Hunter Expressway: Clearing – Branxton (25)

Environmental Construction Method Statement (CMS)

Environmental Construction Method Statement No: HExCMS02

Activity: Clearing works associated with utility construction and access track/road construction.

Scope of activities:

- Minor clearing/ trimming for surveyors to achieve line-of-site.
- Works near items that are environmentally sensitive, eg Kurri Sand Swamp Woodland EEC vegetation.
- Delineation fencing of clearing easement and environmentally sensitive areas.
- Pre-clearing surveys for clearing works.
- Two-phase clearing process.
- Fauna rescue during clearing operations.
- Earthworks and construction of access tracks (including stump grinding).
- Erosion and sediment control installation and maintenance (refer to erosion and sediment control plan).
- Mulching of felled timber.
- Management of stockpile sites.

Relevant Environmental Documents:

Hunter Expressway stage 1 early works construction environmental management plan (RTA, 2010).
Hunter Expressway electricity adjustments vegetation clearing construction environmental management plan (EnergyAustralia, 2010).
Primary Erosion & Sediment Control Plan – G38 Annexure D.
Progressive erosion and sediment control plan.
Specifications G1, G38, G40.
DECCW scheduled development work licence (no. 13285).
DECCW conditions of concurrence (2001).
DECCW conditions of concurrence (2010).
DEWHA expressway approval (2007).

DEWHA electricity adjustments approval 2007/3814 (2010).
Ministers Conditions of Approval (2001).
RTA Environmental Assessment (EIS, Submissions Report).
Energy Australia Environmental Assessment (REF, SIS, Decision Report).
Hunter Expressway Electricity Adjustments Hollow Survey report

Checklists/Monitoring:

Checklist HEx1: Pre-construction environmental checklist.
Checklist HEx2: Daily/weekly environmental checklist. (or RFS-Form-401)

* Further monitoring to be undertaken in accordance with Section 9.3 of RTA's stage 1 early works CEMP and EnergyAustralia's electricity adjustments vegetation clearing CEMP.

Attachments:

Attachment 1 - sensitive area map 21, Branxton – chainage 37,100 to 37,400.
Attachment 2 - progressive erosion and sediment control plan.

Key Contacts:

Project community information line 1800 001 267

Environmental risk items and controls:

Risk	Environmental control
Access roads	Drive on established local road and tracks and within marked and approved corridors to avoid damage to threatened and protected flora, and potential Aboriginal and non-Aboriginal heritage which may be present.
EEC vegetation	All areas of EEC vegetation identified in the environmental assessment documents and the sensitive areas maps (relevant sensitive area map, which includes mapped ECC vegetation, provided as attachment 1) shall be clearly identified prior to any works being undertaken. Works need to be undertaken with care not to move outside the approved work area. The movement of construction traffic into and out of the site is to be via existing local road, access tracks and paths, unless otherwise approved. Do not vary access from these roads without the prior consultation with the RTA environmental management representative and/or RTA senior environmental officer.
Working near Aboriginal heritage sites	Consult sensitive area mapping (Appendix C of CEMPs) to assess where known sites may occur in close proximity to work areas. Work is to be undertaken in accordance with the CEMP procedures. Known Aboriginal heritage sites are to be temporarily or permanently fenced, in consultation with Aboriginal community, prior to works commencing in those areas. Where a potential artefact is encountered, all works in the immediate area shall cease until the potential artefact can be assessed by the project archaeologist.
Working near non-Aboriginal heritage sites	Consult sensitive area mapping (Appendix C of CEMPs) to assess where known sites may occur in close proximity to work areas. Work is to be undertaken in accordance with the CEMP procedures. Known non-Aboriginal heritage sites are to be protected with temporary or permanent fencing, in consultation with the project archaeologist, prior to works commencing in those areas. Where a potential relic is encountered, all works in the immediate area shall cease until the potential relic can be assessed by the project archaeologist.
Erosion and sediment control near waterways	Works are to be undertaken in accordance with the Progressive Erosion and Sediment Control Plan (provided as attachment 2). Maintenance of these controls is to be undertaken weekly or after storm events greater than 10mm.
Threatened fauna	The work area contains habitat for several threatened species known or expected from the area. All protocols contained within the CEMP shall be followed especially the two stage clearing process.
Fauna rescue	Ensure details of the fauna rescue specialist, veterinary care and local animal welfare groups are on site at all times. Fauna rescue personnel and equipment is to be available on site during clearing operations. Uninjured animals that are rescued are to be relocated to suitable predetermined locations within adjoining bushland by the project ecologist.
Work hours	Work hours are to be between 7am and 6pm Mon-Fri and 8am to 1pm Sat unless directed by Agencies or

