

## The Northern Road – Mersey Road, Bringelly to Glenmore Parkway, Glenmore Park

## **Environmental Representative Monthly Report**

May 2021

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# hutchison weller

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#### Appendix A – Site Inspection Reports

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Glossary of terms and abbreviations

Term	Definition
CCS	Community Communications Strategy
CEMP	Construction Environmental Management Plan
СоА	Conditions of Approval
Construction	As defined in the definitions section of the Infrastructure Approval
СРВ	CPB Contractors
CRM	Community Relations Manager
CSSI	Critical State Significant Infrastructure
DPIE	Department of Planning, Industry and Environment
EIS	Environmental Impact Assessment
ER	Independent Environmental Representative approved by DPIE
ERG	Environmental Review Group
EMS	Environmental Management System
EPA	NSW Environment Protection Authority
EPL	NSW Environment Protection Licence
EP&A Act	Environmental Planning and Assessment Act 1979 (NSW)
EPBC Act	Environment Protection and Biodiversity Conservation Act (Cth)
ESCP	Erosion and Sediment Control Plan
GEJV	Georgiou Ertech Joint Venture
OEH	Office of Environment and Heritage
OACEMP	Overarching Construction Environmental Management Plan
OEMP	Operational Environmental Management Plan
OOHW	Out of hours work
POEO Act	Protection of the Environment Operations Act 1997 (NSW)
(the) Project	The Northern Road Upgrade, Mersey Road, Bringelly to Glenmore Parkway,
	Glenmore Park
Proponent	Transport for NSW
Roads and	Roads and Maritime Services
Maritime	
ROL	Road Occupancy Licence
Secretary	Secretary of DPIE
SPIR	Submission and preferred infrastructure report
SSI	State Significant Infrastructure
TCS	Traffic Control Systems
TfNSW	Transport for NSW
ТМС	Transport Management Centre
TNR	The Northern Road
WSIP	Western Sydney Infrastructure Plan

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#### 1. Introduction

#### 1.1 Background

The Northern Road Upgrade – Mersey Road, Bringelly to Glenmore Parkway, Glenmore Park Project (the Project) comprises the upgrade of 16 km of The Northern Road (TNR) as part of the broader Western Sydney Infrastructure Plan (WSIP). The Project will improve traffic flow and connectivity in the western Sydney region and facilitate the construction of the Western Sydney Airport.

The Project is located approximately 45 km west of the Sydney central business district and traverses the local government areas of Penrith in the north and Liverpool in the south.

Transport for NSW is planning and delivering the Project. The Project will be constructed in three separate stages under three separate Construction contracts:

- Stage 4 Mersey Road, Bringelly, to Eaton Road, Luddenham
- Stage 5 Littlefields Road, Luddenham, to Glenmore Parkway, Glenmore Park
- Stage 6 Littlefields Road, Luddenham to Eaton Road, Luddenham

The Project has been assessed under both State and Federal planning approval pathways. The Project was declared by the NSW Minister for Planning to be critical State significant infrastructure (CSSI) development under Schedule 5 of the State Environmental Planning Policy (State and Regional Development) 2011 on 31 March 2017. The Secretary's Environmental Assessment Requirements (SEARs) for the Project were issued on 28 July 2015 and amended SEARs were issued on 9 March 2016. The Project was assessed under Part 5.1 of the Environmental Planning and Assessment Act 1979 (NSW) (EP&A Act).

The Project has the potential to significantly impact on Matters of National Environmental Significance (MNES) including *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) listed Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest. The Project will also impact on areas of Commonwealth land associated with the Defence Establishment Orchard Hills (DEOH) and land purchased by the Australian Government for the Western Sydney Airport. Accordingly, the Project was referred to the then Australian Government Department of the Environment (now Department of the Environment and Energy (DoEE)). The Project was declared by the Federal Minister for the Environment and Energy to be a 'controlled action' under the EPBC Act and Commonwealth Environmental Impact Statement Guidelines were issued in August 2016.

A single Environmental Impact Statement (EIS)/Draft EIS was prepared for the Project to satisfy the environmental assessment requirements of both Part 5.1 of the EP&A Act and Part 8 of the EPBC Act. The EIS was placed on public exhibition between 21 June 2017 and 2 August 2017.

