Approval Requirements	Responsibility	Timing
A1	A s138 Road Opening Permit must be obtained from Lake Macquarie City Council prior to commencement of construction works. A copy of the s138 Road Opening Permit must be provided to Hunter Water prior to commencement of construction works.	Design consultant / construction contractor	Prior to commencement of construction works
A2	If dewatering is required, a Water Supply Work Approval (WSWA) must be obtained from NRAR / Office of Water prior to commencement of construction works. A copy of the WSWA must be provided to Hunter Water prior to commencement of construction works.	Design consultant / construction contractor	Prior to commencement of construction works
A3	If more than 3ML is to be removed during dewatering, a Water Access Licence (WAL) must be obtained from NRAR / Office of Water. A copy of the WAL must be provided to Hunter Water prior to the commencement of dewatering activities.	Design consultant / construction contractor	Prior to commencement of construction works

Schedule 6			
Reference	Project Specific Mitigation Measures	Responsibility	Timing
PS1	The Subsidence Advisory Notice of Determination Ref: TBA23-01701 dated 6 July 2023 must be complied with.	Construction contractor	Prior to commencement of construction works
PS2	Where excavated soil is to be used in site restoration, it must be excavated and stockpiled in sequential layers corresponding to the existing soil profile. Topsoil and leaf litter must be removed first and windrowed in separate stockpiles of less than 1m in height on the upslope side of excavations. Soil layers must be replaced sequentially so that the soil profile is restored as closely as possible to its pre-work status. The natural landform of the site(s) must be restored as closely as possible to the pre-works condition. Exposed areas must be rehabilitated as soon as possible following excavation and completed no more than 10 days after completion of works.	Construction contractor	During construction works

PS3	<p>Any excavations must be conducted in accordance with Hunter Water Supply Code of Australia WSA 03-2011-3.1 Hunter Water Edition Version 2 Part 2: Construction [7] including any excavations deeper than 1.5m must be supported by benching or layback where practical. In the event that geometrically the trench cannot be benched safely, utilisation of shoring boxes is required.</p> <p>Where personnel are to enter excavations, options for short-term excavations include benching or battering of the excavations to 1H:1V or the support of excavations within the residual soil and extremely weathered rock profile. Short-term excavations within highly weathered or better rock may be battered at steeper than 1H:1V and may not require support, however this must be subject to specific geotechnical assessment.</p> <p>Long-term excavations must be either battered at 2H:1V or flatter and protected against erosion or be supported by engineer designed and suitably constructed retaining walls. Excavations may be battered steeper than 2H:1V in rock materials, subject to specific geotechnical assessment.</p>	Construction contractor	During construction works
PS4	<p>Water main trench backfill must be placed and compacted in accordance with Hunter Water Supply Code of Australia WSA 03-2011-3.1 Hunter Water Edition Version 2 Part 2: Construction [7].</p> <p>Compaction must be achieved over the entire area. This may require benching to allow compaction equipment to achieve full compaction to the edge. Alternately, the use of hand compaction equipment may be required.</p> <p>Prior to mechanical compaction of fill material above pipes, sufficient cover must be provided above the pipe to prevent damage. A minimum cover of 200mm must be provided for hand-held or walk behind equipment and 300mm for ride-on machines.</p> <p>Shoring or shields must be maintained on site during backfilling to accommodate hand compaction work and to accommodate personnel required to enter trenches to verify compaction.</p> <p>Particular care must be taken in the choice of compaction equipment and methods where construction is to be undertaken in the vicinity of existing structures such as Hunter Water infrastructure.</p> <p>Observation and monitoring of nearby structures (e.g. pavement) for any signs of distress must be undertaken prior to and in conjunction with compaction.</p>	Construction contractor	During construction works
PS5	<p>Dilapidation surveys must be undertaken on structures adjacent to the proposed works prior to the commencement of construction.</p> <p>Inspection of proposed fill materials must be made by a geotechnical professional to confirm suitability and for guidance on any potential reconditioning requirements, including moisture conditioning.</p> <p>Prior to removal of any excavated materials from the site, classification is required in accordance with the EPA guidelines "Waste Classification Guidelines, Part 1: Classifying Waste [7]". Excavated existing fill material must be stockpiled separately to the underlying natural material and must be assessed separately for waste classification and offsite disposal.</p>	Construction contractor	Prior to and during construction works
PS6	<p>Soils within the area are known to generally range from mild to non-aggressive for buried concrete structures. Structures being designed for these locations must consider a mildly aggressive condition as a minimum.</p>	Design consultant and construction contractor	Prior to and during construction works
PS7	<p>Variations in ground conditions are likely to occur between testing locations. If conditions other than those described in the REF are encountered, further advice must be sought. During excavation, site visits must be made by an experienced geotechnical engineer or engineering geologist to inspect founding conditions, excavation stability and other issues as discussed in the REF.</p> <p>The construction inspections must also provide confirmation of suitable foundation for the pipes, particularly where lower strength layers are encountered.</p> <p>During compaction of the materials, layer thickness and coverages by the compactor must be carefully controlled and in situ density and compaction tests undertaken.</p>	Construction contractor	During construction works

