Construction Environment Management Plan - Types and Locations of Environmental Protection Measures

Project Name: Cyprus Creek Estate

Date and Revision: Revision 2, 16 August 2021

The following have been identified as significant environmental aspects for the site:

- Soil management
- Dust management
- Water quality, erosion and sediment control management
- Noise and vibration
- Flora and fauna protection, weed management
- Cultural heritage management
- Waste management
- Public and Site Safety management

These aspects shall be managed with the environmental protection measures outlined on this plan.

Management

1. Responsibilities:
Project Manager:
H. Scorpio 0412 345 678
Occupational Health, Safety and Environment (OHS&E)
H. Simpson 0498 765 432
Flora and fauna specialist (ACME Flora and Fauna)
B. Terwiliger 03) 12345 6789

Emergency Contact 1: Fire/Police/Ambulance - 000
2: WorkSafe Victoria – 13 23 60

2. Communication of EMP Requirements:
All contractors on site are required to complete an induction prior to commencement of any works.
The induction will include all elements of the CEMP which will be included as a reference document. Evidence of inductions, subject to the Privacy Act, are available for inspection.
The CEMP is available to view in A0 in the site compound at all times.
Regular meetings will be held to identify and review issues associated with the CEMP. All associated documents noted below are available in the site sheds.

3. Inspections and Maintenance:
CEMP control checklist will be developed after CEMP approval by Council.
Checklist will cover soil, dust, erosion, noise, sediment and pest management control measures, fencing/ barricades cultural heritage and flora and fauna protections, and waste management
Sediment and other controls specified on the approved CEMP checked daily and records kept. Spot checks of CEMP controls to occur twice a week
CEMP checklist completed at each inspection and records available to Council upon request.. Remedial actions noted on checklist
CEMP to be reviewed and updated if significant changes occur to the site or at the request of the Responsible Authority
Targeted monitoring after heavy rainfall (>10mm/h) and after high winds (gusts greater than 30km/h)
Breaches of CEMP controls to be addressed within 24 hours.
Deficiencies such as vegetation protection zones and sediment traps will be rectified immediately and any reoccurring issues will be assessed altered.
A maximum of 7 days will apply for rectification of all deficiencies.
Significant breaches will be reported to Council or the EPA where legislation requires.

4. Staging of Works:
Staging of works will occur depending on weather conditions.
Temporary fencing, sediment fencing, stockpiling will be adapted to various stages of works to ensure risks of environmental damage are minimised.
Stripping of soil and removal of vegetation will be completed in stages to minimise soil exposure and prevent erosion, dust, runoff and sediment.

5. Informing Residents:
Letter drops containing contact notification and complaints process will be completed. Signage on site entry will display 24 hour contact details. Door knocking will occur within the local area at times when disruptive works are likely to occur.
Complaints process:
We are committed to ensuring as minimal disruption as possible occurs to the local community throughout the duration of construction. If a complaint arises, we encourage direct contact to rectify the issue via the following methods:
In writing to hscorpio@globexcorp.com or enquiries@globexcorp.com
If the matter is urgent, 24/7 assistance is available on 9912 345 678.
We will endeavour to respond to all complaints within two business days.
Pending the nature of the complaint, response resolution timeframes may vary. If the matter has not been resolved to the complainant's satisfaction, they will be referred to local council.

6. Associated Documents:
Critical incident policy and procedure
Soil and Fill Plan
Biodiversity Assessment
CEMP checklists
Environmental Impact and Risk Assessment
Cultural Heritage Management Plan (CHMP)
Reference documents:
EPA275 Construction Techniques for Sediment Pollution Control
EPA Waste Classification Guidelines (IWRG621, IWRG631)
EPA1834 Civil Construction, Building & Demolition Guide
EPA1820 Construction - guide to preventing harm to people and the environment
EPA1890 Managing Noise from Reversing Alarms
EPA1698:Liquid Storage &Handling Guidelines
Australian Standard AS60335.2.69:2017 – Hazardous Dust
Australian Standard AS490-2009 – Protection of Trees on Development Sites
Australian Standard AS 4687-2007 – Site Fencing
Catchment and Land Protection Act 1994
BS7385 Vibration
In the instance that an Australian Standard, Guideline or Legislation referenced throughout this document becomes invalid, superseded or replaced, the updated document will apply.

