

North West Rail Link
Environmental Construction Compliance Report #4
October 2014 to March 2015



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Executive Summary

This Construction Compliance Report documents TfNSW's and its delivery contractors' compliance with three Planning Approvals (SSI-5100, SSI-5414, and SSI-5931) that have been granted to the North West Rail Link project. This report covers the period 1 October 2014 to 31 March 2015 and is provided to the Department of Planning and Environment (DP&E) in accordance with these Planning Approvals.

Approval of the Construction Environmental Management Plan for Phase 1 (Rapid Transit Rail Facility, RTRF and Cudgegong Road) of OTS works was granted by DP&E on 27 March 2015. Subsequently construction work commenced at the RTRF in March 2015.

The environmental compliance program continued to intensify during the reporting period with all three major works packages active. Over 1600 environmental requirements were monitored, 39 environmental inspections were conducted by the 3 Environmental Representatives which identified 265 issues in total. Two active Compliance Working Groups (TSC and SVC CWG) co-ordinated ongoing audit programs with a third (OTS CWG) in the process of establishment during March 2015.

The SVC contractor is currently reporting high numbers of environmental issues, audit findings and non-compliances and this summarises management activities that are in place to rectify. The TSC contractor reported fewer environmental issues for each month during this reporting period than any previous month since their construction program commenced. The project continues to report zero Class 1 or 2 incidents and the number of complaints received has reduced by 21%.

		TfNSW	TSC	SVC	OTS	Total (This Period)	Total (Previous Period)
Totals for period	Ongoing Conditions (Non-compliances during Quarter)	179 (1)	349 (0)	519 (15)	639 (0)	1686 (16)	950 (7)
	ER Inspections (Issues Raised)	NA	13 (50)	25 (212)	1 (3)	39 (265)	34 (134)
	Audits (Findings)	0 (0)	3 (5)	2 (23)	0 (0)	5 (28)	9 (16)
	Class 1 or 2 Incidents	0	0	0	0	0	0
	Complaints	9	61	8	0	78	105

1 Introduction

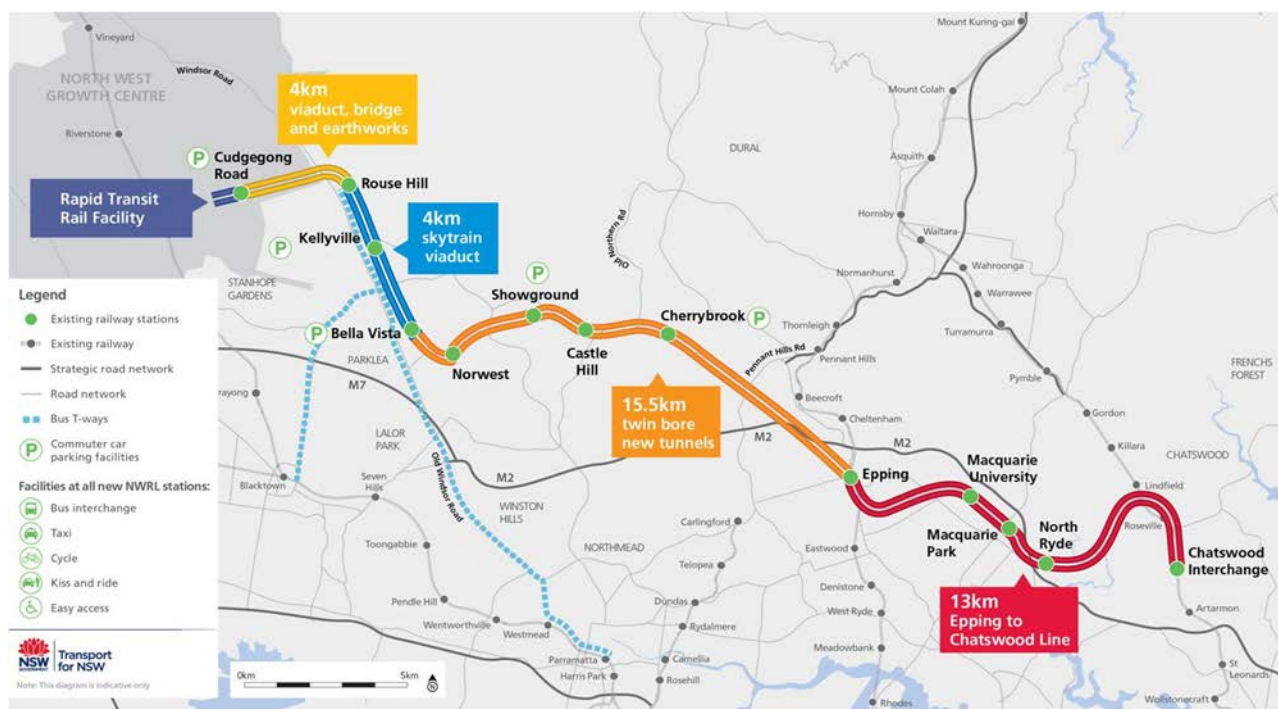
1.1 Purpose of this Report

This Construction Compliance Report documents Transport for New South Wales (TfNSW) and its delivery contractors' compliance with three Planning Approvals (SSI-5100, SSI-5414, and SSI-5931) that have been granted to the North West Rail Link (NWRL) project. These approvals require regular reports to the Secretary of the Department of Planning and Environment (DP&E) during construction of the NWRL with this being the fourth Construction Compliance Report covering the period between 1 October 2014 and 31 March 2015.

1.2 Background

The NWRL will deliver a new high frequency single deck train system initially operating as a shuttle between Cudgegong Road, Rouse Hill and Chatswood. The NWRL includes eight new stations, approximately 15.5 kilometres of tunnels from Epping to Bella Vista, a four kilometre elevated 'Skytrain' (viaduct) between Bella Vista and Rouse Hill, and conversion of the existing Epping to Chatswood Rail Link to deliver high frequency rapid transit services.

Figure 1 - Overview of Alignment



1.3 Statutory context

1.3.1 Planning Approvals

The NWRL is subject to environmental assessments under the NSW Environmental Planning and Assessment Act 1979 (EP&A Act) and is classified as Critical State Significant Infrastructure. Under amendments to the EP&A Act, the Concept Plan for the project, which was approved in 2008, is taken to be a Staged Infrastructure Approval under Part 5.1 of the Act. Under Part 5 of the EP&A Act the project also seeks approvals for other works as required and not already covered by an existing approval.

The project is also captured under the Commonwealth Environmental Protection and Biodiversity Conservation Act (EPBC Act) as a Controlled Action and required a Federal approval by the Australian Government Department of the Environment.

A summary of the approvals held by TfNSW that relate to the NWRL project is provided below:

Table 1 - NWRL Approvals

Approval	Determining Authority	Date Approved
Parramatta Rail Link	Minister for Planning	26/02/2002
Major Civil Construction works (approval reference: SSI-5100) as Modified	Minister for Planning	25/09/2012
Construction and Operation of NWRL (approval reference: EPBC 2012/6360)	Secretary for Department of Environment (Cwth)	11/04/2013
Stations, Rail Infrastructure and Systems (approval reference: SSI-5414) as Modified	Minister for Planning	08/05/2013
Rapid Transit Rail Facility (approval reference: SSI-5931)	Minister for Planning	15/01/2014
Lindfield South Substation	TfNSW (NWRL)	19/09/2014
ECRL Conversion	TfNSW (NWRL)	13/02/2015

1.3.2 Environmental Protection Licences

The NWRL requires its contractors to hold Environmental Protection Licences (EPL's) for works they undertake where those works trigger the need for an EPL under the Protection of the Environment Operations (POEO) Act. A summary of EPLs that active on the project during the reporting period is below.

Table 2 - NWRL Environmental Protection Licences

Licensee	Contract	Activity	EPL	Status
Thiess Pty Ltd	Tunnel and Station Civils	Concrete Works and Railway systems activities	20319	Issued, 30/09/2013
Salini Australia Pty Ltd	Surface and Viaduct Civils	Railway systems activities	20454	Issued, 03/06/2014
Northwest Rapid Transit (NRT)	Operations Trains and Systems	Railway systems activities	20544	Issued, 19/12/2014

This report does not document compliance against the above EPLs which is undertaken by the relevant contractor to the EPA.

2 Active construction packages

The following construction packages were active during the reporting period:

Table 3 - Active Construction Packages on the NWRL

Contract package	Contractor	Awarded	Status
Tunnel and Station Civils (TSC)	Thiess John Holland Dragados JV (TJHD)	July 2013	Construction ongoing
Surface and Viaduct Civils (SVC)	Impregilo Salini JV (ISJV)	December 2013	Construction ongoing
Operations Trains and Systems (OTS)	Northwest Rapid Transit (NRT)	September 2014	Construction ongoing
Linfield South Substation (OTS)	Laing O'Rourke (LORA)	November 2014	Construction ongoing

2.1 Tunnel and Station Civils (TSC)

The TSC package is to construct the 15.5 km twin tunnels between Epping station and tunnel portals immediately north of Celebration Drive at Bella Vista. A combination of road headers and tunnel boring machines (TBMs) are being used to construct the tunnel and tunnel cross passages. Other facilities have been constructed including those for pre-cast segment production, batch plants, spoil handling, tunnelling support and water treatment plants.

The TSC package represents sub-stage 1b under the Stage 1 Approval SSI-5100.

During the reporting period:

- TJHD remain active across all sites, and sites are largely sealed with well-established environmental controls;
- Boring operations have increased with four active TBM's in the ground. Following the launch of the first in September 2014, two more TBM's were launched in November 2014 and the fourth TBM was launched in January.

2.2 Surface and Viaduct Civils (SVC)

The SVC package is to construct an elevated 4km viaduct including earthworks between Bella Vista and Cudgegong Road, Rouse Hill. The package includes the construction of a 270m single span bridge over Windsor Road at Rouse Hill.

The SVC package represents sub-stage 1c under the Stage 1 Approval SSI-5100 and sub-stage 2a under the Stage 2 Approval SSI-5414. This second approval places requirements on permanent works design, including urban design of the viaduct.

During the reporting period:

- Site establishment works were ongoing.
- Site clearing and geotechnical works were completed.
- Viaduct segment production commenced and was ongoing at the end of the period.

- Piling works were ongoing.
- Pier construction commenced and was ongoing at the end of the period.

2.3 Operations Trains and Systems (OTS)

The OTS package will deliver the eight new stations shown in Figure 1 commencing at Cherrybrook and ending at Cudgegong Road. These stations are:

- Underground: Castle Hill, Showground and Norwest which are being built using a 'cut and cover' approach.
- Open cut: Cherrybrook, Bella Vista and Cudgegong Road are being built as open cut stations - that is, open to the sky, but below ground level.
- Elevated stations: Kellyville and Rouse Hill to be built on the viaduct

The OTS works also include the delivery of rail systems, rail track, precinct works and will provide the new rolling stock and will ultimately operate the NWRL for a 15 year period. This package represents sub-stage 2b under the Stage 2 Approval SSI-5414.

The OTS package will also deliver and operate the Rapid Transit Rail Facility (RTRF), which is a train stabling and maintenance facility at Tallawong Road, Rouse Hill. Accordingly TfNSW and the OTS package will be required to comply with Approval SSI-5931.

Additionally conversion of the Epping to Chatswood Rail Link (ECRL) is required to convert to rapid transit. This conversion will include the:

- Modification of track connections at Epping and Chatswood.
- Modification of systems including electrical, signalling, communications, fire and life safety, mechanical and fire systems.
- Modifications of Chatswood, North Ryde, Macquarie University, Macquarie Park and Epping stations
- Installation of air-control units within the station precincts at Epping, Macquarie University, Macquarie Park and North Ryde.

The above works will be subject to a new ECRL Conversion approval under Part 5 of the EP&A Act. The Parramatta Rail Link (PRL) Approval will, in part, also apply to the design and operation of the converted line.

During the reporting period:

- Approval of the NRT Phase 1 CEMP was received on 27 March 2015.
- Initial Design investigations work commenced.
- Site establishment and construction at the Rapid Transit Rail Facility (RTRF).

