

# Independent Environmental Representative Environmental Audit Report

BULK WATER ALLIANCE  
MURRUMBIDGEE TO GOOGONG WATER TRANSFER  
3<sup>RD</sup> AUDIT (CEMP COMPLIANCE)

OCTOBER 2011



# Independent Environmental Representative

Audit Report Number: 3 (CEMP Compliance)



<b>AUDITED ORGANISATION</b>	<b>PROJECT</b>
Bulk Water Alliance	Murrumbidgee to Googong Water Transfer Project
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<b>DEPTH OF AUDIT</b>	<b>SCOPE OF AUDIT</b>
Environmental	Management Plan Compliance
<b>DATE OF AUDIT</b>	<b>AUDIT CRITERIA</b>
21 <sup>st</sup> and 22 <sup>nd</sup> September 2011	Management Plans
<b>PERSONS CONTACTED</b>	<b>AUDIT TEAM</b>
John Turville – Environment Manager Peter Sheahan – Environment Officer Brigid McCarthy – Environment Officer	Erwin Budde, nghenvironmental – Lead auditor Amy Webb, nghenvironmental – Auditor
<b>PREVIOUS AUDIT DATE</b>	<b>PREVIOUS AUDIT REFERENCE</b>
June 2011 (Approvals)	nghenvironmental (April 2011)
March 2011 (CEMP)	nghenvironmental (June 2011)

**AUDIT SUMMARY**

This was the third audit of the Murrumbidgee to Googong Water Transfer Project by the Independent Environmental Representative, and the second CEMP compliance audit. It involved an audit of compliance against the CEMP and associated construction plans.

The audit found compliance with the project's environmental management commitments was being achieved and maintained. Previous management plan audit findings had been closed out. It found a number of positive initiatives and actions which have led to positive outcomes, including waterway crossing construction, erosion and sedimentation controls along the pipeline construction route, and the internal auditing program.

A number of areas of improvement were identified relating to both systems and document management. One (1) Observation of Concern and seven (7) Opportunities for Improvement are raised.

**Signed:**



**Lead Auditor**

**Date: 20<sup>th</sup> October 2011**

## Table of contents

<b>1.</b>	<b>REPORT SUMMARY .....</b>	<b>5</b>
1.1	INTRODUCTION .....	5
1.2	SCOPE OF AUDIT .....	5
1.3	SUMMARY OF CORRECTIVE ACTIONS .....	5
1.4	SUMMARY OF OBSERVATIONS OF CONCERN .....	5
1.5	SUMMARY OF OPPORTUNITIES FOR IMPROVEMENT .....	6
<b>2</b>	<b>AUDIT PROCESS .....</b>	<b>7</b>
2.1	OPENING MEETING .....	7
2.2	CLOSING MEETING .....	7
2.3	SITE INSPECTION.....	7
2.4	DESIGNATED FOLLOW-UP .....	7
2.5	PREVIOUS ENVIRONMENTAL AUDIT .....	7
<b>3</b>	<b>DETAILS OF AUDIT FINDINGS .....</b>	<b>11</b>
3.1	SOIL AND WATER MANAGEMENT PLAN .....	11
3.2	WASTE MANAGEMENT PLAN .....	11
3.3	GENERAL – INTERNAL AUDITING.....	12
<b>4</b>	<b>ATTACHMENTS .....</b>	<b>13</b>

# 1. REPORT SUMMARY

## 1.1 INTRODUCTION

This audit represents the third (3<sup>rd</sup>) independent environmental representative audit conducted of the M2G project to date, and the 2<sup>nd</sup> CEMP compliance audit.

At the time of the audit, the following works were being undertaken:

- Pre-trenching for the pipeline at the HLPS
- The HLPS building construction works were well advanced
- Final concrete works were being completed at the LLPS
- The closure of Williamsdale Road had commenced and pipeline laying was being undertaken in this area
- Construction of the discharge structure had commenced

## 1.2 SCOPE OF AUDIT

The audit scope for this audit was the implementation of Construction Environmental Management Plan, the relevant Subplans and the relevant Environmental Work Method Statements. The following plans were audited:

- Construction Environmental Management Plan (March 2011)
- Aquatic Ecology Management Plan (October 2010)
- Landscape Rehabilitation Management Plan – Appendix D (March 2011)
- Soil and Water Management Plan (December 2010)
- Noise and Vibration Management Plan (December 2010)
- Waste Management Plan (September 2010)
- Emergency Response Management Plan (March 2011)
- Environmental Work Method Statements

The audit covered all operations of the project undertaken to date.

## 1.3 SUMMARY OF CORRECTIVE ACTIONS

No corrective actions were raised during this audit.

## 1.4 SUMMARY OF OBSERVATIONS OF CONCERN

The following Observations of Concern (OoC) were explained to BWA during the audit Closing Meeting. They are considered to be deficiencies in meeting specified requirements.

OoC No.	Section of Report	Details
1	3.2.3	Waste Register is confusing, not controlled and poorly detailed.

## 1.5 SUMMARY OF OPPORTUNITIES FOR IMPROVEMENT

The following Opportunities for Improvement (OfI) were explained to BWA during the audit Closing Meeting. They are considered to be suggestions for improvements to better meet specified requirements.

OfI No.	Section of Report	Details
1	3.1.1	SWMP and EWMS's could be updated/improved to better reflect the record keeping being undertaken for soil and water management.
2	3.1.2	Contingency planning for waterway crossings
3	3.2.1	EWMS improvements to include more waste management measures/strategies
4	3.2.2	Signage of bins at compounds
5	3.2.4	The waste tracking system could be improved to better address the targets contained in Tables 6.3 and 6.4 of the WMP.
6	3.2.5	The WMP could be updated to reflect actual practices in relation to external inspection findings.
7	3.3	Internal Audit Reports could be improved to better address the requirements of the 'Auditing' sections of the CEMP (generally sections 8 or 9).

## 2 AUDIT PROCESS

### 2.1 OPENING MEETING

An opening meeting was held at 10am on 21<sup>st</sup> September 2011. The opening meeting was attended by John Turville, Peter Sheahan and Brigid Metcalf.

### 2.2 CLOSING MEETING

The closing meeting was held at 4:00pm on 22<sup>nd</sup> September, 2011. It was attended by John Turville.

### 2.3 SITE INSPECTION

A site inspection was undertaken on the morning of the 21<sup>st</sup> September 2011.

### 2.4 DESIGNATED FOLLOW-UP

A follow-up of the audit findings will be managed by the BWA Environment Manager to verify the completion of all corrective action. The next IER Audit will be conducted in 3 months.

### 2.5 PREVIOUS ENVIRONMENTAL AUDIT

#### CEMP IMPLEMENTATION AUDIT – MARCH 2011

An audit of compliance against the Construction Environmental Management Plan and Subplans, as required by CoA 6.2-6.3, was undertaken by the ER in March 2011. The results are documented in an audit report (**ngh**environmental March 2011).

The audit found general compliance with the project's environmental management commitments was being achieved and maintained. It found a number of positive initiatives and actions which have led to positive outcomes. This includes the management of clearing works to date, which has been undertaken with the assistance of ecologists and to date has resulted in minimal clearing, effective protection of threatened species, and retention of trees not essential for clearing. The BWA have also initiated an innovative internal audit program whereby personnel across the Alliance, including management, are responsible for undertaking at least 1 environmental audit of a component of the works. This places emphasis and ownership of environmental issues onto the entire construction team and not just environmental staff.

A number of areas of improvement were identified relating to both systems and document management. One (1) Corrective Action Request, three (3) Observations of Concern and six (6) Opportunities for Improvement were raised. The status of these is shown below.

#### Summary of Corrective Actions

CAR No.	Details	Status
1	No pre-construction surveys for the Platypus or its habitats were conducted.	Surveys for the Platypus were undertaken by Eco Logical in April 2011.

### Summary Of Observations of Concern

OoC No.	Details	Status
1	No Aquatic Ecologist has been engaged yet. Therefore no specialist was involved in the in-stream works for the Coffey Dam.	Brigid McCarthy, M2G Environmental Officer, has been appointed as the Aquatic Ecologist.
2	Clearing works are being conducted prior to fences being in place.	All fencing within areas to be cleared has been completed.
3	The SWMP makes a number of commitments to use the services of a Soil Conservation Specialist. The previous Specialist no longer works on the project and has not been replaced.	Soil Conservationist has been engaged and is being used in the project.

### Summary Of Opportunities for Improvement

Ofi No.	Details	Status
1	It is considered that the procedure for preventing the spread of carp eggs during construction through water cart dust suppression could be improved.	Improvements have been made including signage at Gibraltar Gap.
2	The record keeping system for weed control could be improved to more clearly show correlation between works completed and works identified in the Weed Management Plan (Appendix D of the LRMP).	Record keeping has improved. To be reviewed at the next audit (September 2011).
3	The Sensitive Area Diagrams could be more widely distributed and made available.	Sensitive area diagrams were observed in the main site shed/compound.
4	Consideration should be given to provide erosion and sedimentation training to relevant site staff, including the dedicated ERSED crews.	ERSED training courses have been run on several occasions by the Soil Conservationist. Information sheets have been developed and distributed.
5	Waste segregation at the site compound could be improved – paper, timber and bottles were observed in the general waste bin.	The waste contractor (Thiess) advises that waste segregation is being undertaken at the waste management centre. Bottles/paper segregation is now occurring at the main site compound.



Ofi No.	Details	Status
6	No tracking system has been established to determine whether recycling targets contained in the Waste Management Plan are being achieved.	BWA audited Thiess (Mugga Lane WMC) on 12/5/11. General recycling rate being achieved at the WMC is 82.5%. Paper and container recycling bins were established on site as a result of the audit.  Part of this finding is still outstanding (see Section 3.2.4 of this report)

### CONDITIONS OF APPROVAL AUDIT – JUNE 2011

An audit of compliance against the projects Conditions of Approval (NSW, ACT and Commonwealth) was undertaken by the ER in June 2011. The results are documented in an audit report (nghenvironmental June 2011).

The audit found general compliance with the project’s approvals, licences and permits was being achieved and maintained.

A number of areas of improvement were identified relating to both systems and document management. Two (2) Observations of Concern and two (2) Opportunities for Improvement were raised. Several of these have been closed out. The status of these findings is detailed below.

#### Summary of Corrective Actions

No Corrective Actions were issued.

#### Summary Of Observations of Concern

OoC No.	Details	Status
1	Audit reports and reports on compliance were not present on the website.	Files have been uploaded to the public website.
2	PCL TAMS has not endorsed the EWMS’s being prepared by BWA. Brett McNamara, Parks Conservation Service (PCS) has not been followed up with regards to the recent EWMS’s being prepared.	BWA have corresponded with PCS and submitted several EWMS’s for their information.