Noise — Risk: Significant/Med/Low

Requirement: EPA Victoria and Council requirements must be adhered to in relation to the level of noise and working hours, to ensure that residents and other applicable neighbours to the site are not disturbed unreasonably. The generation of noise must be minimised.

7. Working Hours:
8 am to 5 pm Mon-Fri
9 am to 1 pm Sat

In accordance with ch.4 of EPA1834 Civil Construction, Building & Demolition Guide

8. Noise/ Vibration Minimisation Methods:
Regular maintenance of plant and machinery.
Noisy activities to be scheduled for a less sensitive time of day when able (eg. middle of the day)
EPA Victoria and Council requirements must be adhered to in relation to the level of noise and working hours permitted to ensure residents are not disturbed unreasonably.
Community complaints regarding noise are to be reported and an acceptable resolution reached.

9. Other:
Other than urgent works necessary to make the site safe or secure, a Permit to Work Outside of Permitted Hours must be obtained for any noisy works proposed outside of Working Hours. Council reserves the right to withdraw consent.
Broadband reversing alarms to be fitted to all plant and equipment where noise nuisance likely to affect residents
Radio noise not to be audible inside nearby residential premises

Dust — Risk: Significant/Med/Low

Requirement: Dust generation must be minimised to ensure there is no health risk or loss of amenity.

10. Minimising Dust Generation:
Weather will be assessed daily from the Bureau of Meteorology website and posted daily in the compound in a conspicuous location with the CEMP. Activities restricted on dry windy days (i.e. bushfire prone days).
Material will be reduced during vehicle exit via the use of rumble grid and wash down bay. Rumble pad installed at site entry, used for entry and exit.

12. Contingencies:
Check property boundaries for dust blow-off and implement controls as required
Stop works on days of predicted high fire danger / extreme wind conditions

11. Dust Suppression:
Water truck on site at all times for dust suppression, and water on hand for dust suppression as visually identified. Wetting down and covering of excavation faces once vegetation is removed. Project area with exposed soil will be sprayed to reduce the potential for dust. Actions to occur daily during periods of dry weather (no rain within 24 hours).
Visual monitoring of area and weather monitoring to occur to ensure compliance with ch.5 EPA1820 & EPA1834 Civil construction, building and demolition guide
Dust is not to accumulate on roads abutting the site. This will be monitored as part of the CEMP checklist. Street sweepers are on site daily between 1pm -5pm to clean the roads surrounding the site.
Utilise wet processes when grinding, cutting and drilling if safe and practical.

13. Other: (as required)
Mulch exposed areas subject to wind blow-off
Minimise/restrict vehicle movement over exposed surfaces
High traffic areas to be paved with gravel
Cover all loads of fill prior to exiting site
Use dust suppressant product (e.g. Lignin sulfonate / organic Dust Suppressant)
Construct wind fences using shade cloth