2.4 Lindfield South Substation (LSS)

The NWRL Project Delivery office is also overseeing the delivery of a new substation in Lindfield. The Lindfield South Substation will provide additional capacity to the North Shore Line on the Sydney trains network.

During the reporting period:

- Laing O'Rourke was appointed as Principal Contractor for the LSS works
- Preparation of environmental documents for approval by TfNSW was ongoing
- Commencement of initial design and investigation works

2.5 Planning Approval and Construction Package Relationship

A summary of the relationship between the planning approvals and construction packages is provided below:

Table 4 - Allocation of Approvals

Approval	Date Issued	TSC	SVC	OTS	LSS	TfNSW
SSI-5100 (Stage 1)	25/09/2012	✓	✓			✓
SSI-5414 (Stage 2)	08/05/2013		✓	✓		✓
SSI-5931 (RTRF)	15/01/2014			✓		✓
Lindfield Substation REF Approval	19/09/2014				✓	✓
ECRL Conversion REF Approval	13/02/2015			✓		✓
Commonwealth Approval (EPBC Act)	11/04/2013					✓
PRL Approval (Parramatta Rail Link)	26/02/2002			✓		✓

3 Environmental Management

3.1 Periodic review of compliance

A variety of activities are undertaken to ensure that compliance is managed effectively. Commitments to undertake regular monitoring of compliance are drawn from the NWRL project Environmental Management System (inclusive of the Construction Environmental Management Framework) and the Contractor’s Construction Environmental Management Plans (CEMP). These activities are summarised in Table 5.

Table 5 Compliance monitoring activities

Activity	Responsibility
Daily	
Ongoing site surveillance	<ul style="list-style-type: none"> Contractor(s)
Weekly	
Environmental Representative inspection	<ul style="list-style-type: none"> Independent ER
Environmental Manger’s site inspections	<ul style="list-style-type: none"> Contractor(s) and TfNSW
Review of environmental actions and controls	<ul style="list-style-type: none"> Contractor(s)
Monthly	
Environmental compliance status update	<ul style="list-style-type: none"> Contractor(s) to TfNSW TfNSW to Project Executive
Quarterly	
Risk assessment review	<ul style="list-style-type: none"> Contractor(s)
Compliance Review	<ul style="list-style-type: none"> TfNSW, Contractor(s) and Independent ER
Six Monthly	
Independent Environmental Auditing	<ul style="list-style-type: none"> Independent 3rd party auditor
Annual	
TfNSW Management review	<ul style="list-style-type: none"> TfNSW
Internal EMS auditing (annual audit cycle)	<ul style="list-style-type: none"> Contractor(s) and TfNSW

3.2 Auditing

There is a Compliance Working Group (CWG), compromised of representatives from the Contractors and TfNSW NWRL, for each major contract. The primary function of the CWGs is to oversee and co-ordinate audit programs within respective works packages, this includes the Contractors internal environmental audits and independent 3rd party environmental audits.

The NWRL governance structure incorporates several executive sub-committees one of which is called the Assurance Sub-Committee. Each CWG reports to the Assurance Sub-Committee which is chaired by members of the NWRL Executive team.

3.2.1 Internal audits

The first level of audit is undertaken by our Contractors with TfNSW NWRL representatives to an agreed schedule. Environmental audits cover:

- Compliance with approval, permit and licence conditions
- Compliance with the Contractor's, CEMP, sub-plans and procedures
- Community consultation and complaint response procedures
- Environmental training records
- Environmental monitoring and inspection results

3.2.2 Independent Audit

These CWGs also assists in coordinating the Independent Environmental Audit program required by Planning Approvals. These audits are targeted at certain Contract Packages or at TfNSW and may focus on specific issues that are prevalent at the time. The Independent Environmental Auditor is a 3rd party to TfNSW and the Contractors.

3.3 Incident Management

Emergency and incident response procedures are produced by each contractor as well as TfNSW and include:

- Categories for environmental emergencies and incidents;
- Forms for recording of environmental incident details and response;
- Notification protocols for each category of environmental emergency or incident, including notification of TfNSW and notification to owners / occupiers in the vicinity of the incident;
- Procedures for the immediate notification of each relevant authority when the incident results in material harm to the environment;
- Procedures for notification to the Director General within 48 hours of becoming aware of an off-site incident that significantly affects people or the biophysical environment. This notification will be followed by a full written report within 7 days of the date on which the incident occurred;
- Identification of personnel who have the authority to take immediate action to shut down any activity, or to affect any environmental control measure (including as directed by an authorised officer of the EPA); and
- On-site rectification actions.

Categories for environmental incidents are assigned three classes (1, 2 and 3) under the TfNSW incident management procedure. These classes are based upon the consequence matrix from the NWRL Risk Management Procedure as shown below in

Table 6.

Table 6 - Incident Classes

Class 3			Class 2		Class 1
C6	C5	C4	C3	C2	C1
No appreciable changes to environment and/or highly localised event.	Change from normal conditions within environmental regulatory limits and environmental effects are within site boundaries.	Short-term and/or well-contained environmental effects. Minor remedial actions probably required.	Impacts external ecosystem and considerable remediation is required.	Long-term environmental impairment in neighbouring or valued ecosystems. Extensive remediation required.	Irreversible large-scale environmental impact with loss of valued ecosystems.

3.4 Complaint Management

Complaints are handled through the NWRL Complaints Management System which forms part of the North West Rail Link (NWRL) Communications Management System. The System for managing complaints was approved by DP&E on 19 March 2013 and includes procedures for:

- Responding to complaints
- Recording complaints
- Escalation
- Mediation
- Reporting

3.5 Independent Environmental Representative

TfNSW engage independent Environmental Representatives (ER) as a third party adviser to TfNSW and our Contractors. The engagement of an ER is a requirement of the Planning Approvals, and their role is generally to:

- Monitor compliance with the Planning Approvals
- Be available to DP&E for advice
- Provide advice in relation to environmental performance
- Provide advice in relation to environmental performance
- Assist with the undertaking and reporting of site inspections
- Endorse works as non-construction works in accordance with the Planning Approvals
- Review relevant environmental reports and management plans
- Participate in auditing on an as needs basis

4 Compliance Accountability and Tracking

4.1 Compliance Status

Each Condition of Approval has been assessed to determine how it will be complied with over the life of the project. Specific details of this assessment are contained in the NWRL Staging Report. Each condition is initially determined to be **Active** at the project level until each works package to which it applies has provided evidence that it has discharged its obligations as described in the NWRL Staging report. At this point the condition will become **Inactive**.

Within each works package each applicable condition progresses through three distinct phases:

Pending: The condition is determined to apply to the works package, however that works package has not yet commenced construction or non-construction activities.

Ongoing: The condition is determined to apply to the works package and that works package has commenced construction or non-construction activities.

Complete: The condition is determined to apply to the works package and no further evidence is required to demonstrate compliance.

Where TfNSW has retained the obligation to comply with a particular condition, or holds a partial responsibility as defined in the NWRL Staging Report, it will be classified as **Ongoing** and tracked in the same manner as a works package.

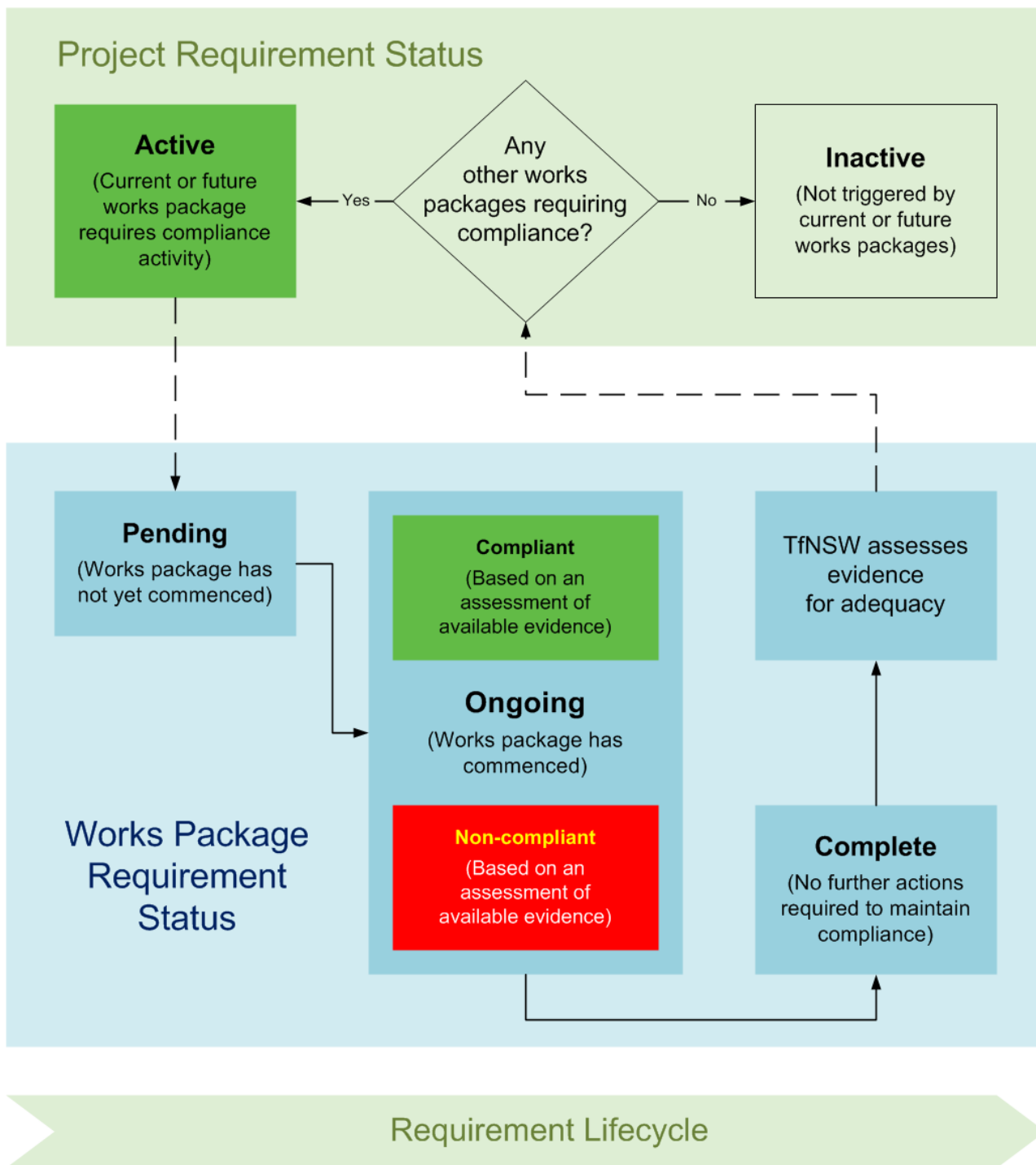
Compliance is assessed for Conditions of Approval with an **Ongoing** status and can be determined to be either **Compliant** or **Non-compliant**. These assessments occur during surveillance activities outlined in Table 5.

For the purposes of the NWRL Compliance Tracking Program Compliant and Non-Compliant are defined as:

Compliant: A temporary status assigned to a Condition of Approval which indicates a check of evidence has occurred and confirmed it is adequate to demonstrate the requirements of a condition is being met on the day it was checked.

Non-Compliant: A temporary status assigned to a Condition of Approval which indicates a check of evidence has occurred and confirmed it is inadequate to demonstrate the requirements of a condition is being met on the day it was checked.

Figure 2 - Requirements Lifecycle



5 Compliance Status

The total number of ongoing compliance requirements at the end of this reporting period was 1686. There was a total of 16 Non-Compliances against these requirements which are detailed in Table 8 and there were no significant environmental incidents during the reporting period.

There were 5 environmentally relevant audits during the reporting period which generated 28 environmental audit findings. There were 17 findings open at the end of the reporting period. All these open findings relate to the SVC contractor and management actions to address this is discussed further in section 5.2.

5.1 Compliance Overview

The results of the compliance monitoring are provided in Table 7. Non-compliances and audit findings are detailed in section 5.3 and 5.4. Issues and observations arising from the Environmental Representatives inspections that identify non-compliances against the MCoA are also included in section 5.3.