<p>PS8</p>	<p>An offset of at least 10m from the edge of the vertical face is required for the reservoir. The 10m set-back recommendations are from the edge of the resulting cut-face after completion of subdivision earthworks. Where the reservoir is constructed first or subdivision earthworks do not occur, remediation of the cut face will be required regardless similar to those proposed for the earthworks.</p> <p>Preparation of the foundation must involve removal of all existing filling and any deleterious material (including ponded water and vegetation) to a suitable foundation that must be inspected by a geotechnical consultant to confirm conditions. Where required after stripping, appropriate controlled filling in accordance with AS3798 will be required to ensure a level platform for the proposed gravel bed. Fill material must be assessed for suitability by an experienced geotechnical consultant as well as the stripped foundation for any key-in and benching requirements that may be necessary.</p> <p>The founding conditions must be assessed by a geotechnical consultant or experienced engineer to confirm suitable conditions.</p> <p>All footings must be founded below any topsoil, uncontrolled fill or deleterious materials. All footings for the same structure must be founded on strata of similar stiffness and reactivity to minimise the risk of differential movements.</p> <p>All footing excavations must be inspected prior to installation by a suitably experienced engineer or geotechnical consultant to confirm that the founding conditions are as described in the REF.</p> <p>All loose material must be cleared from the footing excavations before concrete is poured.</p>	<p>Design consultant and construction contractor</p>	<p>Prior to and during construction works</p>
<p>PS9</p>	<p>Erosion and sediment control measures must be implemented in accordance with the approved Sediment and Erosion control plan to be prepared prior to commencement of civil works on site. Erosion and sediment control measures must include:</p> <ul style="list-style-type: none"> * Identification of potential erosion areas; * Installation and maintenance of flow, erosion, sediment and nutrient control within the site during construction ahead of pavement and kerb establishment; * Separation of 'dirty' construction water from the 'clean' natural overland flow water; * Coordinated work practices aimed at minimising land disturbance; * Minimise vegetation disturbance to surrounding retained vegetation; and * Routine site inspections of drains, channels, sediment control structures and water quality. 	<p>Construction contractor</p>	<p>During construction works</p>
<p>PS10</p>	<p>All fuels, chemicals and liquids must be stored in an impervious bunded area away from:</p> <ul style="list-style-type: none"> * Rivers, creeks or any areas of concentrated water flow; * Flooded or poorly drained areas; * Slopes above 10%; <p>The storage and handling of fuels and chemicals must comply with Australian Standard AS1940.</p> <p>A 'spill kit' must be kept on site at all times for potential chemical or fuel spills.</p> <p>Any fuel, lubricant or hydraulic fluid spillages on land must be collected using absorbent material and the contaminated material disposed of at a licensed waste depot.</p>	<p>Construction contractor</p>	<p>During construction works</p>

<p>PS11</p>	<p>The CEMP must include a Site Plan clearly delineating the designated work area, location of EEC vegetation and hollow-bearing trees; All contractors must be specifically advised of the designated work area. The following activities must not occur outside of designated work areas to minimise environmental impacts: * Storage and mixing of materials; * Vehicle parking; * Establishing construction compound; * Siting material laydown areas; * Liquid disposal; * Machinery repairs and/or refuelling; * Combustion of any material; * Any filling or excavation including trenching, topsoil skimming and/or surface excavation; All construction vehicles/machinery must use the designated access from main roads. Speeds must be limited to reduce the potential of fauna strike and to reduce dust generation; Plant and machinery must be cleaned of any foreign soil and seed prior to being transported to the site to prevent the potential spread of weeds and Phytophthora cinnamomi; If machinery is transported from an area of confirmed infection of Phytophthora cinnamomi to the site, stringent wash down must be completed before leaving the area, removing all soil and vegetative material from cabins, trays, and under carriages; All liquids (fuel, oil, cleaning agents, etc.) must be stored appropriately and disposed of at suitably licensed facilities. Spill management procedures must be implemented as required; and Rubbish must be collected and removed from the site.</p>	<p>Construction contractor</p>	<p>During construction works</p>
<p>PS12</p>	<p>Close up any open trenches at the end of each day to minimise potential trapping or injury to fauna. If this is not possible, provide a means by which fauna can escape e.g. branch extending out of trench. Check trenches / pits / excavations each morning for trapped fauna. If safe to do so, use gloves to pick up the animal and place in a cloth bag, pillow case or box and keep in a quiet, dark, warm (but not hot) location until the animal can be transferred to a wildlife carer. Ensure that the contact details for the local wildlife rescue organisation (Hunter Wildlife Rescue 0418 628 483 or 0418NATIVE) are displayed prominently in the CEMP and site office. Do not approach or attempt to handle snakes. If relocation of a snake is required, section off the area in which the snake is located and contact a licenced reptile handler (https://www.environment.nsw.gov.au/questions/snakeremoval). Never deliberately kill a snake as all native snakes are protected under NSW legislation.</p>	<p>Construction contractor</p>	<p>During construction works</p>
<p>PS13</p>	<p>The extent of vegetation clearing must be clearly identified on construction plans. Clearing limits must be demarcated with highly visible flicker tape to ensure clearing does not extend beyond the required area.</p>	<p>Construction contractor</p>	<p>During construction works</p>
<p>PS14</p>	<p>A suitably qualified ecologist must undertake pre-clearance surveys prior to any vegetation clearing works occurring on site. Preclearance surveys must be undertaken in advance of each clearing/trenching stage, as follows: * Prior to the commencement of any vegetation removal, a preclearance survey must be conducted by the Project Ecologist to identify and flag any areas containing threatened flora (T. juncea), demarcate the areas containing swamp sclerophyll vegetation (EEC) and significant habitat features, which include but are not limited to: o Tree hollows; o Nests; o Arboreal termitaria; o Any areas observed to be currently utilised by BC Act or EPBC Act listed threatened fauna; * During the pre-clearance survey, any significant habitat features or trees that are known to have resident fauna present and all hollow-bearing trees must be: o Marked around the trunk of the tree at approximately 1.5m high with a 'H' marked several sides of the trunk using fluorescent spray marking paint; and/or o Marked with highly visible flagging tape. * At the time of hollow-bearing tree mark up, the civil contractor and project ecologist must walk the pegged (or with suitably accurate survey instrumentation) alignment and determine the exact number of habitat trees to be removed. For each tree consideration must be afforded for alternates to felling the tree such as minor adjustments in trenching and construction buffers at the tree location; * Mark boundary between sensitive vegetation and Subject Site including appropriate buffers for TPZ's and T. juncea; * All recorded clumps of T. juncea must be marked with highly visible flagging tape prior to construction works.</p>	<p>Construction contractor</p>	<p>Prior to construction commencing</p>