A Submissions and Preferred Infrastructure Report (SPIR) was prepared to provide responses to issues raised during exhibition of the initial EIS, to propose Project design refinements and to provide revised environmental management measures (REMMs) for the Project. The SPIR was submitted to the NSW Minister for Planning. A Final EIS satisfying the requirements of the EPBC Act was submitted to the Federal Minister for the Environment and Energy in December 2017.

Approval for the Project under the EP&A Act was granted by the Minister for Planning on 30 May 2018. Approval for the Project under the EPBC Act was granted by the Federal Minister for the Environment and Energy on 15 June 2018. Construction approval was granted on the 25 October 2018, with the approval of the final Overarching CEMP Sub-plan.

A modification to the approval was granted by the Minister for Planning on 11 June 2019. The modification related to the replacement of the Adams Road Bridge for a four-way signalised intersection.



Transport for NSW have appointed two contractors to complete the project. The Georgiou Ertech Joint Venture (GEJV) are constructing the Mersey Road, Bringelly to Eaton Road, Luddenham Stage (Stage 4 of The Northern Road Upgrade). CPB Contractors are constructing the Eaton Road, Luddenham to Glenmore Parkway, Glenmore Park Stage (Stage 5 and 6 of The Northern Road upgrade) of the project.

#### 1.2 Environmental Representative

The Northern Road Upgrade Project – Mersey Road, Bringelly to Glenmore Parkway, Glenmore Park (the Project) has engaged an independent Environmental Representative (ER) in accordance with Condition of Approval (CoA) A20 of the Infrastructure Approval – SSI 7127.

Cameron Weller was nominated as the Principal Environmental Representative for the Project and approved by the delegate to the Secretary on the 26 June 2018 in accordance with CoA A21.

Toby Hobbs was nominated as the Alternate Environmental Representative for the Project and approved by the delegate to the Secretary on the 11 March 2019.

#### 1.3 Scope of monthly report

As required by CoA A24(j), the Environmental Representative is to prepare and submit a monthly report, providing information on the project, the Environmental Representatives activities throughout each month of the project, and a summary of any community complaints, compliance issues and results of site inspections, and any other relevant information. The report also needs to fulfil the requirements outlined in the *Environmental Representative Protocol* (DPIE, 2018).

One monthly ER report will be prepared for all three stages of the Project, unless otherwise advised. Discussion throughout the report will be spilt by the contractor's responsibilities (i.e. Stage 4 being constructed by GEJV and Stage 5 and 6 being constructed by CPB), as CPB Contractors are building both Stages 5 and 6 as one project with one project team.

Stage 4 has been opened to traffic and the GEJV commenced demobilisation from the site during October. Practical completion of the that stage of the Project was achieved in early November 2020. Maintenance will be ongoing on that stage of the project until full operation commences at the completion of the remaining stages of the Project. As no construction work is currently underway, the focus of this report will be on Stages 5 and 6 for the remainder of the Project.

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## 2. Summary of construction activities and project update

#### 2.1 General

#### 2.1.1 Covid-19

Covid-19 was identified in March 2020 as being a major public health risk by the NSW State Government and the Federal Government, which subsequently impacted the way the Project was being constructed for much of the year. The easing of restrictions in June and July 2020 meant the Project was able to get back to some sort of normality in the construction process and the ER site inspections have essentially been able to be carried out in the normal way since then.

State and Federal Government advice will continue to be adhered to, and therefore the site inspection regime will be dependent on this advice, as well as any Project/Contractor specific restrictions that are implemented on either site.

The DPIE will be informed of any changes that are made to the ER inspection schedule.

#### 2.2 Construction activities

Mersey Road, Bringelly to Eaton Road, Luddenham (Stage 4)

Weed management and landscaping maintenance were ongoing during April.

Some damage to the landscaping was observed as a result of the extreme rainfall event, and therefore will require some increased focus on maintenance over the next couple of months.