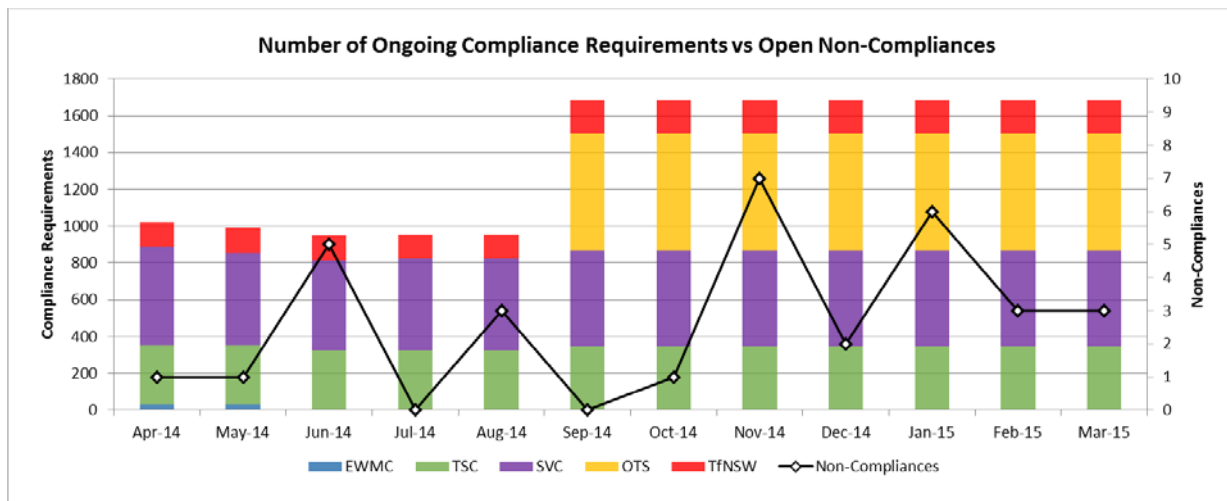
Table 7 Environmental Compliance Surveillance Data from April 2014 to September 2014

		TfNSW	TSC	SVC	OTS
By End of Q1 2015	Ongoing Conditions (Non-compliances during Quarter)	179 (0)	349 (0)	519 (9)	639 (0)
	ER Inspections (Issues Raised)	NA	6 (17)	12 (109)	1 (3)
	Audits (Findings)	0 (0)	1 (0)	0 (0)	NA
	Class 1 or 2 Incidents	0	0	0	0
	Complaints	8	36	2	46
By End of Q4 2014	Ongoing Conditions (Non-compliances during Quarter)	181 (1)	349 (0)	519 (6)	639 (0)
	ER Inspections (Issues Raised)	NA	7 (33)	13 (103)	0 (0)
	Audits (Findings)	0 (0)	2 (5)	2 (25)	NA
	Class 1 or 2 Incidents	0	0	0	NA
	Complaints	0	25	7	32

As the project progresses through its various stages the compliance load will fluctuate as shown in Figure 3. Predominantly the trend has been increasing as additional work packages come online, triggering compliance activities under the Planning Approvals. This compliance load will decrease as TSC and SVC contracts reach completion in 2016.

The ER’s also conducted five Quarterly compliance reviews against the conditions of approval since 1 October 2014 across the three major contracts. These reviews and other surveillance activities identified 16 Non-Compliances as shown in Figure 3 and detailed in Table 8.

Figure 3 - Compliance load and non-compliances



* Note that the ongoing compliance requirements in this graph include requirements relating to the PRL approval.

5.2 SVC Improvement Program

ISJV has established a number of construction sites in the last six months and an increase in the rate of environmental issues, environmental audit findings and non-compliances against the project approval has occurred.

In response TfNSW and ISJV are implementing measures to rectify, including:

- An increase in ISJV and TfNSW staff resourcing to target performance initiatives.
- Implementation of an ISJV environment awareness training program to construction staff.
- Improvement in pre-works planning during construction.

5.3 Non - Compliances

There were 16 non-compliances during the reporting period which are presented in Table 8 below.

Table 8 - List of non-compliances between May 2014 and September 2014

Month Raised	Contract	Identified Through	Condition	Classification	Issue	Status
Oct 14	SVC	Ongoing site surveillance	D1 (SSI-5100 and SSI-5414)	Unauthorised Works	ISJV commenced clearing and grubbing for the Haul Road between Memorial Avenue and the Samantha Riley site compound prior to expiry of the 7 day community consultation period.	Closed
Nov 14	SVC	Ongoing site surveillance	D1 (SSI-5100 and SSI-5414)	Unauthorised Works	Material Investigations works commenced onsite at 105 Schofields road prior to the community notification being distributed.	Closed
Nov 14	SVC	Ongoing site surveillance	D1 (SSI-5100 and SSI-5414)	Unauthorised Works	Barriers were placed on the SR Carpark verge between the roundabout on the SRD access road prior to the community notification being distributed.	Closed
Nov 14	SVC	Ongoing site surveillance	D1 (SSI-5100 and SSI-5414)	Unauthorised Works	Community notifications for the haul road sections between SRD to Windsor Road and Windsor Road to WHD were distributed Prior to TfNSW approval.	Closed
Nov 14	SVC	Environmental Representative inspection	B1 (SSI-5100 and SSI-5414)	Unauthorised Works	Internal hold point for commencing work in new area breached by commencing storage at amber tiles site prior to release of Pre-start environmental checklist.	Closed
Nov 14	SVC	Environmental Manger's site inspections	E46 and, E35 as modified (SSI-5100 and SSI-5414)	Flora and Fauna	Yellow tagged tree not removed in accordance with internal procedure. Ecologist not present during felling.	Closed
Dec 14	SVC	Environmental Manger's site inspections	B1 (SSI-5100 and SSI-5414)	Unauthorised Works	Late finishing (7:30pm) concrete pour at Test Pier without EPL OOHW Approval.	Closed
Dec 14	TfNSW	Compliance Review	E32 and, E27 as modified (SSI-5100 and SSI-5414)	Community	<p>A business Monitoring Report for Stage 1a (Early Works) was not produced and submitted to DP&E.</p> <p>The final ER quarterly review of Stage 1a indicated there were issues relating to the availability of evidence to demonstrate compliance to this condition. The requirements under this condition were completed as part of the Business Monitoring Report for Stage 1a to DP&E.</p> <p>It was subsequently determined that</p>	Closed

Month Raised	Contract	Identified Through	Condition	Classification	Issue	Status
					<p>TfNSW did not have enough evidence to demonstrate that the Early Works Managing Contractor followed the requirements of the Business Management Plan in relation to condition E32 of SSI-5100.</p> <p>It was determined that businesses were engaged appropriately under the Overarching Stakeholder and Community Involvement Plan (OSCIP) but this document sets a different approach to business management and did not link with the requirements of the Business Management Plan for Stage 1a.</p>	
Jan 15	SVC	Environmental Representative inspection	E46 and, E35 as modified (SSI-5100 and SSI-5414)	Systems and Documentation	During the ER inspection on 18/12/14 the pump being used to dewater sediment basin 1 was observed to be unattended, contrary to the ISJV dewatering procedure	Closed
Jan 15	SVC	Compliance Review	C7 and C34 (SSI-5100 and SSI-5414)	Systems and Documentation	The Stormwater and Flooding Management Plan (Rev 2.0) details that the proposed works on sites 9 to 12 cause minor afflux 150mm up to 300 mm in the PMF, which is inconsistent with part (b) of this condition. Sites 9-11 run in parallel and in close proximity to Elizabeth Macarthur Creek, between Bella Vista Station and Samantha Riley Drive. Site 12 spans the floodplain of Caddies Creek between Samantha Riley Drive and Windsor Road.	Closed
Jan 15	SVC	Compliance Review	C11 and C37 (SSI-5100 and SSI-5414)	Systems and Documentation	No surface water monitoring was undertaken in October or December and monitoring undertaken in November covered only 4 of the 12 locations. No groundwater monitoring was undertaken in this period. In addition, section (i) requires reporting of the monitoring results to the Department, EPA, DPI and NoW which has not occurred.	Closed
Jan 15	SVC	Compliance Review	E32 and, E27 as modified (SSI-5100 and SSI-5414)	Community	A Business Management Plan has been prepared by ISJV in accordance with this condition. Revision 6 of this plan was transmitted to TfNSW 29 April 2014. The plan requires quarterly reporting to meet condition E32(d). This reporting has not been completed. There was also limited awareness within ISJV of this requirement.	Closed
Jan 15	SVC	Compliance Review	A11 and A12 (REMM SR1 and SR2)	Systems and Documentation	The Planning Approval requires: Longer term and/or heavily used haul roads would generally be sealed. The criteria for sealing haul roads would be defined during detailed construction planning.	Closed
Feb 15	SVC	Environmental Representative inspection	E33 and, E28 as modified (SSI-5100 and SSI-	Water Pollution	Ongoing use of access road gate for bulk haulage despite non-compliant access.	Closed

Month Raised	Contract	Identified Through	Condition	Classification	Issue	Status
			5414)			
Mar 15	SVC	Ongoing site surveillance	E12 and, E13 as modified (SSI-5100 and SSI-5414)	Unauthorised Works	<p>Out of Hours Work request submitted by Daracon to ISJV Environment Manager approx. 2.30pm 13/3/15, for Saturday 14/3/15 13.00-18.00 for removal of work platform from forms, removal of bolts and locking pins from forms, lifting sections of forms to ground level, and wrapping of column in thermal blanket. Work to involve use of 55 tonne crane, 2 elevated work platforms, a rattlegun and 10 staff.</p> <p>The OOHW request was not approved because it could not be demonstrated the works would be below 5dB(A) at the nearest receiver, and Community notification had not been made.</p> <p>Formwork was removed from Pier 8 on Saturday morning, crane packed up at 1pm. Removal of formwork and installation of geofabric is required within 44- 48 hours of pouring concrete by engineering specification. EWP continued to be used until approx. 3pm for installation of geofabric.</p> <p>No complaints were received.</p>	Closed
Mar 15	SVC	Environmental Representative inspection	C21 (SSI-5100)	Waste and Hazardous Materials	During site inspection at Zone 6 it was observed that two oil containers were left unbanded and outside the required storage area for hazardous materials.	Closed

5.4 Audit Findings

Five environmental audits were conducted during this reporting period as shown in Table 9. These audits produced a total of 28 environmentally related findings which are detailed in Table 10 (note the findings in this table are para-phrased for the purpose of this report).

