

4 OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN (MAINTENANCE PERIOD)

4.1 Preamble

Abigroup are required to maintain the bypass for 10 years following its opening. The Operational Environmental Management Plan (OEMP) was drafted to reflect both the requirements of the MCoA, applicable legislation, and the operational impacts predicted by the EIS and SIS.

The OEMP was reviewed by the RTA and relevant State Agencies, and approved by the NSW Department of Planning.

The RTA undertook an audit of the project against the requirements of the OEMP from 19–20th March 2008. The outstanding issues were subsequently closed-out.

A further audit was undertaken by the EMR on 24 November 2008 to assess compliance with the OEMP. The results are reported below.

4.2 Commencement Date for Plan

The OEMP was drafted and approved by DoP prior to opening of the project to traffic on 11 July 2007. However there is some debate with regard to the appropriate starting date for instigation of the OEMP. The MCoA (September 2003), states that the OEMP 'shall be prepared prior to the commencement of operation'. Whilst the dual carriageways of the Upgrade were opened to traffic on 11 July 2007, construction works continued on the Yelgun Rest Area, and local roads and service roads (areas previously inaccessible or constrained due to highway traffic), until 28 September 2007, the date which RTA formally recognised as 'practical completion'. During this phase, operations continued in accordance with Construction Environmental Management Plan. Up until this date, Abigroup advise that it was operating under the requirements of the CEMP. Further minor work continued beyond this date for several months.

It is considered that the appropriate starting date for the commencement of the OEMP should be the date when the whole project opened to public traffic, *i.e.* 28 September 2007.

Bilfinger Berger Services (BBS), who are performing the maintenance on Abigroup's behalf, advised that it was only verbally notified of its contract approval in mid-January 2008, and not formally notified for some weeks later. However, as it was already performing the maintenance work for the Pacific Highway immediately north of this upgrade, it performed the essential items on the assumption that it would be awarded the work. Consequently, whilst, BBS adopted 1 January 2008 for the commencement of the OEMP, the majority of the requirements of the OEMP were actually instigated by BBS as of 28 September 2007 (*e.g.* servicing of the Gross Pollutant Trap and Nutrient Removal Tank, the monitoring checklist etc).

4.3 Environmental Management Plan

ELEMENT	COMPLIANCE
<i>Induction and Training</i>	
<p>Site induction provided to all operational staff; addressing environmental issues.</p>	<p>The site induction, which is in an electronic format, has been reviewed. It appears to cover the key issues, albeit at a broad level. The format is based on that from several other major projects, and includes copies of the sensitive area plans. Induction and training records indicate that maintenance staff have undertaken this induction. BBS also has the contract for the Yelgun Upgrade and also the Tugun Bypass, so its staff are considered likely to have a broad knowledge of their individual responsibilities, on a day-to-day basis.</p> <p>The maintenance crew is small and well-supervised by personnel who are familiar with the relevant environmental issues and requirements. BBS believes that a strong supervisory approach provides a better environmental outcome rather than expecting all workers to be knowledgeable of all details of the contractual responsibility.</p>
<p>Environmental training will be delivered to maintenance personnel.</p>	<p>Training for maintenance tasks deliver safety, environmental, and quality components as a package for the specific task that is being taught.</p> <p>The environment component was reviewed and considered appropriate to the task.</p> <p>Further awareness occurs through Job Safety & Environmental Assessments (JSEAs), which are prepared for each task undertaken by the contractor.</p>
<i>Communication and Consultation</i>	
<p>The Maintenance Manager shall prepare reports for the regular Project Control Group meetings with regard to the environmental monitoring and maintenance activities set out in Section 3.3.1 of the OEMP.</p>	<p>Examination was made of the minutes of the Project Control Group meetings, which include RTA and Abigroup personnel. The issues covered appeared to be extensive.</p>
<p>Ongoing consultation may be required between various agencies.</p>	<p>The Project Maintenance Manager has been consulting with Byron Shire Council and DECC-NPWS as required.</p>
<p>A complaints register is to be established for the maintenance period.</p>	<p>The complaints hotline was maintained for six months after the bypass was opened. During this period complaints received by BBS were forwarded to Abigroup who added them to the construction complaints database. Since</p>