#### Eaton Road, Luddenham to Glenmore Parkway, Glenmore Park (Stages 5 and 6)

Construction on the northbound carriageway from Littlefields Road through to Kings Hill Road is progressing rapidly. Asphalt paving commenced in late May in this section and is expected to continue into early June.

Local road works on Chain-of-Ponds Road continued throughout May. Chain-of-Ponds Road has been closed to local traffic and will remain closed for the duration of the work. Work was completed in late May and will be reopened on the weekend of the 4/5 June 2021. Over the same weekend, Littlefields Road will be closed to traffic to facilitate the reconstruction of the Littlefields Road intersection and the Traffic Control Systems (TCS). Chain-of-Ponds Road and Kings Hill Road will act as the detour roads during this time.

The demolition and reconstruction of the old Northern Road, which will essentially become the new northbound carriageway is underway in the majority of locations. Property access points are currently being managed very well under difficult conditions due to the large number of property access points throughout this section.

Work around the Bradley Street intersection is progressing well and should be completed in June.

Major box culvert extensions around the northern extent of the Project continued to be constructed throughout May and will continue through June. A substantial amount of planning has gone into the



construction of this element of the Project, due to its high-risk nature. If executed well and in accordance with the plan, it is not expected any environmental impacts will result from this work.

Landscaping is ongoing throughout Stages 5 and 6 and will continue until the completion of the Project.

#### **3.** Status of Environmental Document Review

#### 3.1 Environmental Representative Endorsements and Minor Change Approvals

No major revisions of the Overarching CEMP or Sub-plans were reviewed or endorsed by the ER during May, prior to being submitted to the DPIE for approval.

No minor changes to management plans were approved by the ER during April 2021.

The CPB management plans were reviewed in April and updated in May. These updated plans were sent to TfNSW and the ER for information.

#### 3.2 Other document reviews

No other documents were formally required to be reviewed by the ER during May 2021.

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## 4. Environmental Representative Approvals

#### 4.1 Minor Ancillary Sites

No minor ancillary sites were approved by the ER during May 2021.

#### 4.2 Out of Hours Works

No out of hours works were approved by the ER during May 2021.

Other Out-of-hours works that are permitted by the EPL may have occurred, however, there is no requirement in the ER is involved in providing approval for these works that are already permitted as part of the EPL.

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## 5. Monthly evaluation

#### 5.1 Site inspections

Formal site inspections of TNR4 have ceased, as this stage of the Project is open to traffic and essentially completed. Ongoing minor defect rectification and landscaping maintenance is expected to continue for several months, however, the environmental risk associated with that stage of the Project is negligible.

Two site inspection was carried out by the ER on TNR5&6 during May 2021 on the following days:

- 4 May 2021
- 18 May 2021

Site inspection reports are included in Appendix A of this report.

#### 5.2 Community complaints and response

Seven (7) community complaints were reported to the ER in May 2021. Details of the complaints are as follows:

- One complaint related to driver behaviour when leaving the site compound.
- One complaint related to concerns about internal cracking in their property. An independent assessor has been organised to assess the property.
- One complaint related to cattle breaking free from a property during ongoing property boundary fencing.
- Four complaints related to property damage. Two of these complaints related to vehicle damage due to temporary property access road conditions and two complaints related to damage caused when property accesses were being constructed. Damage claims are being processed where required.

All complaints have been handled by the Transport for NSW Project team in conjunction with the contractors and were closed out within a reasonable timeframe. No complaints have been escalated to the ER during May 2021.

#### 5.3 Incidents, Non-conformances, corrective or preventative actions

Two incidents were reported to the ER during May 2021.

One (Category 2) incident related to a dust being generated by a street sweeper sweeping Chain-of-Ponds Road prior to the chip-seal being laid. Water jets were not being used at the time of the incident due to a perception that the surface needed to by dry prior to the chip-seal being laid. After a review of the TfNSW Specification, it was identified that the surface could be slightly damp prior to the seal being laid.

One (Category 2) incident related to a subcontracted concrete truck driver washing out their concrete agitator adjacent to a drainage pit. There was a concrete wash-out area set up adjacent to the work, however, it was not used by the subcontractor. A toolbox was given to the whole site the next day on vehicle wash down processes and the subcontractor formally notified of the incident.



