# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

# KOGARAH WAR MEMORIAL POOL DEMOLITION & REMEDIATION

| Project Document Version | Date       |
|--------------------------|------------|
| DRAFT                    | 08/02/2021 |

**Document Version History** 

**Contact Information** 

**Georges River Council** 

Document Information Prepared for DA2020/0405

#### **Project Name**

Kogarah War Memorial Pool Demolition and Remediation

#### Date

8 February 2021

#### Authors

#### Tom Heath (TH)

Coordinator Environmental and Open Space Projects



This Document shall at all times remain the property of Georges River Council and shall not be copied or disclosed in any part to any third party without written consent of the Director – Assets and Infrastructure.

# TABLE OF CONTENTS

|    | TABLE OF CONTENTS  | 3  |
|----|--|----|
| 1. | PURPOSE  | 5  |
| 2. | DOCUMENT SCOPE   | 5  |
| 3. | PROJECT MANAGEMENT FRAMEWORK   | 8  |
| 4. | PROJECT DESCRIPTION  | 9  |
| 5. | ENVIRONMENTAL MANAGEMENT   | 14 |
| 6. | ENVIRONMENTAL AUDITS AND INSPECTIONS                                   | 16 |
|    | Appendix 1 - Contractor Environmental Sustainability Policy - TBA      |    |
|    | Appendix 2 - Environmental Risk Assessment - TBA                       |    |
|    | Appendix 3 - Environmental Management Plan - Indicative Draft Provided |    |
|    | Appendix 4 - Incident Management Plan - TBA                            |    |

| PROJECT DETAILS            |  |                     |  |  |
|----------------------------|--|---------------------|--|--|
| PROJECT:                   | Kogarah War Memorial Pool Demolition and Remediation |                     |  |  |
| Contract Number.:          |  | ТВА                 |  |  |
| PRINCIPAL CONTRACTO        | DR:  | ТВА                 |  |  |
| PROJECT COMMENCEM          | IENT:  | ТВА                 |  |  |
| PROJECT COMPLETION         | :  | ТВА                 |  |  |
|                            | EMERGENC   | Y CONTACT NUMBERS   |  |  |
| Descrip                    | tion   | Telephone           |  |  |
| Contractor Emergency Lir   | ne/  | ТВА                 |  |  |
| 24-hour emergency conta    | act  |                     |  |  |
| Ambulance                  |  | 000                 |  |  |
| Fire                       |  | 000                 |  |  |
| Police                     |  | 000                 |  |  |
| Poisons Information Centr  | e  | 131 126             |  |  |
| Electricity Emergencies (A | Nusgrid)   | 13 13 88            |  |  |
| Contractor – Office Hours  |  | ТВА                 |  |  |
| EPA – Pollution Hotline    |  | 131 555 (NSW)       |  |  |
|                            | <u>CONTRAC</u>                                       | TOR CONTACT NUMBERS |  |  |
| NAME                       | POSITION   | I CONTACT DETAILS   |  |  |
|                            |  |                     |  |  |
|                            |  |                     |  |  |
|                            |  |                     |  |  |
|                            |  |                     |  |  |
|                            |  |                     |  |  |
|                            |  |                     |  |  |
|                            |  |                     |  |  |
|                            |  |                     |  |  |
|                            |  |                     |  |  |
|                            |  |                     |  |  |
|                            | CONTRACT CORRESPONDENCE                              |                     |  |  |
| Company address:           |  |                     |  |  |
| Phone:                     |  |                     |  |  |
| Email:                     |  |                     |  |  |

# 1. PURPOSE

This plan defines the environmental management principles, processes, procedures, systems, tools, and templates implemented for use throughout the duration of the project.

# 2. DOCUMENT SCOPE

A Construction Environmental Management Plan (CEMP) is required for all construction projects that have the potential to impact on the environment. This includes routine maintenance works, emergency works, as well as minor and major capital works.

This CEMP has been prepared in accordance with Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004), and is to be read in conjunction with all documentation submitted as part of DA2020/0405 – 78 Carwar Avenue, Carss Park for the Demolition and Remediation of the Kogarah War Memorial Pool site, including the Statement of Environmental Effects (SEE).

This CEMP addresses environmental and cultural issues, risks and the impacts associated with the demolition and subsequent remediation of the Kogarah War Memorial Pool (KWMP) site. The target audiences for this plan are all contractor workers, sub-contractors, and any other relevant stakeholders.