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	<p>1 January 2008 a separate database has been maintained by BBS.</p> <p>It was noted that almost all of the operational complaints documented prior to 1 January 2008 related to noise, mostly from the audible line marking. Seven of the eleven complaints documented by Abigroup after that date relate to audible lines, which have since been removed. One complaint related to a rock from a truck, two were from one person concerned that a drain inlet was unprotected, and one with regard to the apparent name change of Stock Route Road to Billinudgel Road. There were two others referring to outstanding issues from the construction phase - a damaged caravan annex, and a cracked swimming pool.</p> <p>I am advised that noise complaints are now referred directly to the RTA for logging and addressing.</p>
<i>Emergency Preparedness and Response</i>	
<p>A range of preventative measures will be undertaken to reduce the risk of an incident occurring.</p>	<p>Job Safety Analyses (JSAs), including one for spills, have been prepared and staff trained accordingly. The maintenance crew have since been involved in supporting Emergency Services with a tanker roll-over.</p>
<p>Manage incidents and report to RTA and/or DECC as required.</p>	<p>No incidents or major accidents have been attended by BBS. However, assistance was provided to a HAZMAT crew dealing with an incident involving a petrol tanker on Wilfred Street. This included the provision of traffic control and the disposal of used oil absorbent materials.</p>
<i>Flora and Fauna Maintenance</i>	
<p>Need to protect, monitor, and maintain adjacent sensitive areas.</p>	<p>It was advised that staff are reminded by supervisors when working near sensitive areas. To date there has been little activity which would potentially affect these areas, the work mostly being mowing and spraying along fauna fences.</p> <p>Wetlands Australia monitor and maintain the landscaped areas, and also Wetlands A and B under a separate maintenance contract.</p> <p>There have been no incidents with regard to the 'Scar Tree' at the southern end of the bypass.</p> <p>The Project Botanist is monitoring the protected flora, and it is understood that the first annual report will be issued in February 2009.</p> <p>It is understood that both the flora and fauna monitoring reports are expected in February 2009. There have been some significant delays due to weather.</p>
<p>Weed management will be by non-herbicide and targeted herbicide</p>	<p>Mowing, slashing, and minor herbicide control is undertaken by BBS. An experienced sub-contractor who also works with North Coast Weeds undertakes broad-scale herbicide control. Evidence of noxious weed</p>

ELEMENT	COMPLIANCE
methods.	control was evident during the field inspection. BBS advised that they use a variety of herbicides, and in different treatment trains to maximise knock-down of weeds, particularly vines, whilst minimising secondary impacts.
Trimming of over-hanging branches by trees in the Brunswick Heads Nature Reserve requires liaison with DECC.	Trimming of trees over-hanging the adjacent footpath was initiated and supervised by DECC-NPWS, with the work undertaken by BBS.
Monitoring of fauna underpasses will be undertaken for three years.	No monitoring had yet been performed, however correspondence was observed indicating that this work was imminent. BBS was preparing to install sand traps at locations nominated by the Project Ecologist, who would then undertake the monitoring. As at the release of this report, this work was underway and the Project Ecologist had accompanied the BBS Inspector on the first routine inspection of the fauna structures to ensure compliance with the OEMP.
Regular inspections of fauna exclusion fences.	There were good records of inspections, findings, and subsequent close-out of issues. There was a period of time when the public was accessing the road easement and leaving gates open. These are now locked and roadkill numbers have decreased.
Aquatic Habitat Management	
Monitoring of mangrove re-growth on the Brunswick River foreshore.	The Project Botanist has undertaken monitoring of the mangrove settlement and growth of seedlings in this area. Natural recruitment has been significant, and is documented in Section 3.8 of this report.
Maintenance of the underpass at Coolamon Scenic Drive is of significance as it is a 'fish passage'.	It was advised that regular checks have been undertaken, and minor debris, which occasionally blocks this passage, has been removed.
Operational Noise Management Maintenance	
Monitoring shall be undertaken within six months to ascertain the adequacy of the noise mitigation measures.	Renzo Tonin undertook this study and confirmed compliance with the noise monitoring goals. This issue is discussed further in Section 3.1 of this report.
Checklists	
The monitoring checklist attached as Appendix 5 will be completed on a 6 monthly basis.	The RTA completed the checklists as part of an audit in March 2008, and then subsequently in September 2008. They are next due in March 2009.

4.4 Environmental Control Plans

Within the Environmental Management Plan, three Environmental Sub Plans provide detailed information and direction relating to specific environmental issues. These are: Soil and Water, Heritage, and Waste and Reuse. The following table assesses compliance with the key provisions of these Environmental Sub Plans.