No incidents reported to the ER in May triggered the definition of a "incident" in the Conditions of Approval and therefore none of these incidents were required to be reported to the Department in accordance with Condition of Approval A39.

#### 5.4 Meetings

#### 5.4.1 Environmental Review Group Meetings

No ERG meeting was held during May 2021.

Due to Covid-19 restrictions, the ERG is likely to be postponed indefinitely and stakeholders engaged on an individual basis where required.

#### 5.4.2 Other meetings

Regular informal meetings are currently being held between the ER and Transport for NSW to discuss document review comments, project documentation status and general project status.

#### 5.5 Alternate Environmental Representative Activities

The Alternate ER was not required to carry out any activities during May 2021.

#### 5.6 Other Environmental Representative Tasks

No other environmental representative tasks were required to be carried out during May 2021.



## 6. Closing comments

Stage 4 of the Project (Mersey Road to Eaton Road) achieved practical completion in November 2020. Ongoing maintenance and defect rectification will occur until the completion of Stage 5 and the operation of the whole Project commences.

Stage 6 of the Project has essentially been completed also. Ongoing defect and maintenance work will continue throughout Stage 6 until Stage 5 is completed and the operation of the whole Project commences.

Work in Stage 5 is progressing well. A number of milestones were reached in late May, such as completing the Chain-of-Ponds Road intersection ready for reopening in early June. Littlefields Road will be the last major local road reconstruction required on the Project and is expected to take about six weeks to complete. High risk works around the tributary of Surveyors Creek are currently being planned, and are expected to be executed in early June, weather dependent. The ER recommended that the work be carefully planned out due to the high-risk nature of the work, and the Project team adopted the ER's recommendation, and the current plan appears to be robust and well thought out.

The contractor has been responsive and positively engaged with the ER and the general performance of the contractor is overall of a much higher standard than during the early stages of the Project. The remaining sections of the northbound carriage to be constructed will continue to be challenging both the management of erosion and sedimentation control and with the management of property access. The project team continue to manage the challenging property access issue very well and the ER will encourage CPB to continue the hard work that has gone into managing the property accesses.



## **Appendix A. Site Inspection Reports**



PROJECT: TNR 5&6		<ul> <li>Construction Activities:</li> <li>Earthworks continuing in TNR5 along the northbound carriageway in various areas.</li> <li>Drainage installation continuing</li> </ul>	<ul> <li>Weather Conditions: raining approx. 17deg</li> <li>Rainfall previous 24hrs: 0 mm to 9am</li> <li>Rainfall forecast next 24hrs: 10-15mm</li> </ul>	Project Risk Status:
Date: 04/05/21 Inspection N	Time (start/finish): 8:30am No: 81	<ul> <li>Chain-of-Ponds Road reconstruction continuing</li> <li>Bradley Street closure construction continuing.</li> </ul>	Immediate or High Priority action required (if so, provide details)?	√ Green
Inspection No: 81 Attendees: Cameron Weller (ER), Anthony Ryan (CPB), Jim Steen (TfNSW); Simon Lendrum (CPB), Kim Holliday (TfNSW				Red

**General Comments** 

- Site inspection focused on the higher risk areas of the site, which included the area around the area around Chain-of-Ponds Road, the area around Bradley Street, the area around the Gate N11.
- Generally, the site is currently in good condition, and was well set up for the forecast rainfall. Housekeeping is generally good across the site.
- Section between main compound and GRS towing was well prepared for the lean mix concrete paving, which is now largely complete in this area, and is in a very good position to complete the remaining work in this section quickly.