PS15	<p>Contractors undertaking vegetation clearing and construction works on site must observe the following protocols to mitigate the risk of damage to or destruction of trees between the Site and adjacent bushland.</p> <p>To ensure retained trees within the site are protected during development works, the following protocols must be followed by Contractors:</p> <ul style="list-style-type: none"> * Clearing limits and the site boundary must be identified on all design, construction, and operational drawings as well as sensitive area drawings; * Prior to any vegetation clearing occurring on site, high visibility flicker tape (or similar) must be installed at the boundary between the infrastructure stage to be cleared and Reserves or other retained vegetation areas; * No felled trees are to impact retained vegetation, to minimise this occurring all trees adjacent to the site boundary must be felled away from the retained vegetation; * Clearing and construction works are prohibited beyond the site boundary, including movements of vehicles or machinery, stockpiling cleared vegetation, and storage of waste, fill, or materials; * All site personnel must be inducted in relation to the importance of tree protection within the subject site and retained vegetation areas; * Mark Tree Protection Zone/s (TPZ) with star pickets and flicker tapes or similar at appropriate TPZ boundary for trees to be retained (in particular Habitat Trees) to be based on the method to assess TPZ and SRZ set out in AS4970-2009 Protection of Trees on Development Sites. 	Construction contractor	During construction works
PS16	<ul style="list-style-type: none"> * Tree removal must be strictly limited to the subject site; * The mulch/tub grindings generated from the removal of vegetation on Site must be reused on site; * Felled trees must be stockpiled and processed within marked clearing boundaries; * All removal of hollow-bearing trees or significant habitat features must be supervised by the Project Ecologist; * Hollow bearing trees or trees containing significant habitat features must be knocked with an excavator bucket followed by a waiting and observation period to alert any resident fauna that have not moved on from the tree and to encourage the fauna to vacate; * All trees must be slowly lowered (soft felled) where possible - machinery must ease the tree down to ground level by controlling the speed at which the tree descends to the ground, this will reduce impact to tree hollows and any potential fauna that may still be present during the removal process. Alternatively, trees may be sectionally dismantled or a similar technique that involves slowly lowering potential habitat (hollow limbs, termitaria) to the ground; * Following felling and when safe, the supervising Project Ecologist must inspect the tree and hollows for displaced fauna; * The Project Ecologist must confirm and record the number and size class of 'potential' hollows previously identified during pre-clearance surveys; * In the case of any displaced fauna, the Project Ecologist must contact a local wildlife carer; * Trees must be left in situ for a minimum of one (1) night before being removed, mulched or stockpiled, to allow any displaced fauna not observed during the post felling inspection to safely escape under the cover of darkness; * Felled trees must be stockpiled and processed within marked clearing boundaries; * Tree hollows must to be salvaged and stockpiled for reuse as fauna habitat wherever possible. 	Construction contractor	During construction works
PS17	<p>That topsoil must be separated during construction and spread over backfilled trenches.</p> <p>Native canopy trees to be removed on site must be used as mulch overlaid over the proposed pipeline.</p> <p>A qualified Ecologist must complete a post-construction inspection six (6) months after the project has been completed to assess the establishment of weed species and if revegetation must be undertaken.</p> <p>If natural regeneration has not occurred within six (6) months, hydromulching (native seed selection) can be utilised.</p> <p>Revegetation in the form of forbs and shrubs must occur in areas where it is recommended.</p> <p>Bush regenerators must be contracted if postconstruction weed assessment shows high levels of weed establishment.</p>	Construction contractor	Following construction works
PS18	<p>The EPBC Act approval issued by the Department of the Environment and Heritage dated 26th May 2004 must be complied with at all times.</p>	Construction contractor	During construction

<p>PS19</p>	<p>Prior to the commencement of construction works, appropriate temporary fencing must be erected, delineating the construction area and preventing incursion into off-site areas by equipment that may distribute weed seeds and revegetative material.</p> <p>Plant, machinery and vehicles must be cleaned of any soil/mud clods and weed material (including seed) prior to entering and exiting the site to prevent the potential spread of weeds.</p> <p>Daily pre-start checks must include inspections of all catch-points on vehicles and machinery (grills, tyres, wheel arches, chassis/undercarriage) to locate and remove weed material and soil/mud clods.</p> <p>Contractors are to be advised of their obligations under the Biosecurity Act to prevent, mitigate and minimise biosecurity risk, including the spread of weeds within and from the construction corridor.</p> <p>All priority weeds (i.e. Lantana, Bitou Bush, Ground Asparagus and Coolatai Grass) must be eradicated from the work area, either through physical removal and disposal at a facility licensed to accept green waste, or continual suppression throughout the construction period using appropriate means e.g. 'cut and paint' using herbicide.</p> <p>The designated work area must be inspected on a weekly basis for any fresh outbreaks of Priority Weeds. If any outbreaks are identified, they must be eradicated as soon as practicable.</p>	<p>Construction contractor</p>	<p>During construction works</p>
<p>PS20</p>	<p>A Construction Noise Management Plan must be prepared for the works. The plan must detail the specific measures to be implemented to reduce construction noise, including, but not limited to:</p> <ul style="list-style-type: none"> * The plan must cover aspects including site noise planning, scheduling of high noise activities, operator instruction, plant maintenance, plant noise audit and complaints management; * Construction hours must be limited to Monday to Friday 7.00am to 6.00pm, Saturday 8.00am to 1.00pm with no work on Sunday or public holidays where works adjoin residential receivers. If out of hours work is needed, additional approval and assessment would be required from HWC; * The main contractor must coordinate subcontractors so that there are no unnecessary cumulative impacts arising from the simultaneous activities of more than one (1) subcontractor. That is, planning to avoid, if practical, having more than one (1) noisy activity taking place in close proximity. It is good practice to appoint a single coordinator to oversee all significant noise producing activities; * All personnel working on the job including subcontractors and their employees must be made aware of their obligations and responsibilities with regard to minimising noise emissions; * Site inductions and toolbox meetings to all employees and subcontractors must include information about the need to minimise noise impacts to surrounding areas; * Contractors must familiarise themselves with methods of controlling noisy machines and alternative construction procedures. These are explained in AS2436-1981 "Guide to Noise Control on Construction, Maintenance and Demolition Sites"; * Any activities identified in in the risk assessment phase that are known or have the potential to create excessive noise must, where possible, be scheduled to occur at times to cause least annoyance to the community. Carrying out such work during early morning must be avoided. This includes start up and idling etc. of heavy machinery prior to commencement of work; * Mechanical plant must be silenced using best available control technology. Noise suppression devices must be maintained to manufacturer's specifications; * All equipment used on the site must have exhaust systems that have been recommended by the manufacturer as having the lowest associated noise for that machine; * Machines which are used intermittently such as rollers or other earthmoving machinery must either be shut down in the intervening periods between use or throttled down to a minimum; * Any portable equipment with the potential to create high levels of noise e.g. compressors, generators etc. must only be selected for use if it incorporates effective noise control. This equipment must be located where practical so that site sheds, or previously erected structures are between it and the nearest potentially affected receivers. Where no such barriers are present, this machinery must be located behind a portable screen or enclosure. 	<p>Construction contractor</p>	<p>During construction works</p>

