

Clarence River Crossing

Construction / Pre-Operation Compliance Report

Report 8 18th April 2020 – 21st August 2020





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Distribution of controlled copies

The most current version of this report will be available on the project database for all project personnel. The document will be publicly available at https://www.rms.nsw.gov.au/projects/northern-bridges/grafton-clarence-river-crossing/project-documents-current.html

Distribution of this report will be made through the Clarence River Crossing project document control system. The environmental management team will maintain, review and update this document on a six monthly basis.

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Revision History

Each new revision to the report will be distributed to all registered copyholders with an instruction that the superseded copy be destroyed or marker as superseded.

The revision number is included at the end of the document number, which is noted on each page. When amendments occur, the document or relevant section will be reissued with the revision number updated accordingly.

The Project Manager or Environmental Manager will approve amendments by initial in the Approval column below.

The following provides a record of amendments made to this document:

Revision	Date	Description	Page	Prepared By	Approved
1	June 2019	Draft for internal review	All	Project team	S. Leigh
2	August 2019	Updated project details	All	Project team	S. Leigh
3	December 2019	Final draft for review	All	Project team	S. Leigh
4	February 2020	Updated to include TfNSW comments	All	Project team	S. Leigh
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10	August 2020	Draft for Review	All	Project Team	S. Leigh
11	August 2020	Updated by TfNSW and ER comments	All	TfNSW	G Nash



Abbreviations

CEMP Construction Environmental Management Plan

CPESC Certified professional in erosion and sediment control

DPIE Department of Planning, Industry & Environment

DPIW Department of Primary Industries - Water

EIS Environmental Impact Statement

EMS Environmental Management System

EPA Environmental Protection Authority

EP&A Act Environmental Planning & Assessment Act 1979

EPL Environmental Protection Licence

ER Environmental Representative

MCoA Minister's Conditions of Approval

NCR Non-conformance report

NML Noise Management Level (RBL+5)

NSW New South Wales

OOHW Out of Hours Work

POEO Act Protection of the Environmental Operations Act 1997

PPR Preferred Project Report

RBL Rating Background Level

RMS Roads and Maritime Services

ROL Road Occupancy Licence

SEPP State Environmental Planning policy

SSI State Significant Infrastructure



TfNSW Transport for New South Wales

TMP Traffic Management Plan

VENM Virgin Excavated Natural Material



1. Introduction

The Clarence River Crossing entails a new 525-metre long road bridge crossing of the Clarence River, Grafton. The Bridge will comprise two traffic lanes (one in each direction), road shoulders and a pedestrian/cycle path and be located approximately 70-metres downstream of the existing Grafton Bridge, which will be retained. The Project will also consist of a replacement of a rail viaduct section in Pound Street, approach works and upgrades to sections of the local road network in both Grafton and South Grafton.

The Project is required to alleviate existing traffic congestion and safety issues that arise from increasing traffic demand and inherent design issues with the existing bridge. The Project is consistent with key strategic and transport planning policies including the State Infrastructure Strategy and the Mid North Coast Regional Strategy.

Key features of the project include:

- Construction of a new road bridge over the Clarence River, located approximately 70 meters downstream of the existing Grafton Bridge
- Upgrades to parts of the local road network in both Grafton and South Grafton including:
 - Realigning the existing Pacific Highway to join Iolanthe Street near Through Street
 - Providing a new roundabout at the intersection of Through Street and Iolanthe Street
 - Widening pound street to four lanes and approach to the new bridge
 - Providing traffic signals at the intersection at Pound street and Clarence Street
- Works to the existing rail viaduct section across Pound Street to provide sufficient vertical clearance from the Pound Street upgrade
- Construction of a new shared pathway for cyclists and pedestrians for access to and across the new bridge crossing
- Flood mitigation works including the uplift of sections of the existing levee system upstream of the current Grafton Bridge.

Benefits of the project include:

- Improve traffic efficiency between and within Grafton and South Grafton
- Reducing travel time and delays for local people and businesses in peak periods
- Support regional and local economic development
- New shared pathway to provide safe facilities for pedestrians and cyclists
- Flood mitigation works

The Clarence River Crossing is being delivered through a 'design and construct' process. Fulton Hogan was appointed by RMS on 13 September 2016 to deliver the project.

1.1 Background

Roads and Maritime Services (RMS) completed an environmental assessment of the Additional Crossing of the Clarence River at Grafton (the Project EIS) in August 2014. The Project EIS identified a range of environmental, social and planning issues associated with the construction and operation of the Additional Crossing of the Clarence River at Grafton and proposed measures to mitigate or manage those potential impacts.



The Project EIS was publicly exhibited in August 2014 for a period of 30 days. Following public exhibition, submissions from stakeholders were received and addressed by Roads and Maritime in the Submissions Report which was lodged with the Secretary of the Department of Planning and Environment in October 2014.

After consideration of the Project EIS and Submissions Report, the Minister for Planning approved the Additional Crossing of the Clarence River at Grafton Project under Section 115ZB of the Environmental Planning and Assessment Act 1979 (EP&A Act) on 19 December 2014 subject to the Minister's Conditions of Approval (CoA) being met (hereafter referred to as the Project Approval). The project is State Significant Infrastructure (SSI) approved under Part 5.1 of the EP&A Act.

For the purposes of this environmental assessment, the concept design described and assessed in the Project EIS and consequently approved by the Minister, is referred to as the Approved Project.

The CEMP and associated Management Plans were approved by DPE on 15 September, 2016.

1.2 Purpose of this report

The purpose of this compliance tracking report is to assess and provide a summary of the procedures and processes implemented to track compliance in regards to the conditions of approval on the Clarence River Crossing Project.

This is a requirement under the Minister's Condition of Approval (MCoA) A12 which specifies:

A12 – Compliance Tracking

"The proponent shall prepare and implement a Compliance Tracking Program to track compliance with the requirements of this approval. The program shall be submitted to the Secretary for approval prior to the commencement of construction and operate for a minimum of one year following commencement of operation, subject to the Secretary's review of the outcomes of the Independent Environmental Audit Report referred to in condition E5. The operation of the program may be extended if the Secretary determines that there has been unsatisfactory compliance. The program shall include but not necessarily be limited to:

- (a) provisions for the notification of the Secretary prior to the commencement of works prior to the commencement of construction and prior to the commencement of operation of the SSI (including prior to each stage, where works are being staged);
- (b) provisions for periodic review of the compliance status of the SSI against the requirements of this approval;
- (c) provisions for periodic reporting of compliance status to the Secretary, including but not limited to:
 - i. a Pre-Construction Compliance Report, prior to the commencement of constructions;
 - ii. 6-monthly Construction Compliance reports, for the duration of construction; and
 - iii. a Pre-Operation Compliance Report prior to the commencement of operation;
- (d) a program for independent environmental auditing in accordance with AS/NZS ISO 19011:2014 Guidelines for Auditing Management Systems;
- (e) mechanisms for recording environmental incidents during construction and actions taken in response to those incidents;
- (f) provisions for reporting environmental incidents to the Department and relevant public authorities during construction;



- (g) procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management;
- (h) provisions for ensuring all employees, contractors and sub-contractors are aware of, and comply with, the conditions of this approval relevant to their respective activities; and
- (i) Provisions for reporting complaints received in accordance with the Construction Complaints Management System required under condition C2 of this approval.

The compliance tracking program was issued to DPE by RMS and approved by DPE on 10 October 2016.

During this reporting period, the Clarence River Crossing is compliant with the conditions of approval (**Appendix A**). A review of compliance for the six-month period from 19 April 2019 to 14 October 2019 is provided in this report.

1.3 Relevant Documentation

Documentation relevant to this report includes:

- Additional crossing of the Clarence River at Grafton Instrument of Approval
- Environmental Impact Statement
- Submissions Report
- Hydrological Mitigation Report
- Construction Environmental Management Plan and sub plans



2. Project Update

Project works are proceeding generally in accordance with the construction program. During the reporting period there was a total of 15 rain days. There were one rain day that exceeded the 5 day 85th percentile rainfall depth value of 37.2mm. Total rainfall was 91mm for the reporting period. Project works were interrupted at times due to the rainfall events.

The project opened the main bridge structure at design speed in December 2019.

2.1 Levees

The levee works for the project are over 98% complete, with one small levee still required near the South Grafton bowling club.

All areas on the flood side of the levee are now completed and stabilised with final landscaping.

2.2 Demolition

Minor demolition work was carried out during the construction of the new Gwydir Highway roundabout. All demolition works are now completed.

2.3 Utilities, drainage and service relocation

Utilities works have continued to progress in both Grafton and South Grafton, the general update to the status of work are as follows:

- 100% of water relocation completed
- 100% of sewer relocation completed
- 100% copper telecommunications cable relocation completed
- 100% of fibre optic cables have been installed
- 100% of the electrical service packages completed
- 100% of stormwater relocation completed

2.4 Earthworks

Earthworks progressed well in the reporting period, completed works include:

- Minor earthworks at Gwydir Highway roundabout.
- Access ramp to the South Grafton pump station
- Subtle landscape mound on former Pacific Highway

2.4.1 Contaminated Land

During the reporting period there was one contaminated land issue encountered adjacent to the former United Service Station. The find was likely to be diesel and determined by a contaminated land expert that leaving the material in-situ and completing the road formation was appropriate.



The project has two unexpected contaminated land finds which have required the remediation of the contaminated areas. These unexpected finds are being managed in accordance with CoA B11 and B12 and the CCLMP, an update each find is provided below.

Unexpected Find Asbestos Containing Material in Site Won Topsoil.

Approximately 8,000 m³ of site won topsoil from the site was stockpiled for proposed re-use. During the early stages of routine mechanical screening (following screening of approximately 50 m³), it was observed that the topsoil stockpiles contained fibrous cement fragments which were suspected to contain asbestos, and the screening was subsequently halted.

Further sampling of the stockpiles was undertaken and it was determined that due to the presence of asbestos containing material throughout the stockpiles it was determined that the re-use of the surface material as surface topsoil was inappropriate. An alternate proposal to contain the topsoil material within the road embankment was developed and implemented under a Remediation Action Plan.

An accredited NSW Site Auditor has been engaged to prepare a Site Audit Report and Site Audit Statement to determine the land use suitability.

The following reports and document have been developed by the projects contaminated land consultants as part of the process:

- Topsoil Stockpile Assessment, Clarence River Crossing Project, South Grafton, NSW, April 2019
- Remedial Action Plan, Asbestos Impacted Soil Containment, Proposed Summerland Way, South Grafton, NSW, November 2019
- Validation Report, Asbestos Impacted Soil Containment, Proposed Summerland Way, South Grafton, NSW, November 2019
- Operational Environmental Management Plan (Draft), Asbestos Impacted Soil Containment, Clarence River Crossing, South Grafton NSW 2460, November 2019

The finalisation of the Operational Environmental Management Plan, Site Audit Report and Site Audit Statement is expected to be completed outside of the reporting period for this compliance report. A further summary along with the final document will be provided to DPI&E once they have been completed and verified by the Site Auditor.

Unexpected Find South Grafton Hydrocarbon, Fill 1

During excavation of a longitudinal stormwater drain on the site in the vicinity of Fill 1, a galvanised steel pipe of approximately 50 mm diameter was impacted and observed to traverse the excavation and wad embedded in a sand backfilled trench. The trench sand appeared to be saturated with diesel which was seeping into the resultant excavation and pooling.

Upon further investigations, two pipe trenches were visible as shallow trenches backfilled with coarse sand, contrasting the surrounding natural dark brown/black clay. The pipe trench was observed to contain phase separated hydrocarbons (PSH), otherwise known as "free-product". The PSH has the characteristics of diesel.

Based on the supplementary information and further investigations, the site is a former fuel depot which contained one 60,000 L above ground diesel tank. It was estimated that the facility operated from approximately 1989 – 2005. The plans obtained shows the location of the AST close to the lolanthe Street entrance and two dispensing islands with a central control panel.



These features correlated with the observations on-site. The pipe trenches appeared to run below the surface from the above-ground storage tank to the dispensers, in an east to west orientation. No above ground infrastructure has been observed on-site or remained prior to the land being acquired by TfNSW and construction commencing.

Following further sampling of the site to allow the extent of the contamination to be determined and assessed it was recommended in consultation with the project contaminated land consultant that a portion of the contaminated material that was highly impacted would be removed and stockpiled onsite and the remaining less impacted material would remain in-situ.

The stockpiled material was bio-remediated and validated as Excavated Public Road Material and reused on-site. The material that was left in-situ has been managed and monitored in accordance with Contamination Management Strategy, Construction Purposes.

An accredited NSW Site Auditor has been engaged to prepare a Site Audit Report and Site Audit Statement to determine the land use suitability.

The following reports and document have been developed by the projects contaminated land consultants as part of the process:

- Unexpected Find Investigation, Lot 18 DP 1210999 Iolanthe Street, South Grafton, NSW, September 2017
- Contamination Management Strategy Construction Purposes, Unexpected Find Part of Lot 18 DP 1210999 South Grafton, NSW, September 2017
- Data Quality Objectives and Sampling, Analysis and Quality Plan Groundwater investigation,
 Part of Lot 18 and Lot 13 DP 1210999 Iolanthe Street, South Grafton NSW, February 2018
- Detailed Site Investigation, Part of Lot 13 and Lot 18 DP 1210999 Iolanthe Street, South Grafton, NSW 2460, April 2020
- Groundwater Monitoring Well Installation and Monitoring Event (July 2018), Part of Lot 18 and Lot 13 DP 1210999 Iolanthe Street South Grafton, NSW, October 2018. This report covers the first two monitoring events undertaken in October 2017.
- Groundwater Monitoring Event (February 2019), Part of Lot 18 and Lot 13 DP 1210999 lolanthe Street South Grafton, NSW, February 2019. This report covers the third monitoring event undertaken in July 2018.
- Groundwater Monitoring Event (May 2019), Part of Lot 18 and Lot 13 DP 1210999 Iolanthe Street South Grafton, NSW, June 2019. This report covers the fourth monitoring event undertaken in February 2019.
- Groundwater Monitoring Event (August 2019), Part of Lot 18 and Lot 13 DP 1210999 Iolanthe Street South Grafton, NSW, February 2020. This report covers the fifth and sixth monitoring events undertaken in May and August 2019 respectively.

The final monitoring event report (August 2019) provides the conclusions that based on the current data set, there is minimal benefit of maintaining the current quarterly groundwater monitoring frequency at the site. The site is considered to be low risk and suitable for the proposed land use as a road corridor (Lot 18 DP 1210999) and commercial/industrial land use within Lot 13 DP1210999.

Upon further review of the Groundwater Monitoring and Validation the project determined that an Operational Environmental Management Plan would be required for the site due to the low levels of in-situ contaminants that are to remain on-site. The OEMP is expected to be completed outside of the reporting period for this compliance report. A further summary along with the final document will be provided to DPI&E once they have been completed and verified by the Site Auditor.



2.4.2 Traffic management

Traffic management is required throughout works to ensure that public road users and workers are kept separated and safe.

A summary of traffic management activities during the reporting period is detailed below:

Traffic switch to open the new Gwydir Highway roundabout

2.5 Temporary Works

The project has put in place a number of temporary facilities and sites to support construction, these include:

- Crane pads
- Site access roads
- Temporary boundary fencing and signage
- Construction jetty
- Construction pads at the bridge works areas
- Temporary access through the Grafton levee which includes a designed flood management strategy
- Temporary pavements in preparation for needed traffic switches

All temporary work areas and facilities were remediated at the completion of construction or as they become redundant.

2.6 Casting Yard

Operations completed at the casting yard during the reporting period included:

Removal of limited excess and no longer needed construction materials and waste as classified waste or through an appropriate Resource Recovery Order / Exemption. The materials were legally disposed of to either an approved receiver or an appropriate licenced waste facility.

The pre-cast yard is being used to stockpile surplus materials that will be reused before completion pending the issuing of an applicable DA from CVC. The final works and rehabilitation of the site will be completed after the opening of Stage 2 of the project to traffic and outside of the reporting period for this compliance report.

2.7 Bridge Works

The project opened the main bridge structure at design speed in December 2019.

Only minor defect rectification works were completed on the bridge during the reporting period.



2.8 Sustainability

The Clarence River Crossing project continues to implement and encourage a number of initiatives to promote sustainable outcomes across site. Current approaches include:

- Return and earn program for plastic bottles promoted on the project with separate bins, signage and education programs
- The beneficial reuse of surplus material within the casting yard area under an applicable DA.

The project has continued to recycle steel from all construction works. Water from onsite sediment basins has been recycled for onsite dust suppression.



3. Environmental Control and Performance

During the reporting period, the project implemented and maintained a high standard of environmental controls and management measures.

The project's environmental performance is reviewed and measured by TfNSW Northern Project Office, the project ER, EPA, Clarence Valley Council, DPI&E, SEEC (Project Soil Conservationist), and the NSW Department of Primary Industries – Fisheries.