Next Inspection: 18 May 2021



#### Items from previous audit(s) and inspection.

No	LOCATION (Chainage/ Description)	ISSUE/COMMENT	PRIORITY/ RISK (I, H, M, L)	ACTION	Agreed Close out date	Response
1	Nil	Nil	Nil	Nil	Nil	Nil

#### New items

1	Bradley Street	General observation – work has progressed	N/A	N/A	N/A	N/A
		since last inspection. Where required				
		incomplete clean water flow paths have been				
		temporarily covered with either geofabric, or				
		sprayed with soil binder. Headwall and				
		wingwalls were cast in-situ and the formwork				
		is currently blocking the culvert, which allows				
		water to pond in front of the culvert apron.				
		RDY GLUIM				



2	Bradley Street	Observed that some of the scour protection rock being placing in the drain has a relatively high content of fines. Rock being placed in clean water areas should be clean and free of fines.	L	Ensure the remainder of the rock being placed in this clean water area is clean and free of fines to minimise the risk of sediment being eroded and transported downstream.	14/05/21	Scour protection rock placement put on hold due to supply issues. Rock will be inspected as it is delivered and/or placed with a shaker bucket.
3	Bradley Street	Positive observation – drainage depression has been topsoiled, lined with jute-mesh, straw bails installed as checks, and sprayed with hydro-mulch. Sediment fence has also been installed on either side of the channel.	N/A	N/A	N/A	N/A



3	Bradley Street	Observed that the trees at the west of the property did not have exclusion fencing installed around them to protect encroachments into the tree protection zone.	L	Re-instate exclusion fencing around trees to protect tree protection zone.	06/05/21	Reinstated.
4	Tributary of Surveyors Creek	Positive observation – rainfall had only recently commenced, however, very positive to see that water flowing through the culvert was very clean.	N/A	N/A	N/A	N/A



5	South of the tributary of Surveyors Creek	General observation – it was noted that the vast majority of water from this area of the site would flow towards excavation in road formation and therefore this area currently poses a low risk from an ERSED perspective. Project team should however start planning how the area would be set up prior to rainfall as this excavation is filled in and the road formation increases in height. May need to look at augmenting and/or re-aligning the sediment trap adjacent to the culvert or similar; and reviewing how the clean and dirty water interact in this area.	N/A	N/A	N/A	N/A



6	Chain-of-Ponds Road	Positive observation – open drains and inlet	N/A	N/A	N/A	N/A
0		and out of the culvert on Chai-of-Ponds Road have been finished very well. Looks great!				













Issued by: Cameron Weller	Issued to: Simon Lendrum	Copy to: Kimberly Holiday, Jim	Actions Checked:
		Steen, Gary Treloar, Martin Younan,	
		Daniel Farrugia, Nick Fryday, John	
		Wright, Mehendran Kandiah, Dave	
Ph No: 0428271496	Date: 04/05/21	King, Anthony Ryan.	



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Rec	Recommended Priority for Completion of Actions								
Imr	Immediate To be addressed immediately and closed out on the day of inspection								
	High	Within 24hrs*							
М	edium	Within 3 Working Days*							
	Low	Within 5 Working Days*							

<u>Status</u>	
Red	<ul> <li>actions required to address urgent risk issues.</li> <li>satisfactory actions not taken for high risk issues identified on the previous inspection.</li> <li>a Category 1 incident has been identified during the inspection.</li> </ul>
Amber	<ul> <li>actions required to address high and/or medium risk issues.</li> <li>satisfactory actions not taken for previous medium or low risk issues on the previous inspection.</li> </ul>
Green	<ul> <li>actions required to address low risk issues that will not directly cause environmental harm.</li> <li>site demonstrates good environmental management with no action required to avoid environmental harm.</li> </ul>

\*To be completed sooner if adverse weather conditions predicted



		Construction Activities:	Weather Conditions: Sunny approx. 17deg	Project Risk Status:
PROJECT: TNR 5&6		<ul> <li>Earthworks continuing in TNR5 along the northbound carriageway in various areas.</li> </ul>	Rainfall previous 24hrs: 0 mm to 9am	
		Drainage installation continuing	Rainfall forecast next 24hrs: 0mm	
<b>Date</b> : 18/05/21	<b>Time (start/finish)</b> : 8:30am	<ul> <li>Chain-of-Ponds Road intersection reconstruction continuing</li> <li>Installation of water main north of Bradley St</li> </ul>	Immediate or High Priority action required (if so,	<ul> <li>✓ Green (South of N3/S3)</li> </ul>
Inspection No: 82		continuing.	provide details)?	<ul><li>✓ Amber (North of N3/S3)</li></ul>
Attendees: Cameron Weller (ER), Jim Steen (TfNSW); Simon Lendrum (CPB), John Wright (T.R.E.E.S)				Red

**General Comments** 

- Site inspection focused on the higher risk areas of the site, which included the area around the area around Chain-of-Ponds Road, the area around Bradley Street, the area around the Gate N11.
- Generally, the site is currently in good condition, however some areas to the north of N3/S3 have had their risk profiles change recently due to construction continuing.
- Housekeeping in some areas of the site need some attention to ensure the safety of the workers and the environment continues.