#### Summary Of Opportunities for Improvement

Ofi No.	Details	Status
1	A robust system for ensuring water is not taken from Burra Creek for construction activities unless there is visible flow in the Creek is not in place.	Not reviewed
2	The EPA should be asked to endorse Peter Sheehan’s qualifications with regards to noise measuring.	Not reviewed



## 3 DETAILS OF AUDIT FINDINGS

This section details the findings of this audit. It only details those findings requiring action. For complete details of the findings of the Audit, refer to the completed Audit Protocol contained in Appendix A.

### 3.1 SOIL AND WATER MANAGEMENT PLAN

#### 3.1.1 SWMP S18 – Water Quality Records

The SWMP states that records shall be kept regarding water quality and functionality of erosion and sediment control devices, including details of rain events, use of flocculants, sediment removal and dewatering activities. The SWMP also states that a checklist will be completed prior to treated water being discharged from the coffer dams.

It is noted that the actual practice does not reflect this and it is suggested the SWMP be modified to better reflect the processes being followed. Further, the EWMS's similarly do not reflect the actual record keeping being undertaken during the works, and it is suggested that future EWMS's better reflect actual practices.

#### **Opportunity for Improvement 01**

#### 3.1.2 SWMP S32 (and EMWS 006) – Waterway Crossings

The SWMP states that a contingency plan would be implemented if heavy rains and/or flooding occurs during the installation of temporary waterway crossings. No such contingency plan has been developed.

#### **Opportunity for Improvement 02**

### 3.2 WASTE MANAGEMENT PLAN

#### 3.2.1 W4 – EWMS and Waste Minimisation

The Waste Management Plan states that EWMS's would include work practices to minimise waste generation and to maximise reuse of materials on site. While several EWMS's (001, 024) include provisions to reuse some materials, it is considered that in general EWMS's could be improved by including more specific waste management measures and strategies. **Opportunity for Improvement 03**

#### 3.2.2 W5 – Signage of Waste Bins

Segregation of waste was found to be occurring at all compounds and works areas. However, most bins were not labelled and recyclable waste (such as steel) was observed in several general waste bins. It is recognised that Thiess Waste Services separate waste at the waste management centre after collection. However, if separate bins are to be provided, these should be labelled. **Opportunity for Improvement 04**

#### 3.2.3 W6 – Waste Register and Record Keeping

The Waste Management Plan requires a Waste Management Register of all waste collected for disposal and recycling to be maintained, which includes data on amounts, date and time and details and location of disposal.

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The waste register used on site was found to be confusing, and comprised of several different forms. These were not controlled documents, and were found to be incomplete and poorly detailed. Improvements can be made to the waste register and the waste recording could be improved. **Observation of Concern 01**

#### **3.2.4 W19-W85 – Waste Tracking**

A range of waste targets and actions are contained in Table 6.3 and Table 6.4 of the Waste Management Plan. As previously identified, there is currently no documented tracking system to assist in determining compliance with these targets. **Opportunity for Improvement 05**

#### **3.2.5 W106 – External Inspections Record Keeping**

The Waste Management Plan notes that external inspection findings would be recorded on the 'Environmental Maintenance Action and Observation Checklist'. This checklist is not being used by the M2G project, and instead an environmental action report is completed after each external inspection. It is suggested the WMP be updated to reflect actual practices. **Opportunity for Improvement 06**

### **3.3 GENERAL – INTERNAL AUDITING**

The internal audit reports did not contain the information stated in the 'Auditing' section of the management plans (generally section 8 or 9) to determine compliance. **Opportunity for Improvement 07**

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## **4 ATTACHMENTS**

Attachment A      Completed Audit Protocol

N/A - Not audited or not applicable to the current stage of the works

Yes - Compliance Achieved

Reference	Plan	Description	Audit Finding	Evidence
AE1	Aquatic Ecology Management Plan	Prior to the commencement of construction activities, arrange an inspection of all habitat to be disturbed (using a qualified ecological specialist). Any fauna encountered during this pre-clearance survey should be removed if possible, or its shelter/burrow site clearly marked so that an attempt can be made a later/more suitable time to remove the fauna. All locations that need to be dewatered must be cleared of fauna with fauna to be relocated immediately upstream of the work site or to an appropriate area predetermined by the ecologist.	Surveys for the Platypus were undertaken by Eco Logical in April 2011.	ECO Logical Report May 2011
AE2	Aquatic Ecology Management Plan	Iconic and listed threatened species to be specifically targeted during fauna pre-clearance surveys and is to include the following: Platypus Prior to construction, undertake inspection of river and creek banks within the construction footprint for Platypus burrow entrances including nocturnal spotlighting and dusk surveys to detect presence of Platypus in the vicinity of the construction site. If burrows are located, careful excavation in small scoops with an un-toothed bucket is to be undertaken, in case a lactating female and/or dependent young are present. Where appropriate, arrangements for the transfer of any dependent Platypus young to an establishment with established protocols for rearing platypus young (e.g. Taronga Zoo, Sydney). Any adults found in burrow to be left to return to the stream or to be captured and released, depending on the proximity to the construction site and the assessment of the ecologist. Murray River Crayfish Regular inspections of sediment controls, including the Coffey Dam and Silt Curtains to be undertaken to ensure sediment is not escaping and that turbidity in the river is maintained at acceptable levels. The Environmental Officer is to be present during dewatering of the coffer dam to capture and release any individuals stranded within the coffer dam. An Ecologist will be on standby if required to assist	Surveys for the Platypus were undertaken by Eco Logical in April 2011.	ECO Logical Report May 2011
AE3	Aquatic Ecology Management Plan	During any near stream works such as trenching or excavating, water quality will be protected under the construction environmental management plan, including suitably designed and maintained sediment controls (detailed in ESCPs) designed to cope with a greater than average rainfall and/or flow event and regularly inspected and maintained throughout the construction and rehabilitation phase. Mesh netting will not be used as part of the sediment and erosion control measures as it has the ability to trap, kill and/or injure aquatic fauna that may try to pass through	Water quality monitoring records maintained for LLPS Coffey Dam Discharge, Murrumbidgee River, Burra Creek and General Excavation. Silt curtain has been removed. No net meshing is being used.	Water Quality Monitoring Reports 16/9, 19/9 and 20/9
AE4	Aquatic Ecology Management Plan	Avoid undertaking excavation or other works in or near the Murrumbidgee River or Burra Creek during periods of actual or predicted heavy rain or higher than average flows as per the requirements of the SWMP	No excavations at Murrumbidgee since last audit. Burra Creek excavations have all occurred during period of low rainfall (Aug/Sep 2011)	ER Inspections
AE5	Aquatic Ecology Management Plan	Cease work immediately if any previously unknown threatened flora or fauna species are encountered and consult the Ecologist with regards to the actions to be taken. Refer to the procedures in Section 5.4 of this document for summary information on how rescued fauna are to be treated. PCL, RSPCA, Wildcare or WIREs would be consulted in relation to injured animals.	None recorded to date.	Interview
AE6	Aquatic Ecology Management Plan	Water will be extracted from the Murrumbidgee River for construction purposes (predominantly for dust suppression). Whenever the water is required for use within the Burra Creek / Googong catchment (i.e. east of Gibraltar Range), the water must be filtered (at the source) to prevent the potential transfer of pest species between catchments. This will involve the use of a fixed and robust filter system to be placed over the intake pipe when taking water to prevent the potential intake of eggs or juvenile fish of pest species. Construction staff will undertake training to ensure that they are aware of the requirements on this and other ecological issues subject to potential construction impacts.	Signage has been installed. Water carts are not permitted to pass from Murrumbidgee catchment into Burra Creek catchment	ER Inspections
AE7	Aquatic Ecology Management Plan	In the event of high flows/rainfall there is the possibility of an overflow of water into the Coffey Dams which may then have the potential to accumulate silt in the base of structure. During occasional maintenance operations this silt may need to be removed in accordance with the EWMS.05 "Dewatering". Refer to the SWMP for more information on this strategy.	No overflow has occurred. No silt has had to be removed	ER Inspections, Interview
AE8	Aquatic Ecology Management Plan	Any waters extracted from the proposed coffer dams must be certified clean from contamination (oils, spills) associated with the construction before release back into the Murrumbidgee River or Burra Creek. This applies to the initial dewatering of the Coffey Dams. This activity is to be undertaken under the guidance of the SWMP. Dewatering will be undertaken in accordance with EWMS.05 "Dewatering".	Discharge water is being monitored for pH and Turbidity at both the Murrumbidgee and Burra Creek coffer dams. Alum has been used once for floccing.	Water Quality Monitoring Reports 16/9, 19/9 and 20/9
AE9	Aquatic Ecology Management Plan	Turbidity controls to ensure water quality standards comply with the relevant guideline/agreed standards as per the requirements of the SWMP.	Dewatering discharge limits / testing.	Water Quality Monitoring Reports 16/9, 19/9 and 20/9
AE10	Aquatic Ecology Management Plan	Stockpiles will be located away from the Murrumbidgee River and Burra Creek. Approvals from relevant agencies will be gained prior to the disposal and placement of soil material.	No stockpiles present near river or creek	Inspection
AE11	Aquatic Ecology Management Plan	Erosion and sediment control measures will be implemented according to site specific Erosion and Sediment Control Plans (ESCPs) for works adjacent to waterways	ESCP's implemented. TREES inspections are being undertaken.	TREES reports, ER inspections
AE12	Aquatic Ecology Management Plan	Disturbed areas will be rehabilitated and/or landscaped as soon as practical, through a progressive landscaping regime to ensure stabilisation of bare areas and to take advantage of optimal growing conditions. This will be undertaken in accordance with the approved Landscape Rehabilitation Management Plan (LRMP).	Progressive rehabilitation has occurred at LLPS conduit route, HLPS batters and pipeline excavations.	Inspection
AE13	Aquatic Ecology Management Plan	A waste management plan (WMP) has been prepared and will be implemented to avoid potential contamination of waterbodies through inappropriate storage and/or stockpiling of construction waste material. Key strategies of the WMP will be to ensure that all construction waste material is stored properly and located well away from any watercourses. The WMP will provide management strategies for the handling of chemicals and other hazardous construction materials and to detail the immediate action to be undertaken for any spills	See WMP	
AE14	Aquatic Ecology Management Plan	All stream bed and banks will be reinstated and revegetated with appropriate (locally occurring) species to ensure long term bank stability	N/A	

