Council Roadside Reserves Project –

Site Management Checklists and Safeguards
These slides cover

- An introduction to checklists and safeguards
- Example pre-construction checklist
- Practical safeguards for common works in roadside environments

These slides are a general introduction and don’t provide a staged environmental assessment process.

Refer to Council REF Template Chapter 4: Mitigation Measures for more details

Relates to CREMF report Chapter 8: On-ground Works
Benefits to Council

- Environmental data can be used to:
  - Identify features and sites of high importance
  - Minimise council’s legal risk of environmental damage
  - Adopt safeguards for on ground works
  - Inform development of pre construction checklists based on model provided
What?

• Environmental values include
  – Vegetation type
  – Patch size
  – Threatened species or Endangered Ecological Communities
  – Habitat types
  – Coastal areas

• Heritage values include
  – Cultural heritage eg scar trees, artefacts, meeting sites, gravesites
  – Historical heritage eg historic kerb & guttering, convict roads, gravesites
When?

When:
- Planning works
- Routine maintenance activities
- Road construction or upgrades

How:
- Field maps (electronic or printed)
- Roadside markers
- Natural asset database/ GIS
- Pre-construction checklist
- On-ground practices led by guiding safeguards and operating procedures
- Link to RVMP (if available)
Roadside works

Stop & consider potential impacts to natural assets if working in:

- waterways
- areas of vegetation older than 10 years
- remnant vegetation with mature trees or hollow bearing trees
- areas of critical habitat
- wetlands or littoral rainforest areas under the Coastal Management SEPP 2018 (replaced SEPP 14, SEPP 26 and SEPP 71)
- sandstone platforms in the Sydney Basin and other important geological features

In general any works undertaken in these sensitive areas should be referred to specialist environmental staff and the site manager.
Checklists & Safeguards

Checklists are a management tool to avoid or minimise impacts to the environment

• Before works
• During works
• After works

Safeguards are measures that can be taken to guard against adverse environmental impacts.

Operating Procedures apply and may need to be updated.

See CREMF report, Appendix E: Resource Compendium
The CEMP must follow any Part 7 Permit and REF.
It sets out the:
• scope of works
• timelines
• relationship to plans and policies, and
Provides procedures and safeguards for:
• site delineation and marking of ‘no-go’ areas
• material storage and stockpiling
• site restoration and cleanup
• air quality / dust impacts safeguards
• noise and vibration impacts safeguards
• flora and fauna management (including weed management)
• use of temporary crossings and other access works (including provision of fish passage)
• water quality & drainage impacts
• sediment and erosion control plan
• acid sulfate soils management plan
• waste impacts safeguards

The CEMP covers matters relating to the ongoing maintenance of the site.
<table>
<thead>
<tr>
<th>Aspect</th>
<th>Objective</th>
<th>Target</th>
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<tbody>
<tr>
<td>Flora and fauna management</td>
<td>Protect flora and fauna within construction footprint and adjacent areas</td>
<td>Ensure no impact on native flora and fauna species associated with the works</td>
</tr>
<tr>
<td>Weed control</td>
<td>Manage and control weeds</td>
<td>Undertake best practice weed management to ensure no further weed invasion from the construction works</td>
</tr>
<tr>
<td>Air quality/dust</td>
<td>To minimise potential impacts on air quality from construction activities</td>
<td>Maintain adequate air quality management practices throughout the construction phase</td>
</tr>
<tr>
<td>Noise and vibration</td>
<td>To minimise potential impacts of noise and vibration from construction activities</td>
<td>Maintain effective noise and vibration management practices throughout the construction phase</td>
</tr>
<tr>
<td>Soil and water</td>
<td>Minimise water pollution through soil erosion and sediment control, even in event of flooding</td>
<td>Maintain effective erosion and sediment controls throughout the project</td>
</tr>
<tr>
<td>Waste</td>
<td>Minimise waste resulting from construction activities</td>
<td>Reduce, reuse, recycle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Keep accurate records for waste leaving site</td>
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</tbody>
</table>
Example pre-construction checklist

1. Is there a construction environmental management plan that pertains to the site or the works?
2. Has a suitably qualified environmental site representative been appointed?
3. Is the project delivery team briefed on the CEMP or equivalent?
4. Has an onsite risk assessment been completed in the field, signed by the delivery team and appended to the CEMP for records?
5. Have the required approvals, licences and permits been obtained for the works?
6. Have the delivery team put in place the necessary record keeping required in approval permits?
7. Are the project delivery team briefed on the environmental values on the site to be protected?
   a) Is there evidence of debriefing of sub-contractors on environmental management requirements?
8. Is there evidence of adequate environmental protection measures in place?
   a. Are exclusion zones clearly marked?