Next Inspection: 1 June 2021



#### Items from previous audit(s) and inspection.

No	LOCATION (Chainage/ Description)	ISSUE/COMMENT	PRIORITY/ RISK (I, H, M, L)	ACTION	Agreed Close out date	CPB Response
1	Nil	Nil	Nil	Nil	Nil	Nil

#### New items

1	Chain-of-Ponds Road	Housekeeping in the vicinity of the intersections needs some attention.	L	Tidy area to minimise the safety and enviro risk from poor housekeeping.	27/05/21	The area surrounding the Chain-O-Ponds intersection has been cleaned up and unwanted materials removed in time for the scheduled opening of Chain-O-Ponds Road starting 4 <sup>th</sup> June 2021.
2	South of N3 stockpile area	Stockpile area has been reworked over the last few months and requires some additional erosion controls to minimise sedimentation in downstream areas.	L	Install erosion controls as discussed at the along the bottom of the stockpile area. Consider a mulch bund if there an excess of mulch. Or the material near the fence could be reshaped to form a bund along	25/05/21	A mulch bund has been placed. Stockpiles close to the fenceline (where mulch could not be placed at this point) need to remain joined in order to prevent water from sheeting down to the silt fence and drainage below closer to the roadway. The CPB CPESC (Andrew Macleod of SEEC) noted this in his inspection report 27 <sup>th</sup>



		<image/>		the fence line in the lower portion of the stockpile area to slow water and catch sediment in the stockpile area before the catch drain. Also, amend sediment fence adjacent to the clean water drain.		May 2021 and discussed this with the Site Foreman the same day. The silt fence is no longer required if the bunds are installed and the grass cover here is maintained. The silt fence is causing water to concentrate to one location (which has scoured). Removal of the silt fence has been discussed and actioned with the Site Foreman 27 <sup>th</sup> May 2021.
3	Bradley Street – south	Works in progress - Clean water drain is currently being constructed and area around the inlet of the culvert. This should continue to be a priority in this area.	L	Continue to complete the clean water drain and tidy clean water areas as a priority in this area.	Please provide an update by 28/05/21	The swale will continue to be progressed next week commencing 31 <sup>st</sup> May 2021. The remaining 20-30m connecting to the N3 culvert is yet to be constructed.



3	Bradley Street – north	Works in progress – drain inlet incomplete and should try to be completed prior to next rainfall event. If this can't occur ensure water is directed into the pit rather than bypassing.	L	Complete drain inlet prior to next rainfall event. If this can't occur ensure water is directed into the pit rather than bypassing.	25/05/21	The swale will continue to be progressed next week commencing 31 <sup>st</sup> May 2021 and will include additional concreting to extend the swale and a grate above the pit.



4	Bradley Street – south	Sediment fence is observed to not extend around the whole disturbed area.	L	Extent sediment fence around the back of the stockpile.	25/05/21	A mulch bund has been installed Monday 24 <sup>th</sup> May 2021 and extends all the way to the fenced property boundary.



5	Tributary of Surveyors Creek	Area around the culvert outlet has changed in the recent weeks to change the risk profile.	Μ	<ul> <li>Recommend the following in the short term:</li> <li>recently established batters should be pulled and compacted progressively. If rainfall is forecast prior to being completed the batters should be covered.</li> <li>Continue to direct water to low areas in the formation during construction. Utilise sediment traps where water can't be ponded in the formation.</li> </ul>	The batter has been puled and covered temporarily. The Progressive ERSED Plan endorsed by the CPB Soil Con (Andrew Macleod of SEEC) 27 <sup>th</sup> May 2021 details how site water can be managed.