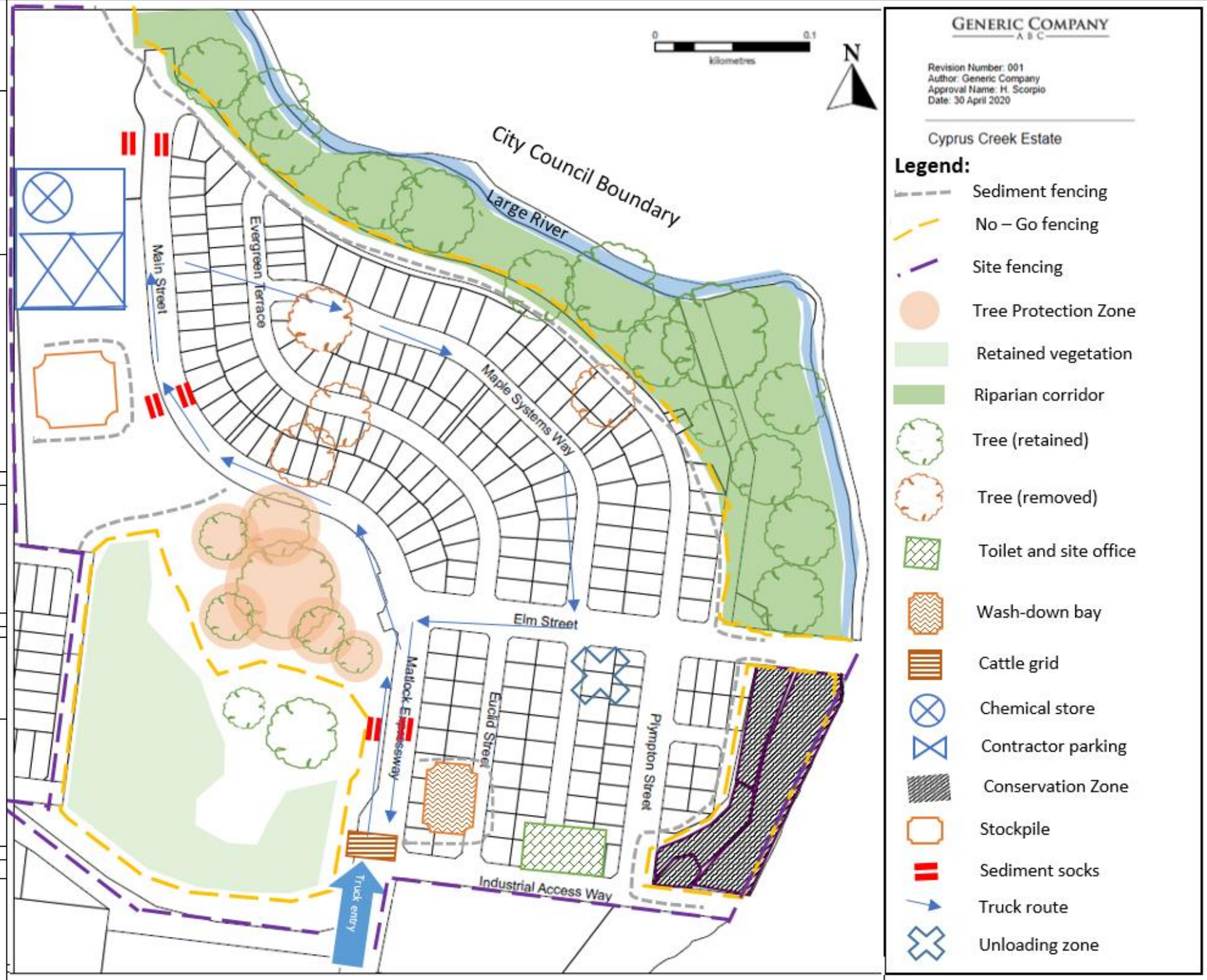
Erosion and Sediment — Risk: Significant/Med/Low

Requirement: Erosion and sediment must be managed in accordance with current best practice environmental management practices, to prevent sediment-laden water from entering any drainage system or natural waterway.

14. Drainage Management:
Diversion of off-site runoff away from conservation reserves, riparian corridor and retained vegetation.
Diversion of on-site runoff away from sensitive areas including unstabilised soil and stockpiles. Diversion controls include swale drains and bunding. Naturalise drainage lines as much as possible.
Diversion of any contaminated flow generated on site to a sediment trap or settlement treatment, prior to release from site into receiving water.
No water from site is to enter the Large river or any other waterway
All drainage measures will be assessed and monitored as part of the weekly CEMP checklist.

17. Sediment Traps:
Sediment controls to include silt stop fencing to prevent runoff beyond site boundary, or within sensitive areas (retained vegetation, waterways). Sediment socks implemented at all stormwater drains along Main Street and Matlock Expressway as pre-existing roads.
Sediment control measures must be maintained for size and capacity of 1 in 5 year storm event and remain in place until the end of civil construction and hard landscape works
Targeted inspections of controls after heavy rainfall (>10 mm/h)
Daily inspections of controls in accordance with monitoring requirements
Emergency sediment fencing available in site compound for any repairs of damaged controls

18. Dewatering



Site controls not to scale. Site management and engineers to ensure placement accuracy of CEMP controls throughout the site.