Reference	Plan	Description	Audit Finding	Evidence
AE15	Aquatic Ecology Management Plan	Rehabilitation of aquatic ecology impacted by pipeline construction at waterway crossings will be undertaken as soon as practical following the completion of construction (refer to the LRMP for further details)	N/A	
AE16	Aquatic Ecology Management Plan	Ensure fuels and chemicals are banded and stored appropriately on site in accordance with ACT EPA and NSW DECCW guidelines.	Chemical storage appropriate. Some issues have been raised but have been readily rectified.	ER Inspections
AE17	Aquatic Ecology Management Plan	Monitor rehabilitation activities in accordance with the objectives stated in the approved Landscape Rehabilitation Management Plan (LRMP)	N/A	
S1	Soil & Water Management Plan	Prepare progressive ESCPs for all impacted areas that comply with: Soils and Construction Volume 1, 4th Edition (Landcom) March 2004; Managing Urban Stormwater: Soils and Construction, Volume 2C: Unsealed Roads (DECC, 2008); Environmental Protection Guidelines for Construction and Land Development in the ACT (EPA, 2007) Relevant EWMSs (eg. Stockpiling)	ESCP's have been prepared for the project. In ACT they have been certified by the EPA. TREES are also assisting in ESC.	ESCP Folder
S2	Soil & Water Management Plan	Works will not commence prior to an ESCP being developed and adequately implemented on site. This may include the development and implementation of EWMSs for high risk activities	N/A	
S3	Soil & Water Management Plan	Erosion and sediment controls will be inspected prior to predicted rainfall, prior to long work breaks and after rainfall events to ensure they are fully functional. If required, initiate any repair or maintenance requirements	Yes	Weekly Inspection Records
S4	Soil & Water Management Plan	ESCPs will be progressively updated as construction activities change and distributed to relevant site personnel for reference and implementation.	Yes	Revision numbers on ESCPs
S5	Soil & Water Management Plan	Site personnel (in particular ERSED crews) will be provided with training on sound environmental practice and the implementation of effective Erosion and Sediment Control structures.	TREES gave training in June 2011.	Toolbox 14/6, Training 21/6
S6	Soil & Water Management Plan	Specific site personnel will be trained and/or toolboxed on correct coffer dam management prior to any discharge.	Yes	Toolbox training LLPS 30/6 (no Records), Toolbox Training Burra Creek 23/8
S7	Soil & Water Management Plan	Site personnel will be kept informed of relevant environmental issues through the implementation of environmental training and toolboxes.	Environmental toolbox discussions being held several times per month.	Toolbox Records
S8	Soil & Water Management Plan	Clearing and grubbing limits will be established and clearing will be undertaken in a controlled manner to limit areas of disturbance	Yes	TEMP
S9	Soil & Water Management Plan	Silt curtains will be installed in the Murrumbidgee River and Burra Creek around the coffer dams.	Silt curtain in Murrumbidgee River has been removed. Silt curtain is in place in Burra Creek	ER Inspections
S10	Soil & Water Management Plan	Where possible, felled vegetation will be utilised as erosion and sediment control or placed as Coarse Wood Debris (CWD) for animal habitat.	Most felled vegetation has been mulched and is being used in erosion and sediment control or in rehabilitation	ER Inspections
S11	Soil & Water Management Plan	Access tracks will be delineated and sign posted to prevent unnecessary ground disturbance.	ROW is clearly defined along the pipeline route. Delineation has occurred at Ch6000 waterway crossing	ER Inspections
S12	Soil & Water Management Plan	Vehicular access at the bed and banks of the Murrumbidgee River and Burra Creek will be limited.	No vehicular access at Murrumbidgee. Limited vehicular access at Burra Creek, although some access is possible to get to the discharge structure.	ER Inspections
S13	Soil & Water Management Plan	Control measures will be implemented at site exits to minimise tracking of sediment onto public roads and identified in relevant ESCP	Yes. Stabilised rock access points present at Monaro Highway and Burra Creek.	ER Inspections
S14	Soil & Water Management Plan	Water carts will be used to suppress dust along the project route.	Yes	ER Inspections
S15	Soil & Water Management Plan	Changes to runoff flow paths to the Murrumbidgee River and Burra Creek will remain unchanged or be minimised as much as practical, with disturbed banks of the Murrumbidgee River and Burra Creek to be lined with geotextile to prevent erosion.	Road runoff at Burra Creek is being separated from site runoff and discharged into the creek in a controlled manner.	ER Inspections
S16	Soil & Water Management Plan	The excavation, lower and lay and backfilling of the pipe line will be undertaken progressively.	The pipeline is being installed progressively. The trencher is working some 800m in advance, immediately backfilling until the detailed excavations have caught up.	ER Inspections
S17	Soil & Water Management Plan	Regular inspections will be undertaken, at least weekly, to ensure erosion and sediment control structures are effective (including following significant rain events). If improvements are identified, these will be documented in an inspection report which is to be closed out within designated time frames.	Weekly and daily inspections being undertaken after rain	Inspection records
S18	Soil & Water Management Plan	Records regarding water quality and functionality of erosion and sediment control devices will be kept, including details of rain events, use of flocculants, sediment removal and dewatering activities. A checklist will be completed prior to when treated water is to be discharged from the coffer dams.	Records of testing and discharge are being maintained. <b>OFI - Revised the SWMP to better reflect actual practices. OFI - EWMS does not refer at all to record keeping</b>	Monitoring records
S19	Soil & Water Management Plan	The coffer dams will be inspected after each rain event (greater than 20 mls in 24 hours), flocculated and discharged or pumped into containers, as required. All appropriate recording will be undertaken prior to discharge. Inside the coffer dams will be kept as clean as possible (eg. Machinery, equipment or excess dirt will not be stored in the coffer dams) to minimise flood damage and potential pollution of the River).	Dewatering is occurring and includes testing for pH and turbidity. Records have been maintained.	Inspections, water quality monitoring records and discharge records.

Reference	Plan	Description	Audit Finding	Evidence
S21	Soil & Water Management Plan	Where appropriate, water from the coffer dams will be utilised for construction purposes, such as compaction and dust suppression.	Water unsuitable for discharge in the Burra Creek coffer dam is being used in dust suppression.	ER Inspections
S22	Soil & Water Management Plan	Stockpiles (Topsoil/ spoil) will be located away from drainage lines, including the Murrumbidgee River and Burra Creek	Yes	ER Inspections
S23	Soil & Water Management Plan	Sediment fences will be installed below stockpiles to manage erosion, clean water diversion drains constructed upslope of stockpiles where there is medium to large catchment upslope and stockpiles will be stabilised as soon as practical.	Yes. Long term stockpiles have been jute-matted	ER Inspections
S24	Soil & Water Management Plan	Progressive rehabilitation will occur during construction activities to stabilise exposed areas and minimise erosion potential	Yes	ER Inspections
S25	Soil & Water Management Plan	Records regarding water quality and functionality of erosion and sediment control devices will be kept, including details of rain events, use of flocculants discharge, sediment removal and dewatering activities with controls updated if ineffective.	Yes	See s17 and s18
S26	Soil & Water Management Plan	A coffer dam checklist will be completed whenever treated water is to be discharged from the coffer dams	Yes	
S27	Soil & Water Management Plan	All work in or adjacent to watercourses must be undertaken in compliance with EWMS 6.7 Working in Watercourse areas EN-EWMS09.	EWMS 006 audited against works done at Ch6000. No issues identified.	EWMS 006 Notes. Toolbox records 30/8 and 8/9
S28	Soil & Water Management Plan	All temporary crossings must be undertaken in compliance with EWMS 6.8 Temporary Waterway Crossings General 6.8.1 EN-EWMS04 and Removal of Temporary Crossings 6.8.2 EN 6.8.2 EWMS07	EWMS 006 audited against works done at Ch6000. No issues identified.	EWMS 006 Notes. Toolbox records 30/8 and 8/9
S29	Soil & Water Management Plan	All temporary diversions of waterways must be undertaken in compliance with EWMS 6.9 Temporary Waterway Diversion EN-CMS06	An EWMS has not been prepared for waterway diversions as none have been necessary. A EWMS has been prepared for Burra Creek works separately	Interview J. Turville
S30	Soil & Water Management Plan	All installations of temporary water crossings must be undertaken in compliance with EWMS 6.9 Temporary Waterway Crossings - general EN-EWMS04	EWMS 006 audited against works done at Ch6000. No issues identified.	EWMS 006 Notes. Toolbox records 30/8 and 8/9
S31	Soil & Water Management Plan	Waterway crossings will not be constructed during periods of heavy rain and flooding	N/A	
S32	Soil & Water Management Plan	A contingency plan will be implemented if heavy rain and/ or flooding occur during the installation of a temporary waterway crossing.	<b>No contingency plan is presented in the EWMS 006. OFI</b>	
S33	Soil & Water Management Plan	A landscape rehabilitation program would be instigated immediately following construction utilising appropriate stabilisation products and species endemic to the area Restoration may also involve the provision of in-stream habitat features such as riffles, pools and snags.	Waterway crossing rehabilitation has occurred immediately after completion of works	Inspection
S34	Soil & Water Management Plan	Staff will be trained through site inductions and tool box talks in relation to management of wastewater, the potential impact on water ways and made aware of their responsibilities and penalties under the ACT Environment Protection Act (1997) and the NSW Protection of the Environment Operations Act (1997) in relation to water pollution.	Yes. Specific ERSED training has been provided. Toolbox talks on waterway crossings have been undertaken.	Toolbox records
S35	Soil & Water Management Plan	Unplanned wastewater discharges will be reported to the Environmental Manager who will notify Regulatory Authorities if required	None to date.	Interview - P. Sheahan
S36	Soil & Water Management Plan	Wastewater from site amenities will be treated by an approved treatment system onsite or removed by a licensed contractor to an appropriate disposal facility with the approval of EPA, PCL and/ or DECCW.	Yes. Coffe dam dewatering is being treated prior to discharge	Discharge records
S37	Soil & Water Management Plan	Discharges from the coffer dams will be undertaken in compliance with EWMS 6.10 Coffe Dam Management	Yes.	ER Inspections
S38	Soil & Water Management Plan	Hydrostatic pressure testing will occur progressively	No testing done yet.	
S39	Soil & Water Management Plan	Water collected in excavations, the pipeline trench or low points on site will be pumped to containers, used on site for dust suppression or be managed following the EWMS Dewatering.	Yes	ER Inspections
S40	Soil & Water Management Plan	Concreting and curing operations will be undertaken in compliance with EWMS 6.11 Using curing compounds, and other relevant EWMSs, eg EWMS 6.11 Concrete Management	N/A	
S41	Soil & Water Management Plan	Concrete washout areas/pits will be adequately sized, located away from drainage lines and waterways and maintained regularly Activities will undertaken in compliance with EWMS 6.11 Concrete Management	Yes	ER Inspections
S42	Soil & Water Management Plan	Where possible opportunities for water reuse/ recycling will be initiated	See WMP Audit results	
S43	Soil & Water Management Plan	Water captured in banded areas will be assessed for contamination prior to discharge. Contamination will be removed using appropriate absorbent material and disposed of in a licensed waste management facility.	Yes. Visual inspection done of yellow bund at LLPS prior to discharge. The bund was storing acid. No formal testing. Water discharged into coffer dam.	Interview P. Sheahan
S44	Soil & Water Management Plan	Construct the coffer dams in accordance with EWMS 6.12 Construction of Coffe Dams and specific ESCP.	N/A	
S45	Soil & Water Management Plan	Manage the coffer dams in accordance with EWMS 6.12 Coffe Dam Management EN-CMS05.	Yes - see notes on dewatering above	
S46	Soil & Water Management Plan	Where appropriate, water from the coffer dams will be utilised for construction purposes, such as compaction and dust suppression	Yes - see notes on dust suppression above	
S47	Soil & Water Management Plan	Records regarding quantity of extracted water, water quality and functionality of erosion and sediment control devices will be kept, including details of rain events, use of flocculants, discharge, sediment removal and dewatering activities.	Yes	Water quality and discharge records
S48	Soil & Water Management Plan	A coffer dam checklist will be completed whenever treated water is to be discharged from the coffer dams	Yes	
S49	Soil & Water Management Plan	Site personnel undergo training on appropriate spill management and emergency response procedures.	Yes	Toolbox records 4/8 and 5/8
S50	Soil & Water Management Plan	Works involving the use of chemicals, dangerous goods or other potential contaminants, will be planned and implemented to minimise the possibility of spillage	N/A	
S51	Soil & Water Management Plan	The use and storage of chemicals and dangerous goods will be strictly in accordance with relevant legislation, manufacturers instructions, MSDS and the relevant Safe Work Method Statements	Storage of chemicals is being undertaken in banded secure containers.	Inspection
S52	Soil & Water Management Plan	Adequate quantities of emergency response materials such as oil spill kits, absorbent materials, sand bags, flocculating agents and pH buffer solutions will be readily available and kept in designated compounds. Hydrocarbon spill kits will also be kept in emergency response vehicles, Superintendent's vehicles, Environmental Officers' vehicle and other vehicles that carry substantial quantities of chemicals (e.g. subcontractors).	Yes. Spill kits are present at site compounds and were well stocked at time of audit.	Inspection