This CEMP encourages best construction practice and ensures that environmental damage during construction is minimised, moreover, the purpose of this document is to control the potential negative environmental impacts associated with the construction phase of the project and/or to enhance any positive environmental impacts. The effective implementation of this CEMP will ensure that the construction activities are conducted and managed in an environmentally sound and responsible manner.

The objectives of this CEMP are to:

- outline the environmental objectives and outcomes to be achieved throughout the project duration,
- identify and define the environmental policy on which this CEMP is based,
- demonstrate commitment to all environmental planning documents and associated environmental management controls plus any necessary permits (if applicable),
- define roles and responsibilities of all personnel involved in the delivery of the works,
- document commitment to environmental performance monitoring and reporting,
- identify environmental training, competency requirements and responsibilities of personnel required to deliver the scope of works,
- ensure environmental risk assessments are adequately carried out of the proposed scope of work, and appropriate management and control measures have been identified for key environmental aspects,
- define monitoring of environmental performance/compliance for key environmental aspects,
- define procedures for environmental incidents, non-compliances and emergency response, and
- identify procedures for environmental audits and evaluation of compliance.

#### 2.1 Environmental Sustainability Policy

A copy of the future contractor's Environmental Sustainability Policy to be included in Appendix 1.

# **3. PROJECT MANAGEMENT FRAMEWORK**

Information on the contractor's management framework including an organisational chart will identify the Roles and Responsibilities of the Project Team. All members of the Project Team are made aware of and understand their responsibilities prior to commencing work on the project.

# 4. PROJECT DESCRIPTION

### 4.1 Scope of works

The proposed works involve the demolition of the existing Kogarah War Memorial Pool and associated infrastructure and subsequent remediation of the site to a standard acceptable for use as public open space.

The key elements of the proposal include:

- Demolition of the existing pool complex and all associated structures and ancillary infrastructure (excluding the existing asphalt car park);
- Removal of trees and vegetation;
- Remediation of the site;
- Earthworks to level the site;
- Installation of a new replacement irrigation tank; and
- Landscaping for use for open space purposes, including paths, seating, picnic shelters and provision for a memorial wall.

# 4.2 Material and equipment

General equipment used works includes, but is not limited to, the following:

- trucks (transporting equipment to the work sites and waste material to appropriate disposal
- facilities),
- noise attenuated dewatering equipment,
- backhoe, excavator or traxcavator,
- access scaffolding componentry,
- wheelbarrows,
- shovels,
- compressors and/or portable generators,
- jackhammers,
- gas monitor and confined space entry equipment,
- hand tools and site material cutting apparatus,



Figure x. Site Location.

### 4.3 Proposed activities

Works may involve the following activities:

- Demolition works
- Tree removal
- Remediation works
- Earthworks
- Drainage
- Landscaping

Additional documentation and work descriptions will be provided by the contractor.

#### 4.3.1 Demolition Works

Appropriate demolition of the following structures:

- 50m Olympic swimming pool, toddlers pool and all concrete surrounds;
- aluminium awnings and canopies, seating and lighting;
- administration and associated change rooms building;
- concrete irrigation water tanks; and
- associated pump house, plant, underground services and equipment.

#### 4.3.2 Tree Removal

Work is associated with the removal of approximately 54 trees from the site. The trees proposed to be removed are listed in project Arborist Report and SEE.

#### 4.3.3 Remediation Works

The Remediation Action Plan (RAP) prepared by Douglas Partners (documentation as part of DA2020/0405) proposes the following remediation works:

- Deeper fill is to be left in situ and managed through a Long Term Environmental Management Plan (LTEMP) and local authority notification. The notification would allow Georges River Council to record this information in its property system information.
- The remediation approach for all fill in the upper 2 3 m comprises off-site disposal of soils excavated to meet design levels and management of the remaining fill through implementation of a cap and management strategy.
- The cap will primarily be 0.5 m thick comprising imported fill and topsoil. The cap will be amended for Tree Protection Zones (TPZ) to minimise impacts on the root zones for retained trees.
- For deeper planting areas for new trees the capping thickness will generally be greater than 0.5 m.