6	Tributary of Surveyors Creek	Area around the culvert outlet has changed in the recent weeks to change the risk profile. Prior to commencing any work in the outlet of culvert a workshop is recommended to be carried out to review of work required to complete the design and the methodology of the work.	Μ	<ul> <li>Carry out a workshop to review of work required to complete the design and the methodology of the work. Document workshop and ensure the methodology is documented in a work method statement and the PESCP.</li> <li>Things to be discussed but not limited to: <ul> <li>How will standing water be managed?</li> <li>How will the old water main be removed?</li> <li>How will unsuitable be treated?</li> <li>Consider the potential for PFAS contamination.</li> <li>How will new water main be installed?</li> <li>How will clean water be diverted from upstream of the culvert and from the upstream area to the west.</li> </ul> </li> </ul>	21/05/21	<ul> <li>How will standing water be managed?</li> <li>Ground water can be either pumped into water carts for reuse or discharged in accordance with EPL requirements.</li> <li>How will the old water main be removed?</li> <li>The old watermain can be grouted in the near vicinity of the culvert. However, a small will need to be section removed below the culvert outlet.</li> <li>How will unsuitable be treated?</li> <li>Material spoil will be taken to area P12 (SB side of TNR) and spread and incorporated into landscaping rehab for the area.</li> <li>How will the new water main be installed?</li> <li>Through the shared path away from the batter and above the culvert.</li> </ul>



				<ul> <li>Consider the length of time it will take for each element to complete (ie removal of old water main, installation of new water main, prep of foundation, blinding, reo, base slab and curing, FRP of wing walls and apron and curing time.</li> <li>How will dissipater be constructed?</li> <li>Materials and equipment that will be required to construct these elements.</li> </ul>		<ul> <li>How will clean water be diverted from upstream of the culvert and from the upstream area to the west.</li> <li>A progressive ERSED plan has been developed and implementation has commenced on site.</li> <li>How will dissipater be constructed?</li> <li>The PESCP endorsed by the CPB CPESC on the 27/5/2021 indicates how the works will be timed and control types to be installed prior and during construction. A Workshop with CPB and TfNSW to discuss the plan has been set for for 1<sup>st</sup> June 2021.</li> <li>Materials and equipment that will be required to construct these elements. Materials will not be installed in the flow path or within the creek line.</li> </ul>
7	Gate S3 area	Works in progress – whole area to the north of Gate S3 is being progressively completed and prepared for landscaping.Image: Complete to the north of Gate S3 is being progressively completed and prepared for landscaping.	L	Continue to complete this area as planned. Rocking of the clean water drain should be treated as one of the priorities.	Provide update by 29/05/21	Works have re-commenced 24 <sup>th</sup> May to install rock checks in the channel to dissipate flows and armour the batters consistent with Blue Book standards. Rock has been placed at the wingwalls of the large fauna culvert to prevent scour and erosion and to provide an aesthetically pleasing feature to the area that is over and above the original design.



Issued by: Cameron Weller	Issued to: Simon Lendrum	Copy to: Kimberly Holiday, Jim Steen, Gary Treloar, Martin Younan,	Actions Checked:
Ph No: 0428271496	Date: 18/05/21	Daniel Farrugia, Nick Fryday, John Wright, Mehendran Kandiah, Dave King, Anthony Ryan.	



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Recommended Priority for Completion of Actions		
Immediate	To be addressed immediately and closed out on the day of inspection	
High	Within 24hrs*	
Medium	Within 3 Working Days*	
Low	Within 5 Working Days*	

Status			
Red	<ul> <li>actions required to address urgent risk issues.</li> <li>satisfactory actions not taken for high risk issues identified on the previous inspection.</li> <li>a Category 1 incident has been identified during the inspection.</li> </ul>		
Amber	<ul> <li>actions required to address high and/or medium risk issues.</li> <li>satisfactory actions not taken for previous medium or low risk issues on the previous inspection.</li> </ul>		
Green	<ul> <li>actions required to address low risk issues that will not directly cause environmental harm.</li> <li>site demonstrates good environmental management with no action required to avoid environmental harm.</li> </ul>		

\*To be completed sooner if adverse weather conditions predicted