	Police. No "warming up" of plant before starting time identified above.
Environmental incident	Keep an emergency spill kit at all work sites at all times and ensure all staff are made aware of its location. In the event of an environmental incident, implement the RTA's Guidance for Environmental Incident Management Procedure (RTA Policy Guideline PN 025G). All personnel must be made aware of the procedure and a copy held at each work location.
PASS	Not expected to be encountered in the project area. RTA project management to be contacted if PASS materials are discovered. Training in the identification of these materials shall be provided as toolbox talks.

Prepared by: David Bone (Bowditch Group)
Reviewed by: Andrew Grainger (Bowditch Group)

WORK SEQUENCE

Process 1: Pre-construction activities			
Steps	Activity	Responsibility#	Sign-off when complete
1	Signoff of CMS by RTA and HRS prior to submission to EMR.	RTA senior environmental officer	
2	Approval of CMS by EMR prior to works commencing.	RTA senior environmental officer/ EMR	
3	Obtain scheduled development work licence from DECCW prior to works commencing.	RTA senior environmental officer	
4	Complete Checklist HEx1: Pre-construction environmental checklist	RTA senior project Manager HRS supervisor RTA environmental officer Project ecologist	
5	Identify capture and release areas for fauna found in areas to be cleared.	Project ecologist	

6	Construct and install nesting boxes in predetermined locations in accordance with Hunter Expressway Electricity Adjustments Hollow Survey report (July 2010).	RTA senior project manager HRS supervisor RTA environmental officer Project ecologist	
7	If any tree hollow roosts for bats are identified during pre-clearing surveys (addressed in Process 3) that are unable to be relocated, install artificial bat roosts in adjacent vegetation prior to clearing.	Project ecologist	
8	Relocate key habitat features, including coarse woody debris (wood greater than 100 mm in diameter and longer than 0.5 m), ground cover features and bush rock to adjacent recipient sites.	Project ecologist	
9	Inspect the work areas, assess drainage and riparian conditions, note areas where disturbance cannot occur and prepare erosion and sediment control plans for the Work areas where necessary (see attachment 2).	Project soil conservationist	

Process 2: Survey set out of access track and easement corridor			
Steps	Activity	Responsibility[#]	Sign-off when complete
1	Workers inducted into requirements of CMS. Requirements reinforced during daily toolbox.	HRS supervisor	
2	Access to be restricted to existing local roads and access tracks in accordance with access points detailed on progressive erosion and sediment control plans (see attachment 2). There is to be no access from other locations.	Survey team	
3	**No clearing or trimming of vegetation is to occur until all environmental approvals have been received and the RTA project manager/senior environmental officer has approved commencement of works ie completion of pre-construction environmental checklist.**	Survey team	
4	Limits of clearing works is to be established by survey pegging and installing continuous durable reflective spinning tape or similar to delineate the boundary of works.	Surveyor	
5	Limits of access constructions is to be established by survey pegs marked with a different colour tape from the clearing limits.	HRS supervisor	

6	The nominated RTA environmental officer and the HRS works supervisor will walk through to confirm clearing limits are marked and fenced appropriately prior to clearing activities occurring. The project ecologist and soil conservationist will also review clearing limits adjacent to environmentally sensitive areas prior to clearing activities and erect signage (nominally visible from distances of about 20m) that states "Environmental Protection Zone – No Entry Without Authorisation".	HRS supervisor RTA environmental officer Project ecologist Project soil conservationist	

