

# CONSTRUCTION METHOD STATEMENT

## Topsoil Stripping and Stockpiling

### Hunter Expressway – Kurri Kurri to Branxton

Rev: 8

Date: 25<sup>th</sup> July  
2011

CMS 02 – Topsoil  
Stripping and  
Stockpiling

#### 1. Summary/Purpose of Activity

Topsoil stripping involves the removal of several layers of soil from the ground surface. The soil is broken down into several types primarily A1 and A2. Stripping of the A1 horizon can commence 1 week after clearing/slashing. A1 is the top 100mm plus the slashed vegetation from clearing. The A1 Topsoil can then either be direct returned for landscaping or stockpiled for future use. The A2 horizon is the remainder of topsoil beneath the top 100mm (A1). A2 horizon topsoil cannot be mixed with the A1 topsoil during stockpiling.

#### 2. Objectives of this WMS

The objective of this CMS is to provide specific control measures so as to ensure that topsoil is stored and managed correctly so it can be utilised for landscaping purposes, restrict weed growth and to ensure that flora communities are preserved.

#### 3. Area/Location of Activity/Site:

Within the approved project corridor in the agreed location of least disturbance which is compatible with construction. Access for topsoil stripping and stockpiling will be from a variety of different local roads or through the alignment.

#### 4. Timing of works/Expected duration:

Bulk topsoil stripping is undertaken during the first 6 months following construction commencement.

Isolated areas of stripping may be required during the construction period as specific requirements are identified eg. drainage structure. Such stripping would be minimal in duration.

#### 5. Approvals Required

The works will be undertaken once construction approval has been provided. The works will comply with the environmental management plan and associated sub plans.

Internal Permit to Excavate required prior to undertaking topsoil stripping.

#### 6. Consultation Requirements:

Abigroup will consult with the RTA, DECCW and I&I NSW (Fisheries) before finalising this CMS.

Community consultation will be conducted by the Community Relations team in accordance with the Community Involvement Plan.

Public complaints will be investigated, reported and recorded in accordance with Section 6 of the Community Involvement Plan. Specific actions that are required by individuals within the construction crews are detailed in the attached table.

#### 7. Incident Response

In the event of an incident such as un-authorized access or damage to protected vegetation or heritage item/area the Foreman or Environmental Officer will give directions to stop work and contact the Environmental Manager immediately. If the Environmental Manager is not available then the Project Director shall be contacted. The Environmental Manager/Project Director will respond to the incident in accordance with Section 6.2 of the CEMP.

#### 8. Relevant References:

The information included in this WMS has been drawn from the Construction EMP and the relevant Sub Plans. For additional information related to this WMS refer to the following documents:

- Ministers Conditions of Approval for the project;
- Construction Environmental Management Plan; and
- Soil and Erosion Control Plan.
- RTA D&C G36.6.9.1

#### 9. Related documents:

- Topsoil Stripping Inspection and Test Plan
- Sensitive Area Plans (SAPs)
- Flora and Fauna Management Sub Plan

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Level	Likelihood	Description
A	Almost certain	Is expected to occur during the project, 90% or > probability
B	Likely	Will probably occur during the project, ~50% probability
C	Moderate	Might occur at sometime during the project, ~10% probability
D	Unlikely	Could occur at some time during the project, ~1% probability
E	Rare	Only occur in exceptional circumstances, < 1% probability
Level	Consequence	Description
1	Insignificant	Insignificant Breach of Environmental Statutes
2	Minor	Minor Breach of Environmental Statutes
3	Moderate	Moderate Breach of Environmental Statutes
4	Major	Major Breach of Environmental Statutes
5	Severe	Shutdown of Project Due to Environmental Breach

Likelihood	Consequences				
	1 Insignificant	2 Minor	3 Moderate	4 Major	5 Severe
A (Almost Certain)	Medium	Significant	High	High	Extreme
B (Likely)	Medium	Medium	Significant	High	Extreme
C (Moderate)	Low	Medium	Significant	High	High
D (Unlikely)	Low	Low	Medium	Significant	High
E (Rare)	Low	Low	Low	Medium	Significant

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### Construction Work Method and Risk Assessment