15. Soil Stabilisation:
Grading, excavations and construction must not proceed during periods of heavy rainfall (> 10 mm/h).
All measures are to be implemented as per the map provided. This is to occur in accordance with EPA1834 Civil construction, building and demolition guide & EPA1820 Construction - guide to preventing harm to people and the environment

16. Stockpile Protection:
Stockpile location along western edge of Main Street (located furthest from residential). Diversion of runoff away from stockpile as per drainage requirements.
Sediment retention structures to be located downslope of stockpile (refer to site plan). Stockpile positioned at least 30 m away from waterways, drainage lines and retained vegetation.
Maximum 1:3 height to width ratio. Stockpiles to be covered with weatherproof covering, hydro mulch or sterile grass (hydro seeding) if in place for >28 days. Grassing in accordance with the CaLP Act.

No direct discharge to sewer or stormwater of untreated or contaminated material. Reuse decontaminated water on site where possible (examples)
a) Open sump pumping – filtering and removing silt/ impurities- discharge of treated water at nominated authorised location by Springfield Wide Water Authority
b) Dry hire by licensed "Dewater Sites R Us" reg.no. tel 123 4567

19. Vehicle and Road Management:
Site Access: Access via Matlock Expressway and Main Street. Construction site compound only access via Main Street.
Cover vehicle tracks and parking areas with gravel where unpaved
Street cleaning:
Cleaning Vehicles: Vehicles to be cleaned in bunded washdown area prior to entry/exit to minimise soil and pathogen transfer.

Washdown area and compound to be in low point to prevent runoff.
Silt fencing installed to prevent runoff in compound and washout area
Traffic control implemented as per Council Approved Traffic Management Plan
Street Cleaning: Daily inspections to occur. Street sweepers on site between 1pm – 5pm daily.
Rumble grid and washout bay located at construction site entry/exit. Refer to plan.
Truck route back to main arterial road must be shown .
Car parking area within site must be shown
Expected number of daily truck movements must be stated

Waste — Risk: Significant/Med/Low

Requirement: Litter and waste must be contained on site, before disposal in a responsible manner. Waste generation must be minimised.

21. Movement of Soil : Off site/ On Site/ N/A
Contaminant Status: No contamination known
If contaminated soil found, disposal as per point 23- Discovery.

22. Waste Minimisation Methods:
Waste controls in accordance with EPA1834 Civil Construction, Building & Demolition Guide & EPA1820 Construction - guide to preventing harm to people and the environment tEPA Waste Classification Guidelines (EPA IWRG621, IWRG631).
Materials reused and recycled to maximum practicality. Dedicated recycling bins to be established. Waste generation must be minimised.

23. Waste Storage and Disposal :
All litter to be disposed of responsibly. Responsible management of soil, organic, stockpiles, building and construction waste to occur.
Recyclable construction materials will be sorted. Waste bins will be collected from the site minimum fortnightly. Lids will be equipped on all waste bins and skips to prevent invasion by pests or the spread of waste via weather. All packaging and food scraps will be placed in segregated bins within the site compound.
Records will be maintained of any hazardous waste that requires disposal and Council to be notified of lawful disposal facility
No burning of waste is permitted
Discovery of unexpected contamination:
Any materials discovered will be segregated within a temporary holding area pending resolution of management outcomes. Items include batteries, historically deposited construction waste and contaminated soil. Any items will be disposed of in accordance with EPA waste classification guidelines. and Council to be notified of lawful disposal facility
Green Waste:
Flora and fauna specialist to monitor removal of vegetation. Green waste to be transferred to approved organic waste processing facility.

24. Other:

Chemicals — Risk: Significant/Med/Low

Requirement: Storage and spill management practices must be implemented to ensure that no environmental damage can result from the escape or spillage of chemicals or fuels.