Table 9 - Environmental Audits between May 2014 and September 2014

Audit No	Auditee	Scope	Audit Date
TSC-AUD-047	TSC	Showground Environment Audit	17/11/2014
NWRL_008_SVC_ISJV	SVC	CEMP and Sub-Plans Implementation	1/12/14
TSC-AUD-046	TSC	Spoil Management Plan and Construction Traffic Management Plan	4/12/2014
ISJV-SVC-EN-004	SVC	Noise and Vibration Management Plan Implementation	16/12/2014
TSC-AUD-062	TSC	CEMP Implementation Audit	26/03/2015

Table 10 Environmental Audit findings from October 2013 to March 2014

#	Month	Audit ID	Works Package	Finding	Action	Status
1	Nov	TSC-AUD-047	TSC	The toolbox record for Site Environment Plan (SEP) revision 05 could not be located. SEP revision 06 has not yet been toolboxed.	Provide High Noise Impact Works toolbox records.	Closed
2	Nov	TSC-AUD-047	TSC	The Erosion and Sediment Control Plan (ESCP) revision 06 had been updated on 13/11. The plan was put up on the Health Safety and Environment board during the audit and is yet to be loaded onto Lotus Notes and put in the site documents.	Erosion and Sediment Control Plan ESCP (rev 05) covering station box excavation, structures erection and nozzle excavation was uploaded into Lotus Notes on 22/11/2014.	Closed
3	Dec	TSC-AUD-046	TSC	Ongoing proactive monitoring required by the TSC contractor to ensure no heavy vehicle marshalling occurs external to worksites.	Senior Project Engineer responsible for managing heavy vehicle sub-contractors has provided inductions to sub-contractor management and drivers on the Heavy Vehicle Code of Conduct.	Closed
4	Dec	NWRL_008_SVC_ISJV	SVC	Pre-construction background surface and groundwater monitoring had not been consistently undertaken at frequencies defined in the Water Quality Monitoring Program (WQMP).	ISJV will review currently available data, recommend further monitoring requirements if need be, and produce a Baseline Water Quality Report.	Open
5	Dec	NWRL_008_SVC_ISJV	SVC	Minimal task-specific training had not been delivered, and no formal plans had been developed as yet to facilitate this process.	ISJV will identify and deliver task-specific training identified by CEMP 5.8.2 to staff and sub-contractors. ISJV will update the Training Plan to reflect required environmental training for high-risk activities.	Open

#	Month	Audit ID	Works Package	Finding	Action	Status
					ISJV to update the CEMP to include additional details on roles and responsibilities relating to management and delivery of training.	
6	Dec	NWRL_008_SVC_ISJV	SVC	The document control system iTWOcx has not been used as yet to control the version and distribution of environment and related documentation including documentation required by sub-contractors.	Under Review*	Open
7	Dec	NWRL_008_SVC_ISJV	SVC	Site Superintendence responsibilities to co-ordinate required environmental protection measures and proactively conduct toolbox talks and site inspections had not been effectively implemented as yet.	ISJV Superintendents and Supervisors will actively participate in site environmental inspections and proactively conduct toolbox talks.	Open
8	Dec	NWRL_008_SVC_ISJV	SVC	The Management System Procedures referred to in the CEMP were not being updated to reflect new arrangements either resultant from changed practices or technology. CEMP 5.8.1 required the use of MSF15-6 Site Induction Form and MSR15-3 Site Induction Register but this is superseded by the DAMSTRA system.	ISJV will review the CEMP Management System Procedures and ensure they are reflective of site practices and technology being used for works.	Open
9	Dec	NWRL_008_SVC_ISJV	SVC	The intended process whereby subcontractors identify and document environmental risks and mitigation measures in their Work Method Statements is inconsistently implemented. Additionally, processes for review and distribution to contractors was informal.	ISJV will confirm the current new process and associated risks, assess actual use and implementation by subcontractors, and if acceptable, amend the CEMP accordingly.	Open
10	Dec	NWRL_008_SVC_ISJV	SVC	Processes used to define Planning Conditions and related technical requirements as design input had not always correctly identified relevant design-lot-specific requirements.	ISJV to facilitate a collaborative review of the SMEC Master Environment Compliance Register, to ensure that requirements allocated to specific design lots are correct.	Open
11	Dec	NWRL_008_SVC_ISJV	SVC	Design Planning Approval compliance (verification & review) procedures Environmental compliance verification and review processes were not adequately documented.	ISJV will review and update the Design Plan to address inadequate description of processes used for Planning Approval inputs and compliance verifications, as well as reflecting required ISJV Environment Team verification arrangements and systems used to assess and evidence compliance to the project approvals.	Open
12	Dec	NWRL_008_SVC_ISJV	SVC	ISJV environmental compliance verification and review processes were not consistently and thoroughly implemented.	ISJV will develop and implement a new version-controlled Interdisciplinary Check form identifying all relevant disciplines including environment and sustainability which prompts mandatory and voluntary review requirements.	Open

#	Month	Audit ID	Works Package	Finding	Action	Status
13	Dec	NWRL_008_SVC_ISJV	SVC	ISJV design sub-contractors' environmental compliance verification and review processes were not consistently and thoroughly implemented.	<p>ISJV will establish minimum frequency of environment participation in design sub-contractors' independent review and verification reviews for each phase of the design.</p> <p>The use of the design sub-contractors' Master Environment Compliance Register at the beginning of design phases for various design lots both as an input and extracted as a compliance review record will be confirmed.</p> <p>These processes will subsequently be documented in the ISJV Design Plan.</p>	Open
14	Dec	TSC-AUD-046	TSC	The CTMP did not reflect that the traffic inspection regime has changed from monthly to 3 - monthly based on the risk profile and lack of actions being identified.	CTMP updated Refer to version 7 Plan provided to TfNSW & ER on 19/12/14	Closed
15	Dec	TSC-AUD-046	TSC	The CTMP did not include a drawing showing the Memorial Avenue access.	CTMP updated Refer to version 7 Plan provided to TfNSW & ER on 19/12/14	Closed
16	Dec	ISJV-SVC-EN-004	SVC	The project environmental team will be significantly under resourced in January 2015 and there is no assurance that all prescribed inspections and monitoring will be undertaken at the required frequency.	Environmental Resource allocation was examined leading up to January 2015. In January 2015 the ISJV Environmental Department comprised an Environmental Manager and two Environmental Co-ordinators who completed all inspections at the required frequency however noise monitoring was not completed due to equipment failure. From February 2015 onwards all noise monitoring has been completed.	Closed
17	Dec	ISJV-SVC-EN-004	SVC	There is no formal process in place to make personnel aware of their responsibilities documented in the CNVMP and those responsibilities have not been documented in formal Position Descriptions.	Responsibilities from key positions as outlined in Section 4 of the CEMP have now been included in the corresponding Position Descriptions. The PD's have been communicated, distributed by the ISJV HR on 25/02/2015 and agreed with personnel. Refer to a sample attached.	Open

#	Month	Audit ID	Works Package	Finding	Action	Status
					Responsibilities from CNVMP are covered in the responsibilities table in Section 4 of the CEMP where key positions have responsibilities to implement all environmental controls in environmental management plans and procedures, and to implement the CEMP and related plans.	
18	Dec	ISJV-SVC-EN-004	SVC	There is no process in place to ensure that each subcontractor working on the site is subject to an environmental toolbox talk, records of toolbox talks have not been kept in some instances and there is no objective evidence that the Principal earthworks subcontractor is conducting environmental toolbox talks.	Under Review*	Open
19	Dec	ISJV-SVC-EN-004	SVC	The CNVIS for Piling Works and Piers has not evaluated the maximum diameter pile being used on the project nor has consideration been given to the fact that the piles are being socketed into rock.	Under Review*	Open
20	Dec	ISJV-SVC-EN-004	SVC	Dilapidation surveys have been undertaken based on geotechnical modelling rather than specified distances from buildings and infrastructure for particular items of plant used in adjacent construction activities.	ISJV will undertake a collaborative review of the Monitoring and Protection Plan with TfNSW and the ER to ensure the need for dilapidation surveys is being appropriately identified.	Open
21	Dec	ISJV-SVC-EN-004	SVC	Incident response requirements have not been formally communicated to the Construction Manager who has been allocated responsibilities in relation to responses.	Incident response requirements have been formally communicated to the Construction Manager through the project's Environmental Incident Response Work Instruction. The Construction Managers current PD includes the responsibility to respond to incident events.	Closed
22	Dec	ISJV-SVC-EN-004	SVC	The Plant Delivery Inspection (Cranes excepted) form does not include a requirement to confirm that each item of plant inspected does not exceed specified maximum allowable noise levels.	Under Review*	Open

#	Month	Audit ID	Works Package	Finding	Action	Status
23	Dec	ISJV-SVC-EN-004	SVC	Noise monitoring was not undertaken for September 2014 (the first month of construction) and some areas of the project were not monitored in December 2014.	Additional environmental resources were employed in January. Regular monitoring across the project has been maintained since.	Closed
24	Dec	ISJV-SVC-EN-004	SVC	Non Conformity Reports or Environmental Incident Reporting & Investigation forms are not being completed when noise levels are detected to exceed allowable upper limits.	The noise level reading referred to which exceeded the Noise management Level (NML) is not classified as an incident. ISJV will undertake Management Measures for exceedances of the NML as per the relevant CNVIS. The Noise Monitoring form has been amended to include details of this.	Closed
25	Dec	ISJV-SVC-EN-004	SVC	An owner or person responsible for ensuring the implementation of the Monitoring and Protection Plan had not been allocated at the time of the audit. It was noted however with regard to noise and vibration that most relevant matters have also been addressed in the CNVMP.	The ISJV Deputy Project Director has been allocated responsibility for the Monitoring and Protection Plan.	Closed
26	Dec	ISJV-SVC-EN-004	SVC	The positioning of noisy plant has not been included in the site induction and it could not be demonstrated that the information had been communicated by other means such as toolbox talks.	Requirements regarding the positioning of noisy plant have been included in the Environmental Controls maps, the CNVIS (Construction Noise & Vibration Impact Statement) and are included in Environmental Toolbox Talks.	Closed
27	Dec	ISJV-SVC-EN-004	SVC	Incidents are being reported, investigated and documented using the Environmental Incident Reporting & Investigation form. On one occasion there was no evidence that the form had been correctly distributed to the Construction Manager and Environmental Representative nor was there any objective evidence of notification within 24 hours.	Under Review*	Open
28	Dec	ISJV-SVC-EN-004	SVC	Appendix A Table 8 of the CNVMP documents appropriate working distances for various types and sizes of vibration intensive plant	Under Review*	Open

#	Month	Audit ID	Works Package	Finding	Action	Status
				<p>and equipment.</p> <p>Advice was provided that no monitoring was proposed as initial land surveys show that the majority of sensitive buildings are located a minimum of 50 m from proposed worksites and therefore outside the zone of influence (nominated in Table 8) where cosmetic damage could occur.</p> <p>However, the specified criteria for larger vibratory rollers documented in Table 8 require a clearance of 100 m to preclude a human response (complaints).</p>		

*Some audit findings were under review by the CWG at the time this report was issued.

5.5 Significant Incidents

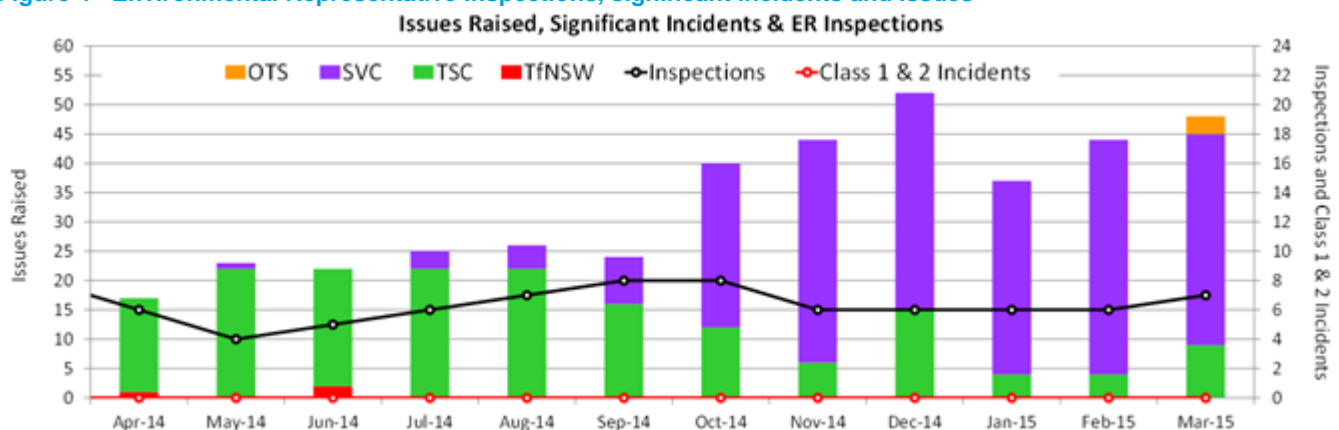
There were no significant (Class 1 or 2) incidents for the reporting period.

5.6 Environmental Representative (ER) Activity

A summary of Environmental Representative activity is provided below. There were 3 ERs on the project during the reporting period one each for the TSC, SVC, and OTS Contracts.

The ER's conducted a total of 39 environmental inspections where they raised 265 issues. December saw the highest number of environmental issues reported, due in part to Christmas shutdown preparations. The first weekly environmental inspection was conducted on the OTS contractor in March and issue frequency is expected to increase in the future.

Figure 4 - Environmental Representative Inspections, significant incidents and Issues



Issues relating to the prevention of water pollution, waste and hazardous material, flora and fauna and unauthorised works were the predominant issue types raised in the six-monthly reporting period by ER inspections. Unauthorised Works issues have significantly increased since the previous reporting period with 15 issues being raised since 1 October 2014 compared to only one issue in the previous 6 months.