PS21	<p>* Plant known to emit noise strongly in one (1) direction, such as a concrete agitator, must, where possible, be oriented such that the noise is directed away from the closest or the most noise sensitive receivers;</p> <p>* Regular and effective maintenance of all equipment including vehicles moving on and off the site must be conducted. Prompt attention must be given to repair of loose or rattling parts and broken equipment. All maintenance work must only be carried out by qualified persons;</p> <p>* When selecting contractors and/or equipment for the job, preference must be given to those with capacities best suited to the task at hand. That is the use of larger machines with excess capacity must be avoided unless these can be shown to be quieter than smaller capacity machines;</p> <p>* Site access must be designed such that delivery vehicles, and other heavy vehicles moving through the site can do so with minimum need to reverse;</p> <p>* Where possible, loading and unloading of plant and materials must be carried out away from potentially affected receivers;</p> <p>* No delivery of plant or materials must be accepted before 7am Monday to Friday or 8am on Saturday.</p>	Construction contractor	During construction works
PS22	<p>All grounds around the Chlorine Dosing Facility and Reservoir for a minimum distance of 10m in each direction or to the property boundary must be maintained as an Asset Protection Zone (Inner Protection Area) as detailed in the NSW Rural Fire Service's document 'Standards for Asset Protection Zones'.</p> <p>The Asset Protection Zone must be free of excess surface fuel and elevated fuel and must have minimum canopy. The Chlorine Dosing Facility, Reservoir and surrounding APZ's must be inspected prior to each fire season and corrective action or maintenance of the APZ and surrounding grasses occur at that time as necessary.</p>	Construction contractor/ Hunter Water	During construction works / operation
PS23	<p>The chlorination room must provide 120/120/120 FRL walls. Any openings to the chlorination room must to comply with section 9 (Flame Zone) of Australian Standard 3959 'Construction of buildings in bushfire-prone areas' 2018.</p> <p>The roof of the entire building must comply with Section 9 (Flame Zone) of Australian Standard 3959 'Construction of buildings in bushfire-prone areas' 2018.</p> <p>The entire building must be constructed to mitigate ember impact. This must be achieved by enclosing all openings (excluding roof tile spaces) or covering openings with a non-corrosive metal screen mesh with a maximum aperture of 2mm. Where applicable, this includes openable windows, vents, weepholes and eaves. External doors must be fitted with draft excluders.</p> <p>A 1.8m high colorbond fence must be erected at the perimeter of the Asset Protection Zone.</p> <p>A water hydrant control valve/65mm fitting must be provided adjacent to the reservoir.</p>	Design consultant and construction contractor	Prior to and during construction works

Schedule 7			
Reference	General Mitigation Measures	Responsibility	Timing
Type	Topography, Soils and Geography		
TSG1	The CEMP for the works must include an erosion and sediment control plan (ESCP). The ESCP must include, as a minimum, the type and location of erosion and sediment controls.	Construction contractor	Prior to works commencing
TSG3	All services in the vicinity of the works must be located in the field and noted in the work plans prior to excavation works - "dial 1100 before you dig".	Construction contractor	Prior to ground penetrating work
TSG4	<p>Erosion and sediment controls must be implemented and maintained consistent with Managing Urban Stormwater: Soils and Construction. Fourth Edition ed. Sydney (NSW) (Landcom, 2004) (the Blue Book). Controls must:</p> <ul style="list-style-type: none"> • be installed prior to disturbance commencing • prevent sediment moving off-site and sediment laden water entering any watercourse, drainage line, or drain inlets • divert clean surface flow around exposed areas and stockpiles • reduce water velocity and capture sediment • minimise the amount of material tracked onto paved surfaces • be cleaned out before 30% capacity of controls is reached. 	Construction contractor	Prior to commencing construction work, during construction work
TSG5	The existing groundcover in the footprint of the work must be maintained as far as possible to assist in erosion and sediment control.	Construction contractor	During works
TSG6	Topsoil must be stripped from areas to be excavated, stored separately to subsoil and then used to rehabilitate disturbed areas.	Construction contractor	During works
TSG7	Disturbed areas must be stabilised as soon as practical after completion of works. Erosion and sediment controls must not be removed until suitable ground cover is achieved in accordance with the Blue Book.	Construction contractor	During works