#	Sequence of Work Activities (How will work be done?)	Potential Hazards (What harm can occur?)	Risk	Safeguards/controls (How can the risk be minimised?)	Responsibility (Who will direct works to ensure compliance?)
Planning / Pre-construction					
1	Commencing work activities	Community are exposed to impacts without prior notice	Significant (C3)	Notification to the Community Relations team detailing works required. At least 5 days notice to the Community Relations team is required prior to the commencement of construction.	Project Engineer
				Notify adjacent residents adjoining the work site at least 5 working days prior to the commencement of topsoil stripping.	Community Relations Officer
				Works will be limited to Monday to Friday 7.00am to 6.00pm; and Saturday 8.00am to 1.00pm. No work outside of these hours or on Sundays and Public Holidays (unless approved by the Environmental Manager or conducting emergency work).	Foreman/Site Engineer
2	Permit to Excavate and Permit to Work Under Power lines	Damage to services.	High (C5)	Complete a Permit to Excavate and Permit to Work Under Power lines and have it approved if relevant to works.	Foreman/Project Engineer
3	Safe work method statements	Unsafe work practices	High (B4)	<p>SWMS for work activity to be completed, SWMS for use of excavator to be reviewed and approved by Project Safety Manager.</p> <p>UHF channel for works to be agreed at tool box prior to commencement of works. Site Safety Manual kept in nominated vehicle.</p> <p>Site foreman manages the site and checks in all visitors.</p> <p>External Plant Checklist, Operator assessment, tickets/licenses, Insurances to be checked and completed.</p>	Foreman/Project Engineer

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4	Provide training to personnel and sub-contractors involved	Non-compliance with work methods.	High (C4)	Toolbox field operators on the requirements of this CMS and the ESCP.	Foreman
5	Mark out sensitive areas within or adjacent to works.	Damage to flora, fauna and/or heritage items.	High (C4)	Survey and fence any sensitive areas that require protecting within/adjacent to the works area in accordance with the sensitive area plans and in consultation with the Project Ecologist.	Project Engineer
6	Mark out areas of environmental and/or archaeological significance.	Damage to flora, fauna habitat and/or heritage items.	High (D5)	Fence areas of significant flora, fauna habitat or known archaeological sites that are to be retained (protected). These sites are to be managed in accordance with the Working near Sensitive Areas WMS.	Environmental Officer
7	Identify stockpile locations for types of topsoil	Non-compliance with SWTC	High (C4)	<p>All long-term stockpile locations must be approved by the EM/DoP. Refer to the approved locations and identify the most suitable site for the intended material. Sites should be:</p> <ul style="list-style-type: none"> <li>As far as practical away from watercourses</li> <li>On land with a generally flat relief;</li> <li>Outside of the drip line of adjacent vegetation;</li> <li>Away from areas of native vegetation where feasible;</li> <li>That are accessible for weed control;</li> <li>As close to the source of the material as practically possible;</li> <li>A2 stockpiles to be separate of A1 horizon stockpiles</li> </ul>	Project Engineer

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				Stockpiles are to represent topsoil from specific ecological communities	
				Signpost with vegetation community type, soil horizon, collection area and date stockpiled	
				Upslope of sedimentation basins where possible.	
8	Identify local ecological community types	Non-Compliance With SWTC	High (C4)	Identify local vegetation communities and stockpiling requirements. Ensure assigned to individual stockpiles to ensure compliance. Also undertake testing of the soil horizons to ensure compliance with specifications.	Environmental Officer
Construction					
9	Commence topsoil stripping operations.	Incorrect management of vegetation communities	High (C4)	Toolbox and delineation to show where material is travelling from and to. Use skilled operators to ensure horizons are not mixed. Regular checks by Environmental officer to ensure compliance.	Foreman
10	Strip and stockpile A1 Horizon of topsoil	Not enough vegetation	Med (C2)	Ensure clearing and slashing has left min of 50mm of vegetation on topsoil.	Environmental Officer
		Contamination	Med (C2)	Ensure soil is tested prior to works and only top 100mm plus vegetation is stripped	Foreman
				Limit use of heavy or tracked machinery to avoid mixing A1 and A2 soil horizons	Project Engineer
		Pollution of waterways after rain due to	High (C4)	Provide ERSED protection measures in accordance with the ESCP to ensure pollution of waterways does not occur from any disturbed ground created by the works.	Foreman/Environmental Officer

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		ground disturbance from the works		Regular inspections to be undertaken by the environmental staff.	
				Do not attempt to enter any swampy land or waterways with the machine. Utilise constructed water crossings where needing to cross waterways.	Foreman
				Ensure all clean water areas remain protected or have controls installed following works.	Foreman/Environmental Officer
				Install and use rocked exit points with rumble grids and remove mud from vehicles before they enter public roads to minimise tracking of material on public roads.	Foreman
		Loss of Productive Topsoil. Non-compliance with SWTC	High (C4)	Minimise topsoil handling	Foreman
				Stabilise stockpiles and ensure adequate ERSED controls.	Foreman
				Stockpile is not to exceed 1m high and 3m wide at the base	Project Engineer
				EEC topsoil can be stored for maximum 6 months.	Project Engineer
				Greta to Branxton topsoil can be stored for maximum 12 months	Project Engineer
				All other topsoil can be stored for maximum 18 months	Project Engineer
				Manage weeds to ensure no greater than 5% of stockpile area	Foreman
		Damage to watercourses and riparian areas.	High (A3)	Locate stockpiles clear of properties and greater than 20 metres from watercourses.	Foreman