3.1 Effectiveness of Environmental Controls

Environmental controls were effective during the reporting period. The project is implementing processes to ensure continuous improvement of the work site.

3.1.1 Soil and water management

The project continues to focus and invest resources into best practice erosion and sediment controls. The result of that investment is rainfall events have been observed to be well managed and not cause a measurable effect on receiving water ways.

Prior to heavy rainfall, site controls are reviewed and reinforced. Additional maintenance and controls are installed prior to shut down periods and long weekends ensuring maximum efficiency of the site during rainfall events.

Final design features including pavements, kerb and gutter, drainage, footpaths and landscaping have now been completed in all areas of both Grafton and South Grafton. This stage of construction ensures the soil is locked away and the runoff from the project is clean.

Weekly environmental inspections capture the need for maintenance of controls and ensure all controls are functioning properly and are fit for purpose. Weekly environmental inspections are completed as a minimum and include prior to, during and after rainfall events and prior to new works commencing.

3.1.2 Flora and Fauna

The 'Three-Toed Snake Tooth Skink Management Plan' does not require monitoring of the TTSTS protection areas during construction. FH continues to go above and beyond the requirements of the management plan by applying extra mitigations such as during construction protection area monitoring. The result of the extra monitoring has confirmed that the TTSTS are surviving well in the protection areas. Both adults and juveniles have observed in the protection areas. FH is now working with the clients to understand how the skink protection areas are to be left following completion. Final landscaping and skink habitat is being established as per the landscape design in areas adjacent to the skink protection areas.

The project submitted the final Biodiversity Offset Statement to DPI&E during the reporting period in accordance with CoA D1.

Further detail will be discussed in section 7.4.



The project has stopped works 27 times for potential heritage finds. Of those stoppages, none occurred within the reporting period.



4. Environmental Management System Overview

4.1 Environmental Management System Certification

The overall Environmental Management System (EMS) for the Project is described within the Construction Environmental Management Plan (CEMP) and relevant sub plans. The EMS for the Project has been prepared to comply with the requirements of AS/NZS ISO 14001 Environmental Management Systems.

Fulton Hogan was audited by 'Telarc' the first quarter of 2020 to review compliance with the ISO 14001 requirements, this audit found the FH business to have a compliant ISO management system that fosters continuous improvement.

4.2 Environmental Management Framework

The framework of the environmental management documents has been designed to comply with the requirements of ISO 14001 and to be consistent with the Guidelines for the preparation of an EMP (DP&I 2004).

The CEMP comprises relevant sections from Fulton Hogan's Corporate Management System as well as a number of supporting documents (i.e. issue specific environmental sub plans) providing more detailed environmental management specifications.

4.3 Construction Environmental Management Plan

The CEMP is the key management tool in relation to environmental performance during the design and construction phases. The CEMP outlines Fulton Hogan's approach to minimising and managing environmental risks associated with the construction phase of the project. The CEMP is a dynamic document that is reviewed and amended to incorporate additional requirements as required, including changes to the project team, organisational structure and responsibilities or as improvements to procedures and methodologies develop.

The CEMP has been prepared in accordance with a number of guidelines including:

- Guideline for the Preparation of Environmental Management Plans (DP&I 2004);
- RMS Specification G36 Environmental Protection (Management Systems);
- ISO 14001:2004 Environmental Management Systems; and
- ISO 19011:2003 Guidelines for Quality and/or Environmental Management Systems Auditing;
- NSW Minister for Planning Conditions of Approval (MCoA); and
- EA and Submissions Report

The CEMP was approved by the Department of Planning and Environment in accordance with MCoA B35 on 5 October 2016.

Detailed environmental management sub plans have been prepared on key environmental elements and identified for the Project through the environmental assessment and approval process. They document aspects, impacts, safe-guards and monitoring requirements for each key environmental element, nominate who is responsible for implementing controls and note the frequency/timing of implementation.



Reviews of the project CEMP occur periodically to ensure the CEMP management system is up to date and applicable to the works which are occurring.

Table 4-1 CEMP and Sub-plans consistency with MCoA and ER review dates

Plan Name	Approved for use on the Project	Latest Revision Date	Summary of update
Construction Environmental Management Plan	15/09/16	Feb 2019	No change
Construction Contaminated Land Management Plan	15/09/16	October 2017	No change
Construction Air Quality Management Plan	15/09/16	Feb 2019	No change
Construction Flora and Fauna Management Plan	15/09/16	Feb 2019	No change
Construction Flood Management Plan	15/09/16	Feb 2019	No change
Construction Heritage Management Plan	15/09/16	August 2016	No change
Construction Noise and Vibration Management Plan	15/09/16	October 2017	No Change
Construction Soil and Water Quality Management Plan	15/09/16	November 2017	No Change
Construction Waste and Energy Management Plan	15/09/16	August 2016	No Change
Construction Traffic and Access Management Plan	15/09/16	October 2017	No Change



5. Non-Compliances and environmental incidents

5.1 Compliance Management

A non-compliance is a failure to comply with the requirements of the Infrastructure Approval or any applicable licence, permit or legal requirement. These are identified through routine inspections, formal reviews such as auditing and compliance reporting, and incident management.

The final six monthly and periodic certification was completed during the last reporting period. There were 0 non-compliances observed on the project.

Table 5-1 Non-compliance summary

Date	Description	Non-Compliant against	Status
Nil	Nil	Nil	Nil

Table 5-2 Non-conformance summary

Date	Description	Resolution	Status
Nil	Nil	Nil	Nil

5.2 Incident Management

During the reporting period there were no events recorded as incidents - see tables 5-3 and 5-4 below.

Table 5-3 Recorded Incidents

RMS Incident Category	April	May	June	July	Aug	Sept	Total
Category 1	0	0	0	0	0	0	0
Category 2	0	1	2	0	0	0	3
Reportable Event	0	0	1	0	0	0	1
Total	0	1	3	0	0	0	4

^{*}Reportable events may include rainfall events that exceed the storage capacity of the onsite sediment basin or unexpected finds. These events are expected and anticipated during construction

Table 5-4 Incident Summary

Date	Description	Agency reporting	Classification	Status
22 May 2020	Concrete slurry not controlled correctly	N/A	Cat 2	Closed



10 June 2020	Hydraulic fluid lost from a truck and trailer.	N/A	Cat 2	Closed
18 June 2020	Less than a few hundred litres of turbid water captured in cleanwater drain	N/A	Cat 2	Closed

Note for table 5-4: reporting to DPI&E under condition CoA A14 is required when there is 'significant offsite' impacts. The incidents described in the table above relate to issues managed onsite and did not result in significant offsite impacts.



6. Environmental representative reports and correspondence

The CEMP requires a suitably qualified and experienced person, independent of the project design and construction, to act as a principal point of assistance in relation to all questions and complaints regarding environmental performance. Updates to the CEMP, consistency assessments and any other plans required under MCoA are required to be signed off by the environmental representative (ER) as necessary. The ER is also required to monitor the implementation of environmental management plans and monitoring programs.

6.1 Environmental representative approvals

During the reporting period the project ER continues to review, provide feedback and inspect the project. There were less approvals required by the project ER in this six-monthly period due to the stage of construction.

The project Environment Representative continues to attend the project and conduct site inspection, audits and approve minor extra approvals/OOH permits as required. The last ERG was chaired in December 2019.

Extra approvals and reviews conducted by the project Environmental Representative during the period included:

Consistency Reviews

- Consistency Review for the Gwydir / Pacific Hwy Roundabout Addendum Work Area Access
- Consistency Review for Beneficial Reuse of Materials on the Crown Land Block
- Consistency Review for the Former Pacific Highway Landscape Mound

Ancillary Facilities Assessments

Nil during the reporting period

Environmental audits

ER 6th Monthly and Periodic Audit (May 2020)

Incident reviews

Nil during the reporting period



6.2 Environmental Representative Reports and Outcomes

Site inspections with the environmental representative occur on a fortnightly basis. RMS and the project Environmental Representative alternate on the reporting of those site inspections

Table 6-1 ER inspection report comments

Report number	Date	Issues/Comments	Status	
		Ensure water collected in stockpile sumps is pump out pursuant to CEMP and Sub Plans for management of construction water.		
		Earth bunding used to contain IBCs needs to be around all of the contained materials. Refer to CEMP and Sub Plans.	Closed out	
42	21 April 2020	ERSED controls at McDonalds and United Corner need to be installed and maintained. Live pits also need to be protected from construction water with sand bags or the like. Sediment fencing requires repairs. Refer to CEMP and Sub Plans.	Closed out	
		Concrete waste in the work area was not managed appropriately		Closed out
43	22 May 2020	ERSED controls require maintenance	Closed out	
		Slurry and turbid water observed to be inappropriately managed	Closed out	
		Remove waste observed in spoil	Closed out	
44	18 June 2020	Install controls to manage sediment laden water in clean water drain		
	Review plantings to ensure they have been correctly inst		Closed out	
		Install controls as per the PESCP	Closed out	
45	0 July 2020	Maintenance to existing controls installed in the pre-cast yard.	Closed out	
40	9 July 2020	Clean up construction waste throughout area on former Pacific Highway	Closed out	



Environmental Monitoring

Environmental monitoring is used to review potential environmental risks caused by project activity. It allows the project to assess and evaluate receiving environment trends and ensure installed controls are appropriate and effective.

A range of environmental monitoring is required during construction of the project. These measures are listed in the CEMP. The results of the monitoring programs are described in this section.

7.1 Water Quality

Water quality throughout the reporting period continues to be representative of background data and has not demonstrated any impacts resulting from construction. Decreases in water quality are typically observed following a large rainfall in the wider upstream catchment.

Water quality monitoring was ceased at the end of 2019 when the marine works were completed and equipment and barges removed from the river.

Water quality monitoring results are included in **Appendix B**.

7.1.1 Groundwater monitoring

The project has two underground sources of soil contamination that required monitoring during construction. Both locations were affected by hydrocarbon pollution into areas of stiff clay. Monitoring results have shown neither plume is moving and bound in the dense soils.

ARTC plume, identified pre-construction, a decision made not to remediate the land but install a monitoring regime. That groundwater monitoring regime undertaken during construction has established that the plume is not moving or moving very slowly. There was no groundwater monitoring undertaken during the reporting period as the requirements of the construction monitoring has been completed. A review of the monitoring results and any ongoing requirements for management is still being undertaken, a summary of the outcomes along with the relevant documents will be provided to DPI&E once finalised. A map showing the location of the monitoring bores used during construction in included in Appendix B-2.

Culvert 1 plume, this area was identified during construction when excavating for the design open drain. Investigation during construction established the likely extent of the plume. A decision was made not to remediate the land but to put in place a groundwater monitoring regime. Groundwater monitoring has confirmed the plume is not moving or moving very slowly. The final monitoring event was completed in August 2019 with no further monitoring completed during the reporting period. The outcomes of the monitoring events and requirements for any further monitoring or management is still under review, a summary of the outcomes along with the relevant documents will be provided to DPI&E once finalised.

7.2 Noise and Vibration Monitoring

Noise monitoring was undertaken for out of hours work assessments and validation. All recorded noise levels were consistent with the anticipated levels as described in the approved Noise and Vibration Management Plan with no non-compliances.

Six out of hours work events were approved during the reporting period. Refer to table 7-1 below.



Table 7-1 Approved OOHW summary

The results of OOH noise monitoring for compliance tracking report 7 are summarised in the table below. A brief summary of the site conditions includes:

- Background noise is consistently higher than the NML at each location monitored. This is due to several factors, including, early morning starts fall into the night period but the background noise from 0500 is dominated by increasing traffic over the existing bridge, which is higher than the NML. Background noise from birds in Grafton starts from about 0430 and is high, there are large groups of birds active in the established heritage trees that make noise of about 60-65dBA in the urban streets of Grafton.
- Pacific Highway traffic at night changes from cars to trucks, there is less volume of traffic but the noise is consistent from passing trucks
- The train line is active 24 hours a day in Grafton, both from shunting and moving carriages but also from train traffic through Grafton
- South Grafton commercial zone is located in an area away from residents, there is also significant attenuation provided by existing buildings and the rail embankment
- Many of the OOH works in the South Grafton marine zone were low noise works that were not audible over the traffic on the existing bridge, these type of works included early pre-start meetings, access to the work area, tying steel, formwork and engineering works
- Works on Pound Street were included in the EIS and are required to reduce impacts on businesses and the TAFE. It was always
 anticipated that OOH works along Pound Street would be a requirement during construction
- Concrete works are at times required OOH to ensure that concrete quality requirements



Permit #	Start Date	End Date	Time Reference	Extra Hours	Works Activity	Justification	Notes	Works Location	NCA	Predicted	NML (RBL+5)	Compliant
190	26/4/20	26/4/20	Night	2000- 0200	South Grafton Line Marking	Traffic Restrictions	Monitoring not completed due to previous data showing excavators are Less than 5dBA above the RBL at this location	Through Street	NCA 1	37	37	Yes
191	5/5/20	8/5/20	Night	1900- 0500	Drainage and Sign defects	Traffic Restrictions	Construction noise was not audible at nearest receiver	Iolanthe Street	NCA 8	46	46	Yes
192	21/5/20	5/6/20	Night	1800- 0600	Northern Tie In	Traffic Restrictions	Dominant noise source was traffic on the Pacific highway	Gwydir Highway	NCA 8	46	46	Yes
193	2/6/20	5/6/20	Night	1800- 0600	Gwydir pavement work	Traffic Restrictions	Dominant noise source was traffic	Gwydir Highway	NCA 8	46	46	Yes
194	2/7/2020	2/07/2020	Night	1800- 0700	Gwydir completion works	Traffic Restrictions	Construction noise was not audible at nearest receiver	Gwydir Highway	NCA 8	46	46	Yes
195	25/07/2020	27/07/2020	Night	1800- 0700	Gwydir completion works	Traffic Restrictions	Dominant noise source was traffic	Gwydir Highway	NCA 8	46	46	Yes



Out of hours works have been used to ensure the safe, on time and high quality delivery of the 'Additional Crossing of the Clarence River at Grafton'. Out of hours works for the reporting period have been done with the support of the project neighbours with minimal complaints received during out of hours work. At times out of hours works have also been done at the request of the community to reduce impacts on the street scape and to limit impacts on businesses and the TAFE.

7.3 Vibration monitoring

The construction of the new road and bridge sub-structure does from time to time create vibration on the ground which can be felt at nearby sensitive receivers. For residents and businesses near the works this is often a new process which can be disconcerting. To alleviate that potential stress, the project team has been working hard to consult with neighbours about vibration works prior to them occurring.

No vibration monitoring was undertaken throughout the reporting period due to completion of all activities likely to impact receivers. The last monitoring event for the project was undertaken on 25/09/2019.

7.4 Air Monitoring

It was agreed with NSW EPA via email correspondence on 06/01/2020 that if no exceedances were experienced in November 2019, that depositional dust monitoring would be able to cease with only minor works at the Gwydir Highway intersection remaining. As no exceedances were recorded, depositional dust monitoring on the project has now ceased. The results of the dust monitoring for November 2109 have been included in Appendix D.

7.5 Flora and Fauna

At this late stage of the project there has been limited need for further ecological inspections or investigations. The site is cleared and the requirements of the 'Three toed Snake Tooth Skink' Management plan predominantly complete.

The most significant change for the flora and fauna at the project is the increase in landscaped and rehabilitated areas. The approved urban design and landscaping plan provides full details on the rehabilitation of the site. In general the plan sought to provide native plantings and shrubs in visible areas, maintain open spaces and heritage views, native plantings in south Grafton, some exotic species which match the natural character of Grafton north side of the river and provide desirable riparian revegetation outcomes for impacted areas. Plantings and mulch cover has also been included in the Landscape Design to provide suitable habitat for the Three toed Snake Tooth Skink, in particular in areas of high or known habitat and to provide connectivity between the areas.

Landscape planting was largely completed by January 2020, after January 2020 maintenance of the landscaping areas included weeding, watering and replacing plants that did not survive. When the project reaches practical completion of all defects in mid-2020 the maintenance period for the project will commence.



8. Audits and Inspections

8.1 Compliance Auditing

Regular auditing of the management system is completed during construction. This includes:

- Internal compliance audits undertaken by Fulton Hogan
- External compliance audits undertaken by the ER and RMS appointed auditors

The intent of these audits is to identify opportunities for improvement and any non-compliances during the course of construction so appropriate corrective actions can be implemented in a timely manner.

Table 8-1 below summarises the audits undertaken during the reporting period.

Table 8-1 Audit summary

Audit	Type of Audit	Date	Overview	Outcome
Nil	Nil	Nil	Nil	Nil

8.2 Internal and external environmental inspections

The project completes weekly site inspections as a minimum to assess environmental performance and identify areas of improvement and maintenance. This includes prior to, during and after adverse weather events, clearing activities, high risk activities and the opening new works areas.