Reference	General Mitigation Measures	Responsibility	Timing
TSG8	Parking of vehicles and storage of plant/equipment is to occur in clearly designated existing cleared areas. Vehicles and machinery must not be parked on vegetated areas. Access must be on designated roads/tracks.	Construction contractor	During works
TSG9	Plant and equipment must be thoroughly cleaned down prior to arrival at and departure from the site to avoid introducing contaminants, soil and seeds and to prevent soil tracking onto roads	Construction contractor	During works
TSG10	All excavated material must be reinstated upon completion of the works, where possible. Where not possible, spoil material must be tested and disposed of at a suitably licensed waste facility.	Construction contractor	During works
TSG11	Weather forecasts must be checked prior to commencing works each day and scheduled to avoid heavy rain and flood events.	Construction contractor	During works
TSG12	If during construction activities, contaminated soils or potential acid sulphate soils are uncovered or are suspected to have been uncovered due to odour or discolouration of soils works must cease immediately, the Hunter Water Project Manager contacted and the appropriate management requirements determined.	Construction contractor	During works
Type	Hydrology and Water Quality		
HWQ1	An Incident Management Plan (IMP) must be prepared as part of the Contractor's CEMP and must include a contingency plan and emergency procedures for dealing with the potential spillage of fuel or other environmental incidents that may occur at the work site. The IMP must also contain procedures to deal with the unexpected onset of rainfall during the work period.	Construction contractor	Prior to works commencing
HWQ2	Regular visual monitoring of local water quality must be undertaken to identify potential turbidity from deficient erosion and sediment control measures, potential spills, or other water quality impacts.	Construction contractor	During works
HWQ3	The storage and handling of fuels and chemicals must comply with Australian Standard AS1940. This includes the provision of a 'spill kit' to be kept on site at all times for potential chemical or fuel spills. All staff must be made aware of the location of the spill kit and trained in its use.	Construction contractor	Prior to work commencing, and during works
HWQ4	If more than 3ML of groundwater will need to be dewatered the contractor must obtain a licence from the relevant authority. For all dewatering the volume must be reported monthly to Hunter Water.	Construction contractor	Prior to dewatering >3ML, prior to work commencing if identified in REF
HWQ5	No chemicals, fuels, and/or waste is to be stored or collected for disposal within or adjacent to drainage lines or unsealed surfaces.	Construction contractor	During works
HWQ6	Refuelling, fuel decanting and vehicle maintenance work must take place in a designated area on an impermeable surface.	Construction contractor	During works
HWQ7	Sewage diversion/bypass provisions must only take place if there are guarantees of adequate capacity in the receiving sewer for the flows and sewage surcharges or overflows will not occur.	Construction contractor	During works
HWQ8	Water from trench/pit de-watering must be pumped and either collected in tanks for appropriate disposal or filtered through geotextile fabric onto grass filter areas.	Construction contractor	During works
HWQ12	The final ground level of the restored sites must ensure no depressions or areas of concentrated surface flow to avoid channelling, waterlogging and erosion.	Construction contractor	During works
HWQ13	Water from excavations must be prevented from entering areas of native vegetation.	Construction contractor	During works
HWQ14	The area of soil surface disturbed and wetted must be kept to the minimum amount necessary to complete the works.	Construction contractor	During works
HWQ15	Daily checks of vehicles working on the construction works must be conducted to ensure that no oils or fuels are leaking.	Construction contractor	During works
Type	Biodiversity		
B1	The contact details of the local wildlife rescue organisation (i.e. Native Animal Trust Fund / Hunter Wildlife Rescue 0418 628 483 and Port Stephens Koalas 1800 775 625 or 1800 PS Koalas) must be documented in the CEMP and displayed in a prominent location (e.g. on wall of site office) in the event of dependent young (e.g. nestlings) or injured fauna being encountered on-site.	Construction contractor	Prior to works commencing

Reference	General Mitigation Measures	Responsibility	Timing
B2	Where removal of native vegetation is required, an appropriately licensed and qualified ecologist experienced in implementing flora and fauna management measures during vegetation clearing operations, including handling of sick or injured wildlife, must be engaged prior to commencement of on-ground works to conduct pre-clearance surveys and to be present during felling of hollow-bearing trees to retrieve dependent young or injured fauna.	Construction contractor	Prior to works commencing
B3	The full extent of approved vegetation clearance must be clearly documented and mapped in the CEMP. All construction activities, including but not limited to vegetation clearing, must be strictly confined to the construction corridor assessed in the ecological assessment report and/or REF.	Construction contractor	Prior to works commencing
B4	Prior to commencement of site establishment activities, construction personnel must be inducted on the ecological sensitivities of the area, including the locations of threatened species, procedures regarding hollow-bearing trees (as detailed in 'Procedure for Removal of Hollow-bearing Trees' below), and minimising vegetation removal (particularly threatened ecological communities and riparian vegetation).	Construction contractor	Prior to works commencing
B5	Material/equipment lay-down areas must be shown in the CEMP and located in cleared or degraded areas to prevent any damage to the surrounding vegetation or habitat.	Construction contractor	Prior to works commencing
B6	The locations of sensitive vegetation and habitat within / adjacent to the construction corridor that are to be protected from clearing, such as threatened plants, hollow-bearing trees, threatened ecological communities, riparian vegetation, coastal wetlands, creek lines, must be clearly marked as 'No-Go' zones on the Site Plan in the CEMP and delineated in the field using protective fencing, bunting or paraweb.	Construction contractor	Prior to works commencing
B7	Degradation or disturbance to areas of riparian (waterside) vegetation or banks of watercourses must be avoided to the greatest possible extent. Any such areas must be clearly identified in the CEMP.	Construction contractor	Prior to works commencing
B8	<p>PRE-CLEARANCE PROCEDURE: Where clearing of native vegetation is required, include a pre-clearance procedure in the CEMP and implement it prior to clearing vegetation, as follows:</p> <ul style="list-style-type: none"> · Determine and mark exclusion zones (identified EECs and threatened species habitat). · Prior to commencement of clearing, a Fauna Ecologist is to conduct a pre-clearance survey (including spotlighting and stagwatching) of the construction corridor to ascertain whether hollows are being used by hollow-dependent fauna such as possums, gliders, microbats and forest owls. · Prior to commencement of tree removal works, ensure that suitable equipment is readily available for handling injured or young fauna, i.e. gloves, handling bag (e.g. pillow case), box. · The pre-clearance survey is to also include a diurnal inspection of tree hollows to determine whether any are being utilized by native bees. Where hollows are found to be utilised by native bees, the hollow is to be relocated to a reserve at least 10 km from the proposed works site to prevent the species returning to the site. · Immediately prior to tree-felling check the canopy of each tree to ensure no nests or roosting fauna are present. · If roosting fauna are detected, the tree is to be left until the animal has relocated of its own accord (generally within 24 to 48 hours). · If a nest with dependent young is detected, contact Native Animal Trust Fund / Hunter Wildlife Rescue on 0418 628 483 to arrange for the nestlings to be taken into care. · Locate nearby habitat suitable for the release of fauna that may be encountered during the pre-clearing process or habitat removal. <p>If Koalas are observed on site:</p> <ul style="list-style-type: none"> - Observe the Koala to ascertain whether it is showing signs of Chlamydia i.e. wet bottom, red weepy eyes / conjunctivitis. - If Koala is showing signs of Chlamydia, contact Port Stephens Koala on 1800 775 625 or 1800 PS Koalas to arrange for the animal to be taken into care. - If Koala is not showing signs of Chlamydia, leave tree for 24 to 48 hrs to allow the animal to move on. - If the Koala has not moved on after 48 hrs, consult with the Project Ecologist for further advice. 	Construction contractor	Prior to works commencing, prior to clearing
B9	Materials, plant and equipment must not be stored within the drip-lines of any trees at the site(s) or near the site(s).	Construction contractor	During works
B10	Soil treatment areas and compounds must be fenced / sectioned off to reduce potential for contact with, or ingestion of, hazardous materials such as lime by domestic and native fauna.	Construction contractor	During works
B11	Vegetation clearing limits must be clearly established and communicated to personnel. No disturbance, removal or trimming of any native vegetation is to occur outside the designated approved clearing limits.	Construction contractor	During works