A breakdown of the type of issues identified by the ER is provided below in Figure 5 and Figure 6.

Figure 5 – Rolling 12 Month Percentage of Environmental Issues Raised by Type

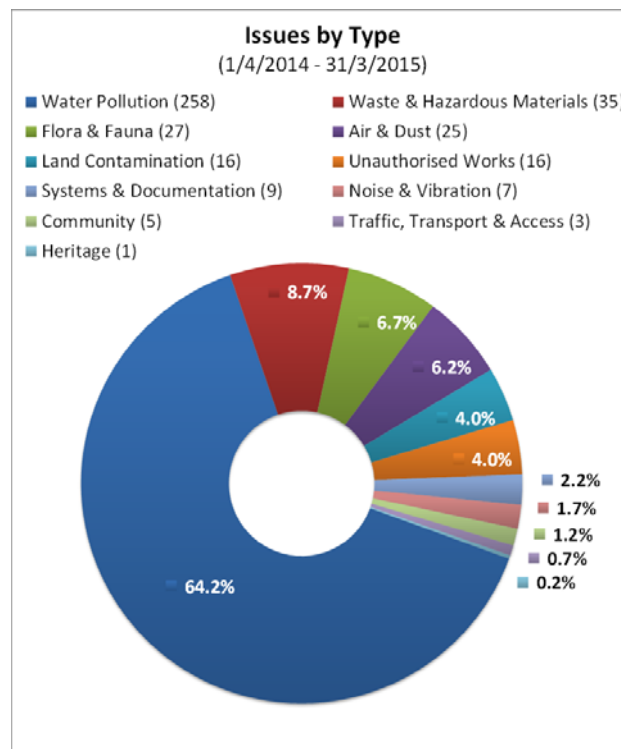
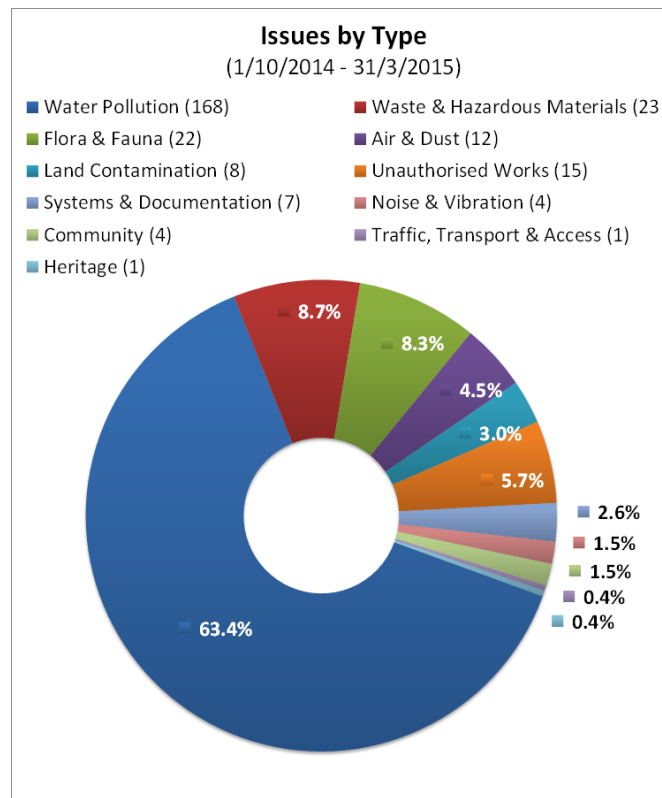


Figure 6 - Six-monthly Percentage of Environmental Issues Raised by Type



5.7 Complaints

During the reporting period the NWRL project received a total of 78 complaints – 61 relating to TSC works, 9 relating to SV works and 8 for TfNSW. All of these complaints have been actioned and resolved in accordance with the Construction Complaints Management System. This report represents a summary of complaints with more details provided in Appendix A.

Complaints fell mainly into six categories with the top issue being Noise and Vibration at 49%. This is attributed to four tunnel boring machines now in the ground and road headers in use throughout this reporting period at Castle Hill and Epping. Transport, Traffic and Access followed at 30%, and 15% for air quality. There are no matters which are currently subject to mediation.

Complaint frequency and type can be attributed to site activities during the reporting period. Construction activities are being communicated effectively to stakeholders and the community in accordance with the approved Overarching Stakeholder and Community Involvement Plan (OSCIP) and Community Liaison Implementation Plan (CLIP).

Figure 7 - All Complaints by Type

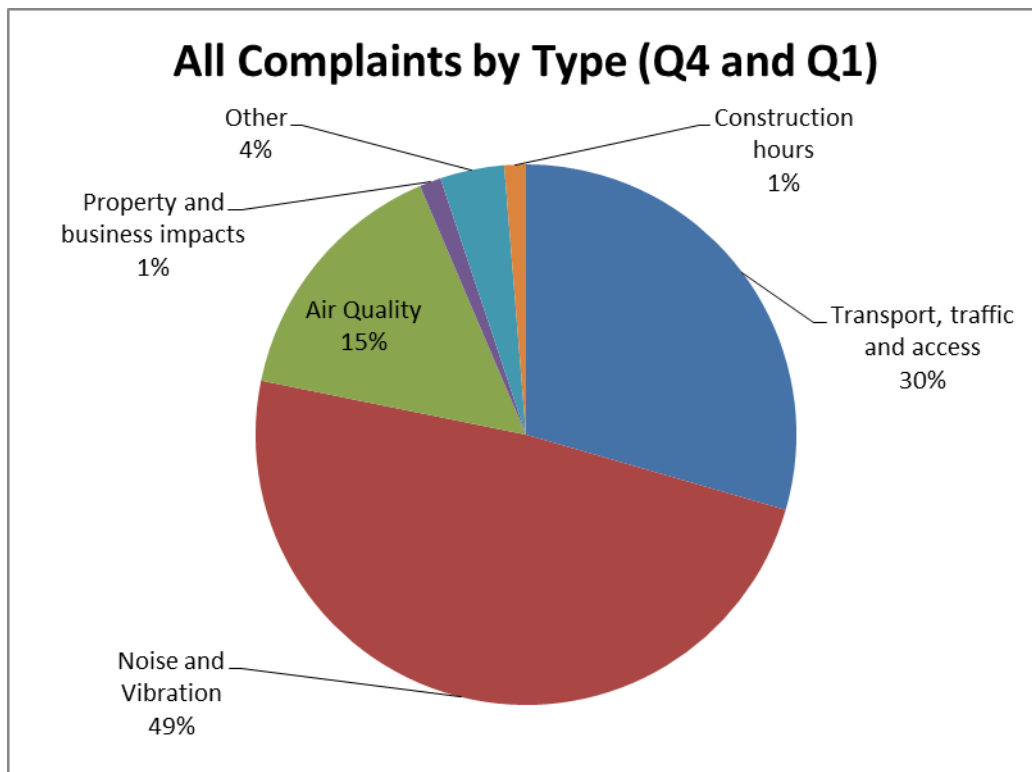
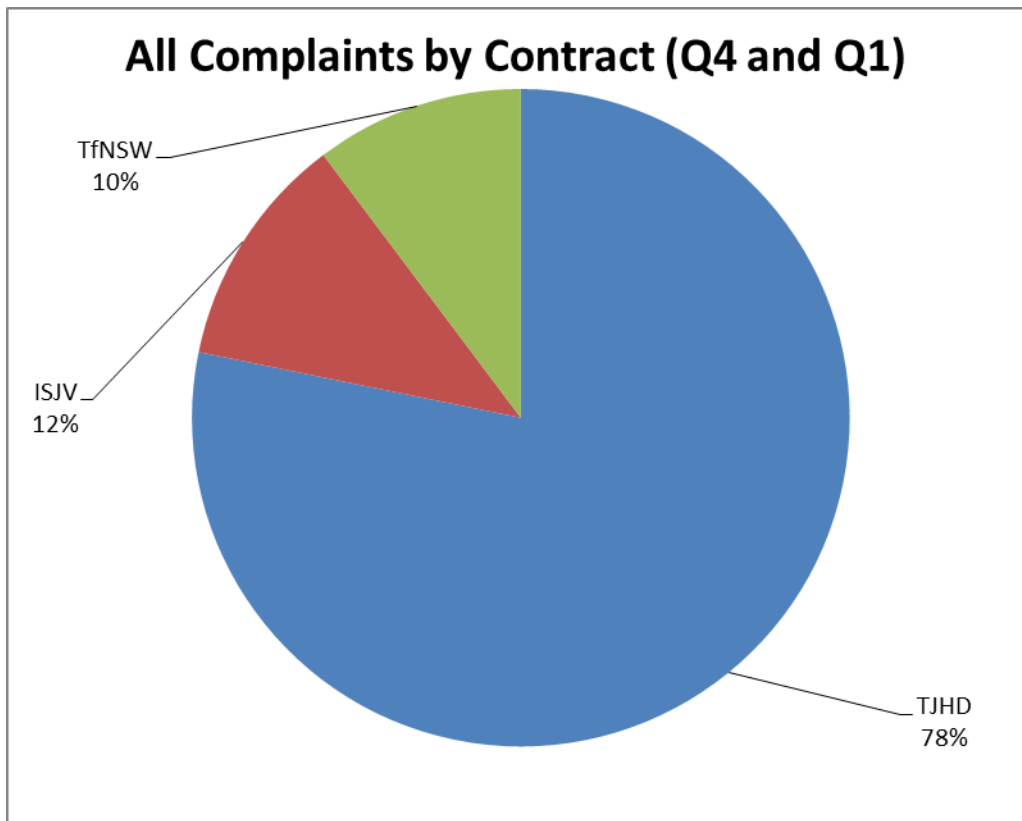


Figure 8 - All Complaints by Contract



Of the 9 complaints from ISJV sites 5 were for Cudgegong Road and 4 for the White Hart - Memorial Drive area. They concerned a mix of issues such as air quality (dust from Rouse Hill for example) and property and business impacts with project workers working near resident's properties.

ISJV complaints mainly concerned dust and noise, while the TfNSW complaints were in relation to the closure and relocation of some T-way car parks to make way for the viaduct works.

TJHD complaints were predominantly noise related and can be attributed to tunnelling activities.

Figure 9 - ISJV Complaints by Site

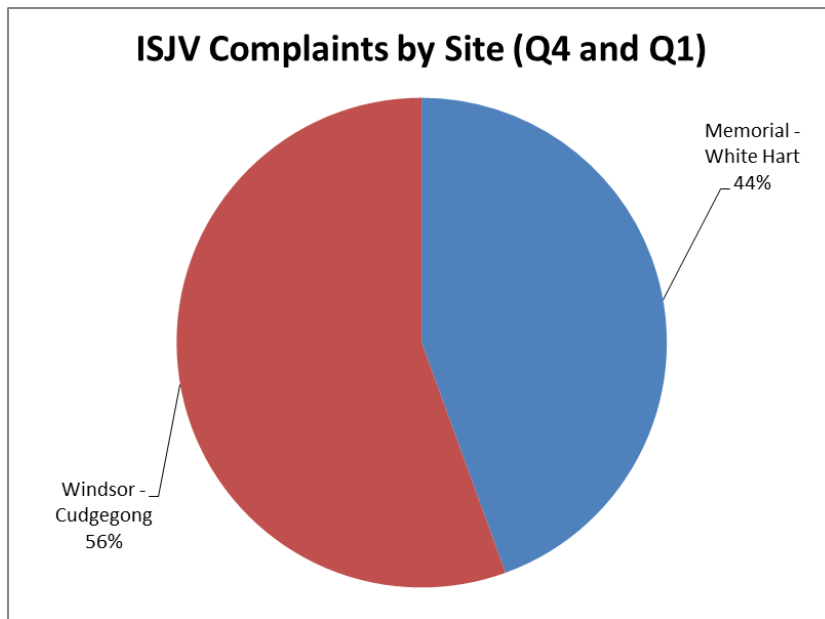
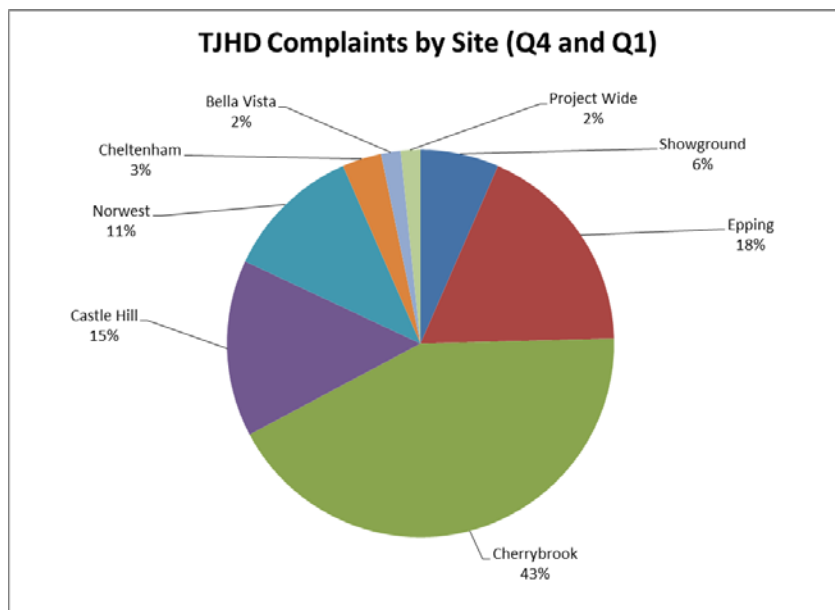


Figure 10 - TJHD Complaints by Site



The number of complaints has decreased for this reporting period in comparison to last reporting period by a significant number (78 this period and 105 for last).