Each inspection provides an opportunity to improve environmental management across the project including new erosion and sediment control installations, improved site mitigation measures and general site improvements.

During the reporting period ERG meetings were held bi-monthly, this frequency was agreed with the ERG group. The bi-monthly schedule was appropriate due to the size of the site, level of risk and speed of construction. The last ERG was held on 5th December 2019 and it was agreed that due to the stage that the project was at that no further ERG's would be required.

Inspections are completed consistent with the requirements of the project CEMP. Table 8-2 below summarises the inspections completed on the project.

Table 8-2 Inspections summary

Type of Inspection	Attendees	
Weekly	Fulton Hogan Staff; environmental, engineers, foreman, leading hand, labourers, superintendents, management	Weekly
Wet Weather	Fulton Hogan Staff; environmental, engineers, foreman, leading hand, labourers, superintendents, management	As required
ER	Simon Williams (ER - GeoLINK) Fulton Hogan Staff; environmental, engineers, foreman and superintendents	Monthly



Type of Inspection	Attendees	Duration
TfNSW Northern	Jason Sheehan Fulton Hogan Staff; environmental, engineers, foreman and superintendents	Monthly
Project Office	Takon nogan olan, environmental, engineers, foreman and superintendents	
NSW EPA	Stan Viney Peter Higgs Fulton Hogan Staff; environmental, engineers, foreman and superintendents	As required
NSW DPI (Fisheries)	James Sakker Fulton Hogan Staff; environmental, engineers, foreman and superintendents	As required
DPI&E	Michael Young Fulton Hogan Staff; environmental, engineers, foreman and superintendents	As required
Environmental Consultants	SEEC – Project Soil Conservationist Ecosure Ecology – Project Ecologist Sandpiper Ecology – Project Ecologist Cavvanba Fulton Hogan Staff; environmental, engineers, foreman and superintendents	As required
Clarence Valley Council	Adam Cameron / Adam Playne Fulton Hogan Staff; environmental, engineers, foreman and superintendents	As required
ERG	TfNSW ER EPA Clarence Valley Council DPI (Fisheries) DPI&E Fulton Hogan Staff; environmental, construction manager	No further ERG's are required.



9. Environmental Complaints

In accordance with MCoA C2 and C3, a complaint management system has been established on the project to address any community enquiries and complaints during the course of construction. There are four mechanisms that have been established to facilitate the lodgement of enquiries and complaints:

Table 9-1: Community contact details

Tool	Details
Project Information line (24-hour toll free)	The Project information line (1800 918 759) is a 24-hour toll free telephone number allowing the community to contact the community relations team at all times when work is being carried out on site, including out of hours work. Outside of working hours, a recorded message with voicemail is available.
Email Address	The email address (graftonbridgecommunity@fultonhogan.com.au) is monitored by the community relations team for incoming emails during business days.
Postal Address	The postal address (PO Box 546, Grafton NSW 2460) is monitored by the project team for incoming letters.
Website	The RMS Additional Crossing of the Clarence River – Grafton Bridge website (www.rms.nsw.gov.au/graftonbridge) includes the contact tools and will be updated regularly to have the latest information about the project.

These tools will be in place until eight weeks after the date of construction completion.

Stakeholder complaints will be responded to and managed in accordance with

- AS-ISO 10002-2006 Complaints Handling (which has superseded AS 4269 Complaints Handling)
- Section 9.2 of the Construction complaints management system Additional Crossing of the Clarence River at Grafton, Community consultation strategy

9.1 Complaints Management

The project engaged with the community in various forms of communication during the reporting period. Those engagements include: door knocks, letter box drops, phone calls, email, community information nights and visitors to the project community display centre.

The majority of communications and interactions with the community are positive with the local residents interested and supportive of the project. At times the construction activities can cause some impacts which can result in complaints. The project received 3 complaints in the reporting period.



Table 9-1 Environmental complaints summary

Complaint #	Date	Environmental Relevance	Summary	Status
1	28/05/2020	Traffic management	Stakeholder complained about lack of signage for traffic switch.	Closed
2	6/06/2020	General Complaint	Resident complained about the height of the noise wall, light spill and truck noise on the new alignment.	Closed
3	17/06/2020	General complaint	Resident called and was not happy with the drainage around the new Grafton bridge.	Closed

9.2 Community Engagement Initiatives

Throughout the report period, ongoing consultation with directly impacted residents about upcoming work was carried out. A member of the community relations team was available at all times during standard working hours at the project site office, 13 Pound Street, Grafton after the main construction office was relocated.

Community consultation for work has included but not been limited to:

- OOH works in Grafton and South Grafton
- Special events
- Traffic switches, staging and changes to access
- Information provided to interested residents at the project site office

The project is maintaining and building on the positive and constructive relationship with the community and stakeholders to effectively address and manage issues as they emerge during construction. All contact with the community and stakeholders is recorded in the community contact database – Consultation Manager.



10. Pre-Operation

The main bridge structure and the approaches leading to the bridge opened to traffic in December 2019, noting that there was sections of the project around the Gwydir roundabout, Pacific Highway and tie-ins to the local road network and finishing works that were undertaken after the bridge was open to traffic. It should also be noted that the bridge maybe subject to reduced traffic speed and periods of traffic control through to the completion of construction for ongoing works.

As the project opened the main bridge structure at design speed, MCoA E3, Operational Noise Compliance Report will be triggered which requires the Operational Noise Report to be submitted within 12 months of the opening date in December 2019 unless otherwise agreed by the Secretary. As noted above the project will also have some sections still under construction and it is anticipated that the project is likely to be fully operational by mid-2020.

A response to COVID-19 Report was submitted to DPI&E during the reporting period which identified that MCoA E3 monitoring requirement could be impacted by the pandemic and that if this was the case TfNSW would seek an extension of time to complete this requirement. TfNSW are currently reviewing the recent traffic data to determine if there has been any impact to traffic movements throughout the project from the COVID-19 Pandemic and to determine a suitable time to undertake the monitoring.

A staging report which outlined the works that were completed as part of Stage1 and open to traffic in December 2019 and works to be completed as part of Stage 2 was submitted to DPI&E in April 2020. The staging report outlined which CoA were either closed, applicable to Stage 1 only, applicable to Stage 2 only or applicable across both stages.

The Stage 2 works as outlined in the Staging Report are scheduled to be completed by mid to late August 2020. The completion of these works will enable the project to open the remaining area of the project to traffic and will make the project operational. There are no changes to Table 2 MCoA Compliance as outlined in the Staging Report, April 2020.



APPENDIX A

Project Approval Compliance Table

CoA Ref	Condition	Timing	Responsible Party	Status (open/ closed)	Compliance comments	Compliance (Compliant/Non- compliant/Not Triggered)
A1.	min Conditions In addition to meeting the specific performance criteria established under this approval, the Proponent shall implement all feasible and reasonable measures to prevent and/or minimise any harm to the environment that may result from the construction or operation of the SSI.	Pre-construction, construction, and operation	Contractor and TfNSW	Closed	Measures used to reduce environmental impacts include additional environmental requirements in the SWTC, a series of FHC/ TfNSW environmental workshops, ERG meetings (in construction), CEMP and sub-plans, environmental work method statements for high-risk construction activities. The project will capture any relevant operational requirements and include as part of the operation and maintenance manuals and reports for implementation during operation. Clarence Valley Council will be responsible for the operation and maintenance of the works.	Compliant
	The Proponent shall carry out the SSI generally with the: (a) State significant infrastructure application SSI-6103; (b) Additional Crossing of the Clarence River at Grafton Environmental Impact Statement Main Volume and Appendices A - L, prepared by Roads and Maritime Services, dated August 2014; (c) Additional Crossing of the Clarence River at Grafton Submissions Report Main Volume and Appendices, prepared by Roads and Maritime Services, dated October 2014; (d) Correspondence from Roads and Maritime Services to the Department titled Grafton Bridge - Additional Crossing of the Clarence River at Grafton – Proposed Early Works dated 1 December 2014; (e) Modification request 1 and letter dated 24 September 2015 to modify the approval to update references to public authorities in the conditions of approval; and (f) Conditions of this approval	Pre-construction, construction, and operation	Contractor	Closed	Addressed in compliance register. These sheets are updated regularly. The project will capture any relevant operational requirements and include as part of the operation and maintenance manuals and reports for implementation during operation. Clarence Valley Council will be responsible for the operation and maintenance of the works.	Compliant
A3.	If there is any inconsistency between the above documents, the more recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.	Pre-construction, construction, and operation	Contractor	Closed	No inconsistency noted during construction. This condition will be carried through to the operation stage of the project where relevant.	Compliant
	The Proponent shall comply with any reasonable requirement(s) of the Secretary arising from the Department's assessment of: (a) any documentation or correspondence that is submitted in accordance with this approval; and (b) the implementation of any actions or measures contained in these documents.	Pre-construction, construction, and operation	Contractor	Closed	Noted.	Compliant
A5.	This approval shall lapse 10 years after the date on which it is granted, unless the works the subject of this SSI approval are physically commenced on or before that date	Pre-construction, construction, and operation	TfNSW	Closed	Stage 1 works which includes roads works in north and south Grafton and the new main bridge over the Clarence River was completed in 2019. Road furniture, landscaping and other works are expected to completed by mid-2020. Works as part of Stage 2 include the new roundabout at the 'Big River Way' and 'Gwydir Highway' intersection are complete and open to traffic on 21st August 2020. All relevant Operation CoA will be carried through to the Operation Stage of the project where required.	Compliant
A6.	The Proponent shall ensure that all licences, permits and approvals are obtained as required by law and maintained as required throughout the life of the SSI. No condition of this approval removes the obligation for the Proponent to obtain, renew or comply with such licences, permits or approvals.		Contractor and TfNSW	Closed	Complete. No ongoing operational requirements.	Compliant
	The Proponent may elect to construct and/or operate the SSI in stages. Where staging is proposed, the Proponent shall submit a Staging Report to the Secretary prior to the commencement of each proposed stage. The Staging Report shall provide details of: (a) how the SSI would be staged, including general details of work activities associated with each stage and the general timing of when each stage would commence; and (b) details of the relevant conditions of approval, which would apply to each stage and how these shall be complied with across and between the stages of the SSI.	Pre-construction, construction	Contractor and TfNSW	Closed	A staging report was submitted to the Department on submitted to the Department of Planning, Investment and Environment on 16/04/2020. An updated staging report was resubmitted to the Department on 25/06/2020 to address items raise in the response letter dated 14/05/2020. Received email correspondence on 06/07/2020 from the Department stating that they have no further comments at this time. All works as part of Stages 1 and 2 have been completed.	Compliant

CoA Ref	Condition	Timing	Responsible Party	Status (open/ closed)	Compliance comments	Compliance (Compliant/Non- compliant/Not
A8.	The Proponent shall ensure that any strategy, plan, program or other document required by the conditions of this approval and relevant to each stage (as identified in the Staging Report) is submitted to the Secretary no later than one month prior to the commencement of the relevant stage(s), unless otherwise agreed by the Secretary. Notes: While any strategy, plan or program may be submitted on a progressive basis, the Proponent will need to ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times; and If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program shall clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program	Pre-construction, construction	Contractor and TfNSW	Closed	Noted, refer detail regarding staging above.	Triggered) Compliant
A9.	The Proponent shall ensure that employees, contractors and sub-contractors are aware of, and comply with, the conditions of this approval relevant to their respective activities.	Pre-construction, construction	Contractor	Closed	For early works induction training booklets are issued for all works. Addressed in FHC's induction program and environmental awareness training. Training completed throughout the works.	Compliant
A10.	The Proponent shall be responsible for environmental impacts resulting from the actions of all persons that it invites onto the site, including contractors, sub-contractors and visitors	Construction	Contractor	Closed	The project has prepared and is implementing a CEMP onsite. All sub contractors were required to work under the project CEMP. Good outcomes were observed during project delivery.	Compliant
A11.	In the event of a dispute between the Proponent and a public authority, in relation to an applicable requirement in this approval or relevant matter relating to the SSI, either party may refer the matter to the Secretary for resolution. The Secretary's determination of any such dispute shall be final and binding on the parties.	Pre-construction, construction, and operation	Contractor and TfNSW	Closed	To be undertaken if required. This condition will be carried through to the operation stage of the project where relevant.	Compliant
A12.	The Proponent shall prepare and implement a Compliance Tracking Program, to track compliance with the requirements of this approval. The Program shall be submitted to the Secretary for approval prior to the commencement of construction and operate for a minimum of one year following commencement of operation, subject to the Secretary's review of the outcomes of the Independent Environmental Audit Report referred to in condition E5. The operation of the program may be extended if the Secretary determines that there has been unsatisfactory compliance. The Program shall include, but not necessarily be limited to: (a) provisions for the notification of the Secretary prior to the commencement of construction and prior to the commencement of operation of the SSI (including prior to each stage, where works are being staged); (b) provisions for periodic review of the compliance status of the SSI against the requirements of this approval; (c) provisions for periodic review of the compliance status to the Secretary, including but not limited to: (i) a Pre-Construction Compliance Report, prior to the commencement of construction; (ii) e-Pre-Operation Compliance Report, prior to the commencement of construction; (iii) e-Pre-Operation Compliance Report prior to the commencement of operation; (d) a program for independent environmental auditing in accordance with AS/NZS ISO 19011:2014 – Guidelines for Auditing Management Systems; (e) mechanisms for recording environmental incidents during construction and actions taken in response to those incidents; (f) provisions for reporting environmental incidents to the Department and relevant public authorities during construction; (g) procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management; (h) provisions for reporting complaints received in accordance with the Construction Complaints Management System required under condition C2 of this approval.	Pre-construction, construction, and operation	Contractor to prepare, and TfNSW input	Closed	This table is Appendix A of the Compliance Tracking Program. Compliance is being managed under a shared compliance system by TfNSW and FHC, with regular updating. DPE approval letter dated 10 October 2016. The letter approved the Compliance Tracking Program and Pre-Construction Compliance Report. Modification 1 requirements raised in the DPE letter have been updated in this register. Compliance Reports No. 6 and 7 were submitted to the Department as Construction / Pre Operation reports due to the Staged opening of the project. Compliance report No.8, this report, is also submitted as a Construction / Pre-operation Report with all construction works completed and open to traffic. This Compliance Report, No.8, will be the final Compliance Report for the project.	