The RAP identifies that this preferred remediation approach has been selected given:

- The non-volatile nature of the contamination that is to be retained below the bulk earthworks level;
- The NSW EPA objective of minimising waste generation (i.e. disposal of soils to landfill);
- The shallow groundwater level at the site which the contaminated fill extends below. In this
  regard, disturbance and excavation of fill below the water table has the potential to impact on
  water quality. Moreover, the feasibility of lowering the groundwater table below the fill level
  without significant works is limited given the site's location adjacent to Kogarah Bay and the
  estuarine deposits that underlay the fill;
- The presence of ASS and the requirement to minimise potential impacts on the environment from ASS during works. This is achieved though minimising both the disturbance of the ASS and lowering of the groundwater table;
- The need to consider geotechnical requirements for potential reuse of site won soils (e.g., sorting / sieving) and the associated asbestos risks that would need to be managed during works;
- Minimising the disturbance of fill within the TPZ for retained trees; and
- Management of the deeper fill below 3 m depth is proposed, which therefore already requires the implementation of an LTEMP for the site.

The successful completion of the remediation is to be validated and reported as outlined herein and a Site Audit Statement obtained. A LTEMP is to be developed for the site. It is envisaged that a condition will be imposed requiring the implementation of the LTEMP prior to completion of works.

#### 4.3.4 Earthworks

Post demolition of the pool complex and as part of the remediation works, excavation is required to the site to remove contaminated material and provision of a cap of clean fill and topsoil over the existing contaminated subgrade material. The site will be graded to fall gently in a north-east direction from the existing carpark to the west and the southern row of trees to the south to the existing footpath in the north and the landscaped batter of the foreshore along the eastern boundary.

Civil Engineering plans and a Civil Engineering and Stormwater Management Report prepared by Enspire Solutions illustrate and detail the proposed earthworks and the extent of cut and fill are included in DA2020/0405 document package.

Given the proposed cap and contain method of remediation proposed for the site, the proposed earthworks will involve the removal (export) of approximately 7,560m3 of fill from the site and the importation of 3,621m3 of top soil and clean fill onto the site.

The earthworks and grading allows for minor mounding in the north-east corner to support a future grove of canopy trees. This is required due to the height of the ground water table in this part of the site.

#### 4.3.5 Earthworks

Given the proposed works involve the demolition of buildings and impervious surfaces and general replacement with landscaping and pervious surfaces, there are no drainage works required by the proposed development.

Based on the local topography, surface water will flow generally east towards Kogarah Bay. The proposed earthworks have been designed with a gentle fall across the site in an north-east and easterly direction to facilitate this.

#### 4.3.6 Landscaping

Post demolition, remediation works and earthworks, the site is proposed to be landscaped. A Landscape Concept Plan submitted with the DA provides a concept for the landscaping works.

These works include:

- Planting vegetation where specified;
- Turfing the site, in particular the central area for passive recreation;
- Provision of pedestrian footpaths, seating and picnic shelters, and
- Identification of future memorial wall location.

### 4.4 Work Sites, Access and Vehicle Movements

The site is referred to as the Kogarah War Memorial Pool (also known as the Carss Park Olympic Pool) and is located at 78 Carwar Avenue, Carss Park (Figure x). It comprises part or all of the following lots:

- Lot 511 DP 752056
- Lot 1 DP 125981
- Lot 376 DP 1118749
- Unreserved Crown Land

Vehicle movements have been specified in the Construction Traffic Management Plan included in DA2020/0405 document package.

### 4.5 Workforce and timeframe

Information on workforce to be provided by Contractor.

Work will generally take place between 7am to 6pm, Monday to Friday and 8.00am to 1pm on Saturdays. No work to occur on Sundays or Public Holidays. Should work be required outside of these hours, then the relevant authorities and affected local residents will need to be notified and additional safeguards detailed.

### 4.6 Changes to the Scope of Works

If the scope of works; site work activities or construction methods described in this document change significantly (including after the awarding of any contract), a supplementary environmental impact assessment must be prepared as per the process set out in Section 5.2. This will be organised by the Contractor Project Manager, as required.

# 5. ENVIRONMENTAL MANAGEMENT

# 5.1 Planning Context

This document has been prepared in support of a Development Application (DA) made to Georges River Council ('the Council') under Part 4 of the Environmental Planning and Assessment (EP&A) Act 1979.

The DA (DA2020/0405) seeks consent to demolish the Kogarah War Memorial Pool, located at 78 Carwar Avenue, Carss Park, remediation works, earthworks and landscaping works.

The DA arises from the Council resolution of 25 May 2020. The resolution included:

(f) That having regard to previous reports provided to Council which highlight that the Kogarah War Memorial Pool and associated facilities are no longer fit for purpose, and Council's insurance liability arising from the potential risk that the facility poses to community safety, the General Manager be authorised to:

i. Prepare a report on establishing a 'Hall of Fame' as part of the proposed regional aquatic facility project to recognise the athletes and coaches who trained at the Kogarah War Memorial Pool, including the identification of an appropriate budget;

ii. Prepare a report on the erection of a permanent war memorial in an appropriate landscape setting at the site of the existing pool that ensures the site remains open green space for community use; and

iii. Undertake the immediate demolition of the Kogarah War Memorial Pool complex, decontaminate and undertake remediation of the site to eliminate the current safety risks to the community."