Reference	Plan	Description	Audit Finding	Evidence
			N/A	
S53	Soil & Water Management Plan	Temporary bunding will be provided for all refuelling or maintenance of plant and equipment or any other activity onsite that could result in spillage of a chemical, fuel or lubricant (especially where the activity is undertaken in a location with direct drainage to a waterway or environmentally sensitive area).		
S54	Soil & Water Management Plan	Where chemical drums (greater than 20 litres) are removed from bunded areas, they will be placed in temporary bunds and returned to the bunded area by the end of the day.	Yes. Temporary bunding was being used at the LLPS	ER Inspections
S55	Soil & Water Management Plan	Machinery, pumps and other equipment will be checked regularly for excessive wear and leaks, and if required, repaired promptly	N/A	
S56	Soil & Water Management Plan	Permanent storage of fuels and chemicals will only occur within impervious bunded areas with a capacity of at least 120% of the total capacity of the largest vessel stored and roofed with 10A° overhang.	Yes	ER Inspections
S57	Soil & Water Management Plan	Bunded areas will be located in an area at least 30m from a Riparian Management Zone or Exclusion Zone as defined in the ACT Forest Code of Practice.	Yes	ER Inspections
S58	Soil & Water Management Plan	Water captured in a bunded area will be monitored and drained (if uncontaminated) after each rain event to ensure bund capacity is maintained at all times. If contamination is evident the contaminant will be absorbed using remediation products (absorbent pads, etc) and disposed to an appropriate waste management facility.	Yes	ER Inspections
S59	Soil & Water Management Plan	Records of water quality checks, discharges and any remedial actions taken will be recorded	Yes	Water quality records
S60	Soil & Water Management Plan	Where safe to do so, containment measures such as sandbags, booms, earth bunds or cut drains will be installed to capture and retain spilled material and prevent it from leaving site, entering any watercourse or impacting on vegetation stands.	Yes. These are being used on site	ER Inspections
S61	Soil & Water Management Plan	Spill kits will be maintained in emergency response vehicles and at identified site facilities where significant spills may occur (e.g. workshops)	See s52	
S62	Soil & Water Management Plan	No refuelling will occur within 30m of a riparian management zone or in a location where fuel may enter a waterbody	See s57	
S63	Soil & Water Management Plan	Establish a program for the implementation of revegetation and topsoiling works along the site and in/adjacent to water courses (Landscape Rehabilitation Management Plan).	LRMP	
S64	Soil & Water Management Plan	Undertake progressive reshaping and rehabilitation works in conjunction with the completion of bulk excavation and land shaping, and in accordance with the Landscape Rehabilitation Management Plan	See LRMP Audit	
S65	Soil & Water Management Plan	Graded banks on a 2-3% grade will be constructed across the easement or mulched rip lines installed where the easement is perpendicular to the existing ground slope to reduce the potential for erosion. The spacing between the graded banks/ mulched rip lines will be determined by the gradient of the existing topography and range from 15m to 40m apart. The graded banks will also be located so as to outlet onto a stable surface.	Yes	ER Inspections
S66	Soil & Water Management Plan	Topsoil will be reused in areas as close as possible to its source location to maximise the benefits available from the existing seed bank	Yes	ER Inspections
S67	Soil & Water Management Plan	Vegetated filter traps will be established or other measures implemented quickly where possible to minimise erosion and offsite sedimentation.	Yes	ER Inspections
S68	Soil & Water Management Plan	Weed management strategies will be implemented in newly rehabilitated areas to control weed infestation and propagator	N/A	
S69	Soil & Water Management Plan	Appropriate endemic and native species will be used wherever possible particularly those that will provide future habitat for endangered fauna	Yes	ER Inspections
S70	Soil & Water Management Plan	A program of seed collection will be implemented to bolster endemic and native seed stores which can be later used for final rehabilitation works	Some seed was sourced from a local property (Guise's View). Parts of the site were investigated for seed collection but it was deemed too difficult to harvest due to rocks.	Interview J Turville
S71	Soil & Water Management Plan	Felled vegetation may be positioned in a manner that prevents erosion (i.e. positioned in windrows along contour banks) or can be mulched to assist in erosion control and rehabilitation works	Felled vegetation has been mulched. Mulch has been used in ERSED control	ER Inspections
S72	Soil & Water Management Plan	Rehabilitation of waterway crossings or areas in and adjacent to the Murrumbidgee River or Burra Creek will occur as soon as works are complete in that area.	N/A	
A1	Noise & Vibration Management Plan	Ensure strict compliance with construction hours [refer section 2.6 of NVMP]. This requirement to be communicated to all Bulk Water Alliance staff through inductions and toolbox meetings. This will mean that no plant or machinery is to be started ("warmed up") prior to the approved start time.	N/A	
A2	Noise & Vibration Management Plan	Provide an induction to site personnel (including sub-contractors) addressing the requirements of this NVMP and their responsibilities with regard to noise and vibration management	Yes. Induction includes several items on noise management	Induction presentation
A3	Noise & Vibration Management Plan	Submit reports to the BWA (and relevant State or Territory Regulatory Authorities when requested) outlining environmental performance and compliance with this NVMP.	Noise Report submitted to ACT EPA monthly	Monthly Report to ACT EPA
A4	Noise & Vibration Management Plan	Prepare a Blast Management Strategy to the satisfaction of the relevant Regulatory Authority (ACT EPA / NSW DECCW) ensuring blasting times are strictly adhered to and blasting criteria are met.	The contractor prepared a blast management strategy/plan for the current round of blasting	Interview JT
A5	Noise & Vibration Management Plan	Provide continuous education of supervisors, operators and sub-contractors on the need to minimise noise through Toolbox meetings and on-site training.	Yes	Toolbox Records 15/9, 2/9
A6	Noise & Vibration Management Plan	Select appropriate sized rock excavation equipment and design procedures for their use in order to comply with vibration emission limits.	N/A	
A7	Noise & Vibration Management Plan	Ensure equipment is operated in the correct manner including replacement of engine covers, repair of defective silencing equipment, tightening of rattling components, repair of leakages in compressed air lines and shutting down equipment not in use.	Yes. Plant observed on site at time of audit appeared to be operating efficiently and without excessive noise emissions	Audit Inspection
A8	Noise & Vibration Management Plan	Position plant on site to reduce emission of noise to the surrounding area. i.e. away from potentially effected receivers.	N/A	