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				Ensure a relevant consultation/notification with New South Wales Office of Water has occurred to clear native vegetation within 20m of a watercourse	Foreman
11	Strip and stockpile A2 Horizon of topsoil	Contamination	Med (C2)	Ensure soil is tested prior to works and only top 150mm is stripped	Foreman
		Pollution of waterways after rain due to ground disturbance from the works	High (C4)	Provide ERSED protection measures in accordance with the ESCP to ensure pollution of waterways does not occur from any disturbed ground created by the works.	Foreman/Environmental Officer
				Regular inspections to be undertaken by the environmental staff.	Environmental Officer
				Do not attempt to enter any swampy land or waterways with the machine. Utilise constructed water crossings where needing to cross waterways.	Foreman
				Ensure all clean water areas remain protected or have controls installed following works.	Foreman/Environmental Officer
				Install and use rocked exit points with rumble grids and remove mud from vehicles before they enter public roads to minimise tracking of material on public roads.	Foreman
				Minimise topsoil handling	Foreman
		Loss of Productive Topsoil. Non-compliance with SWTC	High (C4)	Stabilise stockpiles and ensure adequate ERSED controls.	Foreman
Stockpile is to be a stable configuration	Foreman				
EEC topsoil can be stored for maximum 6 months.	Project Engineer				

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				Greta to Branxton topsoil can be stored for maximum 12 months	Project Engineer
				All other topsoil can be stored for maximum 18 months	Project Engineer
				Manage weeds to ensure no greater than 5% of stockpile area	Forman
		Damage to watercourses and riparian areas.	High (A3)	Locate stockpiles clear of properties and greater than 40 metres from watercourses.	Foreman
				Ensure a relevant consultation/notification with New South Wales Office of Water has occurred to clear native vegetation within 40m of a watercourse	Foreman
12	Stockpile Management	Non-Compliance with SWTC	Med (C2)	All stockpiles are to have signs placed and maintained that indicate vegetation community type, soil horizon, collection area and date of stockpiling.	Foreman
				Stockpiles to be inspected monthly to ensure weeds do not exceed 5% of surface	Foreman



#### CWMS Toolbox

Also refer to Abigroup standard toolboxes

- All long-term stockpile locations must be approved by the EM and relevant authorities.
- Prepare and implement an approved ESCP for the area. Ensure all required sediment basins and clean water drains are in place prior to commencing stripping works.
- Do not attempt to enter any swampy land or waterways with the machine. Utilise constructed water crossings where needing to cross waterways.
- Work hours – weekdays 7.00am to 6.00pm; Saturday 8.00am to 1.00pm. No work outside of these hours without approval from the DECCW.
- Report any injured or killed fauna to the wildlife specialist.
- All stockpiles to be sign-posted.
- Inspect machinery and remove as much topsoil material as practical to remove weed seeds and vegetative matter before topsoil stripping operations move from the weed infested area. This can be achieved by thoroughly brushing down the machinery.
- Where required emergent weed species in stockpiles will be controlled in consultation with the Environmental Officer.
- A1 Horizon topsoil is to be stockpiled to a height of 1m and 3m wide at base. A2 Horizon topsoil is to be stockpiled in stable configurations.
- Topsoil from different vegetation communities and horizons is to be stockpiled separately.
- At least monthly, inspect topsoil stockpiles for weeds and arrange removal either manually or through spraying.
- Install and use rocked exit points with rumble grids and remove mud from vehicles before they enter public roads to minimise tracking of material on public roads.
- Stabilise the stockpile and utilise water-trucks to suppress any generation of dust from the stockpile if necessary.
- Trucks entering and leaving the premises that are carrying dust generating loads must be covered at all times except during loading and unloading.
- Noise checklist for reasonable/feasible to be completed prior to commencing works.
- Ensure traffic movement is kept to a minimum, e.g. ensure trucks are fully loaded so that the volume of each delivery is maximised and the number of trips is therefore minimised.
- Unloading and loading will be carried out away from sensitive receivers and the selection of site access points will take into account the proximity to residents.
- Ensure plant / equipment is maintained in an efficient condition.
- Equipment that is not in use will be switched off.
- Report any spills to the Environmental Manager and ensure appropriate clean up occurs.
- No fuel is to be stored on site overnight, unless in a bunded area.
- Any refueling to be done away from waterways.
- In the event that human remains or unknown heritage items are discovered, stop work and contact the Environmental Manager. Contact the Police if human remains are found.

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WMS Approval

Approved By		Name	Signature	Date
Originator	Engineer	Tim Cook		15/3/2011
Reviewed	Superintendent			
Approved	Project Manager			