The proposed development is to be undertaken on behalf of Georges River Council and has been prepared in accordance with the EP&A Act 1979 and the Environmental Planning and Assessment (EP&A) Regulation 2000.

The project SEE addresses the relevant heads of consideration listed under Section 4.15(1) of the EP&A Act 1979, and provides an assessment of the proposed development against the relevant Environmental Planning Instruments (EPIs) and other planning controls applicable to the site and to the proposal.

The key planning controls are included within:

- Kogarah Local Environmental Plan (KLEP) 2012
- Kogarah Development Control Plan (KDCP) 2013

The proposed works are consistent with the statutory planning framework applying to the site, in that:

- the proposed use is permissible under the RE1 Public Recreation zoning and is consistent with the objectives of the zone;
- the work will have no detrimental impacts on the adjoining state listed Carss Cottage or the locally listed Carss Bush Park, in fact the removal of the heavily vegetated mounds from the northern and eastern sides of the complex will improve views to and from the Carss Cottage precinct;
- the works are consistent with State Environmental Planning Policy No. 55 Remediation of Land (SEPP 55) in that the proposal will remediate what is known to be a contaminated site and make the land suitable for the proposed public recreation use;
- the proposed works have been designed so as to minimise disturbance to the water table, potential acid sulfate soils and groundwater;

- the proposal is consistent with the objectives of State Environmental Planning Policy (Coastal Management) 2018 in that it will return foreshore land to the broader public passive recreation use; and
- the proposal is consistent with the Carss Bush Park Landscape Master Plan and the Carss Bush Park and Todd Park Plan of Management.

All approvals and considerations for the proposed works are to be listed by the Contractor.

Where legislation is relevant to the proposed works, appropriate safeguards and/or mitigation measures will be incorporated in this CEMP.

Reviews of the CEMP and associated legislation will occur upon changes to the scope as defined in DA2020/0405 to ensure any changes to legislation are identified within the CEMP document.

# 6. ENVIRONMENTAL AUDITS AND INSPECTIONS

### 6.1 Environmental Auditing and Reporting

Daily and monthly inspections are undertaken to ensure the ongoing utilisation of the CEMP safeguards set out in the Environmental Risk Assessment (ERA - Appendix 2) and Environmental Management and Control Plan (Appendix 3). This frequency may be greater associated with work identified as 'High-Medium Risk' in the ERA.

The Contractor's Project Manager will be responsible for ensuring environmental control measures and work activities are complying with the CEMP requirements.

The following records will be managed by the Project Manager, demonstrating environmental due diligence and compliance with the CEMP:

- Licences, Permits, Consents or Conditions of Approval as relevant,
- Site Inductions,
- Weekly environmental checklist,
- Environmental audits,
- Non-compliance and corrective actions,
- Complaints,
- Environmental incidents and rectification actions taken,
- Waste dockets,
- Plant and equipment register and daily checks,
- SDSs and chemical registers,
- Training and induction registers, and
- Greenhouse data.

### **6.2 Corrective actions**

All non-compliances of work activities will be documented and reported to the Contractor Project Manager to identify the cause(s), and to take action to prevent recurrence. Compliance tracking information will be provided by the Contractor.

### 6.3 Review

The CEMP will be reviewed if required by factors such as the results of audit reports, complaints, incidents or changes in site conditions or scope of works. The CEMP will also be reviewed and updated when there is a change in approval conditions and when the actual safeguards required differ.

Reviews will be carried out by consulting documents such as the RAP, SEE, subcontractor documentation, Work Method Statements, Incident logs, complaint logs, variation orders to scope of works, completed inspection check sheets and Inspection and Test Plans as appropriate.

Changes to the CEMP will be recorded and issued as per the document control at the start of this CEMP. The review will adequately address all sections of the CEMP and action them appropriately.