This reduction is anticipated as the projects community engagement strategy facilitates increased awareness and understanding with community members.

Principal contractors have created strong working relationships with key community stakeholders (such as site neighbours) to create awareness around upcoming works. A particular focus has been given to out of hours deliveries and anticipated noise and vibration from the tunnel boring machines during this reporting period.

Appendix A Construction Complaints Management Report

Report	Construction Complaints Management Report
Review Period	1 October 2014 – 31 March 2015

Quarter	Site	Classification	Complaint ID	Date	Contractor	Nature of complaint	Event description
Q4	Showground	Unavoidable/Closed	141001WIKA	01/10/2014	TJHD	Transport, traffic and access	Resident sent complaint to Hills Shire Council on 30 Sept regarding noise from heavy vehicle movements on Showground Road, in particular between 6am - 9am near Kings Road. Council forwarded complaint to TJHD on 1 st Oct via email. TJHD investigated with spoil manager who advised that truck movements were unlikely to be related to TJHD works as a peak in truck movements over the last week does not correlate with TJHD's current program of works. Community place manager reiterated to resident that Showground will become a 24hr tunnelling support centre next year and Showground Road will be used for truck movements. She also invited resident to attend upcoming community forum which resident declined.
Q4	Epping	Unavoidable/Closed	EPA Complaint	07/10/2014	TJHD	Noise and Vibration	TJHD received complaint via EPA that the excavator loading spoil onto the trucks is too small and is therefore creating excessive noise and sounds like it is in need of repairs. Resident also complained that there was a gap in the noise wall and wanted to know when this will be completed. TJHD investigated claims and advised the EPA that the excavator is suitable for the tasks of spoil removal. It also underwent a 500 hour service on 24 th Sept and is inspected prior to commencement of works each day. Any repairs or maintenance are rectified prior to the machine being used. TJHD also advised that the gap in the noise wall is temporary and is required to complete the Epping nozzle. This will remain open for the next week, at which point a temporary hoarding will be installed to close the gap until revegetation works are completed. Noise monitoring completed on 3 Oct returned results consistent with predicted noise levels, and attended noise monitoring has been offered to complainant on

Quarter	Site	Classification	Complaint ID	Date	Contractor	Nature of complaint	Event description
							several occasions but declined.
Q4	Epping	Unavoidable/Closed	141003CALE	03/10/2014	TJHD	Air Quality	Resident advised of increase in dust on his balcony and requested if additional dust mitigation measures could be put in place. TJHD Project Engineer advised that all practicable dust mitigation measures are in place including hosing areas and using street sweepers to clean hardstand and that ETTT are in the area and could have contributed to dust issues. TJHD contacted the complainant and advised that the worksite consistently implements dust mitigation measures. Inspection took place this morning (3/10/2014) at 10:00 AM and no signs of dust were evident and it was noted that at the time of the inspection dust mitigation measures were being implemented. TJHD also explained to resident that ETTT are in the same location which he may want to investigate further.
Q4	Cherrybrook	Unavoidable/Closed	141008SIMP	08/10/2014	TJHD	Noise and Vibration	Resident complained about ongoing machinery noise today and requested to know when it would cease. Senior Project Engineer advised noise is likely from a generator being used as part of works on the conveyor tower. The generator is operating outside the acoustic tower to ensure adequate ventilation and safety for workers. TJHD advised resident that works would be intermittent today and for the rest of the week and offered resident attended noise monitoring. Resident declined offer.
Q4	Castle Hill	Unavoidable/Closed	141008PRIS	08/10/2014	TJHD	Transport, traffic and access	Stakeholder complained that the current layout of the bus interchange at Old Castle Hill and Old Northern Roads was unsatisfactory and was causing problems with the interactions of buses, pedestrians and cars. Stakeholder advised that he would like to see land on Old Northern Road handed back to alleviate traffic problems. TJHD investigated and the Senior Project Engineer advised that this section of land (behind the jersey barriers) is being used at the western end of the site as access and storage due to the narrow access behind the noise wall. TJHD also advised that this land is used for vehicles to park when accessing this end of the site. Layout is in accordance with safety requirements and related approvals.
Q4	Kellyville – Riley T-Way car park	Unavoidable/Closed	141008MAZ	08/10/2014	TfNSW	Transport, traffic and access	Commuter advised that she uses the Riley T-Way car park from Monday to Friday and did not receive any information in advance of the works at the site. The commuter resides 2km away from the site. ISJV advised that a notification on works is sent out to residents within 200m of the activity, and car park users will be provided with information as works with a potential to impact are undertaken.
Q4	Norwest	Unavoidable /Closed	141021CRUD	21/10/14	TJHD	Air quality	Caller complained about dust on their car over recent months. TJHD explained mitigation activities included water cart, street sweeping, sprinklers and the monitoring of weather conditions and adjustment of activities accordingly. A water cannon and two large dust extraction fans are also in use

Quarter	Site	Classification	Complaint ID	Date	Contractor	Nature of complaint	Event description
							to minimise dust, with hosing directly onto the area being excavated when required. Complainant was advised that the mitigation measures are frequently checked to ensure effectiveness. Caller was also given an overview of upcoming TJHD works on site to late 2014 and was satisfied with the response. NOTE: In recent weeks TJHD have reduced the size of the Norwest stockpile, and additional sprinklers have been installed. Inspections for dust mitigation have been compliant, with a focus on managing the roads.
Q4	Showground	Unavoidable/Closed	141021PERR	21/10/14	TJHD	Noise and vibration	<p>Complainant phoned the call centre at approximately 9:36 pm to find out when hammering noise would stop as he was trying to sleep. TJHD advised resident that as per the notification delivered on 3 October, out of hours works would be occurring. Complainant said he had received the notification but didn't read it. TJHD advised that the noisy works would cease at 10pm.</p> <p>Between approximately 9.26pm and 9.41pm on 21/10/14 a rockbreaking trial commenced at the nozzles at the Showground site as per the Showground TBM Support Construction Noise Impact Statement (CNIS). The trial was undertaken to confirm if noise monitoring demonstrated compliance with the predicted levels. Other works had been monitored earlier in the evening. At the time of the complaint there was 1 x 36t excavator with a hammer attachment rockbreaking. All other station box excavation activities were non-operational to allow for accurate monitoring. The rockbreaking was conducted for 15 minutes (the necessary monitoring period) of which time rockbreaking intermittently took place for approximately 7 minutes. At the conclusion of the monitoring, the Environmental Coordinator instructed the operators to cease work immediately. The noise results indicated that the rockbreaking was more than 10dBa above the noise goals. Noise was audible from the monitoring location on Carrington Road; no vibration was felt.</p> <p>Given the results, rock hammering will only recommence in the evening when the nozzle works are beyond 15 metres. TJHD explained the situation to the caller, and has committed to keep the resident informed when night time hammering works are planned to recommence.</p>
Q4	Epping	Unavoidable/Closed	141024MCKA	24/10/14	TJHD	Noise and vibration	<p>Resident visited the NWRL Community Information Centre to complain about various noise-related issues at Epping, including type of noise wall, noise modelling process, query re acoustic shed mentioned in Submissions Report, concern that excavator is wrong piece of equipment for the job, making excessive noise etc.</p> <p>TJHD spoke with the complainant, discussed the noise wall, agreed to follow up on a hole/gap in a wall and his query re the Submissions Report and</p>

Quarter	Site	Classification	Complaint ID	Date	Contractor	Nature of complaint	Event description
							repeated the offer to meet with noise experts to provide an overview of the process. Complainant advised that TJHD had not addressed his previous noise concerns. Staff emphasised that noise monitoring had been done on site and offered at his property, offers to meet had been declined on several occasions, and an offer of noise cancelling headphones had also been declined. It was agreed that a meeting will be held this week or after 13 November with the resident and appropriate technical experts. This meeting was held. NOTE: Noise levels from monitoring undertaken on site are compliant. All required panelling is in place.
Q4	Norwest	Unavoidable/Closed	141027PIGG-	24/10/14	TJHD	Noise and vibration	Caller concerned about general construction noise at night. TJHD contacted complainant and advised noisy works were due to finish at 10pm, as per the notification, and explained works will continue after 10pm, however activities are reduced. Complainant said noisy work until 10pm is too late, he has a children's bedroom which faces the site. Complainant advised his wife had made a previous complaint about the noise and was told noise monitoring would be undertaken. Was agreed that TJHD Community Place Manager for Norwest will contact caller again on 27/10 to discuss noise concerns and follow up on previous complaint. Complainant was satisfied with the immediate action to contact the site team, with no further action required until 27/10.
Q4	Rouse Hill – Cudgegong Rd	Avoidable/Closed	141020SPIT	20/10/2014	ISJV	Transport, traffic and access	A resident advised that on Saturday, 18 October, construction workers had entered the back of his property at 87 Schofields Road, Rouse Hill and placed pegs into the ground near the boundary fence and have cut the fence down. ISJV investigated the site and offered to repair the fence which was completed on 21 October.
Q4	Norwest	Unavoidable/Closed	141027JOYC	27/10/2014	TJHD	Noise and vibration	Resident complained about works on site at 7am on Saturday morning. TJHD advised him that spoil handling was going on at that time, which is permitted under the license conditions and extended working hours. Resident was advised that recently it had been possible to arrange the works to start later on Saturday mornings, however on this occasion, there was a need to move the spoil to allow for the installation of a concrete pump required for the next activity. TJHD site team was reminded of the proximity to residents and to identify alternatives if at all possible. Resident was offered noise monitoring and a meeting with the site's community place manager. These offers had not been taken up as at 3/11/14
Q4	Norwest	Unavoidable/Closed	141028POCO	28/01/14	TJHD	Air quality	Complainant contacted the project regarding the amount of dust around the Norwest site. Caller noted there are water carts in use on Brookhollow Avenue but not on Norwest Boulevard. TJHD Site Environment Coordinator inspected Norwest Boulevard and reported