9. Cross check environmental work method statement or Construction Environmental Management Plan prior to
   - Dewatering
   - Working in waterways
   - Working in areas marked “Significant Environmental Area”
   - Clearing and grubbing vegetation or using root rake
   - Working in areas identified for “no clearing”
   - Working near sensitive sites identified in the plan including coastal areas, heritage sites, threatened species habitat or endangered ecological communities
   - Cutting and filling
     a. Is there a soil management plan in place for the site including erosion and sediment control measures if required?
     b. Are the sedimentation control measures being implemented?
     c. Is there a water quality management plan for the site if required?
d. Is there a stockpile management plan if relevant?
   i. Are any materials placed in exclusion zones?
   ii. Are hygiene protocols in place for moving soil to prevent spread of weeds?
   iii. How will stockpiles be protected?

10. Is there adequate planning for the following items (as required)
    a. an Emergency Plan
    b. a Spill Response Plan
    c. Waste Disposal Plan (permits may be required)
    d. Asbestos Management (may include naturally occurring asbestos)
    e. Complaints Register?
Example site management plan

General Notes:

1. All reasonable and practical measures are to be taken to prevent or reduce harm to the environment.
2. Erosion and sediment control is to be installed as per the "Managing Urban Stormwater Soils and Construction Volume I (NSW Landcare) - Blue Book" and relevant standard drawings (see sheet 2).
3. No works are to commence on the site until appropriate erosion and sediment control has been provided and installed.
4. Run on water will be diverted around the work site where practical. Diversion bunds should be lined with filter cloth. Due to the restricted area available between the road and the work area, tightly jacketing sandbags may be used to create a sandbag perimeter bank to divert upstream runoff from the road into the discharge point.
5. Revegetation and rehabilitation works are to be undertaken as soon as practicably possible.
6. Any clearing of vegetation is to be kept to a minimum. Limits of clearing is to be clearly defined and all reasonable care is to be taken to ensure trees and vegetation beyond the limits of clearing are not damaged.
7. All fences are to be provided with posts (at least 1800mm above ground level) and to be provided with sufficient post widths and spacings.
8. Fencing and associated works are to be carried out in accordance with the requirements of the NSW Environmental Protection Agency.
9. All surplus waste to be removed from site and disposed of according to the requirements of the NSW Environmental Protection Agency.
10. Regular maintenance of all erosion and sediment control structures must be undertaken at least daily during dry weather and after every storm event that causes run off. All controls shall be maintained in a satisfactory condition.
11. The contractor is to ensure the suppression of dust at all times.
12. Renovation of all disturbed areas is required. Areas of earthworks and trenching are to be finished, compacted to a depth of 250mm (as applicable) and smoothed.
13. Any de-watering from the pit should be filtered through filter fabric/coverdown filter cloth.
14. The contractor is responsible for the management and protection of utilities including the provision for temporary road access.

Controls drawn on this plan are temporary and will be removed upon stabilisation and completion of the works in the work area.

Legend:
- Work Area
- Existing culvert
- Access to works area
- Existing stockpile unrelated to works
- Stockpile area for works
- Site parking and delivery drop off area
- Stabilised site access
- Existing 900mm brick culvert
- Clean water diversion bund (lined)*
- Ephemeral drainage line-defined channel
- Ephemeral drainage line no defined channel
- *Sediment fence
- Straw bales

For detailed information about the site and infrastructure alignment, refer to surveys plans.
Example management actions during construction (from map)

- All reasonable and practical measures are to be taken to prevent or reduce harm to the environment.
- Erosion and sediment controls are to be installed as per the “Managing Urban Stormwater Soils and Construction Volume 1 (NSW Landcom Bluebook) AND relevant standard drawings (sheet 2)
- No works are to commence on site until appropriate erosion and sediment control has been provided and installed.
- Run on water will be diverted around the work site where practical.
- Revegetation and rehabilitation works are to be undertaken as soon as practically possible.
- Any clearing of vegetation is to be kept to a minimum. Limits of clearing are to be marked on ground and all reasonable care is to be taken to avoid clearing and damage beyond works zone.
- Silt fences are to be provided down gradient of all stock piles.
- Stockpiles are to be located a min 50m from watercourses.
- All surplus waste to be removed from site and disposed of appropriately.
- Regular maintenance of erosion and sediment control structures is required.
- Earthworks and trenching are to be decompacted to depth of 250mm by scarifying.
- Rehabilitation of all disturbed areas is required.
- Dewatering pit to be lined with filter fence.
- Stabilised site access point is to be established.
- Contractor is responsible for management and protection of utilities.
Safeguards

• **Use/adapt existing resources:**
  - RMS Biodiversity Guidelines
  - Council (Standard Operating Procedures)
  - Regional Organisation of Councils
  - Refer to CREMF report, Appendix E: Resource Compendium