Process 3: Identification of Habitat trees			
Steps	Activity	Responsibility#	Sign-off when complete
1	Workers inducted into requirements of CMS. Requirements reinforced during daily toolbox.	HRS supervisor	
2	Access to be restricted to existing local roads and access tracks in accordance with access points detailed on progressive erosion and sediment control plans (see attachment 2). There is to be no access from other locations.	Project ecologist	
3	The project ecologist is to undertake a pre-clearing inspection to mark habitat trees and identify any fauna of concern. Habitat trees will be identified with fluorescent pink survey tape and will be numbered and recorded via GPS. The project ecologist will complete a pre-clearing checklist prior to commencement of clearing works.	Project ecologist	

Process 4: Installation of erosion and sediment controls			
Steps	Activity	Responsibility#	Sign-off when complete
1	Workers inducted into requirements of CMS. Requirements reinforced during daily toolbox	HRS supervisor	
2	Access to be restricted to existing local roads and access tracks in accordance with access points detailed on progressive erosion and sediment control plans (see attachment 2). There is to be no access from other locations.	HRS supervisor	

3	Install erosion and sediment controls appropriate to the work in accordance with RTA Specification G38 (Annex D), and Progressive Erosion and Sediment Control Plan.	HRS supervisor	
4	The nominated RTA environmental officer and the HRS works supervisor will walk through to confirm erosion and sediment controls appropriately installed prior to works commencing in that area.	HRS supervisor RTA environmental officer	
5	Erosion and sediment controls are to be inspected weekly and after 10mm of rainfall by a suitably qualified soil conservationist.	Soil conservationist	

Process 5: Clearing			
Steps	Activity	Responsibility#	Sign-off when complete
1	Workers inducted into requirements of CMS. Requirements reinforced during daily toolbox	HRS supervisor	
2	Clearing must be undertaken using a two stage process as outlined in RTA Specification G38 (Section 2.1). Timber-felling is to be undertaken using direction felling into the cleared easement area only within sensitive areas such as EEC's.	HRS supervisor	
3	Cut stump clearing only is to occur within 20m of all water flow lines. In these locations, plant and machinery will not access these areas with timber felled being removed by dragging or left in place until diversions or temporary crossings are in place.	HRS supervisor	
4	Temporary rock crossing are to be installed in all flow lines to be crossed. Temporary crossing are to be rock crossings with geofabric linings and pipes in accordance with Temporary Waterway Crossing ECMS and Blue Book requirements.	HRS supervisor	
5	All non habitat trees are to be felled in the presence of fauna rescue personnel. Any rescued fauna will be relocated to previously installed nest-boxes or suitable habitat in surrounding habitat.	HRS supervisor Project ecologist	
6	Habitat trees are to be retained for at least 48 hours to allow remaining fauna to relocate beyond clearing limits. Following this period, the project ecologist and fauna rescue personnel will be present to work with tree clearing personnel to identify any trees of concern and inspect habitat trees following felling.	HRS supervisor Project ecologist	

7	Habitat trees are to be lowered to the ground as slowly as possible to minimise the impact on potential fauna in hollows. Felled trees are to be left for a short period of time to allow fauna to escape. Following this, the project ecologist and fauna rescue personnel will inspect the hollow for any remaining wildlife and cut out hollows as required. Any rescued fauna will be relocated to previously installed nest-boxes or suitable habitat in surrounding habitat. The project ecologist will maintain records of trees with hollows that are felled (including hollows and species dimensions) and records of all animals that occupy hollows are that are relocated. Once habitat trees have been felled, any hollows will be removed and relocated to adjacent land or as per requirements outlined in the pre-clearing survey report.	HRS supervisor Project ecologist	
8	All non-harvestable timber, or timber not otherwise used in habitat replacement (which includes timber used by Industry and Investment - Fisheries), is to be mulched and spread thinly within the electricity easement, or windrows along the contour within the easement to minimise disturbance of topsoil and reduce erosion and sedimentation.	HRS supervisor	
9	Minimise removal of groundcover/grasses and topsoil in order to retain the run-off infiltration capacity of the groundcover and to minimise topsoil run-off.	HRS supervisor	
10	Seed disturbed areas, as required, with a suitable cover crop within 14 days of clearing.	HRS supervisor	
11	Survey and record area of native vegetation clearing,	HRS supervisor Surveyor Project ecologist	
12	Maintain roads, disturbed areas, stockpiles and handling areas in a condition that minimises windblown, traffic generated or equipment generated dust. This could be done by activities such as: • Watering • Road sweeping • Removal of accumulated materials from environmental controls.	HRS supervisor	