Reference	General Mitigation Measures	Responsibility	Timing
B12	Stockpile and laydown areas must be located in cleared areas and beyond tree protection zones (TPZs).	Construction contractor	During works
B13	To prevent damage to vegetation outside the boundaries of access tracks/roads and minimise the spread of weeds, vehicles and machinery must be restricted to designated access roads and tracks.	Construction contractor	During works
B14	Avoid the removal of large canopy trees, with or without hollows, as far as is practicable. If removal of hollow-bearing trees is required, follow the Procedure for Felling Hollow-bearing Trees.	Construction contractor	During works
B15	Where access tracks/roads run alongside areas of natural bushland, protective fencing or paraweb fencing must be installed along the boundaries of the track/road to prevent vehicles from inadvertently entering/damaging bushland.	Construction contractor	During works
B16	Where excavated soil is to be used in site restoration, it must be excavated and stockpiled in sequential layers corresponding to the existing soil profile. Topsoil and leaf litter must be removed first and windrowed in separate signposted stockpiles of less than 1m in height on the upslope side of excavations. Soil layers must be replaced sequentially so that the soil profile is restored as closely as possible to its pre-work status.	Construction contractor	During works
B17	Disturbed areas must be stabilised as soon as possible and in a progressive manner as works are completed.	Construction contractor	During works
B18	Excavations not back-filled at the end of the day must be covered prior to nightfall to avoid presenting an obstacle or trap to fauna. If this is not possible, provide a means by which fauna can escape (e.g. branch extending out of trench).	Construction contractor	During works
B19	Check trenches / pits / excavations each morning for trapped fauna.	Construction contractor	During works
B20	If any threatened species are discovered before or during the work that may be at direct risk from the proposed works, stop work immediately and contact Hunter Water.	Construction contractor	During works
B21	Contractors must familiarise themselves with Priority Weeds (as listed in the Draft Hunter Region Strategic Weed Management Plan 2023-27) with potential to occur at the work sites, to ensure they can readily identify such species if present.	Construction contractor	During works
B22	To help to prevent the spread of weeds, contractors must 'arrive clean and leave clean' by ensuring all clothing, hats, footwear, tools, equipment, machinery and vehicles are free of weed seeds, mud, soil and organic matter prior to entering and leaving the work site. Incorporate weed checks into daily pre-start checks to mitigate the risk of weeds being transferred within the construction corridor. Check potential sources of contamination on vehicles and machinery (i.e. check for seeds / weed propagules in tyres, radiator grills, cabin floor mats, machinery attachments, excavator tracks, etc).	Construction contractor	During works
B23	Weed management must be undertaken in accordance with species-specific control measures listed in NSW WeedWise and any applicable Local Control Orders issued under the Biosecurity Act 2015.	Construction contractor	During works
B24	Regular inspections of the disturbance footprint must be undertaken to identify and treat weeds.	Construction contractor	During works
B25	All weeds removed from a site(s) must be transported in a sealed container or bag and disposed at a licenced waste disposal facility.	Construction contractor	During works
B26	If a native animal encountered on-site requires removal, contact the local wildlife care group or the Project Ecologist (if one has been appointed) for advice on how to handle the animal safely or to ascertain whether a representative needs to attend the site to assist.	Construction contractor	During works
B27	Do not approach or attempt to handle snakes or large lizards such as goannas. If relocation of a snake or large lizard is required, section off the area in which the snake / lizard is located and contact a licenced reptile handler. Never deliberately kill a snake or lizard as all native snakes are protected under NSW legislation.	Construction contractor	During works
B28	Any ground timber (including hollow logs) within the development footprint must be retained and re-distributed onsite following completion of construction activities. Caution must be exercised when moving timber to minimise potential impacts to fauna that may be occupying hollow logs.	Construction contractor	During works
B29	The natural landform of the site(s) must be restored as closely as possible to the pre-works condition.	Construction contractor	During works
B30	Sites must be restored in a manner consistent with the surrounding area (e.g. turf, native vegetation plantings). The appropriate method of site restoration must be confirmed with Hunter Water and included in the CEMP.	Construction contractor	During works