CoA Ref	Condition	Timing	Responsible Party	Status (open/ closed)	Compliance comments	Compliance (Compliant/Non- compliant/Not Triggered)
A13.	The Proponent shall notify the EPA in relation to any pollution incident in carrying out the SSI as required by the <i>Protection of the Environment (Operations) Act 1997</i> as required by that Act. The Proponent shall provide the Secretary with a record of any such notification.	Construction	Contractor and TfNSW	Closed	EPA are advised of all applicable incidents. EPA are given construction updates generally which include information on waste management, threatened species management and other activities as they are occurring. EPA are consulted on all of the project EWMS. EPA attend the site regularly during construction.	Compliant
	The Proponent shall notify the Secretary (using the contact name and phone number notified by the Department from time to time) of any incident (other than those relating to the Protection of the Environment (Operations) Act 1997) with actual or potential significant off-site impacts on people or the biophysical environment within 24 hours of becoming aware of the incident on weekdays, or the following business day on weekends. The Proponent shall provide full written details of the incident to the Secretary within seven days of the date on which the incident occurred.	Construction	Contractor and TfNSW	Closed	Was undertaken as required.	Compliant
	The Proponent shall meet the requirements of the Secretary or relevant public authority (as determined by the Secretary) to address the cause or impact of any incident, as it relates to this approval, reported in accordance with condition A14, within such period as the Secretary may require.	Construction	Contractor	Closed	Was undertaken as required, in consultation with DPI&E and TfNSW.	Compliant
Part B- Env	vironmental Performance					
B1.	The clearing of native vegetation shall be generally in accordance with the areas specified in the documents listed in condition A2, and with the objective of reducing impacts to any endangered ecological communities (EECs), threatened species and their habitat to the greatest extent practicable.	Pre-construction, construction	Contractor	Closed	All clearing works are complete.	Compliant
B2.	Prior to construction, pre-clearing surveys and inspections for EECs and threatened species shall be undertaken. The surveys and inspections, and any subsequent relocation of species, shall be undertaken under the guidance of a suitably qualified ecologist and shall be in accordance with the methodology incorporated into the approved Construction Flora and Fauna Management Plan required under condition D46(e).	Pre-construction	Contractor	Closed	This condition has been met and a Clearing Report submitted to TfNSW for the project to capture all clearing activities and any impacts that need to be offset or captured, in particular the requirements for the TTSTS. All clearing works on the project are complete.	Compliant
ВЗ.	The Proponent shall undertake flora and fauna surveys of those parts of the project area previously not surveyed, due to accessibility issues, prior to the commencement of construction that affects those areas. Should threatened species, communities or habitats be identified, these shall be offset and addressed in the Biodiversity Offset Statement required under condition D1.	Pre-construction	TfNSW	Closed	Surveys of missed areas were undertaken by RMS in January/ February 2016 and 2-3 Three toed Snake Tooth Skink found in these missing lots. Further surveys were undertaken on the project and outside the project. A TTSTS MP was been prepared for construction and DPE has been advised of the missing lot survey results and referral to the DoE under the EPBC Act. EPBC referral was been determined 30/06/2016 as "Not Controlled Action". Works have being undertaken in accordance with TTSTS Management plan and provided a good outcome for the project and the skink populations in the area. This condition has been met and a Clearing Report submitted to TfNSW for the project to capture all clearing activities and any impacts that need to be offset or captured, in particular the requirements for the TTSTS. All clearing works on the project are complete.	
B4.	The Proponent shall undertake a targeted rehabilitation program post construction to restore riparian habitat to at least the pre-construction condition or better, unless otherwise agreed by DPI (Fisheries) and NOW.	Construction, Operation	Contractor	Closed	Has been addressed in consultation with agencies and in the FFMP, UDLP and revegetation plans. The rehabilitation of the riparian areas has been completed as part of Stage 2 works, with ongoing maintenance captured as part of the Landscape Maintenance Period.	Compliant

CoA Ref	Condition	Timing	Responsible Party	Status	Compliance comments	Compliance
				(open/ closed)		(Compliant/Non- compliant/Not Triggered)
B5.	Vegetation shall be established in or adjacent to disturbed areas and include species which may provide habitat for wildlife following the completion of construction in the vicinity of the disturbed area. Revegetation is to be consistent with the Urban Design and Landscape Plan required under condition D42.	Construction, Operation	Contractor	Closed	Has been addressed in consultation with agencies and in the FFMP, UDLP and revegetation plans. TTSTS MP measures have been included in the UDLP, TfNSW have raised the importance of this issue. As noted above, impacts on vegetation have been reduced in Grafton at 31, 33, 37, and 13-17 Pound Street and 4 McClymont Place. The project 'Urban Design and Landscaping Plan' has been reviewed by DP&E and approved. The UDLP has been updated to include some minor amendments to the final landscape around the pump station control units and has been submitted and accepted by DP\&E. Appendix D of the UDLMP includes a Landscape Management Plan which will be implemented during the 3 year Landscape Maintenance Period. At the completion of the 3 year maintenance period the landscaped areas will be transferred to Clarence Valley Council.	Compliant
B6.	Scour protection measures shall be implemented prior to and during construction on the banks of the Clarence River in the vicinity of the bridge works to protect the riverbank from erosion and instability during construction and operation.	Pre-construction, construction	Contractor	Closed	The existing Clarence River riparian vegetation was maintained during construction except for two small areas. Minor cut stump clearing on the southern side for pontoon and jetty construction and a small section of riparian shrubs removed for the installation of scour rock at the drainage outlet. There was no erosion of the riverbank on either side during delivery of the project.	Compliant
B7.	The Proponent shall consult with and provide feasible and reasonable assistance to NSW State Emergency Service and Council, prior to operation of the SSI, to: (a) prepare any new or necessary update(s) to the relevant evacuation, traffic management and flood plans and documents in relation to flooding events in Grafton and South Grafton, to reflect changes to flooding levels, flows and characteristics; and (b) prepare or update community evacuation information, to improve the community's awareness of the risk of flooding and the need to evacuate Grafton and South Grafton prior to the levees overtopping.	Pre-construction, construction	Contractor	Closed	The project team have agreed on reasonable assistance to the SES and CVC to update their flood planning documents and assist with communicating the changes to the local community.	Compliant
	Any drainage works that are intended to be operated by Council shall be designed in consultation with Council. Facilities such as back-up generators shall be provided to ensure continued operation of the Pound Street pumping station during electrical power outages.	Pre-construction	Contractor	Closed	All project drainage works have been designed and constructed in close consultation with CVC who have provided written acceptance of the works completed to date. The Pound Street pumping station has been designed to provide continued operation during an electrical power outage via the provision of a backup generator.	Compliant
В9.	The SSI shall be constructed and operated to comply with section 120 of the <i>Protection of the Environment Operations Act 1997</i> , which prohibits the pollution of waters.	Construction, Operation	Contractor and TfNSW	Closed	In accordance with CoA D46 (c) a Construction Soil and Water Quality Management Plan (CSWQMP) was prepared and submitted to the Secretary for approval. The Plan outlines the mitigation and management measures that would be implemented during construction to ensure compliance with section 120 of the Protection of the Environment Operations Act 1997. Planning sessions are held for earthworks to optimise controls and PESCPs. The fill 1 and fill 3 basins has been decommissioned as works in the catchment is complete and stabilised. This condition will be carried through to the operation stage of the project where relevant.	Compliant
B10.	All water from the SSI shall be appropriately treated prior to discharge, to protect the quality of the receiving waters.	Construction, Operation	Contractor and TfNSW	Closed	In accordance with CoA D46 (c) a Construction Soil and Water Quality Management Plan (CSWQMP) was prepared and submitted to the Secretary for approval. The Plan outlined the mitigation and management measures that were implemented during construction to meet water quality criteria for all off site water discharges. Stage 1 and 2 works are now complete. Water Quality treatment swales and basin have been included in the detailed design and construction to provide the required water quality treatment during operation and to protect the quality of the receiving waters.	Compliant

CoA Ref	Condition	Timing	Responsible Party	Status (open/ closed)	Compliance comments	Compliance (Compliant/Non- compliant/Not Triggered)
B11.	In the event that remediation of contaminated soils is required, the Proponent shall engage a suitably qualified and experienced contaminated land consultant to prepare a validation report upon completion of the remediation. The validation report shall verify that the site has been remediated consistent with the remediation action plan for the project and to a standard consistent with the clean-up criteria for the site.	Pre-construction, construction	Contractor and TfNSW	Closed	The project has a 'Construction Contaminated Land Management Plan'. During construction the project encountered a number of locations where soil was contaminated. Two of these finds were of a substantial nature and required onsite rehabilitation works are referred to in condition B12. These sites have been remediated in accordance with the Remedial Action Plan with a Site Audit Report and Statement proved from an accredited NSW Site Auditor.	Compliant
	The Proponent shall engage an accredited NSW Site Auditor to prepare a Site Audit Report and Site Audit Statement to determine the land use suitability. The Site Audit Report shall summarise the information reviewed by the auditor and provide the basis for the conclusions contained in the Site Audit Statement. The Statement and Report shall be submitted to the Secretary within seven days of the report being finalised and prior to the commencement of site preparation or excavation activities within areas identified as requiring remediation. A copy of the report shall also be submitted to Council for its information.	Pre-construction	TfNSW and Contractor	Closed	A contaminated land auditor from the approved EPA list is appointed to oversee the management of the south Grafton diesel contamination. The groundwater monitoring and modelling has been reviewed independently by the auditor. An accredited NSW Site Auditor was engaged for the encapsulation of topsoil containing asbestos materials (ACM) in South Grafton batter widening. These sites have been remediated in accordance with the Remedial Action Plan with a Site Audit Report and Statement provided from an accredited NSW Site Auditor.	Compliant
B13.	Impacts to Aboriginal heritage shall be minimised to the greatest extent practicable through both detailed design and construction, particularly with regard to encroachment on the Aboriginal dreaming site Golden Eel (AHIMS site number 12-6-0326). Where impacts are unavoidable, works shall be undertaken in accordance with the strategy outlined in the Construction Heritage Management Plan required under condition D46(d).	Pre-construction, construction	Contractor	Closed	Management strategies are included in the project Construction Heritage Management Plan (CHMP). The CHMP was prepared in consultation with OEH, NSW Heritage Council and Aboriginal groups. Heritage issues have also been included in site environmental induction training. Permanent fencing has been installed on the eastern side of the corridor west of Alipou Ck in South Grafton. A meeting of Ngerrie LALC and RMS discussed Aboriginal heritage issues on 8 Feb 2016 and again on 28 June 2016. There have been further meetings with the LALC organised by Fulton Hogan. A consistency review was prepared for an additional construction area east of the project boundary and at closer to the important Alipou creek cultural site. Ngerrie LALC approved the boundary extension and have taken part in onsite heritage inductions discussing the history and significance of the site with construction crews. All works are complete and there will be no further works undertaken in the vicinity of Aboriginal heritage sites. No further Aboriginal heritage sites were encountered during construction.	Compliant
B14.	Prior to the commencement of construction in proximity to the following heritage items: CZB18, CZB25, CZB26, CZB27, CZB28, CZB30, CZB31, CZB32, CZB33 and CZB35, the Proponent shall complete all archival recordings, including photographic recording of these heritage items, unless otherwise agreed by the Secretary.	Pre-construction	Contractor and TfNSW	Closed	Archival reports have been addressed by Biosis heritage consultants. Also included this detail in the CHMP. The reports were forwarded to relevant agencies in November 2016.	Compliant
B15.	Prior to construction partially affecting the following heritage items: CZB10, CZB11, CZB19, CZB20, CZB21 and CZB37, the Proponent shall complete archival recordings of existing condition, including photographic recording of these heritage items, unless otherwise agreed by the Secretary. The Proponent shall ensure the project is conducted in a sympathetic manner that minimises impact to these sites.	Pre-construction	Contractor and TfNSW	Closed	Archival reports have been addressed by Biosis heritage consultants. Also included this detail in the CHMP. The reports were forwarded to relevant agencies in November 2016.	Compliant
	Archival recording shall be undertaken by an experienced heritage consultant, in accordance with the Guidelines issued by the Heritage Council of NSW. The areas containing heritage items shall be clearly identified and/or fenced until the completion of the archival recordings. Within 6 months of completing the archival recording, the Proponent shall submit a report containing the archival and photographic recordings and the historical research, where required, to the Department, the Heritage Council of NSW, Australian Rail Track Corporation, the local library and the local Historical Society.	Pre-construction	Contractor and TfNSW	Closed	Has been addressed by Biosis heritage consultants. Also include this detail in the CHMP. Note updated Sched 28 amended requirement.	Compliant
B17.	A monitoring program shall be implemented for construction works in the vicinity of the flood levee in highly archaeologically sensitive areas and overseen by an appropriately qualified archaeologist. Any previously unidentified heritage items shall be managed in accordance with the procedures detailed in the Construction Heritage Management Plan provided under condition D46(d) of this approval	Pre-construction, construction	Contractor and TfNSW	Closed	The project archaeologist attended all the levee works as required and to manage several unexpected finds. The project archaeologist provided advice, gave onsite training and inductions and assessed heritage issues which arose. Sites of heritage significance near the works were protected and no impacts were observed. This was implemented during the final minor levee works to be completed in south Grafton.	Compliant

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B18.	Prior to the commencement of construction, the Proponent shall implement 'no-go' exclusion zones to prevent access and protect the following heritage item: FMW29.	Pre-construction	Contractor	Closed	Item was protected during works. No impacts, no further works in this location	Compliant
B19.	The Proponent shall not destroy, modify or otherwise physically affect the heritage items listed in Table 8-46 in the Additional Crossing of the Clarence River at Grafton Environmental Impact Statement Main Volume (RMS, August 2014).	Pre-construction, construction	Contractor	Closed	The CHMP has addressed this condition. Heritage sites are included in Sensitive Area Plans. Important all heritage items are included in the GIS sensitive area plan layers, including those additional items addressed in the June 2016 Built Heritage report.	Compliant
B20	Identified impacts to heritage sites shall be minimised where feasible and reasonable through both detailed design and construction, particularly with regard to retained locally listed historic properties and the existing Grafton Bridge. Where impacts are unavoidable, works shall be undertaken in accordance with the actions to manage heritage construction impacts required by condition D46(d) and under the guidance of an appropriately qualified heritage specialist.	Pre-construction, construction	Contractor and TfNSW	Closed	This condition has been addressed through detailed design and in the CHMP.	Compliant
B21.	This approval does not allow the Proponent to destroy, modify or otherwise physically affect human remains as part of the SSI	Pre-construction, construction	Contractor	Closed	Addressed in the CHMP.	Compliant
B22.	The Proponent shall not destroy, modify or otherwise physically affect any heritage items outside the SSI footprint, unless otherwise agreed by the Secretary in accordance with condition D41.	Pre-construction, construction	Contractor	Closed	Addressed in the CHMP and managed during construction, including using the Sensitive Area Plans.	Compliant
B23.	The measures to protect heritage sites near or adjacent to the SSI during construction shall be detailed in the Construction Heritage Management Plan required under condition D46(d).	Pre-construction	Contractor	Closed	No impacts occurred during construction, permanent fencing has been installed.	Compliant
B24.	In relation to new or modified local road, parking, pedestrian and cycle infrastructure, the SSI shall, where feasible and reasonable, be designed: (a) in consultation with the Council; (b) to take into consideration existing and future demand, road safety and traffic network impacts; (c) to meet relevant design, engineering and safety guidelines, including Austroads Guide to Traffic Engineering Practice; and (d) be certified by an appropriately qualified person that has considered the above matters.	Pre-construction	Contractor	Closed	Addressed during the development of the design with certification provided by Aurecon and the Project Verifier.	Compliant
B25	The Proponent shall ensure that the SSI is designed to minimise land take impacts to surrounding properties as far as feasible and reasonable, in consultation with the affected landowners.	Pre-construction	Contractor	Closed	Addressed in detailed design. Retention of 13 and 15 Pound Street has reduced construction noise impacts and improved the street scape. Other initiatives include staging works during construction to reduce the impacts on businesses and sensitive receivers. Works that are being built in stages or OOH to reduce impacts include: Clarence St carpark constructed early to provide car parking; Clarence St and Pound St asphalting OOH to reduce impacts on residential access and noise impacts on the TAFE; clearing works OOH to reduce impacts on the TAFE; lolanthe St works completed behind barriers to maintain traffic flows; Pacific highway connection and staging plans modified to reduce impacts on South Grafton Businesses.	
B26	The Proponent shall, in consultation with relevant landowners, construct the SSI in a manner that minimises intrusion and disruption to surrounding properties, unless otherwise agreed by the landowner.	Pre-construction, construction	Contractor	Open	Ongoing consultation throughout construction with neighbours and sensitive receivers was undertaken during construction to ensure the project was built with respect to people possibly affected by the works.	Compliant
B27	Any damage caused to property as a result of the SSI shall be rectified or the landowner compensated, within a reasonable timeframe, with the costs borne by the Proponent. This condition is not intended to limit any claims that the landowner may have against the Proponent.	Pre-construction, Construction. operation	Contractor	Closed	Final dilapidation reports have been completed on all affected properties. Properties that have made damage claims are either being rectified by the project team or independently assessed by TfNSW insurers.	Compliant
B28	Utilities, services and other infrastructure potentially affected by construction and operation shall be identified prior to construction to determine requirements for access to, diversion, protection, and/or support. Consultation with the relevant owner and/or provider of services that are likely to be affected by the SSI shall be undertaken to make suitable arrangements for access to, diversion, protection, and/or support of the affected infrastructure as required. The cost of any such arrangements shall be borne by the Proponent.	Pre-construction	Contractor	Closed	This condition was addressed through detailed design. Design changes were completed with ongoing consultation, design modifications help to ensure landholders, service providers and asset owners needs are met.	Compliant