Reference	Plan	Description	Audit Finding	Evidence
A9	Noise & Vibration Management Plan	Select site access points and haul road locations away from sensitive receivers.	Yes. There is limited opportunity to select alternative access routes but most access selected has been the shortest distance from Williamsdale Road or Angle Crossing Road	ER Inspections
A10	Noise & Vibration Management Plan	Regularly grade access roads to reduce noise from trucks rattling.	No grading of Angle Crossing or Williamsdale Road has occurred since construction commenced. The ROW was generally in good condition.	Site inspection
A11	Noise & Vibration Management Plan	Ensure equipment and diesel combustion engines (including delivery and disposal trucks) are turned off when not in use.	N/A	
A12	Noise & Vibration Management Plan	Ensure machinery used is appropriately sized to prevent overloading and associated over-revving.	N/A	
A13	Noise & Vibration Management Plan	Where possible, locate construction equipment in a position that provides the most acoustic shielding from buildings and topography.	N/A	
A14	Noise & Vibration Management Plan	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.	N/A	
A15	Noise & Vibration Management Plan	Ensure plant and equipment is adequately maintained.	N/A	
A16	Noise & Vibration Management Plan	Undertake monitoring of noise levels from a selection of fixed and mobile plant every six months and ensure that levels are not degraded by lack of maintenance and comply with respective Australian Standards (Refer AS 2436 -1981).	Done by Safety as part of the pre-start	Pre-start Checklists
A17	Noise & Vibration Management Plan	Undertake monthly monitoring of construction noise levels at sensitive receivers to check for compliance. Prepare monthly monitoring summaries for submission to the Bulk Water Alliance and relevant Regulatory Authorities when requested.	Yes. Monitoring is occurring regularly.	Noise Monitoring Records
A18	Noise & Vibration Management Plan	All monitoring results will be reported to the satisfaction of the BWA. A monitoring summary report will be submitted to the BWA and records will be maintained for submission to relevant Regulatory Authorities upon request.	Monthly monitoring summaries are prepared.	Monthly Noise Monitoring Summary Reports
A19	Noise & Vibration Management Plan	Design blasts to not exceed the ANZECC limits or, alternatively, develop other mitigation measures that mitigate the potential impacts (negotiate with the potentially affected residents)	N/A. No blast had yet occurred.	
A20	Noise & Vibration Management Plan	Stabilise access tracks with gravel or similar, all weather material and position access points away from sensitive receivers	Yes	ER Inspections
A21	Noise & Vibration Management Plan	Develop Construction Method Statement (CMS) to assist in minimising noise and vibration generating activities. This CMS to be toolboxed to construction staff regularly.	Yes. EWMS's consider noise mitigation	EWMS
A22	Noise & Vibration Management Plan	Construction hours and scheduling Where feasible and reasonable, noisy activity will be carried out in the least sensitive time periods (to be determined through community consultation)	Yes. No noise complaints have been received. Community consultation has occurred with regards to the weekend work on Williamsdale Road	Interview R Clarke.
A23	Noise & Vibration Management Plan	Construction respite period Noisy activities will be carried out in blocks of time (e.g. all rock hammer operators have lunch break at the same time)	N/A	
A24	Noise & Vibration Management Plan	Equipment selection Where feasible and reasonable, use quieter construction methods (e.g. choice of plant / equipment or methods). E.g. Enclosing noisy compressors or pumps and fitting silencers to any pressure operated equipment and engines, reducing need for rock hammers by blast design or rock splitters.	N/A	
A25	Noise & Vibration Management Plan	Maximum noise levels Plant and equipment will have noise levels monitored and checked. Ensure maintenance of machinery is carried out regularly. Vehicles found to produce excessive noise compared to normal industry expectations should be stood down until repairs or modifications can be made.	Done by Safety as part of the pre-start	Pre-start Checklists
A26	Noise & Vibration Management Plan	Use and siting of plant Noise emitting plant to be directed away from sensitive receivers. Shielding from terrain and objects should be considered in equipment location. Simultaneous operation of noisy plant within discernable range of sensitive receiver is to be avoided.	N/A	
A27	Noise & Vibration Management Plan	Plan worksites and activities to minimise noise and vibration Plan traffic flow, parking and loading/unloading areas to minimize reversing movements within the site (min. reverse beepers)	N/A	
A28	Noise & Vibration Management Plan	Minimise disturbance arising from delivery of goods to construction sites Loading and unloading of materials/deliveries is to occur as far as possible away from sensitive receivers. Select site access points as far as possible away from sensitive receivers.	N/A	
A29	Noise & Vibration Management Plan	Letterbox drops Project updates provided in letterboxes of sensitive receivers.	Yes.	Community Updates
A30	Noise & Vibration Management Plan	Individual briefing Visit resident at least 48 hours ahead of potentially disturbing activities.	Mailout (e-mail), Text Message, Personal Drop-in	Interview R Clarke.

Reference	Plan	Description	Audit Finding	Evidence
A31	Noise & Vibration Management Plan	Project specific respite offer When residents are subject to lengthy periods of noise or vibration. The offer could comprise pre-purchased movie tickets, alternative temporary accommodation or similar offer.	N/A	
A32	Noise & Vibration Management Plan	Specific notifications These notifications are letterbox dropped or hand delivered 7 days ahead of particularly noisy activities. This supports other periodic notifications or to advertise unscheduled works.	N/A	
A33	Noise & Vibration Management Plan	Phone calls Directly notify residents ahead of upcoming noisy activities.	Yes. JT and RC regularly in contact with residences.	Interview J Turville and R Clarke
A34	Noise & Vibration Management Plan	On going Evaluation As the project proceeds, re-evaluation of construction methodology to assess the feasibility and reasonableness of using quieter methods, wherever practicable.	N/A	
A35	Noise & Vibration Management Plan	The blast charge configuration will be selected by the specialist Blasting Sub-Contractor to minimise impacts on sensitive receivers. Before blasting can commence at a site, critical locations will be identified and appropriate measures taken (e.g. reduction of blast size) to limit overpressure and vibration to acceptable levels.	N/A	
A36	Noise & Vibration Management Plan	All sensitive receivers will be informed of blasting activities, as per the CESM Plan with blasting to be scheduled for a set time and day so that blasting will not occur more than once on any set day. Any alteration from the agreed arrangement will be communicated to nearby residences to avoid any surprises.	Yes. Sensitive receivers have been notified by various means (e-mail, sms, phone call and door knock) prior to the blast due to occur today.	Interview R Clarke.
A37	Noise & Vibration Management Plan	A monitoring regime for all blasts will be developed which includes obtaining waveform traces at the three most affected locations.	Yes. Monitoring was undertaken for blast on 21/9	Blast Monitoring Records
A38	Noise & Vibration Management Plan	Where airblast overpressure levels are anticipated to exceed ANZECC guidelines, the Bulk Water Alliance will negotiate an arrangement with the potentially affected residential receivers so as to mitigate any adverse impact on amenity.	N/A	
A39	Noise & Vibration Management Plan	Consideration will be given to delaying or cancelling the blast under extreme enhancing weather conditions. E.g. Temperature inversion layer	N/A	
NVMP 1	Noise & Vibration Management Plan	S2.7 An EPL is required to be obtained from DECCW. The EPL will detail noise and vibration compliance limits for this part of the project.	Yes. EPL Obtained.	
NVMP 2	Noise & Vibration Management Plan	S3.4 When required, additional specialist support will be outsourced to complement noise and vibration management on site. eg Acoustic Specialist, Dilapidation Inspector	N/A	
NVMP 4	Noise & Vibration Management Plan	S4.3.2 ...all potentially impacted residents will be informed of the nature of the works, expected noise levels, duration of works and a method of contact.	Yes. Property Interaction Plans have been prepared	Property Interaction Plans
NVMP 5	Noise & Vibration Management Plan	S4.3.5 Heavy vehicles attending the site would be restricted, where possible, to between 7:00 am and 6:00 pm to minimise the risk of sleep disturbance. Early morning oversized deliveries may be required on occasion for some of the construction works and would occur outside the recommended construction hours. The mitigation measures detailed in section 6 would be implemented to reduce the impact of sleep disturbance. All drivers would be sensitised to the potential for sleep disturbance on local residents and would be expected to take practical and reasonable measures to minimise the impact during the course of their delivery activities. Residents to be impacted by such activities outside of normal construction hours will be notified as early as possible prior to activity (pending approval from the Department of Planning).	N/A	
NVMP 6	Noise & Vibration Management Plan	S4.3.6 Resident would be informed that the vibration levels are minimal and should not give rise to structural damage.... Residential receivers should only be exposed to intermittent vibration for less than 1 day per event.... Vibration mitigation measures detailed in section 6 would be considered when construction works are within 50 m of residents.	Yes	Vibration Monitoring 20/9
NVMP 7	Noise & Vibration Management Plan	S4.3.7 Blasting will be used in areas where hydraulic excavators with hammer attachments are ineffective due to large formations of hard rock. Areas of rock that potentially require blasting have been identified at the following pipeline chainages and areas: • CH387 – CH950; (ACT Lot 0 DP 1654) • CH1892 – CH1985; (ACT Lot 0 DP 1653) • CH6850 – CH6921(NSW Lot 1 & 2 DP1065476) and • Low lift pump station for construction of the base.	Yes. One blast to date (21/9)	
NVMP 8	Noise & Vibration Management Plan	S4.3.7 Methods to reduce the impact of airblast overpressure are detailed in Section 6 (Environmental Mitigation Measures), though the blast contractor would determine their effectiveness and practicability. Blast monitoring should be undertaken to assess compliance and confirm the predictions. Prior to a blast the parameters are designed and confirmed by an interdependent consultant who will ratify the site constants will not be exceeded.	Yes.	
NVMP 10	Noise & Vibration Management Plan	S6.3 A copy of this NVMP will be made available to potentially affected noise receivers before commencement of works by the CESM Manager. Noise monitoring results will also be made available for the potentially affected receivers upon request.	A copy is available on the website.	Website
NVMP 11	Noise & Vibration Management Plan	S8.1 Inspection. The Environmental Manager and M2G Environmental Manager will undertake monthly inspections of construction activities to ensure compliance with the requirements of the NVMP and the noise control measures identified in Section 5. This will also identify opportunities for improvement in noise management performance. An inspection report would be requested to facilitate follow up of any identified issues. A copy of the report will be distributed to relevant site personnel and a response will be prepared outlining the action taken/proposed within 7 working days. A summary of inspection outcomes will be provided to the Bulk Water Alliance APMT on a monthly basis.	Yes	