Reference	General Mitigation Measures	Responsibility	Timing
B31	All temporary erosion and sediment control devices such as silt-stop fencing must be removed from the site at the completion of the works or when the site(s) are restored/stabilised.	Construction contractor	During works
B32	Rehabilitation of native vegetation areas must use brush matting and/or mulching and/or planting of appropriate local native tubestock and/or seeding with local provenance seed, whichever method(s) is/are deemed appropriate in the ecological assessment / REF.	Construction contractor	During works
B33	Tree stumps are to be left in situ to provide ground stabilisation.	Construction contractor	During works
B34	<p>REHABILITATION OF NATIVE VEGETATION:</p> <p>A suitably qualified bush regenerator with demonstrated experience in native revegetation must be engaged to undertake progressive rehabilitation of the disturbance footprint to maximise potential for re-establishment of native vegetation and to minimise the potential for long-term weed issues post-construction. 50% of the native vegetation cleared from the construction corridor must be used as brush-matting in cleared areas, with the remaining 50% mulched and spread on-site. Following completion of construction works, rehabilitation over the construction corridor must comprise the following:</p> <ul style="list-style-type: none"> · Ripping the ground surface to a depth of 300mm to reduce compaction and to allow rainwater to be stored in the soil profile. · Broadcast seeding with a native seed mix at a minimum application rate of 10kg of native seed per hectare. The seed mix is to consist of native groundcovers and shrubs indigenous to the vegetation communities to be rehabilitated. · Planting of tubestock comprising native species indigenous to the community being rehabilitated. Native groundcovers should be planted at a density of two (2) tubestock per m², and native shrubs should be planted at a density of one (1) tubestock per m² (or otherwise advised by the Project Ecologist or Hunter Water). · No trees are to be planted within 5 metres of infrastructure including pipelines and buildings. · Mulching with native forest mulch (such as mulched vegetation from construction corridor or certified forest mulch). · Follow-up watering and weed removal once per week for first 4 weeks, followed by monthly watering and weed removal for a period of 6 months. 	Construction contractor	During works
B35	<p>CONSTRUCTION SITES WITH HOLLOW-BEARING TREES:</p> <ul style="list-style-type: none"> · Hollow-bearing trees within the construction corridor / site must be retained as far as is practicable. Where this is not practicable, hollows must be salvaged and attached by appropriate means to suitable trees in adjacent bushland under the supervision of a Fauna Ecologist experienced in tree hollow relocation. The Fauna Ecologist would also be responsible for retrieving injured or young animals and ensuring their safe transfer to a licensed wildlife carer. · The Fauna Ecologist must also determine how many hollows of each size class (owl / glider / microbat / phascogale / parrot) are provided by each felled hollow-bearing tree. Salvaged hollows and/or nest boxes must be installed in adjoining bushland not impacted by the construction works at a ratio of 1:1, i.e. for every tree hollow identified by the Fauna Ecologist, a salvaged hollow or nest box of equivalent class must be installed in adjoining bushland, with landowner's consent. · Felled hollow-bearing trees must to be placed in adjoining habitat to provide long-term fauna habitat. · The pre-clearance survey must include a diurnal inspection of tree hollows to determine whether any are being utilized by native bees. Where hollows are found to be utilised by native bees, the hollow must be relocated to a reserve at least 10 km from the proposed works site to prevent the species returning to the site. 	Construction contractor	During works
B36	<p>PROCEDURE FOR FELLING HOLLOW-BEARING TREES:</p> <ul style="list-style-type: none"> · Hollow-bearing trees must be gently nudged with machinery in the presence of an ecologist experienced in fauna handling, as nudging may encourage fauna to leave the trees. · After nudging, hollow-bearing trees must be left for a minimum of 10 minutes to allow time for any fauna to escape out of the trees and move safely away from machinery. The tree must be monitored by the Project Ecologist during this time. · Gently nudge the tree again. · Carefully lower each hollow-bearing limb and trunk to the ground (e.g. using ropes and pulleys) to protect any resident fauna. · Observe the tree for escaping fauna throughout the nudging/felling process. · Gently nudge the trunk again and carefully lower to the ground to protect any resident fauna. · Immediately following the felling of hollow-bearing trees, the Fauna Ecologist must inspect the hollows to retrieve any young or injured fauna or identify the presence of nesting material that would indicate the hollow was being used. · Any uninjured fauna must be encouraged to relocate to adjacent habitat areas. · Any injured or dependent young animals must be captured and held in a quiet, cool, safe place until transferred to a licensed native animal carer. 	Construction contractor	During works

Reference	General Mitigation Measures	Responsibility	Timing
Type	Noise and Vibration		
NV2	Works will be carried out during standard work hours (i.e. 7:00 am to 6:00 pm Monday to Friday and 8:00 am to 1:00 pm Saturday). For any work that is performed outside normal work hours or on Sunday or public holidays, the contractor must complete the Hunter Water OOHW Approval Form and adhere to the OOHW Construction Noise Guideline.	Construction contractor	Prior to work commencing outside of standard work hours
NV3	All vehicles and plant must be turned off when not in use.	Construction contractor	During works
NV4	All stationary and mobile equipment must be fitted with mufflers and in serviceable condition. Generators, if used, must have sound proof enclosures.	Construction contractor	During works
NV5	Personnel must be inducted and trained in noise control measures to reduce impacts on receivers during inductions and toolbox talks.	Construction contractor	During works
NV6	A complaint management procedure must be developed. Community complaints must be allocated to a responsible contractor representative to facilitate investigation, respond to the complainant, review noise mitigation measures and to implement any corrective actions. The details of the complaint must also be circulated to the applicable construction personnel for action, where required.	Construction contractor	During works
NV7	Construction vehicles including trucks must not be allowed to queue on local roads, or if this is required for safety reasons, engines must be switched off.	Construction contractor	During works
NV8	Where possible, all plant must utilise a broad band reverse alarm and the need for reversing manoeuvres must be minimised.	Construction contractor	During works
NV9	Deliveries must be scheduled during standard work hours only.	Construction contractor	During works
Type	Aboriginal and Non Aboriginal Heritage		
H1	All parties involved in the activity must be made aware that it is an offence under Section 86 of the NPW Act to harm or desecrate an Aboriginal object unless that harm or desecration is the subject of an Aboriginal Heritage Impact Permit (AHIP).	Construction contractor	Prior to work commencing
H2	If Non-Aboriginal heritage items are discovered during the course of the project, all work must cease in the area and the Contractor must inform Hunter Water as soon as possible. Hunter Water will determine the preferred management approach and the local council and/or the Department of Planning and Environment will be notified, if required.	Construction contractor	During works
H3	In the event that an Aboriginal object (or objects) is uncovered during the proposed works, ground disturbance works must cease within 20 metres of the object(s) and Hunter Water must be contacted. Hunter Water would advise the Department of Planning and Environment and the relevant Aboriginal parties so that appropriate management strategies can be identified.	Construction contractor	During works
H4	In the unlikely event that human skeletal material is uncovered during the proposed construction works, all works must cease within 20 metres of the skeletal remains. Should the remains be verified as human, the NSW Police and Department of Planning and Environment must be contacted. No works must proceed within the vicinity of the skeletal remains until an appropriate course of action has been determined in consultation with NSW Police, the Department of Planning and Environment and Aboriginal parties (if the remains are identified as Aboriginal).	Construction contractor	During works
Type	Traffic and Access		
TA1	The Contractor must prepare a Traffic Management Plan for works that may impact on roads or traffic. Should work on public roads be required, consultation with the relevant traffic authority(s) must be undertaken.	Construction contractor	Prior to works commencing
TA2	Apply for a permit of licence under Section 138 Roads Act 1993 consent from the relevant road authority(s).	Construction contractor	Prior to works commencing
TA3	Appropriate exclusion barriers, signage and site supervision must be employed at all times to ensure that the work site is controlled and that unauthorised vehicles and pedestrians are excluded from the work area.	Construction contractor	During works
TA4	All traffic control devices must be in accordance with AS 1742.3:2019 "Manual of uniform traffic control devices, Part 3: Traffic control for works on roads".	Construction contractor	During works
TA6	Vehicle access routes to and within the site(s) must be defined via 'paraweb' or other clearly visible and robust fencing.	Construction contractor	During works