• *Preliminary* considerations outlined in following slides
Weed management in roadsides

• **Requirements**
  - Biosecurity Act 2015
    - General biosecurity duty
    - Listed species
    - Local Control Authorities & Published weed management plans
  
  Replaced former Noxious Weed Act 1993

**Example Safeguards**

To prevent or minimise the spread of noxious and environmental weed species

- Learn to identify weeds of the region.
- During construction any weeds and or noxious weeds will be disposed of appropriately. All material trimmed from high risk weed species must be disposed of off site.
- Construction machinery should be washed prior to entering and leaving site to ensure weed propagules are not transported.
- Consult council’s weeds officer (statutory Local Control Authority) for weed identification and weed control options, particularly in areas of potentially high conservation value.

Further information:

Biosecurity Act Factsheets

Weeds of National Significance [WONS species list](https://www.nrm.org.au/national-weed-list)

RMS Guide 6 [Weed Management](https://www.nrm.org.au/national-weed-list)
Erosion & sediment control in roadsides

• Requirements
  – *NSW Protection of the Environment Operations Act 1997 No. 156 (POEO Act)*
  – *Objectives of NSW Water Management Act 2000 (WM Act)*
  – Under (s38) Council is exempt from controlled activity as a public authority but principles apply

**Further information:**

**Example Safeguards**
Site management will incorporate best management erosion and sediment control practices such as those found in the Department of Housing’s “Blue Book (4th Edition) on erosion and sediment control.

Linear silt stop fencing to be installed down slope of all effected areas and stockpiles. Silt fencing will be installed before excavation begins.

Sandbags, hay bales wrapped in geotextile fabric etc. will be used to slow water flow and trap sediment. No straw bales are to be used.

Overburden will be placed in the form of a bund upslope of the site where necessary to reduce surface water entering the site.

All erosion and silt control devices will be visually inspected weekly to ensure effectiveness as well as after each rainfall event.
Clearing or trimming vegetation in roadsides

### Requirements
- *NSW Biodiversity Conservation Act 2016*
- *Local Land Services Act 2013*
- SEPP Vegetation in Non Rural Areas 2017
- *NSW Environmental Planning and Assessment Act 1979 (EP&A Act)*
- Commonwealth *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*

### Example Safeguards
Remove minimum required vegetation and minimise disturbance to remaining vegetation.

Trees that are to be trimmed (or removed if necessary) will be clearly marked. Any vegetation to be protected adjacent to the work area will be protected with exclusion fencing.

Exclusion fencing will be placed at or beyond the drip lines of the protected vegetation so as to prevent damage to their root systems.

Any trees with hollows are to be checked prior to being removed for native fauna. If anything is found, works will stop and WIRES will be contacted.

If any damage occurs to vegetation outside of the boundaries of the work site as a result of the implementation of the proposal, the Project Manager will be notified and will establish strategies for mitigation of impacts and site restoration.

### Further information:
- RMS Environmental Handbook for Road and Bridge Works
- CREMF report Section 7
Mowing or slashing in roadsides

Requirements

- Vegetation on roadsides must be managed for the safety of road users and also for the maintenance of biodiversity and aesthetic values.
- *Mowing or slashing in areas of high conservation to follow site management plan or RVMP (NB road furniture location)*
- Prevent spread of invasive species
- *Bushfire risk management and fuel load management*

Example Safeguards

- Remove the minimum required vegetation and minimise disturbance to remaining vegetation
- Mow after flowering and seeding is complete in sensitive areas
- Mow around regenerating vegetation (other than where specified for road safety)
- No mowing on high fire danger days
- Clean machinery with high pressure compressed air, vacuum or brush water in contained area
- Avoid slashing weed infested areas when weeds are in seed

Further information:

RMS EIA PO5 G01 T02 Standard Safeguards list for routine and minor works
HCCREMS Regional Roadside Resource Kit
Vehicle & equipment hygiene

Requirements

- Trade and Investment Critical Risk Control and Procedure – Hazardous Chemicals

Safeguards

Site supervisor to ensure:

- Construction machinery should be washed prior to entering and leaving site to ensure weed propagules are not transported.
- Risk assessment completed for *Phytophthora* spp, myrtle rust, weeds

Further information:

*Arrive Clean, Leave Clean*, Commonwealth of Australia 2015

Managing Phytophthora Dieback Guidelines for Local Government (2010), Dieback Working Group

Preventing spread of Myrtle Rust in bushland (2015), NSW DPI Industries
This presentation has briefly introduced common topics for consideration to ‘improve management of natural assets in roadside environments’.

The Council Roadside Reserve (CRR) Project delivered by LGNSW and funded through the NSW Environmental Trust is available to Councils to develop and trial improvements to roadside environmental management.