Reference	Plan	Description	Audit Finding	Evidence
NVMP 12	Noise & Vibration Management Plan	S8.2 Monitoring. Noise and vibration monitoring will be undertaken on a monthly basis (unless otherwise specified in ACT Environmental Authorisation or NSW EPL) by a suitably qualified environmental professional. See specific info under headings: Equipment noise, complaints response, construction noise, vibration and blasting monitoring pg 32-33	Yes. Monitoring being undertaken by BWA staff using handheld monitors.	Monitoring Reports and Records
NVMP 13	Noise & Vibration Management Plan	S8.3 Auditing. The NVMP will be audited at least annually.	Yes	
NVMP 14	Noise & Vibration Management Plan	S8.4 Reporting. Performance reports will be made available to the Bulk Water Alliance on a monthly basis. The reports will summarise: <ul style="list-style-type: none"> <li>Monitoring results and comparison with noise objectives;</li> <li>Complaints (received by the Bulk Water Alliance);</li> <li>Inspection outcomes;</li> <li>Community notifications and;</li> <li>Other relevant issues.</li> </ul> Where monitored noise levels exceed the predicted noise levels, feasible and reasonable mitigation measures will be identified and implemented.	Not being undertaken. Reporting monthly to ACTEW do not currently include noise results	
LR1	Landscape Rehabilitation Management Plan	Pre-construction - Survey of alignment for all elements identified <ul style="list-style-type: none"> <li>Topsoil and landforms</li> <li>Drainage</li> <li>Vegetation type &amp; weeds</li> <li>Environmentally Sensitive Areas</li> </ul>	Yes. EA undertook detailed investigations. Weed mapping was undertaken prior to construction	EA, CEMP
LR2	Landscape Rehabilitation Management Plan	Pre-construction - Survey of alignment including cross sections to record existing surface level and contours. This survey will include the locations of rivers, creeks and drainage lines (waterways).	Yes.	
LR3	Landscape Rehabilitation Management Plan	Pre-construction - Surveys of all rivers and creeks to be encountered along the pipeline route identifying key features such as vegetation, existing erosion and clean water flow paths leading to the creek or drainage line.	Yes.	
LR4	Landscape Rehabilitation Management Plan	Pre-construction - Undertake relevant flora and fauna surveys including (but not limited to) <ul style="list-style-type: none"> <li>Presence of Swainsona recta along the pipeline route</li> <li>Tagging of trees to be removed and/or retained</li> <li>Seek expert advice from DECCW (Threatened Species Unit) regarding the translocation of rare and threatened species where applicable</li> <li>Weed mapping</li> </ul>	Yes. Surveys for Swainsona were undertaken. Habitat trees were identified and marked. Advice was sought from Dr Briggs regarding Swainsona relocation. Weed mapping was undertaken	ECO Logical Reports, ER Inspections, Weed Management Plan
LR5	Landscape Rehabilitation Management Plan	Pre-construction - Development of Environmental Work Method Statements (EWMS') to ensure that appropriate mitigation measures will be deployed throughout the construction activities.	Yes	EWMSs
LR6	Landscape Rehabilitation Management Plan	Pre-construction - Obtaining a "Permit to Enter Site" prior to construction commencing – to be issued by the Construction Manager. The "Permit to Enter" system outlines the specific approvals, documentation and pre construction activities that must be completed prior to works commencing in an area. This system ensures that the pre-construction activities identified above are complete prior to works commencing.	Yes. System is being implemented	
LR7	Landscape Rehabilitation Management Plan	Pre-construction - Development of site specific rehabilitation plans in consultation with Councils, landowners, state agencies as well as Project Ecologist, Soil Conservationist and key interest groups such as Friends of Grassland (FoG) and Landcare groups.	Yes.	
LR8	Landscape Rehabilitation Management Plan	During construction - Protection of public landscape assets	Yes. Public assets at the Murrumbidgee River have been protected through exclusion fencing. Works areas are clearly demarkated.	ER Inspections
LR9	Landscape Rehabilitation Management Plan	During construction - Establish vehicles/ plant wash down facilities along the project route.	Weed wash facilities have been established. Vehicle inspection and wash records reviewed	ER Inspections. Vehicle Inspection and Wash Records
LR10	Landscape Rehabilitation Management Plan	During construction - Undertake weed spraying where identified in the Weed Management Strategy two weeks prior to clearing and grubbing commencing.	N/A	
LR11	Landscape Rehabilitation Management Plan	During construction - Ensure that clearing is minimised where possible and works are confined to the approved corridor (constrained and unconstrained areas).	Works have been confined to the works area.	ER Inspections, Audit Inspection
LR12	Landscape Rehabilitation Management Plan	During construction - Clearing and stockpiling of site topsoil for reuse during rehabilitation works. Ensure that stockpiles are covered as appropriate and that appropriate erosion and sediment controls are in place to avoid erosion and sediment runoff. Weed infested topsoil will be kept separate from weed free topsoil.	Topsoil from the pipeline is being stripped and stored adjacent to the pipeline route, then respread progressively. Topsoil from the compound has been stripped and stockpiled, jute matted and seeded. Topsoil from the HLPs and LLPS has been stockpiled.	Audit Inspection
LR13	Landscape Rehabilitation Management Plan	During construction - Undertake weekly inspections and complete weekly inspection checklist to ensure that areas of disturbance are being minimised and that effective controls are being implemented to minimise environmental impact.	Yes. Weekly inspections being undertaken. Checklists being completed.	Weekly Inspection Checklists
LR14	Landscape Rehabilitation Management Plan	During construction - Ensure backfilled areas are shaped and prepared appropriately for rehabilitation, including mounding of the backfilled pipeline to allow for settlement and the construction of graded banks or mulched rip lines, at predetermined intervals (based on soil type and slope gradient), across the pipeline easement where the pipe line easement is perpendicular to the existing slope.	Mounding is being done but its not noticeable on site.	Interview C. Schwarzer
LR15	Landscape Rehabilitation Management Plan	During construction - Ongoing liaison with landowners and key stakeholders regarding progress of rehabilitation	Yes.	Intevieu J. Turville

Reference	Plan	Description	Audit Finding	Evidence
LR16	Landscape Rehabilitation Management Plan	During construction - Progressive rehabilitation to be undertaken in accordance with specific Site Environment Plans.	Site Environment Plans were not prepared. Instead separate ESCP's, Sensitive Area Diagrams and Property Interaction Plans	Interview J. Turville
LR17	Landscape Rehabilitation Management Plan	Post construction - Vehicles will be confined to designated maintenance access tracks within the nominated Right of Way (ROW) if still present.	Yes. ROW is being maintained post-rehabilitation.	Audit Inspection
LR18	Landscape Rehabilitation Management Plan	Post construction - Undertake monitoring and maintenance as required on rehabilitated areas to ensure long term stabilisation.	N/A	
LR19	Landscape Rehabilitation Management Plan	Post construction - Implement corrective actions where necessary if performance objective is not being achieved. This will include replanting of species which have not survived, weed control, installation of additional controls if erosion is occurring etc.	N/A	
LR20	Landscape Rehabilitation Management Plan	S2.4 A licence to collect native seed may be required by the appointed revegetation contractor should collection of native seed occur on State or Territory land. This licence will be sought prior to undertaking any seed collection activities	Seed collector sourced seed from own property - no licence is required for this.	Interview P.Sheahan
LR21	Landscape Rehabilitation Management Plan	S5.2 - It is recommended that the topsoil immediately above the pipe trench and the haul road (ROW) be scraped to a maximum depth of 100mm (or less depending on topsoil profile) and stockpiled separately for later reinstatement.... An Environmental Work Method Statement (EWMS) for Topsoil Stripping and Stockpiling (BWA-M2G-EN-EWMS-002) has been prepared to specifically manage environmental and rehabilitation related impacts associated with this activity	Stockpiling of topsoil is effective and being well performed. EWMS 002 reviewed.	Toolbox Training Record 2/6/11
LR22	Landscape Rehabilitation Management Plan	Following construction, the depth to which the compaction extends is determined and then a depth just below the compaction zone is cultivated to enable the soil to be opened up enabling greater oxygen intake and water infiltration into the soil profile. The depth will be as shallow as possible to overcome the compaction and ripping up and down steeper slopes will be avoided. The practice is not recommended where sub-soils are dispersible.	Yes. Ripping is occurring before topsoil is reinstated	ER Inspections
LR23	Landscape Rehabilitation Management Plan	S5.2 - To alleviate problems associated with sodic, dispersive soils, the M2G Construction Manager will incorporate gypsum into the soil profile (primarily subsoil) at the time of backfilling the trench, where required. <a href="#">[refer rates in s 5.2]</a>	No gypsum being used. Soils not sufficiently sodic	Interview P. Sheahan
LR24	Landscape Rehabilitation Management Plan	S5.2 - It is important that soil from weed affected areas be used only within those areas. Under no circumstances is top soil from weed affected areas allowed to enter high conservation grassland/woodland areas.	Weed topsoil reused at Smiths Hill, Howarth (only where it came from)	Interview J. Turville
LR25	Landscape Rehabilitation Management Plan	S5.3 Are establishment techniques being implemented in accordance with the processes described in: 5.3.1 Non- native areas (Direct seeding, hydromulching) pg 26-27 5.3.2 High conservation value areas (cultivation of soil profile, seed spreading, Air seeding) pg 28-30 5.3.3 Drainage lines (rehab methodology as per table 5.3) pg 31-32 5.3.4 Seed sourcing (native species) p 32 5.3.5 Erosion control p32 5.3.6 Maintenance regime (reinstatement of disturbed areas, weed management, watering reseeding of bare areas, replanting of planted areas) p33 5.3.7 Protection of threatened species, incl referral of proposed actions re EPBC species to DEWHA. p33	The Landscape Contract includes the requirements of Section 5.3. Also includes in the Specifications to the contract. The implementation of the contract is being reviewed through the QA System (Verification Checklist). The process was reviewed for Property #1103 (Brian Smith).	Contract and Specifications, Verification Checklist
LR26	Landscape Rehabilitation Management Plan	Are the practices in S 5.4 being followed to improve terrestrial flora and fauna values? P34	Yes. CWD has been separated and is being used for habitat	ER Inspections
LR27	Landscape Rehabilitation Management Plan	All communication and consultation will be undertaken in accordance with the project Community Engagement and Stakeholder Management (CESM) Plan	See CESM Plan Audit Results	
LR28	Landscape Rehabilitation Management Plan	S7 Are the three main forms of training (site induction, environmental management training, Toolbox training) being implemented as described on pg 37	Yes	Induction, Training and Toolbox Records
LR29	Landscape Rehabilitation Management Plan	S7 Records of all site inductions and on site training will be kept on a database, including details of the training topic(s) presented, participants and training dates. All participants will be required to "sign-off" that they have been informed and understand their environmental obligations at the conclusion of each training session.	Yes	Induction, Training and Toolbox Records
LR30	Landscape Rehabilitation Management Plan	S7 Training will generally be prepared and delivered by the Environmental Officer, or by personnel delegated by the M2G Land and Compliance Manager.	Yes	Induction, Training and Toolbox Records
LR31	Landscape Rehabilitation Management Plan	S8.1 Inspection and Auditing. The implementation of the LRMP will be monitored regularly by Environmental staff in conjunction with the appointed Landscape contractor and M2G construction staff. The appointed sub-contractors engaged to work on the landscape rehabilitation of the pipeline will have to comply with BWA's quality management system as well as specifications for landscape planting and revegetation according to the LRMP. A regular program of monitoring, auditing and review of the LRMP and its implementation, will be carried out in accordance with this LRMP and its specific designs, the CEMP and the M2G specific Quality Management Plan.	Yes. Environment staff are responsible for completing the Verification Checklist. The VC forms part of the QA System.	Verification Checklist, Contract and Specifications
W1	Waste Management Plan	Where possible opportunities for water reuse/ recycling will be initiated	Water reuse/recycling occurs at Burra Creek. Also at septic tank in compound - irrigation to paddock.	ER Inspections. PS interview 21/9/11
W2	Waste Management Plan	Ensure that there is no open burning or incineration on site.	EWMSs include provisions to prevent waste burning/incineration on site	Clearing & Grubbing BWA-M2G-EN-EWMS-001-1, 17 Dec 2010, Construction of Discharge Structure - Burra Creek BSW-M2G-EN-EWMS-024 9 Aug 2011
W3	Waste Management Plan	Waste management and minimisation will form part of the induction program.	Induction powerpoint pres includes waste slide	Induction package Rev 3 Aug 11 - ecopy saved