[#] Broader roles and responsibilities of the RTA, EnergyAustralia, Hunter Road Services and any subcontractors are outlined in further detail in Section 5 of the RTA's stage 1 early works CEMP and EnergyAustralia's electricity adjustments vegetation clearing CEMP.

Approvals

Approval Authority	Signature	Date
RTA senior environmental officer		
HRS supervisor		
RTA project manager		

Environmental management representative	5 July 2010

Revision Schedule

Revision Number	Changes	Authorised by / Date
2.0	Removal of reference to vehicle movement plan	David Ledlin, 28 July 2010

Signoff

By signing this document you confirm that the CMS has been fully explained and that you have clearly understood and accept your required responsibilities and actions. You also confirm that you understand that the controls specified in the CMS must be applied as documented or an alternative CMS is to prepared and approved.

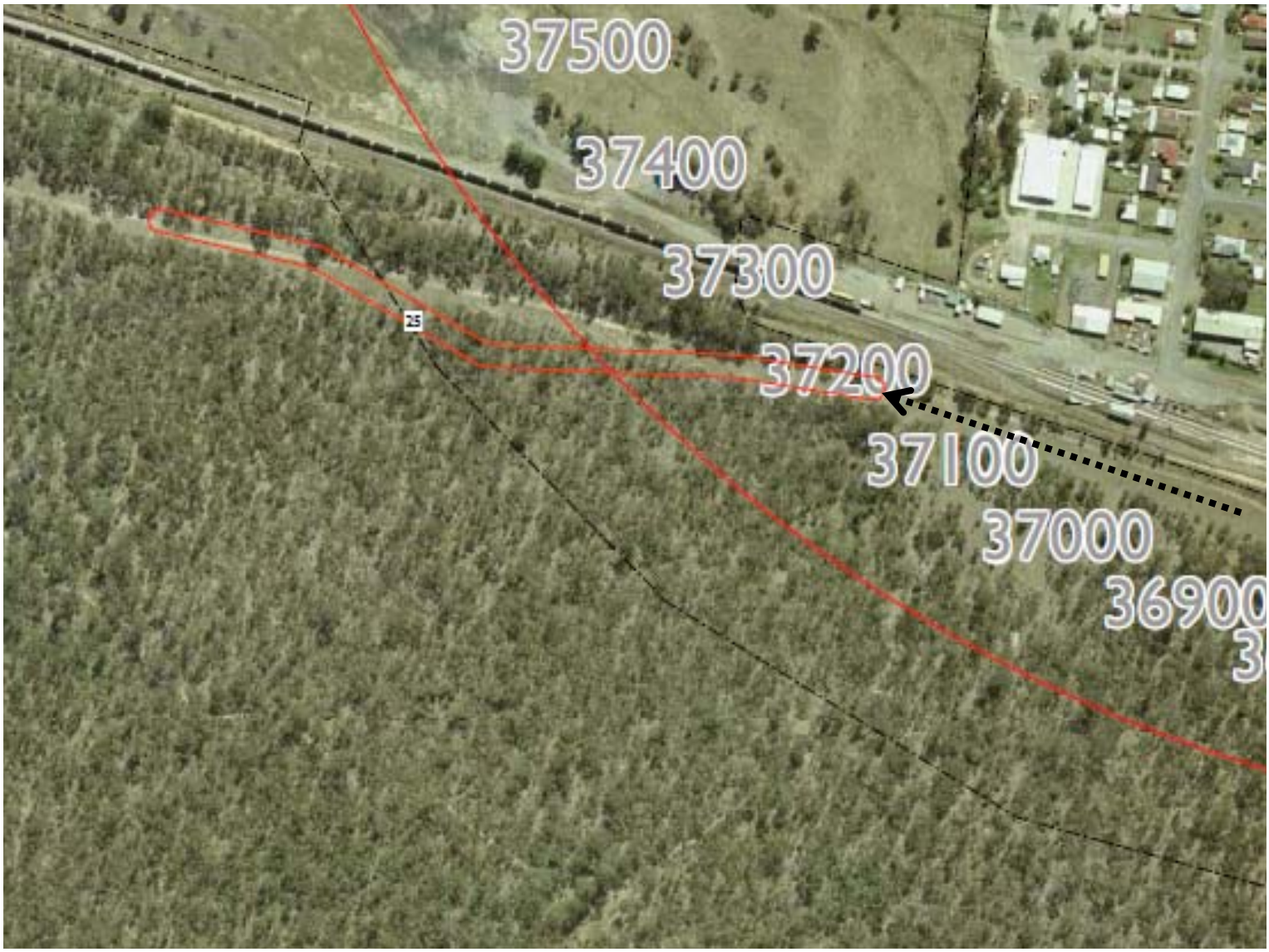
Name	Position	Employer	Signature	Date

Attachments

Attachment 1 – sensitive area map 21, Branxton – chainage 37,100 to 37,400.
Attachment 2 – progressive erosion and sediment control plan.

Sensitive areas maps have been removed because they show confidential information about the location of Aboriginal heritage sites.

Progressive Erosion & Sediment Control Plan for Clearing of the Energy Australia Easement Job No. 25 Branxton



Key

- Creek crossing
- 20m Exclusion zone of a Waterway
- G Gate
- Entrance point

Comments

1. this PESCP should be read in conjunction with the Primary Erosion Sediment control Plan for this project (attached)
2. Minimal disturbance - at all times stay within the flagged working corridors
3. Enter the site via the cleared Energy Australia track easement that commences at Wine Country road directly next to the Rail line corridor.

Primary Erosion and Sedimentation Control Plan
for Clearing & Grubbing of the
Energy Australia Easement Realignment for the Hunter Expressway

1. This primary Erosion and Sediment Control Plan should be read in conjunction with the documents G38 – Soil and Management and the Construction Method Statement(s) developed for the Early Works.
2. All field staff are to "Toolbox" the Construction Method Statement".