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Part C - Co	ommunity Information and Reporting					
C1.	C1. Prior to the commencement of construction or as otherwise agreed by the Secretary, the Proponent shall prepare and implement a Community Communication Strategy to the satisfaction of the Secretary. The Strategy shall provide mechanisms to facilitate communication between the Proponent (and its contractor(s)), the Environmental Representative (see condition D43), the Council and community stakeholders (particularly adjoining landowners) on the construction environmental management of the SSI. The Strategy shall include, but not be limited to: (a) identification of stakeholders to be consulted as part of the Strategy, including affected and adjoining landowners; (b) procedures and mechanisms for the regular distribution of information to community stakeholders on construction progress and matters associated with environmental management; (c) the formation of community-based focus groups for key environmental management issues for the SSI. The Strategy shall provide detail on the structure, scope, objectives and frequency of the community-based focus groups; (d) procedures and mechanisms through which the community stakeholders can discuss or provide feedback to the Proponent and/or Environmental Representative in relation to the environmental management and delivery of the SSI; (e) procedures and mechanisms through which the Proponent can respond to enquiries or feedback from the community stakeholders in relation to the environmental management and delivery of the SSI; and (f) procedures and mechanisms that would be implemented to resolve issues/ disputes that may arise between parties on the matters relating to environmental management and the delivery of the SSI. This may include the use of an appropriately qualified and experienced independent mediator. Issues that shall be addressed through the Community Communication Strategy include (but are not necessarily limited to): (ii) flooding and hydrology matters, including levee works; (iii) traffic management (including parking, property access, ped	Pre-construction	Contractor	Closed	A Community Communication Strategy (CCS) has been prepared and submitted to the Secretary prior to commencement of construction. DPE approval letter dated 6 October 2016.	Compliant
C2.	Prior to the commencement of pre-construction and construction, or as otherwise agreed by the Secretary, the Proponent shall ensure that the following are available for community enquiries and complaints for the duration of construction: (a) a 24 hour telephone number(s) on which complaints and enquiries about the SSI may be registered; (b) a postal address to which written complaints and enquiries may be sent; (c) an email address to which electronic complaints and enquiries may be transmitted; and (d) a mediation system for complaints unable to be resolved. The telephone number, the postal address and the email address shall be published in newspaper(s) circulating in the local area prior to the commencement of construction and prior to the commencement of operation. This information shall also be provided on the website (or dedicated pages) required by this approval.	Prior to pre- construction, Prior to construction, prior to operation.	Contractor and TfNSW	Closed	The web site is being updated progressively by TfNSW and Fulton Hogan. A toll free number is established and well publicised in all communications material since the development of the project. Postal address is established to the TfNSW Grafton office and publicised in all communications material and on the website. A dedicated Grafton Bridge email address is established and managed by the contractor as addressed in Community Communications Strategy. TfNSW placed advertisements prior to commencement of construction on two occasions (between 12 October and 19 October) in the Grafton Coastal Views, Grafton Daily Examiner and Clarence Valley Review. The commencement of operation was promoted via a media release (issued by the local MP) which was picked up by numerous media outlets including The Daily Examiner, Clarence Valley Independent and local TV and radio stations.	Compliant

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	Prior to the commencement of pre-construction and construction, or as otherwise agreed by the Secretary, the Proponent shall prepare and implement a Construction Complaints Management System consistent with <i>AS 4269: Complaints Handling</i> and maintain the System for the duration of construction and up to 12 months following completion of the SSI. Information on all complaints received, including the means by which they were addressed and whether resolution was reached, with or without mediation, shall be maintained in a complaints register and included in the construction compliance reports required by condition A12 of this approval. The information contained within the System shall be made available to the Secretary and relevant agencies on request.	Prior to pre- construction	Contractor and TfNSW	Closed	Consultation Manager database is established which manages and tracks consultation, feedback and complaints. This has been managed by the contractor through construction. Fulton Hogan's Construction Complaints Management System is described in the Community Communications Strategy. At the conclusion of the licensing agreement with Consultation Manager, TfNSW will continue to manage community complaints using its internal customer complaint management system (Salesforce). Consultation Manager will provide TfNSW with a spreadsheet containing a record of all community engagement on the project, which will be stored in TfNSW's record management system (Objective).	Compliant
	Prior to the commencement of pre-construction and construction, or as otherwise agreed by the Secretary, the Proponent shall establish and maintain a new website, or dedicated pages within an existing website, for the Provision of electronic information associated with the SSI, for the duration of construction and for 12 months following completion of the SSI. The Proponent shall, subject to confidentiality, publish and maintain up-to-date information on the website or dedicated pages including, but not necessarily limited to: (a) information on the current implementation status of the SSI; (b) a copy of the documents listed in condition A2, and any documentation supporting modifications to this approval that may be granted from time to time; (c) a copy of this approval and any future modification to this approval; (d) a copy of each relevant environmental approval, licence or permit required and obtained in relation to the SSI; (e) a copy of each current strategy, plan, program or other document required under this approval; (f) the outcomes of compliance tracking in accordance with condition A12 of this approval; and (g) details of contact point(s) to which community complaints and enquiries may be directed, including a telephone number, a postal address and an email address.	Prior to pre- construction	Contractor and TfNSW	Closed	The Grafton Bridge web site has been established for a long period and is regularly updated with Community Updates and notifications. The EIS, submissions report and planning approval documents are on the website. http://www.rms.nsw.gov.au/projects/northern-nsw/grafton-clarence-river-crossing/environmental-impact-statement.html TfNSW will continue to update the project website as required during the operation phase.	Compliant
Part D - Co	nstruction Environmental Management, Reporting and Auditing.					
D1.	Prior to the commencement of operation of the SSI, the Proponent shall prepare a Biodiversity Offset Statement in consultation with the EPA. The Statement shall: (a) confirm the threatened species, communities and their habitat (in hectares) cleared and their condition; and (b) provide details of measures to offset impacts of the SSI on native vegetation, including threatened species, communities and their habitats, including the timing, responsibility, management and monitoring, and implementation of the offset measures. Biodiversity impacts shall be offset in in accordance with the document Principles for the Use of Biodiversity Offsets in NSW (DECCW, 2008). A copy of the statement shall be submitted to the Secretary and EPA.	Construction	Contractor and TfNSW	Closed	A Biodiversity Offset Statement will be prepared in consultation with the DPE and EPA. I is important to note that the project is approved to impact 0.41 ha of EEC vegetation. Remaining impacts to vegetation include weeds/ planted native vegetation. TTSTS impacts have been considered and vegetation impacts have been reduced on the levees and somewhat on the Grafton bridge side of the project. The Biodiversity Offset Statement is currently in draft format and was submitted to the EPA in September 2019 for an initial review, noting that there were still some outstanding items to be resolved. The EPA raised no major issues with Biodiversity Offset Statement, noting the requirement for some outstanding items to be resolved. A final copy of the Biodiversity Offset Statement will be submitted to the EPA during the next Compliance Reporting Period. A final copy of the Biodiversity Offset Statement that was developed in consultation with the EPA was submitted to the DPI&E on 29/07/2020 with email correspondence received on 04/08/2020 stating that the Department does not have any comments at this time.	

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				(open/ closed)		(Compliant/Non- compliant/Not Triggered)
D2.	Construction activities associated with the SSI shall be undertaken during the following standard construction hours: (a) 7:00 am to 6:00 pm Monday to Friday, inclusive; and (b) 8:00 am to 1:00 pm Saturday; and (c) at no time on Sunday or public holidays.	Construction	Contractor	Closed	Hours of work and Out-of-Hours Work Protocol have been included in the CNVMP. The CNVMP has been submitted to the Secretary for approval and was approved as part of the CEMP. OOH works are being undertaken where there is justification and the project can comply with condition D3 or D4 of the project approval	Compliant
D3.	Construction works outside the standard construction hours may be undertaken in the following circumstances: (a) construction works that generate noise and vibration that is: (i) LAeq(15 minute) noise levels no more than 5 dB(A) above rating background level at any residence in accordance with the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009); and (ii) LAeq(15 minute) noise levels no more than the noise management levels specified in Table 3 of the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009) at other sensitive receivers; and (iii) continuous or impulsive vibration values, measured at the most affected residence, that are no more than those for human exposure to vibration, specified for residences in Table 2.2 of Assessing Vibration: a technical guideline; and (iv) intermittent vibration values, measured at the most affected residence, that are no more than those for human exposure to vibration, specified for residences in Table 2.4 of Assessing Vibration: a technical guideline; or (b) where a negotiated agreement has been reached with affected receivers, where the prescribed noise and vibration levels cannot be achieved; or (c) for the delivery of materials required outside the standard construction hours by the NSW Police Force or other authorities for safety reasons; or (d) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm; or (e) out-of-hours work in accordance with condition D4.	Construction	Contractor	Closed	Out of hours works have been required for a number of reasons in the reporting period, those reasons included: operations at the pre cast yard, new services construction, services connections, concrete pours to manage temperature and critical works that were not audible. The approval pathway for the works has been under condition D3 the works were either done with a negotiated agreement or they were inaudible.	Compliant
D4.	Construction activities which cannot be undertaken during the standard construction hours for technical or other justifiable reasons (Out of Hours work) may be permitted with the approval of the Environmental Representative. Out of Hours work shall be undertaken in accordance with an approved Construction Environment Management Plan or Construction Noise and Vibration Management Plan for the SSI, where that plan provides a process for the consideration of Out of Hours work. This consideration includes: (a) process for obtaining the Environmental Representative's approval for Out of Hours work; (b) details of the nature and need for activities to be conducted during the varied construction hours; (c) justifies the varied construction hours in accordance with the Interim Construction Noise Guideline (DECC, 2009); (d) provides evidence that consultation with potentially affected receivers, that the issues raised have been addressed and all feasible and reasonable mitigation measures have been put in place; and (e) provides evidence of consultation with the EPA and Council on the proposed work outside the standard construction hours.	Construction	Contractor	Closed	Out of hours works (OoHW) have been required for a number of reasons in the reporting period, those reasons included: new services construction, services connections, concrete pours to manage temperature and critical works that were not audible. The approval pathway for the works has generally been under condition D3 the works were either done with a negotiated agreement or they were inaudible. There was OoHW completed using condition D4 during the reporting period which included pavement works, rail bridge works and traffic switches.	Compliant
D5.	Construction activities resulting in impulsive or tonal noise emission (such as rock breaking, rock hammering, pile driving) shall only be undertaken: (a) between the hours of 8:00 am to 6:00 pm Monday to Friday; (b) between the hours of 8:00 am to 1:00 pm Saturday; and (c) in continuous blocks not exceeding three hours each with a minimum respite from those activities and works of not less than one hour between each block. For the purposes of this condition 'continuous' includes any period during which there is less than a one hour respite between ceasing and recommencing any of the work the subject of this condition.	Construction	Contractor	Closed	See CNVMP. There is no further construction activities to be undertaken which result in impulsive or tonal noise emission.	Compliant

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D6.	The Proponent shall, where feasible and reasonable, limit high noise impact activities and work to the mid- morning and mid-afternoon periods.	Construction	Contractor	Closed	See CNVMP There is no further construction activities to be undertaken which result in impulsive or tonal noise emission.	Compliant
D7.	The SSI shall be constructed with the aim of achieving the construction noise management levels detailed in the <i>Interim Construction Noise Guideline</i> (DECC, 2009). All feasible and reasonable noise mitigation measures shall be implemented and any activities that could exceed the construction noise management levels shall be identified and managed in accordance with the Construction Noise and Vibration Management Plan required under condition D46(a).			Closed	See CNVMP. At residence vibration monitoring was undertaken as required.	Compliant
D8.	The SSI shall be constructed with the aim of achieving the following construction vibration goals: (a) for structural damage to heritage structures, the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration – Part 3 Effects of vibration on structures; (b) for damage to other buildings and/or structures, the vibration limits set out in the British Standard BS 7385-1:1990 – Evaluation and measurement of vibration in buildings - Guide for measurement of vibration and evaluation of their effects on buildings (and referenced in Australian Standard 2187.2 – 2006 Explosives – Storage and use – Use of explosives); and (C) for human exposure, the acceptable vibration values set out in Assessing Vibration: A Technical Guideline (Department of Environment and Conservation, 2006).	Construction	Contractor	Closed	Vibration monitoring occurred during construction and reviewed activities such as pile driving, excavation, truck movements, compaction and construction works.	Compliant
D9.	Wherever feasible and reasonable, piling activities shall be undertaken using quieter construction methods, such as bored piles or vibrated piles rather than impact or percussion piling methods.	Construction	Contractor	Closed	High impact noise activities was not required during this reporting period. There is no further construction activities to be undertaken which require piling activities.	Compliant
D10	During construction, affected educational institutions shall be consulted and reasonable steps taken to ensure that noise generating construction works in the vicinity of affected buildings are not timetabled during examination periods where practicable, unless other reasonable arrangements to the affected institutions are made at no cost to the affected institution.	Construction	Contractor	Closed	The TAFE situated in Grafton NSW shares boundaries with the project on Clarence and Pound streets. The project consulted with TAFE about upcoming works, access, disruption to services and changes to traffic. Consultation took place on average twice a month. The project undertook the following to mitigate impacts on the TAFE: working outside of normal construction hours to reduce impacts during class times, improved temporary pavements to reduce dust, scheduled only low noise activates during exams. Works in the vicinity of Grafton Tafe are now complete.	Compliant
D11.	The Proponent shall undertake a review of the operational noise mitigation measures proposed to be implemented for the SSI, within six months of commencing construction, unless otherwise agreed by the Secretary. The review shall be submitted for the approval of the Secretary, and be prepared in consultation with the EPA, and shall: (a) confirm the operational noise predictions of the SSI based on detailed design. This operational noise assessment shall be based on an appropriately calibrated noise model (which has incorporated additional noise monitoring, where necessary for calibration purposes); (b) review the suitability of the operational noise mitigation measures identified in the documents listed in condition A2. The review shall take into account the detailed design of the SSI and, where feasible and reasonable, and where necessary, refine the proposed measures with the objective of meeting the criteria outlined in the NSW Road Noise Policy (Department of Environment, Climate Change and Water, 2011), based on the operational noise performance of the SSI predicted under (a) above; and (c) where necessary, investigate additional feasible and reasonable noise mitigation measures to achieve the criteria outlined in the NSW Road Noise Policy (DECCW, 2011).	Construction	Contractor	Closed	Operational Noise report submitted to DP&E and approved by Secretary on 4/8/2017.	Compliant

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D12.	3	Pre -Construction and Construction	Contractor	Closed	TfNSW has implemented the at residence treatment and has completed all measures for residential houses with some remaining works to be undertaken at the educational facilities, it has been agreed that these works will be completed as part of the Operational Noise Compliance monitoring to determine the full extent of works. The project has noise mitigations included such as low noise pavements and noise walls. At the completion of construction the model used in the operational noise report will be tested with onsite monitoring of actual noise. The construction of the noise wall was completed during the previous reporting period and has provided a good outcome to the surrounding residents.	
D13.	Access to all properties shall be maintained during construction, where feasible and reasonable, unless otherwise agreed by the relevant property owner or occupier. Any access physically affected by the SSI shall be reinstated to at least an equivalent standard, unless agreed with by the property owner.	Construction	Contractor	Closed	See CTAMP. CTAMP has been submitted to the Secretary for approval. This plan was approved with the CEMP. Works have been scheduled and implemented to ensure that access to properties was maintained during construction works in consultation with the affected property owners.	Compliant
D14.	Safe pedestrian and cyclist access through or around worksites shall be maintained during construction. In circumstances where pedestrian and cyclist access is restricted due to construction activities, a satisfactory alternate route shall be provided and signposted.	Construction	Contractor	Closed	All permanent pedestrian and cyclist arrangements within the project have been completed and are open for use.	Compliant
D15.	Construction vehicles (including staff vehicles) associated with the SSI shall be managed to: (a) minimise parking or queuing on public roads; (b) minimise idling and queuing in local residential streets where practicable; (c) minimise the use of local roads (through residential streets and town centres) to gain access to construction sites and compounds; and (d) adhere to the nominated haulage routes identified in the Construction Traffic and Access Management Plan required under condition D46(b)	Construction	Contractor	Closed	Parking for the project works were modified to reduce the traffic and visual effects on neighbours and the community. Where possible traffic was directed through the project away from public roads, for example this method was used to bring in concrete trucks for sub-structure works in Grafton.	Compliant
D16.	Where feasible and reasonable, the Proponent shall provide alternative temporary parking spaces for formal on-street parking spaces removed and/or impacted by the construction of the SSI. The location and number of temporary or relocated parking spaces shall be determined in consultation with Council and affected businesses. The alternative parking spaces shall be provided prior to commencement of construction activities that impact on parking spaces within the SSI footprint.	Construction	Contractor	Closed	See CTAMP. CTAMP has been submitted to the Secretary for approval and approved by DPE. Pound St carpark was completed early in the project and open to traffic. This 28 space carpark will provide alternate parking for the TAFE and adjacent businesses during construction.	Compliant
D17.	Upon determining the haulage route(s) for construction vehicles associated with the SSI, and prior to construction, an independent and qualified expert shall prepare a Road Dilapidation Report for local roads outside the SSI boundary. The Report shall assess the current condition of the road and describe mechanisms to restore any damage that may result due to their use by traffic and transport related to the construction of the SSI. The Report shall be submitted to Council for review prior to the commencement of haulage. Following completion of construction, a subsequent Report shall be prepared to assess any damage that may have resulted from the construction of the SSI. Measures undertaken to restore or reinstate local roads affected by the SSI shall be undertaken in a timely manner, in accordance with the reasonable requirements of Council, and at the full expense of the Proponent. *Note: *Nothing in this condition restricts the Proponent commencing adjustments and minor upgrades to the existing road network to cater for construction traffic and installation of temporary project signage prior to the commencement of construction.	Construction	Contractor	Closed	A road dilapidation report was completed prior to construction vehicles accessing public roads, the reports were compiled in March 2017. The final road dilapidation report for Stage 2 works was completed during the reporting period. There was damage observed when comparing pre and post construction reports, all damage works have been rectified.	Compliant