#### Appendix 3. Management measures to be implemented during the Project to mitigate against the environmental impact.

The below are examples of mitigation measures to be implemented by the Contractor as part of official project Construction Environmental Management Plan (CEMP). This information will be outlined in project documentation including Contractors Environmental Risk Assessment (ERA), and in the Planning Approval Documents.

| Objective   | Environmental Action   | Timeframe                | Person Responsible |
|---|--|--------------------------|--------------------|
| GENERAL   |  |                          |                    |
| To minimise the risk of environmental                               | All project staff and contractors will be inducted on the environmental sensitivities of the work site(s) and relevant safeguards prior to commencement.   | Prior to work commencing | ТВА                |
| incidents and<br>complaints and to                                  | Notification of pollution incidents as required under Part 5.7 cl. 147-149 of the PoEO Act, for immediate notification of pollution incidents that cause or threaten material harm to the environment.   | As required              | ТВА                |
| effectively manage<br>incidents and<br>complaints if they<br>occur. | <ul> <li>Environmental incidents will be immediately reported to the appropriate authorities and reported to the Principal no later than 24 hours after the incident was first identified.</li> <li>To ensure compliance with the PoEO Act, Georges River Council's employees and contractors will follow the NSW Environmental Protection Authority "Protocol for industry notification of pollution incidents" that have caused or threaten material harm to the environment <ul> <li>(http://www.epa.nsw.gov.au/reporting-and-incidents/report-pollution/contacts-chemical-radiation-pollution/notification-protocol).</li> <li>If the incident presents an immediate threat to human health or property call 000.</li> <li>If the incident does not require a 000 response, verbally notify of the incident in the following order: <ol> <li>EPA on Environment Line – 13 15 55</li> <li>Relevant local authority for the area –</li> <li>WaterNSW for Special and Controlled Areas (Emergency reporting - 24 hours (fires, chemical spills) Phone: 1800 061 069)</li> <li>Relevant Local Council (refer to www.olg.nsw.gov.au/local-government-directory)</li> </ol> </li> <li>Ministry of Health – 9391 9939 (office hours); 0491 227 423 (after hours)</li> <li>SafeWork NSW – 13 10 50</li> <li>Fire and Rescue NSW – 1300 729 579 (emergency only 000)</li> </ul> </li> <li>Written notification of the incident must then be provided to each authority as per the legislative requirements or advice from the authorities.</li> </ul> | As required              | TBA                |
|   | An incident register will be maintained by the Project Engineer and kept on site.  | During works             | ТВА                |
|   | The Georges River Council PM will be notified immediately of any complaints relating to management of environmental issues.  | As required              | ТВА                |

| Objective   | Environmental Action  | Timeframe                                    | Person Responsible |
|---|---|--|--------------------|
| Topography, Geolog                                    | y and Soils   | 1  |                    |
| No sedimentation of waterways.                        | Erosion and sedimentation controls will be installed prior to construction works commencing in accordance with <i>Managing Urban Stormwater: Soils and Construction – Volume 1, 4<sup>th</sup> Edition,</i> (Landcom 2004) ('the Blue Book').   | Site establishment and during works          | ТВА                |
| No impacts from                                       | Site supervisor must have Erosion and Sediment Control Competency.  | Prior to works                               | ТВА                |
| excavation,<br>contamination or<br>ground disturbance | Minimise disturbance to ground surfaces and the area of exposed surfaces. Restore disturbed areas as soon as feasible and in a progressive manner as works are completed.   | During works/ Upon<br>progressive completion | ТВА                |
|   | All sediment and erosion control devices will be inspected regularly (including immediately after rainfall) and will be maintained and repaired as necessary so that they remain effective for the duration of works.   | During works                                 | ТВА                |
|   | The tyres of work vehicles and machinery will be checked before leaving work sites. Tyres will be cleaned as necessary to ensure that soil or other erodible materials are not transferred outside the work site.   | During works                                 | ТВА                |
|   | Any material transferred off work sites will be swept up as required and at least daily, and, if material is tracking on to local roads, the area will be swept immediately.  | During works                                 | ТВА                |
|   | Vehicle and machinery movement will be confined to designated tracks, pathways and work areas and will keep to sealed areas where possible.   | During works                                 | ТВА                |
|   | All erosion and sediment control measures will be established before excavation begins and removed once all surfaces have been stabilised.  | During works                                 | ТВА                |
|   | Earthworks will not take place during or after heavy rain when doing so is likely to cause soil erosion or soil structural damage. Under such circumstances, work will stop and only recommence after the ground surfaces have sufficiently dried out. Check Bureau of Meteorology Website daily.                       | Prior to and during works                    | ТВА                |
|   | Excavated soil will be stockpiled in a suitable location (upslope of works, level ground away from drainage lines and kerbs). Topsoil that is to be used in site restoration will be stockpiled separately.   | During works                                 | ТВА                |
|   | Any stockpiles of soils or fill are to be managed in an appropriate manner to prevent dust, erosion and sediment runoff and be covered overnight.   | During works                                 | ТВА                |
|   | Excavated ASS material is to be stockpiled on plastic or in a skip bin and protected by a secure waterproof cover until its reuse in backfilling or removal from site. It is to be replaced within the excavation (backfilled) in the shortest time frame possible (within 24 hours) to minimise the risk of oxidation. | During works                                 | ТВА                |
|   | If during excavation it is considered that soils are not previously identified as Acid Sulphate Soil could be ASS (dark grey/black in colour, sulphurous or egg-like odour), works will be works will be stopped and the ER contacted for advice.   | During works                                 | ТВА                |