3. The principle of minimal disturbance is to be carried out at all times by:-
    a. Confirming the area and or trees to be cleared prior to works commence.
    b. Consulting the Ecologist and Sensitive Area Maps for any specific requirements that might apply to the area.
    c. Limiting clearing to areas clearly fenced /pegged.
    d. Ensuring all vehicle and or plant movements onto and around the site are confined to the designated corridor and existing access tracks/local roads.
    e. Identifying suitable sites for stockpiling mulch that avoid waterways (min of 20 m away) and by installing and maintaining erosion and sediment controls.
4. Flow lines to remain relatively undisturbed and shall be cleared as described in G1 section 1.1
    a. "by cutting trees at a height of approximately 1.5m above ground level and transporting off-site to an appropriate timber mill or mulching and use on site. The stump is to remain in the ground"
5. Access by all vehicles/machinery over flow lines/waterways must be via existing crossings identified in the progressive ESCP.
6. Preserve vegetation such as grasses and herbs within existing tabledrains and or depressions as long as possible.
7. The ground surface following clearing is to be left "rough" and with as much grass and herbs remaining as the surface as practical for surface protection.
    a. Mulch can be spread directly over the ground (no deeper than 100mm thick) to act as surface protection.
    b. No mulch will be left any closer than 20m from any waterway and or flow line; to prevent leachate entering the downstream waters.
8. Temporary sediment controls to be constructed at strategic locations as indicated on the progressive ESCP.
9. All controls are to be inspected and maintained (where necessary) weekly and following rainfall events (greater than 10mm).
10. Dust emissions to air are to be controlled with the use of a water cart.
11. Tracking of mud and soil onto the surrounding public roads is to be carefully controlled by directing vehicles to nominated entry and exist points and by using access pads if required.
    a. Sweep any tracked mud and or soil off public roads on a daily basis.