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D18.	Where available and practicable, and of appropriate chemical and biological quality, stormwater, recycled water or other water sources shall be used, where feasible and reasonable, in preference to potable water for construction activities, including concrete mixing and dust control.	Construction	Contractor		This condition has been addressed in the CSWQMP. The issues was also been discussed at the ERG meetings in July and Aug 2016. Water source options were discussed at ERGs. Fulton Hogan where possible recycled captured site waters to supplement the extra demand on water requirements along with additional capacity provided in site sediment basins. Blue book requirements to empty sediment basins after rainfall were also be implemented during construction works. All construction activities requiring water have been completed.	Compliant
D19.	Soil and water management measures consistent with Managing Urban Stormwater - Soils and Construction Volumes 1 and 2, 4th Edition (Landform, 2004) shall be employed during the construction of the SSI to minimise soil erosion and the discharge of sediment and other pollutants to land and/or water.	Construction	Contractor		This condition has been addressed in the CSWQMP. Innovation was applied at Fill 1 to divert dirty water away from the Clarence River and Alipou Creek and improvement treatment. Innovative automated treatment measures were implemented as part of managing and treating groundwater as part of constructing the discharge lines from the operation basin in Grafton.	Compliant
D20.	Works in riparian areas and on riverfront land shall be undertaken in accordance with NOW guidelines for controlled activities on waterfront land, as applicable			Closed	The project managed temporary works to reduce the amount of potential impacts on waterfront land. Riparian vegetation has been maintained and protected with only minor clearing on the southern side of the Clarence River. The temporary access pad on the north side of the Clarence River maintained a small buffer of riparian vegetation. Impacts to the degraded EEC on the north side of the river was reduced to the minimum extent possible. The riparian vegetation has been revegetated as part of the final landscaping treatments on the north and south side of the Clarence River.	Compliant
D21.	The Proponent shall consult with the NSW State Emergency Service during detailed design on feasible and reasonable measures to maximise the evacuation capability of Grafton and South Grafton during a major flood emergency.	Pre-construction	Contractor and TfNSW	Closed	The project has consulted with CVC and SES during the detailed design phase to implement measures that will maximise the flood evacuation capability of Grafton and South Grafton during a major flood event.	Compliant
D22.	The Proponent shall undertake further flood modelling based on the detailed design of the SSI. The flood modelling shall consider the recommendations of WMAwater outlined in Appendix A ElS flooding and hydrology technical paper peer review in the document listed in condition A2(c), and: (a) include a detailed floor level survey of potentially affected properties, as identified in the flood modelling; (b) update the flood frequency analysis and application of the latest hydrological practice of the new Australian Rainfall and Runoff publication; (c) assess the same design flood events as those in the ElS, including the probable maximum flood (PMF) event; and (d) assess and report all flood height changes to a resolution no coarser than 1cm.	Pre-construction	Contractor and TfNSW		WBM are undertaking the flood modelling for RMS. WMA are the appointed RMS independent hydrologic consultant. KBR have prepared the Hydrological Mitigation report. The Hydrological Mitigation Report was approved by the secretary on 6/7/2016 in accordance with D23. The HMR included further flood modelling based on the detailed design of the new bridge and the recommendations from WMAwater outlined in Appendix A EIS flooding and hydrology technical paper peer review.	Compliant

CoA Ref	Condition	Timing	Responsible Party	Status	Compliance comments	Compliance
		J		(open/ closed)		(Compliant/Non- compliant/Not Triggered)
D23.	The Proponent shall prepare a Hydrological Mitigation Report that details all feasible and reasonable flood mitigation measures for properties where flood impacts are predicted to increase as a result of the SSI. The Report shall be prepared by a suitably qualified and experienced expert, whose appointment has been approved by the Secretary. The Report shall: (a) be informed by the detailed surveys (e.g. floor levels) of potentially affected properties and the results of the flood modelling of the detailed design carried out under condition D22 of this approval and in consultation with EPA and Council; (b) include mitigation measures based on documented flood management objectives for affected properties. The flood management objectives shall cover flood level (height), duration, velocity and direction, and flood evacuation and be developed in consultation with Council and the SES; (c) ensure mitigation measures that include changes to the height of the levees have no detrimental impact on residences and urban land uses protected by the levees and properties downstream of the SSI; (d) identify properties in those areas likely to have an increased/exacerbated flooding impact and detail the predicted impact. The types of impacts to be considered include all those examined in the EIS including but not limited to changes in flood levels and velocities, alteration to drainage, reduction in flood evacuation access or capability and impacts on infrastructure; (e) identify mitigation measures to be implemented to address these impacts: (f) identify mitigation measures to be implemented to address these impacts: (g) demonstrate consistency with the flood management objectives in subsection (b); (h) be developed in consultation with directly-affected landowners, and Council and in relation to public assets and community flood evacuation issues; and (i) where house raising is proposed, ensure habitable floor levels are raised to a minimum height of the 100 year ARI flood plus 0.5m freeboard, unless justified by	Pre-construction	TfNSW	Closed	Schedule 41.Future Approvals to be obtained by RMS. "The Secretary of the Department of Planning and Environment's approval required by condition D23. of the Planning Minister's Approvals in respect of the Hydrological Mitigation Report". KBR have prepared the Hydrological Mitigation report and DPE have approved it. (a) potentially affected properties have been identified. Floor level surveys have been completed. (b) Flood management objectives have been set in the HMR and have been developed in consultation with Council and SES. (c) the proposed levee mitigation measures have no measurable impact on properties downstream of the new bridge. (d) potentially affected properties have been identified. Floor level surveys have been completed and directly affected property owners have been consulted with. One shed floor has been raised slightly. (e) Likely mitigation measures have been identified in the HMR. (f) Flood velocities are mostly not predicted to increase. Where they do increase, the potential impact is addressed in the HMR. (g) Flood management objectives are identified in the HMR and they form the basis for determining flood impact on properties (h) Directly affected landowners and Council have been consulted with regard to refinement of public assets (levee). This consultation is ongoing. (i) No house raising is required. One shed floor has been raised. Mitigation measures are being determined in consultation with landowners. The HMR has been submitted to DPE and approved by DPE on 6/7/2016. Levee mitigation measures are mostly completed with some minor works still to be undertaken.	Compliant
D24.	Based on the mitigation measures identified in the Hydrological Mitigation Report, the Proponent shall prepare and implement a final schedule of feasible and reasonable flood mitigation measures proposed at each directly-affected property in consultation with the landowner, and consistent with the flood management objectives described in condition D23(b). The schedule shall be provided to the relevant landowner(s) prior to the implementation/construction of the mitigation works, unless otherwise agreed by the Secretary. A copy of each schedule of flood mitigation measures shall be provided to the Department and Council prior to the implementation/construction of the mitigation measures on the property. The Proponent shall undertake engineering and property investigations of the Grafton and South levees prior		RMS	Closed	Copies of the final mitigation measures have been provided to relevant land owners, CVC and provided to DP&E. No reasonable or feasible mitigation measures have been identified for the South Grafton Bowling Club and the South Grafton Ex-Services Club. Compensation arrangements have been agreed with the clubs and a modification is being sought to provide certainty around this outcome. TfNSW organised regular meetings with Council, OEH and SES to progress levee	Compliant Compliant
<i>D2</i> 5.	to detailed design to inform the structural capability of changes to the levees. Any work to augment the structure of the levees shall be carried out in consultation with Council and affected landowners. Note: Should additional assessment of work arising from the engineering and property investigations of the levees be required, the proponent shall undertake a review of the consistency of those works with the SSI approval. Work that is inconsistent with the SSI may require a modification of the approval.	construction		3,0000	upgrading works. PWD have undertaken an engineering assessment of the levees and detailed design of the levee works for RMS. All work has been carried out in accordance with plans approved by Clarence Valley Council and the private landowners of individual properties impacted. The final small section of levee (SG11a) has been designed in consultation with the landowners and has been constructed in close consultation with CVC.	С
D26.	The proposed Grafton and South Grafton levee flood mitigation measures shall be implemented prior to construction commencing in the Clarence River, including pier/pile construction and the installation of temporary in-river rock platforms, unless otherwise agreed by the Secretary.	Pre-construction	Contractor	Closed	Grafton and South Grafton flood levee mitigation measures implemented with secretary approval received 29/3/2017 to allow commencement of construction in the Clarence River.	Compliant

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D27	The Proponent shall employ a suitably qualified and experienced independent hydrological expert, whose appointment has been endorsed by the Secretary, to provide independent advice for all hydrological matters, including assistance to landowners in resolving feasible and reasonable mitigation measures.	Pre-construction, construction	RMS	Closed	WMA are the appointed RMS independent hydrologic consultant. The appointment of WMA Water has been approved by DPE on 27/11/2015.	Compliant
D28	During detailed design, the Proponent shall undertake a detailed drainage study of the SSI adjacent to the northern and southern approach roads within the levees to ensure there are no adverse impacts to property or existing infrastructure. The study shall be carried out in consultation with Council and include the design of the Pound Street drainage basin and pumping station, and Council's existing drainage and flood relief systems.	Pre-construction	Contractor and TfNSW	Closed	A detailed drainage study has been undertaken for the areas adjacent to the SSI for the northern and southern approach roads. This study was undertaken in consultation with CVC and SES.	Compliant
D29.	The SSI shall be constructed in a manner that minimises dust emissions from the site, including wind-blown and traffic-generated dust and tracking of material onto public roads. All activities on the site shall be undertaken with the objective of preventing visible emissions of dust from the site. Should such visible dust emissions occur at any time, the Proponent shall identify and implement all feasible and reasonable dust mitigation measures, including cessation of relevant works, as appropriate, such that emissions of visible dust cease.	Construction	Contractor	Closed	Addressed in the CAQMP. CAQMP has been submitted to the Secretary for approval and approved as part of the CEMP. Construction measures to reduce dust emissions included the use of water carts, mud tracking controls, revegetation, monitoring wind conditions and other measures. Dust monitoring results were discussed at monthly ERGs. Dust monitoring ceased in early 2020 in agreement with the EPA.	Compliant
D30.	Dangerous goods, as defined by the Australian Dangerous Goods Code, shall be stored and handled strictly in accordance with: (a) all relevant Australian Standards;(b) for liquids, a minimum bund volume requirement of 110% of the volume of the largest single stored volume, within the bund; and (c) the Environment Protection Manual for Authorised Officers: Bunding and Spill Management, technical bulletin (Environment Protection Authority, 1997). In the event of an inconsistency between the requirements listed from (a) to (c) above, the most stringent requirement shall prevail to the extent of the inconsistency.	Construction	Contractor	Closed	This has been addressed in CWEMP submitted to the Secretary for approval and approved as part of the CEMP.	Compliant
D31.	Waste generated outside the site shall not be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence or waste exemption under the Protection of the Environment Operations Act 1997, if such a licence is required in relation to that waste.	Construction	Contractor	Closed	Offsite waste has not been received on the project. Waste has been managed through the correct waste stream and taken to licenced facilities as required.	Compliant
D32.	The reuse and/or recycling of waste materials generated on site shall be maximised as far as practicable, to minimise the need for treatment or disposal of those materials off site.	Construction	Contractor	Closed	This has been addressed in CWEMP submitted to the Secretary for approval and approved as part of the CEMP. Clearing material has been used for timber eg Men Shed and used for mulch for landscaping and erosion and sediment control. As much as possible of the house demolition materials were recycled. Topsoil is recycled as well as waste concrete and steel where possible. Recycled paper is used in site offices. Surplus spoil material has been reused on site where possible and also to offsite locations that are legally able to accept the material through approved DA's and the relevant Resource Recovery Order and Exemptions.	
D33.	All liquid and/or non-liquid waste generated on the site shall be assessed and classified in accordance with Waste Classification Guidelines (Department of Environment, Climate Change and Water, 2009).	Construction	Contractor	Closed	This has been addressed in CWEMP submitted to the Secretary for approval and approved as part of the CEMP.	Compliant
D34.	All waste materials removed from the site shall only be directed to a waste management facility or premises lawfully permitted to accept the materials.	Construction	Contractor	Closed	This has been addressed in CWEMP submitted to the Secretary for approval and approved as part of the CEMP.	Compliant
D35.	The Proponent shall ensure that all plant and equipment used at the site is: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	Construction	Contractor	Closed	This has been addressed in CWEMP submitted to the Secretary for approval and approved as part of the CEMP.	Compliant

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						Triggered)
D36.	The sites for ancillary facilities that are associated with the construction of the SSI and that have not been	Pre-Construction,	Contractor	Closed	This has been addressed in Appendix A5 of the CEMP. Ancillary facilities include two	Compliant
	identified and assessed in the documents listed in condition A2 shall:	Construction			houses on Pound Street that have been retained rather than demolished. This is all within	
	(a) be located more than 50 metres from a waterway, including the Clarence River;				the SSI corridor. An approved ancillary area is located on the eastern site of Iolanthe	
	(b) be located within or adjacent to the SSI boundary;				Street, north of Bunnings. The casting yard is within the EIS/ CEMP approved corridor/	
	(c) have ready access to the road network or direct access to the construction corridor;				approved ancillary area. The area around the new Gwydir Highway roundabout is an	
	(d) be located to minimise the need for heavy vehicles to travel through residential areas;				approved ancillary area.	
	(e) be located in areas of low ecological significance and require no clearing of native vegetation;				No further Ancillary Facilities are required for the project.	
	(f) be located on relatively level land;					
	(g) be separated from the nearest residences by at least 200 metres (or at least 300 metres for a temporary batching					
	plant);					
	(h) be above the 20 year ARI flood level unless a contingency plan to manage flooding is prepared and implemented;					
	(i) not unreasonably affect the land use of adjacent properties;					
	(j) provide sufficient area for the storage of material to minimise, to the greatest extent practical, the number of					
	deliveries required outside standard construction hours; and					
	(k) be located in areas of low heritage conservation significance (including areas identified as being of Aboriginal					
	cultural value) and not impact on heritage sites beyond those already impacted by the SSI.					
	The Proponent shall undertake an assessment of the facility against the above criteria in consultation with the					
	relevant public authority(s) and the Council. The site and relevant environmental management measures					
	shall be included in the Construction Environmental Management Plan required under condition D45.					
D37.	Ancillary facilities that have not been previously identified and assessed in the documents listed in condition	Pre-Construction,	Contractor	Closed	This has been addressed in Appendix A5 of the CEMP. Assessment of ancillary sites	Compliant
	A2, and do not meet the criteria set out under condition D36, shall be approved by the Environmental	Construction			against these criteria were undertaken by Fulton Hogan where proposed in consultation	•
	Representative prior to its establishment. In obtaining this approval, the Proponent shall consult with the				with TfNSW and the ER. Refer additional ancillary sites under MCoA D 36.	
	relevant public authority(s) and the Council, and demonstrate to the satisfaction of the Environmental				No further Ancillary Facilities are required for the project.	
	Representative, how the potential environmental impacts can be mitigated and managed to acceptable					
	standards. The outcomes of the assessment shall be documented in a report and include, but not necessarily					
	be limited to:					
	(a) details on the site location and access arrangements;					
	(b) a description of the activities to be undertaken including the hours of use and storage of dangerous goods;					
	(c) Outcomes of the assessment of the site against the locational criteria set out in condition D36;					
	(d) an assessment of the environmental impacts on the site and the surrounding environment, including, but not limited					
	to noise, vibration, air quality, traffic and access during site establishment and operation, flora and fauna, heritage,					
	erosion and sedimentation, water quality and light spill;					
	(e) details of the mitigation, monitoring and management procedures specific to the ancillary facility that would be					
	implemented to minimise environmental impacts; and					
	(f) demonstrated overall consistency with the approved SSI (including impacts identified in the documents listed in condition A2).					
	A copy of the report shall be included in the Construction Environmental Management Plan required under					
	condition D45.					
	oonalion 2-10.					
D38.	Notwithstanding condition D37, ancillary facilities that that have not been previously identified and assessed	Pre-construction	Contractor and RMS	Closed	This was undertaken by Fulton Hogan in consultation with TfNSW and the ER where	Compliant
	in the documents listed in condition A2 and result in additional impacts to biodiversity, heritage, flooding and				proposed. An office ancillary site in Pound/ Greaves St has been approved, all within the	
	noise beyond those approved for the SSI, shall be approved by the Secretary prior to their establishment. In				SSI corridor. The two houses used were originally to be demolished, but are now	
	order to obtain this approval, the Proponent shall undertake an assessment of the ancillary facility in				retained, improving street amenity.	
	accordance with condition D37 and forward a copy of the assessment report to the Secretary, as part of the				No further Ancillary Facilities are required for the project.	
	approval submission, at least one month prior to the establishment of the facility.					
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				(open/ closed)		(Compliant/Non- compliant/Not Triggered)
D39.	All ancillary facilities and access points shall be rehabilitated to at least their preconstruction condition or better, unless otherwise agreed by the landowner where relevant.	Construction	Contractor	Closed	Pound Street, south Grafton pre-cast yard, Fill 2 and the Gwydir Highway ancillary sites are no longer required to support construction. The sites have been rehabilitated to their pre-existing condition or an agreement has been established with the landowner where the pre-existing condition has not been reinstated. No further Ancillary Facilities are required for the project.	Compliant
D40.	Where changes are made to the boundary or use of an ancillary facility, including facilities identified in the documents listed in condition A2, the Proponent shall assess the facility against the criteria set out in condition D36 If the ancillary facility site: (a) does not meet the criteria set out under condition D36 the Proponent shall seek the approval of the Environmental Representative in accordance with condition D37; or (b) results in impacts to biodiversity, heritage, flooding and noise beyond those approved for the SSI, the Proponent shall seek the approval of the Secretary in accordance with condition D38. The relevant approval shall be obtained prior to the establishment of the ancillary facility.	Pre-construction	Contractor and TfNSW	Closed	Complete and no new ancillary sites will be needed, the houses on Pound St, pre-cast yard and the Gwydir roundabout will be the ancillary support sites until completion.	Compliant
D41.	The Proponent may undertake archaeological investigations at ancillary sites that do not meet the criterion set out in condition D36, where this is required to assess the potential Aboriginal and non-Aboriginal archaeological impacts of the ancillary facility provided they are undertaken under a methodology prepared to the satisfaction of the Secretary in consultation with EPA.	Pre-construction	Contractor	Closed	Complete and no new ancillary sites will be needed, the houses on Pound St, pre-cast yard and the Gwydir roundabout will be the ancillary support sites until completion	Compliant
D42.	The Proponent shall prepare and implement an Urban Design and Landscape Management Plan prior to the commencement of permanent built works and/or landscaping, unless otherwise agreed by the Secretary, to present an integrated landscape and design for the SSI. The Plan shall be prepared in accordance with the Roads and Maritime Services urban design and visual guidelines, and the design principles and revegetation guidelines outlined in the EIS. The Plan shall be prepared by an appropriately qualified expert in consultation with EPA, including the Heritage Division, Council and community, and submitted to the Secretary for approval. The Plan shall include, but not necessarily be limited to: (a) identification of design principles and standards based on - (i) local environmental values, (ii) heritage values, (iii) urban design context, (iv) sustainable design and maintenance, (v) community amenity and privacy, (vi) relevant design standards and guidelines including "Crime Prevention Through Environmental Design Principles", and (vii) the urban design objectives outlined in the EIS Technical Paper Urban Design and Landscape Concept Report: (b) details on the location of existing vegetation and proposed landscaping (including use of indigenous and endemic species where possible). Details of species to be replanted/revegetated shall be provided in a Revegetation Strategy, including their appropriateness to the area and habitat for threatened species; (c) a description of locations along the corridor directly or indirectly impacted by the construction of the SSI (e.g. temporary ancillary facilities, access tracks, etc.) and details of the strategies to progressively rehabilitate regenerate and/or revegetate the locations with the objective of promoting biodiversity outcomes and visual integration; (d) appropriate roadside plantings and landscaping in the vicinity of heritage items and ensure no additional heritage impacts; (e) appropriate roadside plantings and landscaping of environmental controls (such as erosion	Pre-construction	Contractor	Closed	The Urban Design and Landscaping plan for the project has received conditional approval. The project submitted Addendum 1 to the UDLMP to DPI&E on 30/04/2020 which captured the amendments to the landscaping works around the pump station and control units in Grafton. DPI&E provided correspondence on 21/07/2020 that they have no comments at this time.	Compliant