| Objective  | Environmental Action  | Timeframe                                    | Person Responsible |
|--|---|--|--------------------|
|  | All contamination protocols identified in project Remediation Action Plan to be adhered to.   | During works                                 | ТВА                |
|  | Any areas that are disturbed or damaged by the works will be stabilised as soon as feasible   | During works/ Upon<br>progressive completion | ТВА                |
| Water quality, hydro                                       | blogy and drainage  |  |                    |
| No pollution of<br>waterways by                            | All site personnel will be briefed in the procedure of the Emergency Management Plan (also referred to as Incident Management Plan in REF).   | Prior to works                               | ТВА                |
| potable water<br>discharge, or from<br>fuels or chemicals. | A functioning spill kit will be kept in a readily accessible location at all times. All staff will be trained in its use.   | During works                                 | ТВА                |
| idels of chemicals.  | No equipment, machinery or work vehicles will be washed on site unless within a designated wash out area agreed with the ER.  | During works                                 | ТВА                |
|  | In the event of spill (eg. Fuel, chemical, wastewater) the Council Project Manager must be notified immediately and the Emergency Management Plan implemented.  | During works                                 | ТВА                |
|  | Equipment will not be used if there are any signs of fuel, oil or hydraulic leaks. Leaks will be repaired immediately or the equipment will be removed from site and replaced with leak-free item.  | During works                                 | ТВА                |
|  | Safety Data Sheets (SDS) are to be kept on site for all chemicals and fuels. All chemicals used on site will be recorded on a register at the site.   | During works                                 | ТВА                |
|  | All chemicals and fuels will be stored in bunded areas (holding 110% of fuel/chemical volume), labelled, transported and used in accordance with Australian Standards and in line with best practices.  | During works                                 | ТВА                |
|  | Refuelling should be done off site if feasible. If not feasible all refuelling, fuel decanting and vehicle maintenance work will only take place within a designated bunded area away from waterways, drainage lines and environmentally sensitive areas.   | During works                                 | ТВА                |
|  | Any fuels spillage will be collected and the contaminated material disposed of at a licensed waste depot.   | During works                                 | ТВА                |
|  | During pavement saw cutting, geotextile pillows or sandbags will be placed down slope of the work area to prevent pollutants from entering the stormwater system. Bitumen and/or concrete (hydrocarbon/alkaline) residue captured by the pollutant traps will be vacuumed or mopped up using absorbent material, and the material will be disposed of in accordance with EPA requirements   | During works                                 | ТВА                |
|  | In the event that trench de-watering is required during any excavation activities, water will be collected<br>and contained prior to disposal so that no runoff escapes the work site. The water will be filtered through<br>a geotextile sock then discharged to the wastewater system, via the nearest suitable access chamber, in<br>volumes that will not result in overflows downstream. Only ground/rain water that is clear (i.e. no visible<br>sediment) and not reasonably expected to be contaminated may be pumped out. Approval from the<br>Council Project Manager will be required before undertaking this procedure. | During works                                 | TBA                |