Quarter	Site	Classification	Complaint ID	Date	Contractor	Nature of complaint	Event description
							visible staining on Brookhollow Ave and left at the roundabout onto Norwest Blvd until the bus stop. No dust was visible during inspection of both Brookhollow Ave and Norwest Blvd. TJHD explained the dust mitigation measures in use on the site, and advised that water carts are not used on Norwest Boulevard for safety reasons as it is a high volume road and could potentially create unsafe conditions. The staining would be expected to disappear over time. The complainant accepted that all reasonable mitigation measures to reduce dust leaving site have been performed.
Q4	Showground	Unavoidable/Closed	141031RICH	31/10/2014	TJHD	Noise and vibration	Caller advised that drilling was still happening at 17.30 on Carrington Road, Castle Hill, and they understood it was supposed to stop at 17.00. TJHD has been unable to contact the caller on the number given and will door knock the property today (3/11).
Q4	Norwest	Unavoidable/Closed	141101DASI	1/11/2014	TJHD	Noise and vibration	Resident emailed project to complaint about noise at night. TJHD staff emailed him to try and establish telephone contact. As he has not responded as of 3/11 at 2pm, TJHD have emailed him some information about the works underway at Norwest, the licensing of it, and reminded him that he is welcome to call at any time if he has a question or a concern.
Q4	Samantha Riley Drive site	Avoidable/Closed	141027LEE	27/10/2014	ISJV	Noise and vibration	Resident made a noise complaint in relation to reverse beepers on construction vehicles working on the Riley T-Way temporary car park. He expected construction vehicles would be fitted with soft tonal quackers as per the information stated in community notifications. ISJV advised the stakeholder that quackers will be fitted on construction vehicles going forward.
Q4	Cudgegong Rd, Rouse Hill	Unavoidable/Closed	141029KAYL	28/10/2014	ISJV	Property and business impacts	Resident reported there were torches and people working at the end of her property boundary and the ISJV Terry Road site at 11-12pm on Monday night 27/10/14. ISJV advised the stakeholder that in future, they will be notified ahead of any surveying or SVC related works.
Q4	Epping	Unavoidable/Closed	141103GALL	01/11/2014	TJHD	Air quality	Ray Road resident complained via email re dust on washing on balcony, car etc. TJHD contacted resident to arrange meeting and provided advice about how dust is being managed at the site. Meeting to be arranged to suit resident, as his wife is about to give birth.
Q4	Schofields Rd, Rouse Hill	Unavoidable/Closed	141031FUDA	31/10/14	ISJV	Air quality	Resident complained that the plants on their property are being affected by dust due to the excavation work at 97 Schofields Road, Rouse Hill. ISJV confirmed that a water cart had been put in place as a measure against dust though as the weather was windier than average, the dust condition was greater than usual. Stakeholder also reported that the stockpiles of dirt were left bare and suggested they be covered with geo fabric. ISJV advised resident this suggestion will be passed on to the construction team.

Quarter	Site	Classification	Complaint ID	Date	Contractor	Nature of complaint	Event description
Q4	Norwest	Unavoidable/Closed	141611URWI	16/11/2014	TJHD	Noise and vibration	<p>TJHD called the complainant who said that she had been out on Saturday night but when she arrived home she was unable to get to sleep because of noise coming from somewhere near the corner of Brookhollow Avenue. She said that it sounded like hammering and that the noise went from 12:45am-2:15 am. She noted that she had also heard the same noise this morning at 9am as well as on previous nights. She said that the noise was not disturbing during the day but that it had been last night and on other nights. Complainant noted that she had not called previously as her friend had only just pointed out that she should contact the project's 1800 number.</p> <p>The Norwest site team confirmed that there had been hammering at the site, and would be hammering work the following night (Sunday 16th Nov) but with a different hammer which could be less noisy. Advice was that hammering activities are almost complete there and are likely to be finished in approximately a week's time.</p> <p>TJHD called the complainant, relayed this information and explained the process for noise monitoring. TJHD offered to conduct noise monitoring at the resident's home should there be another night on which noise was disturbing her. TJHD stressed that the 1800 number was a 24 hour number and urged the complainant to ring at the time that she was being disturbed by noise so that this monitoring could be conducted at her property. Complainant's details passed to Norwest Community Place Manger for follow up on remainder of works due at Norwest.</p> <p>NB: TJHD will check what other works may have been undertaken in the area at this time eg: storm-related emergency works</p>
Q4	Samantha Riley Drive site	Unavoidable/Closed	141103BLAI	03/11/2014	ISJV	Other	<p>Stakeholder complained that construction personnel restricted him from taking photos of the construction site at Samantha Riley Drive, Kellyville. ISJV followed up with the site foremen and the IC who was present at the time and both confirmed the stakeholder was within the boundary fence and was asked to move away for safety purposes. ISJV liaising with the stakeholder on his request for photo opportunities of the site.</p>
Q4	Cherrybrook	Unavoidable/Closed	141117SHAH	17/11/2014	TJHD	Noise and vibration	<p>Complaint advised was woken at around 2:45am by hammering noises, loud beeps and diesel engine noise. Out of hours delivery of two gantries took place at that time, using the same delivery methodology as was used for TBM3. Site team planned to raise the complaint in toolbox talk with the night shift crew and reiterate the need to minimise noise whilst work is carried out on the surface.</p> <p>TJHD contacted complainant, explained the nature of works and advised that the final OOHs delivery for TBM4 would take place that night, with works after this time confined to within the station box excavation. Staff also advised that if there were any further disturbances at night to contact the 1800 number at the time in order to resolve the issue immediately if possible. Complainant was</p>

Quarter	Site	Classification	Complaint ID	Date	Contractor	Nature of complaint	Event description
							satisfied with this response. Noise monitoring was offered to the complainant but not accepted. NB: TJHD completed noise monitoring on Thursday 13 November 2014. The results were below the predicted noise goals for OOH deliveries. On 7 November TJHD spoke with the complainant and he had no issues with OOH works or deliveries.
Q4	Cheltenham	Unavoidable/Closed	141118DEAR	18/11/2014	TJHD	Noise and vibration	Complainant has just returned from overseas trip to find the excavation is ongoing. TJHD has maintained regular contact with the complainant whilst he has been away and has provided him with weekly updates on progress. In response to this complaint, TJHD provided complainant with an overview of the schedule of works both prior to and post the traverse of the TBMs. TJHD noted that a hammer was being used at site today but that from next week the bulldozer recently delivered to site will be operating. TJHD offered to conduct noise monitoring at the resident's property but this was declined. TJHD also asked complainant if he would like to try noise cancelling headphones but this was also declined. TJHD again suggested that complainant come onto site so that he would get a better picture of what is occurring there and he accepted this offer. Visit to be set up at a time that suits resident.
Q4	Norwest	Avoidable/Closed	141121GEOR	21/11/2014	TJHD	Transport, traffic and access	Complainant sent picture of two trucks parked in the shopping centre car park at 7:15am, and advised that she was concerned about damage they may be causing to car park, and would advise her lawyers same. Following an investigation TJHD advised the complainant that the subcontractors involved had had their drivers' induction cards withdrawn and the subcontractor barred from working on any TJHD sites. TJHD also advised complainant that excavation works at Norwest are nearing completion with spoil haulage expected to be finished within the next two weeks.
Q4	Epping	Unavoidable/Closed	141122THOM	21/11/2014	TJHD	Noise and vibration	Complainant asked about work, hours of work and likely duration. TJHD advised they are now conducting 24 hour activities at the Epping worksite for road header tunnelling as per the notification, and will continue until the end of TJHD's stage of the project i.e. potentially until 2016/17. TJHD also advised complainant that if finding it noisy at night to call the project's 24 hour number at the time, so that noise monitoring can be done to check what is happening at the time. Complainant was offered noise monitoring. NB: Complaint has been categorised as unavoidable as noise monitoring was not able to be undertaken at the time of the complaint. Additionally, recent noise monitoring of plant and equipment in use during the evening/night time periods at Epping has been conducted, following the installation of additional

Quarter	Site	Classification	Complaint ID	Date	Contractor	Nature of complaint	Event description
							noise attenuation measures, and has shown that noise levels during these times are compliant with EPA licence requirements
Q4	Epping	Unavoidable/Closed	141126THOM	26/11/2014	TJHD	Noise and vibration	<p>Caller advised that they could hear a loud humming, occasional banging and some talking, lasting up to about an hour.</p> <p>TJHD offered noise monitoring which was accepted, noting it may have been already undertaken that night near his premises.</p> <p>TJHD investigated to identify any changes in activity from 1am to approx. 2.30am, the time the complainant noticed the noise.</p> <p>Noise monitoring undertaken on the evening/night of 25/11/14 confirmed compliance.</p> <p>It was also identified during and post (approx. 12.00am) monitoring that works were being undertaken by a non-project related work crew on the corner of Carlingford and Beecroft roads, involving the use of a sucker truck. The organisation undertaking these works could not be determined. This noise was clearly audible during the monitoring at 6-8 Edensor Rd.</p> <p>TJHD followed up with the complaint to advise re the noise monitoring and discuss upcoming works program. TJHD Community Place Manager committed to following up his queries and coming back to him this week. Resident satisfied with this response.</p> <p>NB: Resident attended a community forum on the 18.10.14 and noise cancelling headphones were offered and accepted based on the discussion the complainant had at the forum.</p>
Q4	Cheltenham	Unavoidable/Closed	141126RUMB	26/11/2014	TJHD	Transport, traffic and access	<p>Complainant advised she noted a truck with a trailer (spoil haulage vehicle) exiting the Kirkham Street access at speed while she was stopped at the red light. Complainant also advised that another truck was coming down Kirkham Street at speed and crossed over the lines which made her swerve.</p> <p>TJHD advised complainant that the Project Engineer went immediately to the site to investigate the matter with traffic controllers and truck drivers.</p> <p>Caller was advised that a spoil haulage vehicle was leaving site at the time and was not noted to be travelling at excessive speed. It was also noted that a smaller truck which was not related to the project ignored traffic controller instructions and did an illegal u-turn near the site entrance.</p> <p>TJHD advised caller they will reinforce the site rules by further toolboxing the team and emphasising information on the driver code of conduct. Complainant was satisfied with this response.</p>
Q4	Epping	Unavoidable/Closed	141126SAMA	26/11/2014	TJHD	Noise and vibration	<p>Caller advised they were being disturbed by construction noise, just after 10pm.</p> <p>TJHD Environment Manager was on site, advised noise monitoring was undertaken at 6-8 Edensor Rd at approximately 9.30pm and reported that the noise being generated was within the predicted noise goals. Site team advised that excavation (benching) was being undertaken near the portal approximately</p>

Quarter	Site	Classification	Complaint ID	Date	Contractor	Nature of complaint	Event description
							10-15m into the tunnel. Site team advised that these works would be completed quickly and excavation would continue at the tunnel face, approximately 40m into the tunnel. TJHD called complainant back, explained works and what he could expect for the remainder of the evening. Caller was advised that noise monitoring had been undertaken and was compliant however further monitoring could be undertaken at his property if he wished. The complainant declined the offer. The complainant was satisfied with information, and advised that during the call the noise was better, however he would like further information on upcoming works. It was agreed that TJHD Epping Community Place Manager would call him on 27.11
Q4	Terry Rd	Unavoidable/Closed	141127HOFF	27/11/2014	ISJV	Air quality	Resident complained of dust blowing from construction site onto the Rouse Hill Lifestyle Park property. Stakeholder acknowledged that a water cart was being used to manage dust on site but dust was still travelling onto the adjacent property. ISJV informed the resident they are considering a wider range of dust mitigation measures to combat dust at the work site including a noise and dust barrier that will be installed from the following day. An extra water cart was also put in place to manage the increased levels of dust. Stakeholder was satisfied with the resolution.
Q4	Epping	Avoidable/Closed	141203 MCKA	03/12/2014	TJHD	Noise and vibration	Caller advised that new loader was fitted with a reversing beeper rather than a quacker. The complainant did not require noise monitoring, and would like to know when the quacker will be installed. It was noted that earlier consultation with the complainant had indicated that quackers would be used. Complaint is classified as avoidable as quackers being installed on plant has been advised to resident in previous written communications.
Q4	Bella Vista	Avoidable/Closed	141209WALS	9/12/2014	TJHD	Transport, traffic and access	Caller advised that advised that a Kingsfeld truck had blocked the Old Windsor Road and Celebration Drive intersection to allow an additional two Kingsfeld trucks to turn into Celebration Drive and therefore traffic could not move for a sequence of lights. Complainant advised that they contacted the 1800 number as they worked in the area and have continually witnessed the good behaviour of drivers, and therefore believed that this behaviour was out of character. TJHD advised that the project takes driver behaviour very seriously and all drivers undertake a project induction and sign onto a driver code of conduct. Kingsfeld undertook an investigation with the driver and subsequently the driver has had his employment terminated. TJHD contacted complainant and left a message advising that due to the details provided, the driver has now been removed from the project