25. Storage:
Chemicals used/stored on site:
Designated areas (including for fuels, oils, chemicals and other hazardous materials) within the site compound boundary, protected by appropriate bunding.
Bunding and liners for chemical storage must be installed in accordance with the EPA1698:Liquid Storage &Handling Guidelines. Bunds to be impervious and compatible with liquids being contained.
Minimal storage of field and other chemicals on site
MSDS register with risk assessments for available products and chemicals can be found in the site office.
Chemicals to be stored and labelled according to MSDS

26: Spill Management:
Training and emergency procedures for fuel/chemical spills
Emergency contact numbers and response flow chart displayed in site office.
Weekly inspections of management measures
Spill kits available in site compound
Designated refuelling areas and site compound must be appropriately bunded and graded to a sump at the lowest point where spills collect
Reporting of spills and spill management in accordance with EPA guidelines

27. Refuelling Procedure:
Designated appropriate refuelling points must be used
Bunding and liners for chemical storage must be installed in accordance with the EPA1698:Liquid Storage &Handling Guidelines
Bunds to be impervious and compatible with liquids being contained
No refuelling to occur within minimum 50 m of any waterway, 30 m of retained vegetation
Refuelling and other hazardous material use to only occur within appropriately bunded or portable sealed bunded area
Minimal refuelling of vehicles to occur on site and wherever possible done off site

28. Other:
Vehicle machinery maintenance must not occur on site. All oily water must be disposed of at a suitably licenced waste disposal facility.

Other Site Specific Issues

Significant Flora/ Fauna — Risk: Significant/Med/Low

Requirement: All significant flora and fauna on and adjacent to the site must be protected.

29. Yes/No. Details:
Designated sensitive vegetation requiring protection and preservation adjacent to the site will be protected with No-Go fencing and signage in accordance with AS490-2009.
Vegetation clearance will be limited to approved areas only.
Cleared vegetation will be removed in stages, with complex habitat and food resources decommissioned prior to removal.
Cleared vegetation will be removed and temporarily stockpiled. Stockpile to be monitored for weed and pest animals and removed prior to establishment of pest harbour.
Green waste will be transported to approved organic waste processing facility. Weed and pest prevention measures as per the CaLP Act (1994). Slashing must not occur when targeted weeds are seeding
Flora and fauna specialist to be engaged for advice. Removal of habitat will be completed in accordance with the Wildlife Act (1975) and the biodiversity assessment. Offset credits obtained in accordance with permit conditions. Vegetation to be protected with fencing in accordance with AS490-2009.
Prior to tree removal, a zoologist must inspect and ethically remove wildlife a maximum of 48 hours prior to tree removal. Protection measures checked weekly in accordance with CEMP checklist.
Prior to removal of complex habitat (including fallen logs, rubbish piles, construction materials historically left on site), pre clearance survey by an ecologist must occur. In the instance that this is not possible, the ecologist will supervise the removal of complex habitat and relocate disturbed fauna. A report detailing fauna relocations/deaths/injuries will be provided to Council.

Archaeological/ Heritage — Risk: Significant/Med/Low

Requirement: Places, sites and objects of archaeological or heritage significance must be protected.

30. Yes/No. Details:
There are no known cultural heritage sites within the project site; however, the proximity to the Large river presents the potential for sites or artefacts of cultural significance to be identified within the site due to historical land use.

Mitigation: Heritage inductions are to occur, and relevant documentation displayed in site compound has per the CHMP.
If artefacts are found, works shall cease until an investigation is undertaken by a qualified archaeologist.
Aboriginal Affairs Victoria is to be notified upon the discovery of any Aboriginal cultural material.
Police or State Coroner's office must be informed of the discovery of suspected human remains.

☐ — Risk: Significant/Med/Low

31.

☐ — Risk: Significant/Med/Low

32.