| Objective   | Environmental Action  | Timeframe                         | Person Responsible |
|---|---|-----------------------------------|--------------------|
|   |   |                                   |                    |
| Flora, Fauna and Ec                                   | osystems  |                                   |                    |
| No harm to or<br>unapproved removal<br>of vegetation. | Materials, plant, equipment, work vehicles and stockpiles will be placed to avoid damage to trees identified in the Arborist report to remain, and will not be placed under the drip line of trees or shrubs (on other than hard paved surfaces). | Prior to works                    | ТВА                |
|   | Laydown and storage areas for materials, equipment and stockpiles will be located on flat and already cleared land where possible   | Prior to and during works         | ТВА                |
|   | Disturbance of vegetation will be limited to that identified within DA2020/0405 documentation for removal   | Prior to and during works         | ТВА                |
|   | Vegetation will be trimmed or temporarily tied back (no breaking branches) where possible rather than the removal of whole plants.  | Prior to and during works         | ТВА                |
|   | Any topsoil imported to the site must meet Australian Standards for AS 4419 or AS 4454 to minimise introduction of weeds.   | Prior to and during works         | ТВА                |
|   | Any native animals encountered must be allowed to leave site without being harassed. Contact WIRES for assistance where necessary.  | Prior to and during works         | ТВА                |
|   | If animals are encountered and impact on the work, contact the Council Project Manager for further advice.  | During works                      | ТВА                |
| No harm to Fauna<br>and ecosystems                    | Lopping or trimming of established trees will be executed by an appropriately qualified tree surgeon or arborist.   | During works                      | ТВА                |
|   | All trees or other vegetation will be checked for signs of animals prior to trimming (eg hollows, nests, debris, culverts). If anything is found, works will stop and WIRES will be contacted.  | Prior to works                    | ТВА                |
|   | Excavation will be avoided within the drip line of trees to remain  | During works                      | ТВА                |
|   | Root cutting will only occur when absolutely necessary. Arborist will be consulted where required (eg. tree stability, root cutting).   | During works                      | ТВА                |
|   | All weed material removed will be disposed off-site in sealed bags to a licenced disposal facility.   | During and at completion of works | ТВА                |
|   | Manage priority weeds in accordance with the requirements of the Biosecurity Act 2015.  | During and at completion of works | ТВА                |
|   | Disturbance to areas of waterside (riparian) vegetation or banks of watercourses will be avoided to the greatest extent possible.   | During works                      | ТВА                |

| Objective  | Environmental Action  | Timeframe                                   | Person Responsible |
|--|---|---|--------------------|
| No impact on<br>amenity and public<br>health from                                      | Activities with the potential to generate dust will be closely monitored and dust suppression (water spraying) will occur where appropriate.  | During works                                | ТВА                |
| emissions  | Reduce vehicle speeds on unsealed access roads to minimise dust generation.   | During works                                | ТВА                |
| No degradation of air<br>quality through dust<br>or odour                              | Vehicles and machinery will be maintained in good working condition, have appropriate exhaust pollution controls and meet the Australian Standards for exhaust emissions.   | During works                                | ТВА                |
| generation   | Machinery and vehicles will not be left running or idling when not in use   | During works                                | ТВА                |
|  | All loads will be covered and secured to minimise dust during transport   | During works                                | ТВА                |
|  | All maintenance holes will be closed overnight  | During works                                | ТВА                |
| leritage   |   |   |                    |
| No impact to heritage<br>sted items, artefacts   | The contractor will adhere to all heritage stipulations/conditions identified in DA2020/0405.   | Prior to and during works                   | ТВА                |
| or relics  | If any heritage items are within or may be impacted by the work site, they will be annotated as no-go zones on a site plan. Work crews will be made aware of heritage items.  | Prior to and during works                   | ТВА                |
|  | If an item (or suspected item) of Aboriginal or non-Aboriginal heritage is discovered during works, all work in that area will cease and the Council Project Manager informed as soon as possible to determine the subsequent course of action.<br>Works are not to proceed until all necessary approvals have been obtained. | During works                                | ТВА                |
| Social and Visual env  | rironment   | 1   | 1                  |
| No complaints  | Public information signs are to be displayed while work is in progress.   | During works                                | ТВА                |
| concerning the visual<br>condition of the work<br>site or impacts on<br>public amenity | Work areas will be maintained in a clean and tidy condition. Materials and equipment will be contained within the works compound where possible.  | During works                                | ТВА                |
|  | Notifications will be sent to local residents and businesses in accordance with Georges River Council Communications policies and requirements prior to, during and after works as required.  | Prior to, during and at completion of works | ТВА                |
|  | The Council Project Manager will be notified immediately of any complaints (noise, dust and/or odour) that are received and will respond to any complaints as soon as possible  | During works                                | ТВА                |
|  | On completion of all works (including site restoration), all vehicles, material and refuse relating to the works will be removed  | Completion of works                         | ТВА                |