Reference	Plan	Description	Audit Finding	Evidence
W4	Waste Management Plan	Environmental Work Method Statements (EWMSs) will include practices to minimise waste generation and to maximise recycling and reuse of materials including rock fill material, concrete, oils, greases, lubricants, sanitary wastes, timber, glass, cleared vegetation and metal.	EWMSs include provisions for reuse of timber, and general statement re toolboxing & encouraging practices to minimise waste and maximise recycling/reuse of the materials referred to in this measure. <b>Ofi EWMS could be improved in future with more specific measures to manage waste.</b>	Clearing & Grubbing BWA-M2G-EN-EWMS-001-1, 17 Dec 2010, Construction of Discharge Structure - Burra Creek BSW-M2G-EN-EWMS-024 9 Aug 2011
W5	Waste Management Plan	Segregated waste disposal containers for the collection and recycling/disposal of all waste streams generated during the early works will be provided on-site. Waste disposal containers will have clear signage and instructions for use to avoid cross-contamination.	Laydown 5 - Steel bin, Compound - Yes, High-lift - No signage, Low lift - No signage. <b>Ofi Signage not present on disposal containers at non-compound sites.</b> Peter Sheehan inspection of Thiess Mugga Lane facility found 82.5% of commingled materials recycled.	Inspection 21/09/11, Audit correspondence Peter Sheehan re Inspection at Thiess 12/5/11 ecopy saved
W6	Waste Management Plan	A Waste Management Register of all waste collected for disposal and recycling, including amounts, data and time and details and location of disposal will be maintained at all times.	Waste register is confusing (2 different forms), not controlled docs, incomplete - only spoil? White form is only spoil requests - this is not the register. JT 21/0/11 OOC - <b>Improve Waste Recording</b>	Spoil Management Material tracking folder - 1053 of 1050.
W7	Waste Management Plan	Prior to disposal of non-recyclable liquid and non-liquid waste, it will be classified based on the DECC Waste Classification Guidelines, Part 1: Classifying Waste and <i>ACT's Environmental Standards – Assessment &amp; Classification of Liquid and Non-liquid Wastes (2000)</i>	Everything outside the compound is pumped out. Records need to be uploaded. Ofi include in waste register.	PS interview 21/9/11
W8	Waste Management Plan	All waste being transported off site on public roads must be covered.	N/A	
W9	Waste Management Plan	Toilets will be emptied and serviced regularly (pump-out system).	N/A	
W10	Waste Management Plan	The site will be cleared of any litter.	At the time of the audit the site was generally free of litter.	Audit inspection 21/9/11
W11	Waste Management Plan	Topsoil will be stockpiled, stabilised and reused for landscaping (where not infested with weeds). Weeds will be disposed of.	Top soil is being separated and reused for landscaping, weed infested topsoil is being segregated.	ER inspections
W12	Waste Management Plan	Storage of all hazardous substances and dangerous goods will be in accordance with MSDS requirements in a bunded area. Solid and hazardous wastes will be contained and separated from inert waste.	Hazardous material at LLPS and at Main compound are being stored in a lockable, bunded container.	ER inspections
W13	Waste Management Plan	Any material contaminated by spills i.e. fuel, oil, lubricants etc will be stored in a sealed secure container within a bunded area and will be transported to an EPA approved waste disposal site.	Contaminated material in a 1000l bin. at compound. Not yet transported off site. EB TO VERIFY.	PS interview 21/9/11
W14	Waste Management Plan	Biodegradable products will be used wherever possible.	Yes	Inspection 21/09/11
W15	Waste Management Plan	A wastewater collection and treatment system will be provided for all vehicles, plant and equipment maintenance and cleaning areas to prevent the discharge of pollutants to stormwater. Wastewater arising from such activities will be collected and disposed of in accordance with the relevant regulatory authorities guidelines. Water use in office will be metered and reported monthly.	Weed washdown areas have been established and been used appropriately. Records have been maintained.	Previous ER inspections.
W16	Waste Management Plan	Truck wash-down facilities will be provided on site in an area designed to contain wastewater	Yes	ER Inspections
W17	Waste Management Plan	Regular collection of wastes will ensure air emissions are at a satisfactory level. All waste and wastewater management systems will be regularly inspected and audited.	Emmissions - N/A. Regular audits and inspections are being undertaken.	Site inspection checklists including waste considerations. 25/3 and 12/5/11 audits of WMP and Thiess facility inspection. Six-monthly audits.
W18	Waste Management Plan	Concrete washout pits will be provided and used.	Yes - generally provided and used.	ER Inspections
W19 - W85	Waste Management Plan	Specific waste measures to be implemented as per Table 6.1	<b>Ofi suggest that tracking program addresses targets contained in Table 6.4 and 6.3 Action plan for key waste streams.</b>	
W86	Waste Management Plan	S6.2.2 Energy Conservation Key strategies adopted to reduce greenhouse gases will be promoted by energy efficient and less greenhouse-intensive work practices and will include the actions outlined in S6.2.2.	N/A	
W87	Waste Management Plan	S4.2.7 Sub-contractor monitoring The work of subcontractors will be monitored through the site inspection process detailed in Section 8 of this document. Observations will be made by relevant personnel (listed above) to assess the effectiveness of the environmental protection measures being used by the subcontractors and to determine compliance with the requirements of the WMP. Any non-conformances or improvements identified during these inspections will be documented on an Environmental Maintenance, Observation and Action List for minor non-conformances/improvements or an Environmental Improvement Notice (EIN) for significant non-conformances.	Use of site environmental inspection checklist IS consistent. Record keeping adequate (i.e. Copies of checklist/written evidence attached).	

Reference	Plan	Description	Audit Finding	Evidence
W88	Waste Management Plan	A concerted effort will be made by BWA to utilise the spoil onsite rather than dispose of materials off-site. However, this is not always achievable. To assist the BWA to dispose of excess material in an environmentally sustainable manner and in accordance with government agency expectations and licence requirements, a procedure for disposing of this material can be found in Appendix A of this document.	Yes	Spoil Management - Material tracking folder 1053 of 1050.
W89	Waste Management Plan	5.2.2 Disposing of waste in NSW A duly completed and signed notice under section 143(3A) of the POEO Act 1997 ("s.143 Notice") will be received prior to transporting wastes generated by or for the M2G project to a place that is not owned by the BWA or ACTEW and is not a licensed waste facility (the "Waste Site"). This includes waste transported for reuse, recycling, disposal or stockpiling. Waste in this context includes spoil, fill, Virgin Excavated Natural Material ("VENM"), crushed rock, reclaimed asphalt pavement, mulched vegetation, waste concrete, etc.	N/A	
W90	Waste Management Plan	5.2.2 Disposing of waste in NSW Waste will not be transported to the Waste Site unless: • The landholder has been provided with a letter highlighting the need for a "s.143 Notice", your role and the respective roles of the BWA and the landholder in ensuring that the waste is appropriately managed. The letter will be consistent with the template letter in Appendix D with the following documents attached: – A copy of the 'Questions and answers for the landowner/occupier' relating to illegal waste dumping, available from the DECCW website at <a href="http://www.environment.nsw.gov.au/waste/s143questions.htm">http://www.environment.nsw.gov.au/waste/s143questions.htm</a> – a "s.143 Notice" for the landholder to complete. The "s.143 Notice" must be obtained from DECCW at <a href="http://www.environment.nsw.gov.au/resources/waste/notice_s143.pdf">http://www.environment.nsw.gov.au/resources/waste/notice_s143.pdf</a> • The "s.143 Notice" is completed and signed by the landholder, and the original copy of the signed "s.143 Notice" returned to the M2G site office; and • A copy of the "s.143 Notice" is provided to the transporter of the materials, who will be made aware of the material's classification and the details on the "s.143 Notice".	N/A	
W91	Waste Management Plan	5.2.2 Disposing of waste in NSW The BWA will ensure that the waste is accurately described on the "s.143 Notice" and waste delivery arrangements have been confirmed with the landholder prior to transporting materials to the Waste Site.	N/A	
W92	Waste Management Plan	5.2.3 Disposing of spoil in ACT If soil of a quantity greater than 100m3 is to be disposed of and placed on leased land with the ACT, an Environmental Authorisation will need to be obtained prior to importation and placement of the soil material. The Environmental Authorisation will need to be obtained by the party accepting the material and the BWA would need to comply with their own Environmental Authorisation (No. 802) prior to disposal of this spoil material, in particular Schedule 2, Table 7, Waste Management of Environmental Authorisation 802.	Yes	
W93	Waste Management Plan	5.2.3 Disposing of spoil in ACT Every attempt will be made to recycle/ reuse other insert waste products on site, such as concrete from the demolition of compound foundations or fill materials from the coffer dam. If this is not feasible, the waste will be disposed of at a waste management facility lawfully able to accept such waste.	N/A	
W94	Waste Management Plan	5.2.3 Industrial waste (ACT) or Special waste (NSW). Testing of material suspected to be contaminated in relation to the railway line will occur using an accredited consultant and the amount of contaminated material is estimated to be around 200m3. If determined to be unsuitable the material will be disposed of at a licensed waste facility and transported using a licensed waste transporter. Excavated material removed from this location will be replaced with VENM sourced from either side of the rail reserve as part of the pipeline excavation.	None to date.	Interview JT
W95	Waste Management Plan	5.2.3 Industrial waste (ACT) or Special waste (NSW). Soil testing will be undertaken if it is thought that contamination from the sheep dip is present within the pipeline easement. As stated above, an accredited consultant will be engaged to undertake the sampling and report on the results. Any material deemed unsuitable (contaminated) will be disposed of at a licensed waste facility using a licensed waste transporter.	None to date.	Interview JT
W96	Waste Management Plan	5.2.3 Industrial waste (ACT) or Special waste (NSW). If controlled waste material is to be transported between NSW and the ACT appropriate tracking of the waste materials will be undertaken in consultation with the relevant Authorities. Appendix C contains the Waste Management Register that will be used to document this process. It is noted that the definition of VENM in the ACT is slightly different to that of NSW and any material identified as VENM will need to meet the requirements of the relevant State's definition.	None to date.	ER inspections.
W97	Waste Management Plan	5.6.1.2 Receivables facilities An appropriately licensed facility will be sought for the known contaminant at the time of disposal, if the need arises to dispose of such hazardous waste. The M2G Environmental Officer will ensure that all receiving facilities are appropriately licensed to accept the type of waste transported offsite. A record of this will be kept in the Waste Management Register to be provided (refer Appendix B). When using landfills for the first time, a copy of the landfill's licence will be requested and reviewed. The BWA will not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997, if such a licence is required in relation to that waste. A waste management contractor will be engaged to pick up and appropriately dispose of waste material generated from the M2G Project.	High-lift Pump Station - Separate worksite has own waste bins. Budget bins engaged to pick up bins.	ER inspection 21/9/11