I have read this Environmental Management Plan and agree to undertake works and ensure sub-contractors undertake works in accordance with this plan. Developer _____ Consultant _____ Contractor _____

The following have been identified as significant environmental aspects for the site:
:
:
:
These aspects shall be managed with the environmental protection measures outlined on this plan.

Site and Public Safety

Responsibilities: All contractors **Site Fencing** 2m High cyclone fencing and inward gates at Industrial Access Way, balance of site temp fencing to AS4687. No fencing or bases to encroach on footpath **Trench Guards** Wire mesh guards or hoarding to be placed over trenched areas at footpath boundary. Open trenches to be covered as soon as practicable	**Truck Movements** Earthworks: heavy rigid 10 ton typical 20 movements per day over 3 months (where entry / exit = 2 movements). Arrival / departure movements timed to avoid queuing on the roadway Construction deliveries: Maximum 4 Heavy Combination and 20 other < Heavy Rigid movements per day during building phase Loading bay shown on plan
Security lighting Shown on plan. Located and baffled to minimise light spill / nuisance to residential areas Security Cameras to be installed at key access points Industrial Access Way and Plympton St near Large River to deter illegal dumping/ site protection	**Contractor / employee parking** Shown on plan. Existing Naturestrip of Truck Entry to be flagged and signposted NO STOPPING to prevent material storage /illegal parking
PEDESTRIAN AND VEHICLE ACCESS Separate pedestrian entry for workers signposted. Gravel path Maximum vehicle size entering site = Heavy Combination Temporary crossover at TRUCK ACCESS constructed to Council standard removed at completion stage 1. Sign NO PEDESTRIAN ACCESS at truck entry on Matlock Expressway	**TRAFFIC MANAGEMENT** (if required) works to occur between the following hours: • Works between xx0am - Monday – Friday. Working hours outside of these times will need to be specified and approved by Council on a case by case basis. • Roadworks on Saturday and Sunday to be specified and approved by Council **Or as otherwise specified in approved Traffic Management plan**

Risk: Significant/Med/Low

=VIBRATION

Vibration and settlement from filling and compaction of earthworks. Vibration intensive Plant must have a minimum working distance to prevent cosmetic damage (compliance with BS7385). Management of vibration in accordance with Ch EPA1834 Civil Construction, Building & Demolition Guide Sediment markers will be installed at all abutting properties and roadways.	Compliance and Mitigation: Monitoring surveys will be carried out before and after the filling and compaction of earthworks. The use of vibration intensive Plant will require review if complaints are received from surrounding properties. Dilapidation reports conducted on xx properties / Council land prior to commencement of basement / compactions works

Risk: Significant/Med/Low

PROTECTION OF COUNCIL or other AUTHORITY ASSETS

Dilapidation report of adjoining Council assets to be provided to Council prior to commencing works OR request to Council to undertake dilapidation report. Video of Council drains southern side of Industrial Way to be submitted to Council prior to commencement of works	

Other

Risk: Significant/Med/Low

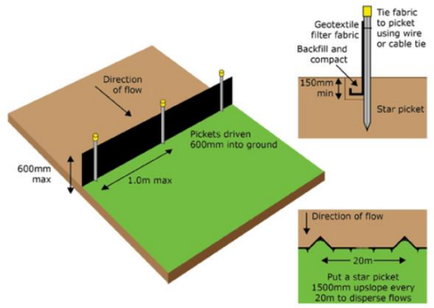
Risk: Significant/Med/Low

Site EMP A1 Plan (1)- Types and Locations of Environmental Protection Measures

Project Name:
Date and Revision:

EXAMPLES OF TYPICAL CONTROLS TO BE IMPLEMENTED AS PART OF THIS MANAGEMENT PLAN:

Figure 1: Silt fence installation (source: EPA Victoria 2004, Publication 960 p.30)



Typical TPZ to AS4970

Gravel sausages require de-silting when sediment has built up to 1/3 the height of the measure, when the built up sediment is preventing the log from working effectively, or when the sausage is clogged and run-off can no longer flow through it.

PLAN HERE

Other Site Specific Issues

✎	△	☐ Risk: Significant/Med/Low	☐ Risk: Significant/Med/Low