| Objective   | Environmental Action  | Timeframe                 | Person Responsible |
|---|---|---------------------------|--------------------|
| Minimise<br>construction noise<br>and vibration.                              | Construction work will be limited to standard working hours (DECC, 2009a): <ul> <li>7am to 6pm, Monday to Friday</li> <li>8am to 1pm, Saturday</li> </ul> No programmed site work will take place on Sundays or public holidays   | During works              | ТВА                |
| No complaints   | All reasonable and feasible measures will be implemented to reduce noise impacts during the proposed works.   | During works              | ТВА                |
|   | Plant or machinery will not be permitted to warm-up near residential dwellings before the nominated working hours.  | During works              | ТВА                |
|   | Equipment used will have efficient muffler design and be well maintained in accordance with the manufacturers specifications.   | During works              | ТВА                |
|   | Noise abatement controls will be set up where required  | During works              | ТВА                |
|   | Schedule works bearing in mind the activities and sensitivity of adjacent land uses (eg Churches, hospitals, commercial premises).  | During works              | ТВА                |
|   | Works will be conducted in accordance with safeguards defined in <i>the Interim Construction Noise Guidelines</i> (DECC 2009)   | During works              | ТВА                |
| Minimise impacts  | Working hours to be in accordance with RMS or Council Road Closure Permits where required.  | During works              | ТВА                |
| when working<br>outside of normal<br>construction hours                       | The relevant Council department, EPA (where required) and the affected community will be informed before any work is conducted outside of the standard construction hours with details such as date, time, duration and type of the activity. Additional controls to be highlighted if this work is required.                                       | During works              | ТВА                |
|   | The work site will be designed to minimise the need for truck reversing movements.  | Prior to and during works | ТВА                |
|   | Noisy plant equipment will be positioned and oriented so as to minimise noise impacts on sensitive receivers.   | During works              | ТВА                |
| Traffic and Access  |   |                           |                    |
| To maintain safe<br>pedestrian and<br>vehicle access<br>around the work site. | Controls identified in Construction Traffic Management Plan to be adhered to.   | During works              | ТВА                |
|   | Work vehicles will not block access to private driveways, public facilities or businesses, not approved in DA2020/0405. Potentially affected property owners, local residents and businesses will be notified prior. Where the obstruction is required for any extended period, alternative access will be provided by ramps or other agreed means. | During works              | ТВА                |
|   | Works are to be scheduled so as to minimise impact upon the functioning of schools and businesses (no major materials deliveries at school drop off or pick up times etc).  | During works              | ТВА                |

| Objective                               | Environmental Action   | Timeframe                      | Person Responsible |
|---|--|--------------------------------|--------------------|
|   | Site to be managed so that there is no reduction in the ability of people to move safely past the works.<br>Safe alternative pedestrian access past the works is to be maintained at all times. This access should<br>also be suitable for prams and wheelchairs                 | During works                   | ТВА                |
|   | Appropriate signs will be erected to inform public foot traffic of activities in the area and any temporary closures.  | Prior to and during works      | ТВА                |
| Waste Management                        |  |                                |                    |
| No inappropriate storage or disposal of | Work staff will contain and remove all of their general garbage (including cigarette butts), from the work sites and not allow litter to accumulate.   | During works                   | ТВА                |
| hazardous materials.                    | Suitable bins (or bags) will be provided at each work site for the disposal of construction waste and litter.<br>The number of bins will allow for separation of waste streams (general, contaminated, hazardous and recyclables). Bins will be removed from site when 80% full. | During works                   | ТВА                |
|   | Dockets and records of the transport and fates of all materials removed from the site will be kept and submitted to the Council Project Manager as proof of correct disposal and for environmental audit purposes.   | During works                   | ТВА                |
|   | Disposal of wastes, including spoil that cannot be reused, will only take place at a licenced waste disposal depot and/or beneficially reused.   | During works                   | ТВА                |
|   | Where possible, recyclable material, such as metal, concrete and bitumen waste, should be recycled and/or beneficially reused.   | During works                   | ТВА                |
|   | Only certified, validated clean material is to be imported for backfill.   | During works                   | ТВА                |
|   | Hazardous materials located during the works should be sealed, labelled according to their contents, and temporarily stored within bunded areas until their removal from the work site and disposal at an appropriate EPA licensed facility as soon as possible.                 | During works                   | ТВА                |
|   | The waste containment area will be inspected regularly to determine the need for additional safeguards to prevent impacts on water quality and human health.   | During works                   | ТВА                |
|   | The work site(s) will be left clean and free of weeds, debris and other rubbish at the end of works.   | During and at the end of works | ТВА                |
|   | Any cleared native vegetation will be used in site stabilisation and/or restoration where possible. Excess cleared vegetation will be disposed of at an appropriate green waste disposal facility.   | During works                   | ТВА                |