ELEMENT	COMPLIANCE
Soil and Water	
<p>Routine inspections will be undertaken to assess the condition and integrity of all constructed wetlands.</p>	<p>Routine inspections are currently being undertaken by Australian Wetlands as part of their maintenance work. This is predominantly weed control and plant establishment. There is no mandate to ascertain functionality.</p> <p>The construction of Wetland B has only just been finalised, with planting of macrophytes occurring in early November 2008 to enhance wetland functioning.</p>
<p>Water quality basins are routinely inspected.</p>	<p>There is an annual formal inspection, and informal inspections approximately quarterly whilst checking fauna fences.</p>
<p>The Gross Pollutant Trap and Nutrient Removal Tank need to be serviced bi-annually and the results reported to the RTA annually.</p>	<p>This has occurred twice since opening of the Upgrade, and is due again in February 2009.</p>
<p>Waterways and drainage lines require regular maintenance and removal of litter and other debris.</p>	<p>Drainage lines are inspected quarterly. Litter is removed as part of day-to-day maintenance, and removed prior to mowing.</p>
<p>Water quality monitoring is required at the six locations nominated in the plan.</p>	<p>Southern Cross University performed monitoring on 28 March 2008. The data indicated some potential acid sulphate soils at Site W1 with a pH of 4.86, and moderate, though uniform, turbidity at each site (27–44 NTU).</p>
<p>Erosion needs to be treated.</p>	<p>There are currently two outstanding areas where ground cover has yet to be achieved –part of the batter on Cut 6, just south of the STP access road, and the western batter at the southern most section of the bypass. These are both potentially expensive items to repair within the context of a maintenance budget. Consequently, it was advised that the former will be addressed within the current financial year’s budget, and the latter in next year’s budget. A small area above a sediment basin on the western boundary near the Rest Area is also unstable and will be treated as well. The method is likely to be via compost blanket incorporating stabilisers and an appropriate seed mix.</p>
<p>Fuel and chemical storage in bunded</p>	<p>40-60L of Roundup is kept on-site, and up to 60L (3 x 20L) of fuel for brush-cutters and pumps. These are stored in a locked area on a plastic</p>

ELEMENT	COMPLIANCE
areas.	bund designed specifically for this purpose.
Acid sulphate soils (ASS) should not be disturbed.	No maintenance work performed to date has required earthworks that might disturb such soils.
Following a flood event basins, wetlands, and traps must be inspected and maintained.	There have been no flood events to date, however it was advised that regular inspections are performed after major rain events.
Potential impacts associated with landslip.	There have been no landslips associated with the bypass to date.
Heritage	
"Scar tree" on the Brunswick Bypass median.	There has been no disturbance to this tree.
Potential "middens" site located inside (but close to the boundary with) the Brunswick Heads Nature Reserve.	There has been no disturbance to this area.
Old Brunswick River Ferry Crossing point to the west of the Brunswick River Bridge.	There has been no disturbance to this area.
The Hainsville township in the Coolamon Scenic Drive area.	There has been no disturbance to this area.
Indigenous items discovered during the construction phase and returned to site.	These artefacts have yet to be returned to the site.
Waste and Reuse	
Roadside litter will be collected	Roadside litter is collected on a daily basis and recorded on 'day-works records sheets'. It is also collected prior to mowing. The roadside inspection reports indicate that formal quarterly inspections are being conducted. The reports indicate that no roadside litter has been encountered in any locations during any of these inspections, indicating that the daily collection of litter is being successfully undertaken.
A register will be kept to record the type and quantity of waste disposed of to landfill	The waste register indicates the regular collection of waste by Solo Waste.
Workshop areas and bunds will be inspected with respect to waste management	Weekly checklists have been provided to indicate regular inspections, focusing on actual and potential waste.

4.5 Discussion

No significant issues arose from the audit. There is still some confusion as to the appropriate starting date for commencement of the OEMP, and this is evident in the maintenance contractor's own monitoring schedule with many items being scheduled around a September 2007 commencement date, whilst others using a January 2008 start date.

Whilst the dates may arguably be in non-conformance with the plan, being up to three months late, from a pragmatic perspective, all of the required work is being undertaken, and to a high standard.

There is still some minor remediation work to be undertaken including stabilisation of several batters. This work is quite expensive, and consequently scheduled to occur over the next two financial years, with the first works in February 2009. The latter includes the application of a compost blanket with integrated seed to the batter below Banana Road. A similar treatment is proposed of another area on the project later this year. This particular treatment was utilised successfully on a much more difficult site on the Tugun Bypass.