Reference	General Mitigation Measures	Responsibility	Timing
TA7	Parking of vehicles and storage of plant/equipment must occur in clearly designated existing cleared areas. Vehicles and machinery must not be parked on vegetated areas.	Construction contractor	During works
TA8	Existing traffic movements and property accesses must be maintained during the works, where possible.	Construction contractor	During works
TA9	Movement of heavy vehicles must be restricted to standard work hours (i.e. 7:00 am to 6:00 pm Monday to Friday and 8:00 am to 1:00 pm Saturday).	Construction contractor	During works
TA10	Parking of light vehicles must be on the road verge wherever possible, or located to minimise interference with the vehicle movements of local residents.	Construction contractor	During works
TA11	Residents must be notified of road closures at least fourteen (14) days prior to works commencing unless other timeframes are nominated by a traffic authority(s) approval(s).	Construction contractor	14 days prior to works commencing
Type	Visual Environment		
VE1	Work site(s) must be restored as closely to their original condition as possible at the completion of works.	Contractor	Following completion of works
VE2	On completion of the works, all vehicles, construction equipment, materials, and refuse relating to the works must be removed from the work site(s) and any adjacent affected areas.	Contractor	Following completion of works
VE3	Work areas must be maintained, kept free of rubbish and cleaned up at the end of each working day.	Contractor	During works
VE4	Clear the minimum amount of vegetation necessary and undertake replacement planting in accordance with the REF.	Contractor	During works
Type	Socioeconomic, Landuse and Services		
SLS3	All services in the vicinity of the works must be located in the field, and 'pegged-out' and noted on the site plans prior to excavation works - "dial 1100 before you dig".	Contractor	Prior to ground penetrating work
SLS4	A complaints register must be maintained and any complaints investigated within 24 hours of the complaint being received. Hunter Water must be notified of any complaints.	Contractor	During works
SLS5	Where entry to private properties is required, a notice of entry letter must be provided at least 24 hours in advance.	Contractor	During works
SLS6	The contractor must personally contact the occupant when they enter a private property to notify of their presence.	Contractor	During works
SLS7	Any accidental damage to private property that occurs during the works must be immediately reported to Hunter Water and repaired in consultation with the owner.	Contractor	During works
SLS8	Signage containing project information and contact details must be located in a prominent position (such as on site fencing).	Contractor	During works
SLS9	Work sites must be restored to as close to their original condition as possible following the completion of works.	Contractor	Following completion of disturbance works
Type	Energy and Air Quality		
EAQ1	Machinery and vehicles must not be left running or idling when not in use.	Construction contractor	During works
EAQ2	Odour or air pollutant emission complaints must be investigated promptly and the source must be eliminated, wherever practicable.	Construction contractor	During works
EAQ3	Equipment, machinery and vehicles used on site must be maintained to the manufacturer's specifications to minimise emissions.	Construction contractor	During works

Reference	General Mitigation Measures	Responsibility	Timing
EAQ4	Visually monitor dust and where necessary: <ul style="list-style-type: none"> - Apply water (or alternate measures) to exposed surfaces that are generating dust - Appropriately cover loads on trucks transporting material to and from the construction site - Securely fix tailgates of road transport trucks prior to loading and immediately after unloading - Avoid dust generating works during strong winds and - Prevent where possible, or remove, mud and dirt being tracked onto sealed road surfaces. 	Construction contractor	During works
EAQ5	Methods for management of emissions must be incorporated into project inductions, training and prestart talks.	Construction contractor	During works
EAQ6	Traffic movements and vehicle speeds must be restricted over disturbed areas and unsealed roads.	Construction contractor	During works
EAQ7	Long term stockpiles must be stabilised by covering, or by applying soil binders such as polyvinyl acetate (PVA) or latex sprays.	Construction contractor	During works
Type	Waste and Resource Use		
WR1	The Contractor's recycling and reuse methodology must be detailed in the CEMP and must follow the resource management hierarchy principles (in accordance with the Waste Avoidance and Resource Recovery Act 2001): <ul style="list-style-type: none"> - avoid unnecessary resource consumption as a priority - avoidance must be followed by resource recovery (including reuse of materials, reprocessing, recycling and energy recovery) - disposal must be undertaken as a last resort. 	Construction contractor	Prior to works commencing
WR2	Any fill brought to site must conform to the requirements of the Excavated Natural Material Order 2014 or be classified as VENM by a suitably qualified person.	Construction contractor	Prior to fill coming to site
WR3	All excess material (that cannot be reused or recycled) must be disposed of as soon as practicable to a facility licensed to accept the waste as per the waste classification results (tested by a suitably qualified person in accordance with the NSW Waste Classification Guidelines 2014).	Construction contractor	During works
WR4	All waste disposal receipts must be retained and provided to Hunter Water on request.	Construction contractor	During works
WR5	Waste must be segregated and labelled to improve recycling opportunities, avoid cross contamination and reduce disposal costs.	Construction contractor	During works
WR6	Waste receptacles must be covered and located away from drainage lines.	Construction contractor	During works
WR7	All vessels used for contaminated or hazardous waste must be sealed, labelled according to their contents, and stored within bunded areas until their removal from the work site.	Construction contractor	During works
WR8	Any fuel, lubricant or hydraulic fluid spillages must be collected using absorbent material and the contaminated material disposed of at a licensed waste facility.	Construction contractor	During works
Type	Hazard and Risk		
HR2	Advise all workers of emergency contact details and display them in an easily accessible location	Construction contractor	During works
HR3	No hot work is to be undertaken during days of Total Fire Ban.	Construction contractor	During works
Type	Cumulative Impacts		
CI1	Consult and coordinate with proponents of nearby projects to assess and manage cumulative impacts. Revise the CEMP to address these impacts as they become known.	Construction contractor	Ongoing during works