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	Continued - from previous point (h) location and design treatments for any associated footpaths and cyclist elements, and other features such as seating, fencing, materials and signs; (i) a lighting plan lighting (with lighting in accordance with AS/NZS 1158 Lighting for Roads and Public Spaces series as relevant and AS 4282-1997 Control of the Obtrusive Effect of Outdoor Lighting) including lighting designs; (j) an assessment of the visual screening effects of existing vegetation and the proposed landscaping and built elements. Where properties have been identified as likely to experience high visual impact as a result of the SSI and high residual impacts are likely to remain, the Proponent shall, in consultation with affected landowners, identify opportunities for providing at-property landscaping to further screen views of the SSI. Where agreed with the landowner, these measures shall be implemented during the construction of the SSI; (k) graphics such as sections, perspective views and sketches for key elements of the SSI, including, but not limited to built elements of the SSI; (l) final design details of the proposed external materials and finishes for the bridge and noise barriers, including schedules and a sample board of materials and colours; (m) monitoring and maintenance procedures for the built elements, including performance indicators, responsibilities, timing and duration; and (n) evidence of consultation with EPA, Council and community on the proposed urban design and landscape measures prior to finalisation of the Plan. Note: *The Urban Design and Landscape Plan shall be consistent with any revegetation and biodiversity offsets established for the SSI under the conditions of this approval.	Pre-construction	Contractor	Closed	The Urban Design and Landscaping plan for the project has received conditional approval. The project submitted Addendum 1 to the UDLMP to DPI&E on 30/04/2020 which captured the amendments to the landscaping works around the pump station and control units in Grafton. DPI&E provided correspondence on 21/07/2020 that they have no comments at this time.	Compliant
	Prior to the commencement of construction of the SSI, or as otherwise agreed by the Secretary, the Proponent shall nominate for the approval of the Secretary a suitably qualified and experienced Environmental Representative(s) that is independent of the design and construction personnel. The Proponent shall employ the Environmental Representative(s) for the duration of construction, or as otherwise agreed by the Secretary. The Environment Representative(s) shall: (a) be the principal point of advice in relation to the environmental performance of the SSI; (b) monitor the implementation of environmental management plans and monitoring programs required under this approval and advise the Proponent upon the achievement of these plans/programs; (c) have responsibility for considering and advising the Proponent on matters specified in the conditions of this approval, and other licences and approvals related to the environmental performance and impacts of the SSI; (d) ensure that environmental auditing is undertaken in accordance with the Proponent's Environmental Management System(s); (e) be given the authority to approve/reject minor amendments to the Construction Environment Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environment Management Plan; (f) be given the authority to approve/reject Out of Hours Works in accordance with condition D4. These works shall be conducted in accordance with the Out of Hours Works Protocol (OOHW Protocol) required in accordance with condition D46(a)(vi); (g) be given the authority to approve/reject ancillary facilities in accordance with conditions D36 and D37; (h) be given the authority to approve/reject ancillary facilities in accordance with conditions D36 and D37; (h) be given the authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, to direct that relevant actions be ceased immediately should an adver	Pre-construction	Contractor	Closed	Simon Williams has been appointed the Environmental Representative for the project/approved by DPE on 16/1/2015.	Compliant

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	The Environmental Representative shall prepare and submit to the Secretary a monthly report on the Environmental Representative's actions and decision on matters specified in condition D43 for the preceding month. The reports shall be submitted within seven (7) days from the end of each month for the duration of construction of the SSI, or as otherwise agreed by the Secretary. Notwithstanding, the Environmental Representative shall be given the independence to report to the Secretary at any time and/or at the request of the Secretary.	Pre-construction	Contractor	Closed	The Project Environmental Representative restarted in early 2016 and increased presence at 20 September, 2016. Recommenced monthly reports from October 2016 as agreed with DPE.	Compliant
	The Proponent shall prepare and implement a Construction Environmental Management Plan for the SSI, prior to the commencement of construction, or as otherwise agreed by the Secretary. The Plan shall be prepared in consultation with relevant agencies and Council and outline the environmental management practices and procedures that are to be followed during construction. The Plan shall be prepared in accordance with the <i>Guideline for the Preparation of Environmental Management Plans</i> (Department of Infrastructure, Planning and Natural Resources, 2004): SEE CRITERIA Clause D45 (a) - (d)(x) of Consolidated instrument Grafton Bridge Modification Document	Pre-construction	Contractor	Closed	CEMP has been submitted to the Secretary for approval. The following associated management plans have also been submitted to the Secretary for approval: - CNVMP - CSWQMP - CFFMP - CAQMP - CCLMP - CFMP - CHMP - CHMP - CHMP - CHMP - CTAMP. The CEMP and Management Plans were approved by DPE.	Compliant
	As part of the Construction Environmental Management Plan for the SSI, the Proponent shall prepare and implement: SEE CRITERIA Clause D46 (a) - (f)(vii) of Consolidated instrument Grafton Bridge Modification Document	Pre-construction	Contractor	Closed	DPE CEMP approval was received on 4 October 2016, subject to addressing 4 conditions. DPE issue another letter dated 5 October 2016 correcting errors in the CEMP plan list.	Compliant

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Part E - Op	perational Environmental Management, Reporting and Auditing					
E1.	The SSI shall be designed and operated with the objective of not exceeding the road noise criteria outlined in the NSW Road Noise Policy (Department of Environment, Climate Change and Water, 2011).	Pre-construction, Operation	Contractor and TfNSW	Open	There are extensive Environmental Document requirements for design and operation in regards to noise. The SWTC App 4 includes extensive operational noise requirements. The Operational Noise Management Report has been considered as part of detailed design with at house noise treatments and mitigation measures installed at identified receivers as part of construction works. The Operational Noise Compliance Monitoring is proposed to be completed within 12 months of operation in accordance with CoA E3, although this is dependant on the ongoing impacts of the COVID-19 Pandemic. TfNSW provided detail relating to this requirement in it's Response to COVID-19 report which was submitted to DPI&E on20/07/2020.	Compliant
E2.	The Pumping Station at Pound Street shall be designed and operated (including regular maintenance and testing) to not exceed the noise criteria in the NSW Industrial Noise Policy (2000).	Pre-construction, construction, operation	Contractor	Closed	The pump station has been tested during commissioning and does not exceed the INP criteria. Being underground, the pumps are barely audible above background noise. It is noted that the pumps are only operated for a short duration during testing or at times of flood.	Compliant
E3.	The Proponent shall undertake operational noise monitoring, to compare actual noise performance of the SSI against noise performance predicted in the review of noise mitigation measures required by condition D11 within 12 months of the commencement of operation of the SSI, or as otherwise agreed by the Secretary. The Proponent shall subsequently prepare an Operational Noise Compliance Report to document this monitoring. The Report shall include, but not necessarily be limited to: (a) noise monitoring to assess compliance with the operational noise levels predicted in the review of operational noise mitigation measures required under condition D11 and documents listed in condition A2; (b) a review of the operational noise levels in terms of criteria and noise goals established in the NSW Road Noise Policy 2011; (c) methodology, location and frequency of noise monitoring undertaken, including monitoring sites at which SSI noise levels are ascertained, with specific reference to locations indicative of impacts on sensitive receivers; (d) details of any complaints and enquiries received in relation to operational noise generated by the SSI between the date of commencement of operation and the date the report was prepared; (e) any required recalibrations of the noise model taking into consideration factors such as noise monitoring and actual traffic numbers and proportions; (f) an assessment of the performance and effectiveness of applied noise mitigation measures together with a review and if necessary, reassessment of feasible and reasonable mitigation measures with a review and in necessary, reassessment of feasible and reasonable mitigation measures in the review of noise mitigation measures required by condition D11, that would be implemented with the objective of meeting the criteria outlined in the NSW Road Noise Policy 2011, when these measures would be implemented and how their effectiveness would be measured and reported to the Secretary and the EPA. The Proponent shall provide the Secretary and the	Pre-construction, construction, operation	TfNSW	Open	Stage 1 of the project was completed on 12 December 2019 with the opening of the main bridge structure and approaches to design speed and triggers the requirement for operational noise monitoring and reporting. Stage 2 works were completed in August 2020 with the project being fully open to traffic on 21/08/2020. Operational noise monitoring applicable to the project would be undertaken in accordance with Condition E3 once traffic is travelling at the design speeds and following the opening of Stage 2 to traffic. This CoA has been included in the Response to COVID 19 document submitted to DPI&E and outlines the possible impacts that the COVID 19 Pandemic may have on TfNSW undertaking the required task in the specified timeframe. TfNSW has proposed mitigation measure of seeking an extension of time to complete the monitoring and submit the report to DPI&E should there be any impacts from the COVID 19 Pandemic.	
E4.	Prior to the commencement of operation, the Proponent shall incorporate the SSI into existing environmental management systems administered by the Proponent and prepared in accordance with the AS/NZS ISO 14000 or similar Environmental Management System series. If there is an inconsistency between the existing environmental management systems and the conditions of this SSI approval, the requirements of this SSI approval shall prevail.	Construction, Operation	Contractor and TfNSW	Closed	Operation and Maintenance Manuals and Reports have been developed by the project which included an environmental component to capture the ongoing environmental requirements to be implemented during operation. These requirements have been incorporated into the Proponents overall maintenance management systems which includes an environmental management system and will be handed over to Clarence Valley Council for inclusion in their maintenance systems.	Compliant

CoA Ref	Condition	Timing	Responsible Party	Status (open/ closed)	Compliance comments	Compliance (Compliant/Non- compliant/Not Triggered)
	Within 18 months of the commencement of operation, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the SSI. This audit shall: (a). be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary; (b). include consultation with the relevant agencies and Council; (c). assess the environmental performance of the SSI and assess whether it is complying with the requirements in this approval, and any other relevant approvals (including any assessment, plan or program required under these approvals); (d). review the adequacy of any approved strategy, plan or program required under the abovementioned approvals; and (e). recommend measures or actions to improve the environmental performance of the SSI, and/or any strategy, plan or program required under these approvals.	Operation	TfNSW	Open	The project became fully operational and open to traffic on 21st August 2020. TfNSW will commence a procurement strategy and undertake the requirements of the audit within 18 months of the project becoming fully open to traffic and operational.	Compliant
	Within 90 days of commissioning this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary and relevant public authorities, together with its response to any recommendations contained in the audit report. Should the Audit identify unsatisfactory compliance with the SSI approval, the Secretary may require an additional Audit to be undertaken at a later date(s).	Operation	TfNSW	Open	Refer to details provide for CoA E4 above. TfNSW will provide a copy of the audit report as required.	Not Triggered
	The Proponent shall maintain the SSI in accordance with the documents listed in condition A2 and any strategy, plan, program or other document required by the conditions of this approval.	Operation	TfNSW	Open	Noted.	Not Triggered



APPENDIX B

Water Quality Monitoring Results





B-1: Surface water quality monitoring completed during the reporting period

Date	Weather conditions	Sampling Location	Location ID	Turbidity	рН	Conductivity	Temperature	Oil and Grease	Algae	Debris and rubbish	Flow rate	Colour
19/11/2019	Dry	Sailing Club	US1	5	7.50	592	23.1	No	No	No	Slow- tidal	clear
19/11/2019	Dry	Boat Ramp South	US2	5	7.54	610	23.2	No	No	No	Slow- tidal	Clear
19/11/2019	Dry	Alipou Creek	US3	8	7.9	856	20.1	No	No	No	Slow- tidal	Moderate tannin
19/11/2019	Dry	Pound Street	DS1	6	7.8	622	22.8	No	No	No	Slow- tidal	Clear
19/11/2019	Dry	DS River/Butters Lane	DS2	5	7.6	751	22.9	No	No	No	Slow- tidal	Clear
16/12/2019	Dry	Sailing Club	US1	4	6.8	600	22.9	No	No	No	Slow- tidal	Clear
16/12/2019	Dry	Boat Ramp South	US2	5	7.1	685	22	No	No	No	Slow- tidal	Clear
16/12/2019	Dry	Alipou Creek	US3	9	7.2	900	19.8	No	No	No	Slow- tidal	Brown
16/12/2019	Dry	Pound Street	DS1	5	6.9	655	22.9	No	No	No	Slow- tidal	Clear
16/12/2019	Dry	DS River/Butters Lane	DS2	3	7.2	705	23.1	No	No	No	Slow- tidal	Brown

No surface water monitoring was recorded after the marine works were completed in 2019. All barges, boats and equipment was demobilised from the Clarence River in 2019, there was no longer a need to monitor river water quality.

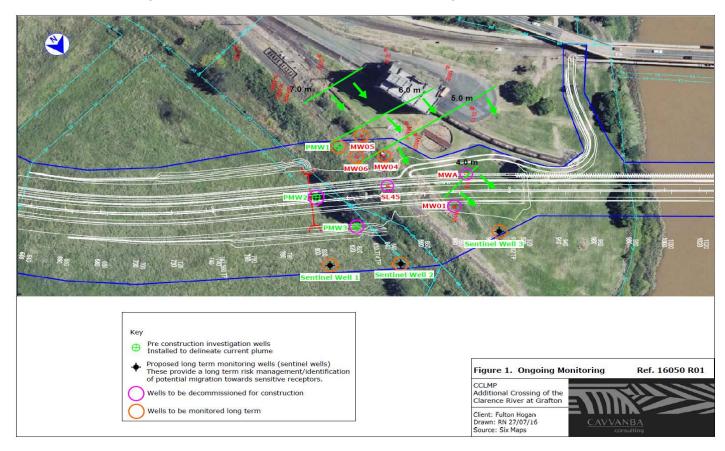
Results recorded during construction were indicative of background conditions and showed no impacts at any time from the construction activities.