Reference	Plan	Description	Audit Finding	Evidence
W98	Waste Management Plan	<p>S6.2.3 Re-use and recycling action plan</p> <p>Waste separation and segregation will be promoted on-site to facilitate reuse and recycling as a priority of the waste management program as follows:</p> <ul style="list-style-type: none"> <li>Waste segregation at work areas - all waste materials, including spoil and demolition waste, will be separated on-site into dedicated bins/ areas (where practicable) for either reuse on-site or collection by a waste contractor and transport to off-site recycling facilities.</li> <li>Waste separation off site - all wastes are to be deposited into one bin where space is not available on the worksite(s) for placement of multiple bins, and the waste is to be sorted off-site by a waste contractor.</li> </ul> <p>Refer also strategies in Tables 6.3 for reuse, recycling and disposal strategy for segregated waste materials generated during construction and Table 6.4 Waste Action Plan to promote the use of recycled materials and the conservation of energy and water</p>	Refer to W5	
W99	Waste Management Plan	<p>6.2.4 External Notification</p> <p>In the event that an incident has caused, is causing, or is likely to cause material or serious environmental harm, whether the harm occurs on or off the site, the BWA Environmental Manager will report the incident to the ACT EPA, DECCW and ActewAGL in the following manner:</p> <ul style="list-style-type: none"> <li>Notify the ACT EPA by telephoning Canberra Connect on 132281 during and outside business hours if a spill occurs within the ACT or NSW DECCW on 131 555 if it occurs with NSW.</li> <li>Notify ActewAGL on either of the numbers listed in S6.2.4 in order of priority.</li> </ul>	No waste incidents to date	Incident records.
W100	Waste Management Plan	<p>S8 Training</p> <p>All employees and sub-contractors would receive appropriate training and induction in the waste hierarchy and in their requirements.</p>	Yes - Induction package	Induction package
W101	Waste Management Plan	<p>S8 Are the three main forms of training (site induction, environmental management training, Toolbox training) being implemented as described on pg 37 38?</p>	Yes - induction and toolbox training occurring.	Toolbox and Induction records
W102	Waste Management Plan	<p>S8 Records of all site inductions and on site training will be kept on a database, including details of the training topic(s) presented, participants and training dates. All participants will be required to "sign-off" that they have been informed and understand their environmental obligations at the conclusion of each training session.</p>	Yes	Training records
W103	Waste Management Plan	<p>S8 Training will generally be prepared and delivered by the Environmental Officer, or by personnel delegated by the M2G Land and Compliance Manager.</p>	Yes. Most training is being delivered by M2G environmental staff.	Training records
W104	Waste Management Plan	<p>9.1.1 Informal Daily Inspections</p> <p>Informal visual checks of waste management will be undertaken daily by the foremen. Any maintenance requirements identified can be actioned prior to Environmental Maintenance Action and Observation Checklist being issued by the Environmental Officer.</p>	N/A	
W105	Waste Management Plan	<p>9.1.2 Weekly Site Inspections</p> <p>Inspections by Environmental Officer will occur on a weekly basis or more frequently if specified in an Environmental Authorisation (ACT) or EPL (NSW) using the Site Environmental Inspection Checklist. Issues will then be documented on an Environmental Maintenance Action &amp; Observation Checklist. Issues raised during this inspection will be closed out by the construction team within an allocated time frame depending on level of environmental risk.</p>	Yes - issues with checklists refer Waste /Item	
W106	Waste Management Plan	<p>9.1.3 External Inspections</p> <p>External inspections will be held in consultation with the ACT EPA, NSW DECCW and other Regulatory Authorities to inspect the site and operating procedures. These inspections will be documented with all agreed outcomes documented in an Environmental Maintenance Action &amp; Observation Checklist for actioning</p>	Yes - <b>but EMA&amp;O not being used (OFI - update WMP)</b>	
W107	Waste Management Plan	<p>9.1.4 Independent Auditor</p> <p>Details of the independent auditor have been summarised within the CEMP. In general, the independent auditor will assess compliance against project conditions and licences during the course of construction.</p>	Yes.	This Audit.
W108	Waste Management Plan	<p>9.2.1 Waste Register</p> <p>The project will maintain a waste register covering all waste removed from work sites, compounds and offices, and the extent of material reuse and recycling. A waste register template is provided in Appendix B, and includes waste classification, description, amount, treatment method, mode of transport and the receiving facility to which it is being transported.</p>	Waste Register not compliant - records insufficient in format and detail.	Waste Management Plan. Spoil Management - Material Tracking folder 1053 of 1050
W109	Waste Management Plan	<p>Table 9.1 details the monitoring actions for waste management that will be undertaken throughout the project.</p>	Generally being implemented with the exception of issues raised above.	
W110	Waste Management Plan	<p>S9.3 Auditing. Regular periodic audits of the waste management activities would be performed to ensure compliance with this WMP. Responsibilities for audits and inspections are detailed in the CEMP.</p> <p>Audits will include:</p> <ul style="list-style-type: none"> <li>A full site inspection</li> <li>Compliance with legislative requirements and project approvals</li> <li>Compliance with this WMP</li> <li>Full review of environmental records (e.g. checklist and inspections)</li> <li>Review of monitoring results</li> <li>Review of the Waste Register</li> <li>Closure of non-conformances and previous audit findings</li> <li>An assessment of the suitability of the WMP with regards to current construction activities. This may initiate a WMP review/revision</li> <li>Recommendations for further improvements</li> </ul>	Audit reports did not contain enough information to determine compliance. <b>OFI improve audit planning and documentation.</b>	



Reference	Plan	Description	Audit Finding	Evidence
W111	Waste Management Plan	<p>9.4.1 Environmental Actions Lists and Improvement Notices</p> <p>The M2G Environmental Officer(s) will issue Environmental Maintenance Observation and Action Lists or an Environmental Improvement Notice (EIN) as required. Environmental Maintenance Observation and Action Lists will be issued to the Superintendent and/or Foremen for deficiencies that are minor in nature but require rectification. An Environmental Improvement Notice (EIN) will be issued for more serious deficiencies which pose a greater level of environmental risk, or for when a reprimand is required for poor performance.</p>	EINs now called SQE notices. SQEs are issued.	ER Inspection 21/9/11
W112	Waste Management Plan	<p>9.4.2 Resolving Non-conformances and implementing Corrective Actions</p> <p>The process outlined in S9.4.2 for managing environmental non-conformances will be followed.</p>	Not Audited	
W113	Waste Management Plan	<p>The M2G Environmental Manager with the assistance of the Environmental Officer(s) will maintain the following records</p> <ul style="list-style-type: none"> <li>• The WMP;</li> <li>• Relevant approvals, regulatory licences and permits;</li> <li>• Inspection records and checklists;</li> <li>• Environmental monitoring results and chain-of-custody forms;</li> <li>• Environmental accident/incident/emergency reports;</li> <li>• Environmental Non-conformance and EIN documentation;</li> <li>• Audit reports;</li> <li>• Waste Register;</li> <li>• Monthly Reports;</li> <li>• Management review minutes and action taken</li> </ul> <p>Where hard copy records are provided they will be scanned and made available electronically. Each set of records will be allocated a register/index for easy reference and filing. Records will be maintained for at least 5 years after the date of final completion and will be available to ACTEW Representatives and Regulatory Agencies as required.</p>	All except Waste Register and Chain of Custody	Previous ER inspections
W114	Waste Management Plan	<p>A Waste Register is to be maintained by the Environmental Officer and sub-contractors, to record the management of wastes from the project located in Appendix B. Dockets/receipts/manifests will also be retained for waste tracking to identify the waste transport contractor and destination of the wastes from each worksite. Records will be kept to demonstrate that all surplus materials are recycled, reused or disposed of in accordance with statutory requirements.</p>	Some dockets/receipts retained in Spoil Management - Material Tracking folder 1053 of 1050	
W115	Waste Management Plan	<p>Details of wastes removed from site will be included in monthly reports. In addition, Waste information that is reportable under the NSW Government 'Waste Reduction and Purchasing Policy' will be reported by 31 July for the preceding financial year and at project completion; this is detailed within Appendix C.</p>	OFI MGMT plan to be updated	
W116	Waste Management Plan	<p>9.6 Document and Data Control</p> <p>All environmental documentation associated with this management plan will be documented and maintained on site in accordance with "document and data control" requirements detailed in the CEMP.</p>	The Waste Register is not compliant. Refer above items.	
	CESM	<p>Drill and blast mitigation measures</p> <ul style="list-style-type: none"> <li>• All sensitive receivers will be informed of blasting activities, as per the Community Information Plan with blasting to be scheduled for a set time and day so that blasting will not occur more than once on any set day. Any alteration from the agreed arrangement will be communicated to nearby residences to avoid any surprises. Where airblast overpressure levels are anticipated to exceed ANZECC guidelines, the Bulk Water Alliance will negotiate an arrangement with the potentially affected residential receivers so as to mitigate any adverse impact on amenity.</li> </ul>	Yes. See Noise and Vibration N36	Interview R. Clarke
	CESM	<p>11.4.3 Traffic Management Plan</p> <p>The CESM team will have responsibility for ensuring that community members and stakeholders affected by traffic control measures are kept informed of potential impacts and changing traffic conditions. This includes being the first point of contact and managing community complaints in accordance with the Complaints Management Procedure.</p> <p>The CESM team will;</p> <ul style="list-style-type: none"> <li>• Consult with landowners, community members, local sporting and recreational groups, including equine owners, local businesses and other impacted stakeholders regarding the potential construction impacts;</li> <li>• Document and inform the construction team of stakeholders and landowners access requirements on a daily basis;</li> <li>• Implement procedures to inform the relevant community of Construction traffic routes and any potential disruptions to traffic flows and amenity impacts with adequate notice;</li> <li>• Implement procedures to consult with local landowners with regard to Construction traffic to ensure the safety of livestock and to limit disruption to livestock movements;</li> <li>• Ensure adequate static and variable message and signage systems are updated to reflect changed traffic conditions; and</li> <li>• Manage and record complaints in accordance with the Complaints Management Procedure.</li> </ul>	Yes.	Community Meeting Minutes, Community Information Releases, Traffic Management Plan.