B-2: Ground water quality monitoring completed during the reporting period.

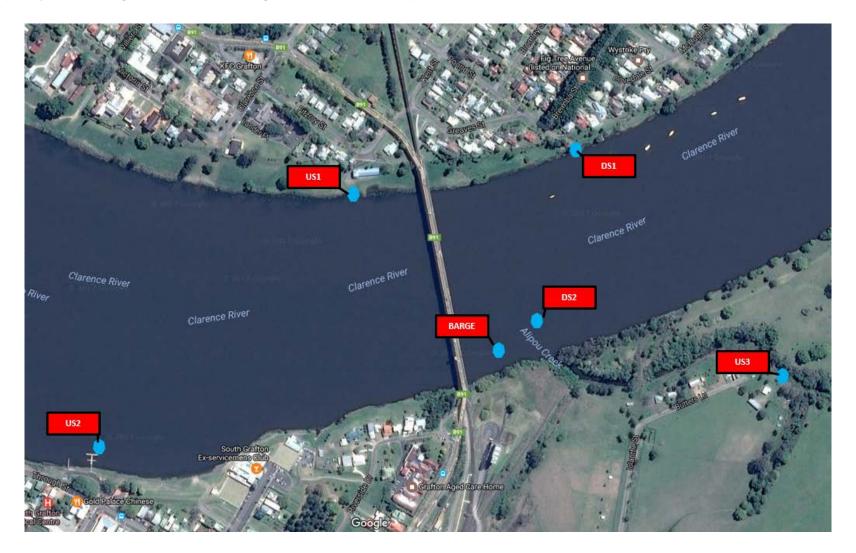
No groundwater monitoring completed during the reporting period.

A map showing the location of the monitoring bores and sentinel that were monitored during construction for the ARTC land has been included below.





Transport for NSW B-3: Water quality monitoring locations, including extra locations sampled for construction





APPENDIX C

Noise and Vibration Monitoring Results



Monitoring Type	Date	Day	Time (24 hr)	Works Activity	Works Location	Monitoring Location	NML (RBL+5)	LAeq15	LAmax	LAmin	Compliant	Additional Comments
Out of hours	26/04/2020	Sunday	21:30	Line marking	South Grafton	25 Through St	37	44.2	46	38.5	Yes	Dominant noise was Bent Street traffic. Works were not audible.
Out of hours	6/05/2020	Wednesday	23:15	Drainage and sign defect rectification	Iolanthe and Through Street	Butters lane	46	44.7	46.2	37.5	Yes	Measured noise was within the range of the predicted noise output.
Out of hours	21/5/2020	Thursday	20:05	Subsoil and pavement works	Fill 2 northern tie in	Federation Street	46					Audibility check on Federation Street, works were confirmed as not audible.
Out of hours	2/06/2020	Tuesday	21:10	Pavement works	Gwydir Hwy RAB	Ryan Street	46	47.6	49.1	44.1	Yes	Dominant noise source was traffic.
Out of hours	2/07/2020	Thursday	19:45	Barrier removal	Gwydir Hwy RAB	Ryan Street	46	49.6	54.7	42.4	Yes	Dominant noise source was traffic. Construction works were not audible.
Out of hours	25/07/2019	Thursday	23:25	Finishing pavement works	Gwydir Hwy RAB	Ryan Street	46					Audibility check on Ryan Street, works were confirmed as not audible.



C-2: Vibration monitoring completed during the reporting period

Clarence River Crossing - Vibration Monitoring Register

No vibration monitoring was undertaken throughout the reporting period due to completion of all activities likely to impact receivers. The last monitoring event for the project was undertaken on 25/09/2019.

Date	Start Time	End Time	Construction Activity	Plant	Nearest Receiver	Monitoring location	Structure	Building Structure Requirement (mm/s)	Human Response Criteria (mm/s)	Recorded Peak (mm/s)	Screening level Exceeded (7.5 mm/s)	No. of Exceedances	Action	Compliant
3/7/19	930	1630	Segment lifts on northern crane pad	750 t crane	10 Greaves St	10 Greaves St	Residential	20	200	0.50	No	0	Nil	Yes
9/7/19	11:00	12:00	Segment lifts on northern crane pad	750 t crane	10 Greaves St	8 Greaves	Residential	20	200	0.50	No	0	Nil	Yes
23/7/19	6:00	16:00	Segment lifts on northern crane pad	751 t crane	11 Greaves St	8 Greaves	Residential	20	200	1.48	No	0	Nil	Yes
24/7/19	6:00	12:30	Segment lifts on northern crane pad	750 t crane	10 Greaves St	8 Greaves	Residential	20	200	0.75	No	0	Nil	Yes
25/7/19	6:00	14:00	Segment lifts on northern crane pad	751 t crane	10 Greaves St	8 Greaves	Residential	20	200	0.72	No	0	Nil	Yes
3/7/19	930	1630	Segment lifts on northern crane pad	750 t crane	10 Greaves St	10 Greaves St	Residential	20	200	0.50	No	0	Nil	Yes
5/8/19	6:00	18:00	Crane operations, segment erection works, truck movement	750t Crane, truck and dog, 120 T excavator	8 Greaves Street	8 Greaves Street	Residential	20	200	0.53	No	0	Nil	Yes
6/8/19	6:00	18:00	Crane operations, segment	750t Crane, truck and	8 Greaves Street	8 Greaves Street	Residential	20	200	0.93	No	0	Nil	Yes



Date	Start Time	End Time	Construction Activity	Plant	Nearest Receiver	Monitoring location	Structure	Building Structure Requirement (mm/s)	Human Response Criteria (mm/s)	Recorded Peak (mm/s)	Screening level Exceeded (7.5 mm/s)	No. of Exceedances	Action	Compliant
			erection works, truck movement	dog, 120 T excavator										
7/8/19	6:00	18:00	Crane operations, segment erection works, truck movement	750t Crane, truck and dog, 120 T excavator	8 Greaves Street	8 Greaves Street	Residential	20	200	0.37	No	0	Nil	Yes
8/8/19	6:00	18:00	Crane operations, segment erection works, truck movement	750t Crane, truck and dog, 120 T excavator	8 Greaves Street	8 Greaves Street	Residential	20	200	1.43	No	0	Nil	Yes
9/8/19	6:00	18:00	Crane operations, segment erection works, truck movement	750t Crane, truck and dog, 120 T excavator	8 Greaves Street	8 Greaves Street	Residential	20	200	1.04	No	0	Nil	Yes
10/8/19	6:00	18:00	Crane operations, segment erection works, truck movement	750t Crane, truck and dog, 120 T excavator	8 Greaves Street	8 Greaves Street	Residential	20	200	0.24	No	0	Nil	Yes
11/8/19	6:00	18:00	Crane operations, segment erection works, truck movement	750t Crane, truck and dog, 120 T excavator	8 Greaves Street	8 Greaves Street	Residential	20	200	0.32	No	0	Nil	Yes
12/8/19	18:00	6:00	Villiers St demolition	Asphalting Plant, 120	36 Villiers St	36 Villiers St	Heritage	20	200	2.32	No	0	Nil	Yes



Date	Start Time	End Time	Construction Activity	Plant	Nearest Receiver	Monitoring location	Structure	Building Structure Requirement (mm/s)	Human Response Criteria (mm/s)	Recorded Peak (mm/s)	Screening level Exceeded (7.5 mm/s)	No. of Exceedances	Action	Compliant
			and asphalting	T Excavator										
14/8/19	6:00	18:00	Crane operations, segment erection works, truck movement	750t Crane, truck and dog, 120 T excavator	8 Greaves Street	8 Greaves Street	Residential	20	200	1.20	No	0	Nil	Yes
15/8/19	6:00	18:00	Crane operations, segment erection works, truck movement	750t Crane, truck and dog, 120 T excavator	8 Greaves Street	8 Greaves Street	Residential	20	200	0.43	No	0	Nil	Yes
16/8/19	6:00	18:00	Crane operations, segment erection works, truck movement	750t Crane, truck and dog, 120 T excavator	8 Greaves Street	8 Greaves Street	Residential	20	200	0.37	No	0	Nil	Yes
17/8/19	6:00	18:00	Crane operations, segment erection works, truck movement	750t Crane, truck and dog, 120 T excavator	8 Greaves Street	8 Greaves Street	Residential	20	200	1.63	No	0	Nil	Yes
18/8/19	6:00	18:00	Crane operations, segment erection works, truck movement	750t Crane, truck and dog, 120 T excavator	8 Greaves Street	8 Greaves Street	Residential	20	200	0.62	No	0	Nil	Yes
19/8/19	6:00	18:00	Crane operations, segment erection	750t Crane, truck and	8 Greaves Street	8 Greaves Street	Residential	20	200	0.47	No	0	Nil	Yes



Date	Start Time	End Time	Construction Activity	Plant	Nearest Receiver	Monitoring location	Structure	Building Structure Requirement (mm/s)	Human Response Criteria (mm/s)	Recorded Peak (mm/s)	Screening level Exceeded (7.5 mm/s)	No. of Exceedances	Action	Compliant
			works, truck movement	dog, 120 T excavator										
20/8/19	6:00	18:00	Crane operations, segment erection works, truck movement	750t Crane, truck and dog, 120 T excavator	8 Greaves Street	8 Greaves Street	Residential	20	200	0.88	No	0	Nil	Yes
21/8/19	6:00	18:00	Crane operations, segment erection works, truck movement	750t Crane, truck and dog, 120 T excavator	8 Greaves Street	8 Greaves Street	Residential	20	200	0.68	No	0	Nil	Yes
22/8/19	6:00	18:00	Crane operations, segment erection works, truck movement	750t Crane, truck and dog, 120 T excavator	8 Greaves Street	8 Greaves Street	Residential	20	200	1.03	No	0	Nil	Yes
23/8/19	6:00	18:00	Crane operations, segment erection works, truck movement	750t Crane, truck and dog, 120 T excavator	8 Greaves Street	8 Greaves Street	Residential	20	200	0.88	No	0	Nil	Yes
11/9/19	6:00	18:00	Plant movement, fill 3 compaction, barrier and parapet installation	Truck and Dog , pozi track, 13T excavator, smooth drum roller	8 Greaves Street	8 Greaves Street	Residential	20	200	1.08	No	1	Nil	Yes
12/9/19	6:00	18:00	Plant movement, fill 3 compaction,	Truck and Dog , pozi track, 13T	8 Greaves Street	8 Greaves Street	Residential	20	200	1.42	No	2	Nil	Yes



Date	Start Time	End Time	Construction Activity	Plant	Nearest Receiver	Monitoring location	Structure	Building Structure Requirement (mm/s)	Human Response Criteria (mm/s)	Recorded Peak (mm/s)	Screening level Exceeded (7.5 mm/s)	No. of Exceedances	Action	Compliant
			barrier and parapet installation	excavator, smooth drum roller										
13/9/19	6:00	18:00	Plant movement, fill 3 compaction, barrier and parapet installation	Truck and Dog , pozi track, 13T excavator, smooth drum roller	8 Greaves Street	8 Greaves Street	Residential	20	200	0.54	No	3	Nil	Yes
14/9/19	6:00	18:00	Plant movement, fill 3 compaction, barrier and parapet installation	Truck and Dog , pozi track, 13T excavator, smooth drum roller	8 Greaves Street	8 Greaves Street	Residential	20	200	0.31	No	4	Nil	Yes
15/9/19	6:00	18:00	Plant movement, fill 3 compaction, barrier and parapet installation	Truck and Dog , pozi track, 13T excavator, smooth drum roller	8 Greaves Street	8 Greaves Street	Residential	20	200	0.35	No	5	Nil	Yes
16/9/19	6:00	18:00	Plant movement, fill 3 compaction, barrier and parapet installation	Truck and Dog , pozi track, 13T excavator, smooth drum roller	8 Greaves Street	8 Greaves Street	Residential	20	200	1.99	No	6	Nil	Yes
17/9/19	6:00	18:00	Plant movement, fill 3 compaction, barrier and parapet installation	Truck and Dog , pozi track, 13T excavator, smooth drum roller	8 Greaves Street	8 Greaves Street	Residential	20	200	1.39	No	7	Nil	Yes
18/9/19	6:00	18:00	Plant movement, fill 3 compaction,	Truck and Dog , pozi track, 13T	8 Greaves Street	8 Greaves Street	Residential	20	200	0.34	No	8	Nil	Yes



Date	Start Time	End Time	Construction Activity	Plant	Nearest Receiver	Monitoring location	Structure	Building Structure Requirement (mm/s)	Human Response Criteria (mm/s)	Recorded Peak (mm/s)	Screening level Exceeded (7.5 mm/s)	No. of Exceedances	Action	Compliant
			barrier and parapet installation	excavator, smooth drum roller										
19/9/19	6:00	18:00	Plant movement, fill 3 compaction, barrier and parapet installation	Truck and Dog , pozi track, 13T excavator, smooth drum roller	8 Greaves Street	8 Greaves Street	Residential	20	200	0.66	No	9	Nil	Yes
20/9/19	6:00	18:00	Plant movement, fill 3 compaction, barrier and parapet installation	Truck and Dog , pozi track, 13T excavator, smooth drum roller	8 Greaves Street	8 Greaves Street	Residential	20	200	1.19	No	10	Nil	Yes
21/9/19	6:00	18:00	Plant movement, fill 3 compaction, barrier and parapet installation	Truck and Dog , pozi track, 13T excavator, smooth drum roller	8 Greaves Street	8 Greaves Street	Residential	20	200	1.19	No	11	Nil	Yes
23/9/19	6:00	18:00	Plant movement, fill 3 compaction, barrier and parapet installation	Truck and Dog , pozi track, 13T excavator, smooth drum roller	8 Greaves Street	8 Greaves Street	Residential	20	200	0.80	No	12	Nil	Yes/
24/9/19	6:00	18:00	Plant movement, fill 3 compaction, barrier and parapet installation	Truck and Dog , pozi track, 13T excavator, smooth drum roller	8 Greaves Street	8 Greaves Street	Residential	20	200	1.37	No	13	Nil	Yes
25/9/19	6:00	18:00	Plant movement, fill 3 compaction,	Truck and Dog , pozi track, 13T	8 Greaves Street	8 Greaves Street	Residential	20	200	1.26	No	14	Nil	Yes



Date	Start Time	End Time	Construction Activity	Plant	Nearest Receiver	Monitoring location	Structure	Building Structure Requirement (mm/s)	Human Response Criteria (mm/s)	Recorded Peak (mm/s)	Screening level Exceeded (7.5 mm/s)	No. of Exceedances	Action	Compliant
			barrier and parapet installation	excavator, smooth drum roller										



Air Quality Monitoring Results

No vibration monitoring was undertaken throughout the reporting period as agreed with NSW EPA.

October 2019

LabID	Sample Description	Date On	Date Off	Number of Days	Insoluble Solids	Ash	Combustible	Calculated Rain
							Matter	
			Units	days	g/m2/mth	g/m2/mth	g/m2/mth	mm
			Method Code	AS 3580.10.1	AS 3580.10.1	AS 3580.10.1	AS 3580.10.1	AS 3580.10.1
			Limit of Report		0.1	0.1	0.1	1
8249/1	Control	16/09/2019	16/10/2019	30	2.2	1.7	0.5	50
8249/2	DMG2Rail	16/09/2019	16/10/2019	30	2.3	2.0	0.3	54
8249/3	DMG3Bunnings	16/09/2019	16/10/2019	30	4.6	3.8	0.8	56
8249/4	Pound Street	16/09/2019	16/10/2019	30	2.7	2.4	0.3	45

Results have been approved and report finalised on 28/10/2019

NATA Accredited Laboratory - 20375

Accredited for compliance with ISO/IEC 17025 – Testing. The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.





November 2019

LabID	Sample Description	Date On	Date Off	Number of Days	Insoluble Solids	Ash	Combustible	Calculated Rain
							Matter	
			Units	days	g/m2/mth	g/m2/mth	g/m2/mth	mm
			Method Code	AS 3580.10.1	AS 3580.10.1	AS 3580.10.1	AS 3580.10.1	AS 3580.10.1
			Limit of Report		0.1	0.1	0.1	1
8385/1	Control	16/10/2019	25/11/2019	40	1.0	0.7	0.3	11
8385/2	DMG2Rail	16/10/2019	25/11/2019	40	1.4	1.1	0.3	9
8385/3	DMG3Bunnings	16/10/2019	25/11/2019	40	2.4	2.0	0.4	11
8385/4	Pound Street	16/10/2019	25/11/2019	40	2.8	2.1	0.7	11

Results have been approved and report finalised on 3/12/2019

NATA Accredited Laboratory - 20375

Accredited for compliance with ISO/IEC 17025 – Testing. The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