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Q4	Castle Hill	Unavoidable/Closed	141212MISS	12/12/2014	TJHD	Noise and vibration	<p>Caller complained about works and noise going on past 10pm. TJHD advised resident that hammering works had stopped at 10pm and that road header excavation works were continuing, and in line with the previous discussions that the Community Place Manger for Castle Hill has had with this resident, agreed to organise for noise monitoring to be undertaken at his property. TJHD advised complainant they would follow up with the site team on Saturday 13/12/14 to get an overview of works scheduled for the rest of the weekend and contact the complainant to organise a suitable time to monitor. (No evening or night works were programmed.)</p> <p>Complainant is aware from prior discussions with TJHD that monitoring needs to be programmed to take into account both hammering and roadheading works and that the program of works means that this might not be feasible until next week.</p> <p>Place Manager and the Manager, Approvals, Environment and Sustainability Manager will meet with the complainant to discuss noise modelling and construction program. Noise monitoring to be organised for a night when both hammering and road header excavation OOH is programmed.</p>
Q1	Epping	Unavoidable/Closed	150109MCKA	9/01/2015	TJHD	Noise and vibration	<p>Resident emailed TJHD to complain about the use of a specific loader, which he understood from earlier advice was not going to be used at the site anymore.</p> <p>TJHD staff again advised the resident that a new, larger loader is doing the bulk of the work, while the smaller loader has been retained on the worksite as a 'back up' and to assist with efficient operation of the site/truck movements. The resident was advised that the site team is making every effort to ensure that only the primary, larger loader is used to load the trucks.</p> <p>NB: During a meeting held with the resident on 4/11/2014, and in a subsequent email sent on 7/11/2014, TJHD advised the larger loader (primary loader) would be used primarily for loading the trucks, with the secondary loader (small loader) used as required to ensure that the loading of spoil is undertaken efficiently and safely.</p>
Q1	Cherrybrook	Unavoidable/Closed	150119LIM	19/01/2015	TJHD	Transport, traffic and access	<p>TJHD contacted complainant who enquired about the possibility of future tours of the Cherrybrook site. TJHD advised that there are currently no tours scheduled, however will be in contact if any opportunities arise.</p> <p>During the conversation the complainant advised that he has noted some vehicles travelling down Franklin Road at speed during the evening. TJHD enquired if complainant could provide a description of the vehicles and more accurate times, which he could not.</p> <p>TJHD advised without this information she couldn't follow up on the matter, however agreed to communicate the matter to the site supervisors to ensure that each crew are reminded of local street speed limits and site rules for</p>

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							entering and exiting site. Complainant was satisfied with this response.
Q1	Cherrybrook	Unavoidable/Closed	150129CLAN	29/01/2015	TJHD	Noise and vibration	<p>Resident called at 1.10am to advise they could feel their house in Edward Bennett Drive shaking due to tunnelling. Site team advised TJHD staff that that conveyor construction works on TBM4 had ceased at 10pm and TBM 3 may have reached harder rock. All shed doors were Closed and mitigation measures to minimise impacts were in place.</p> <p>The property is just on the TBM3 alignment; the tunnel depth is approximately 18-22m. The complainant had been previously notified via doorknock and email.</p> <p>The Tunnelling CNIS indicates that the regenerated noise level predicted to be experienced during TBM cutting works at this property is below 45 dB(A). Vibration levels are not predicted to exceed the human comfort criteria and are therefore within structural damage limits.</p> <p>TJHD Community Place Manager contacted the complainant to discuss the tunnelling program and potential impacts. Complainant advised that vibration could be felt at the property in 15 minute intervals and was concerned that this may cause property damage. TJHD explained that TBM3 cutter head would be approximately 30m from property by the following evening, with vibration expected to be minimal after this time. TJHD also explained that TBM4 and cross passage works will be undertaken in coming months and that these works may also result in audible regenerated noise and some vibration being felt. TJHD will keep in contact with the resident about the works program. TJHD offered vibration monitoring due to the resident's concerns about property damage. A monitor was installed that day.</p> <p>Results were within predicted levels for this activity.</p>
Q1	Cherrybrook	Unavoidable/Closed	150204XIAO	3/02/2015	TJHD	Other	<p>Stakeholder contacted project to complain about the weeds growing between his property and the Cherrybrook staff car park.</p> <p>The site undergoes regular maintenance of weeds including this area. Due to wet weather and site shutdown in January, some maintenance was interrupted. TJHD's weed management contractor was scheduled to complete this work in the week commencing 26/1/15, but this was cancelled due to wet weather. As no phone number was available, TJHD emailed the resident. Work was scheduled to be completed w/c 2/2, pending weather.</p>
Q1	Castle Hill	Unavoidable/Closed	150205MISS	5/02/2015	TJHD	Noise and vibration	<p>Resident called to complain about the grinding noise from the cavern construction the previous evening. Resident reported that during the night his family could not sleep and had to move rooms and open all windows to try to assist with the noise.</p> <p>Under the Tunnelling CNIS noise levels are predicted to be less than 45dB(A)</p>

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							and noise monitoring has confirmed that levels are well below this. In previous discussions with the resident. TJHD have tabled mitigation options, including noise cancelling headphones and also advised relocation is available. However, given the resident's ongoing concerns, TJHD again offered to relocate the resident for two nights. This offer was accepted. TJHD is continuing to consult with the resident to discuss the works program and potential impacts.
Q1	Castle Hill	Unavoidable/Closed	150205NICH	5/02/2015	TJHD	Noise and vibration	Stakeholders came into the NSWRL Community Information Centre to complain of a hammering noise being heard from 8am to 9pm. They recently moved into the complex in Mercer St. TJHD contacted the resident to explain current and upcoming work activities of excavation within the station box, cavern and nozzles and the construction hours. TJHD advised that the apartments are regularly notified and updated on construction via notifications and newsletters. TJHD site staff undertook further investigations.
Q1	Castle Hill	Unavoidable/Closed	150206EDWA	6/02/2015	TJHD	Noise and vibration	Northpoint Apartments resident explained she was woken after midnight by a 'very loud' noise that seemed 'very close' and continued for several hours. The complainant further described the noise to be like a loud engine. She advised she had not experienced this type of noise at night previously. TJHD explained the activities inside the cavern have been progressive (getting gradually closer) and ongoing. TJHD offered ear plugs and to phone when the site plans to use the roadheader at night again, noting the site will cut again that evening from 8pm. Complainant declined both offer of earplugs and further consultation on work times. TJHD requested that the complainant make note of time if she is woken again, or to phone the project line, she agreed to this. NB: Recent vibration monitoring undertaken in the basement of the building show results below the human comfort criteria. The complainant's report of a new noise sounding like a loud engine is not consistent with the works that have been and are being undertaken. TJHD checked to see if any other non-TJHD works were being undertaken in close proximity to this address.
Q1	Cherrybrook	Unavoidable/Closed	150209SIMP	9/02/2015	TJHD	Other	Resident emailed TJHD re dust and vegetation maintenance matters. TJHD contacted the resident by phone to discuss the issues raised. TJHD advised that landscaping and maintenance for the area behind Oliver Way was scheduled for the following day. It was also noted that while there had been delays to the maintenance program due to the Christmas shutdown and recent heavy rainfall, landscaping and weed management are part of a regular maintenance program. TJHD advised that dust mitigation measures such as street sweeping are in place, as truck movements seem to be the only source of any dust issues given

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							TJHD are largely tunnelling and constructing conveyor systems. With regard to the swale drains and their capacity, TJHD advised they are regularly checked by the environment team to ensure they are operational during heavy rain events. This was done in particular during the most recent rain events. Complainant was satisfied with this response.
Q1	Castle Hill	Unavoidable/Closed	150209MISS	9/02/2015	TJHD	Noise and vibration	<p>Complainant contacted TJHD at 10.05pm to advise he can hear a "loud 'motorbike' noise or a 'loud exhaust' like noise." Heading 2 is now 14 metres in depth (to crown of tunnel) and is within approx. 10 metres of the complainant's house.</p> <p>TJHD telephoned the complainant and explained the evening's works program (drilling in the cavern to install mesh which would continue for approximately another hour, then shotcreting for about four hours, followed by cutting), noting that the timing of activities is dependent on progress of each activity. TJHD explained these works have been regularly undertaken in the cavern both day and night as part of ground support works.</p> <p>TJHD recommended the complainant use the earplugs and noise cancelling head phones provided, and also suggested he play music/white noise application into the headphones, as previously advised. TJHD advised they would discuss the works with the site team the following day and contact the complainant with an update. Complainant agreed with these actions.</p> <p>TJHD contacted the complainant on 10/2 to arrange monitoring inside the property that evening. Under the Tunnelling CNIS noise levels are predicted to be less than 45dB(A). Monitoring that evening was compliant.</p> <p>To assist the resident to manage through this stage of works, he was relocated for two nights.</p>
Q1	Cherrybrook	Unavoidable/Closed	150210 PARR	10/2/2015	TJHD	Noise and vibration	<p>TJHD phoned the complainant who advised that he had been woken at around 10pm and again at around 3am the previous evening by a loud noise, possibly a truck horn. He also mentioned that on occasion, he had heard a banging type noise. TJHD advised that they would investigate, noting that trucks do not run on site after 10pm, however it may be the vehicle that supplies tunnel segments to the TBM (a TSP).</p> <p>TJHD advised the Project Manager and Shift Manager of the call, who agreed to remind all workers to ensure that the doors of the acoustic shed are Closed after 10pm.</p> <p>TJHD spoke with complainant the following morning, who advised that the horns again woke him just after 3am, and it had happened numerous times throughout the night. TJHD advised that they would investigate further and offered noise monitoring. Complainant declined monitoring and did not want a</p>

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							call back. The General Superintendent went to site that evening and instructed all staff that forklifts horns are not to be used in the evening and night periods, that all shed doors must be Closed from 10pm until 7am, and that spoil management in the acoustic shed is to be minimal and efficient in avoiding the banging of the bucket. The TSP horns are also being adjusted to minimise noise.
Q1	Castle Hill	Unavoidable/Closed	150211VALK	11/02/2015	TJHD	Noise and vibration	Complainant advised recent construction works have disturbed her sleep twice this week. She noted ear plugs were worn however they did not help with getting to sleep. Complainant described it 'like drilling' coming from next door/through the walls from about 10.30pm when they went to bed until about 12am. TJHD advised that the site was installing ground support last night, which included some drilling. TJHD explained the cavern excavation and ground support methodology, noting the continuous sequence of works. To assist with noise, TJHD suggested they leave the windows open, which had been suggested to the complainant last year when she attended a presentation about cavern works. Complainant said she would try that tonight. Complainant noted she has been able to some hear construction noise, which she can tolerate, however she was not expecting this particular noise at the time. TJHD offered to provide further information about activities scheduled for tonight; however the complainant declined, noting if she is woken again, she will visit the Centre the next day to advise. NB: Noise monitoring conducted on 12/2 was compliant
Q1	Project wide	Unavoidable/Closed	150216TAYL	16/2/2015	TJHD	Transport, traffic and access	Complainant contacted project to advise that while the majority of tip truck contractors for the project were using late model equipment, some contractors in plain white Kenworth trucks have non-compliant engine and exhaust systems. TJHD staff attempted to contact the complainant by phone and by email advised that all project trucks have to be registered and comply with Roads and Maritime Services rules; that TJHD conducts regular audits on the heavy haulage contractors including inspection by TJHD fitters; that nearly 60% of the fleet used are brand new, with the oldest truck in the fleet about four years old. TJHD also advised that all its trucks used on the project have a three digit identification sticker on both the truck and trailer. The trucks are also fitted with a GPS system and electronic logging each time a truck enters and leaves the sites and drop-off sites. TJHD encouraged the complainant to contact them again if he sees a truck he is concerned about, using the three digit number or the truck registration.
Q1	Cherrybrook	Unavoidable/Closed	150218KIER	18/2/2015	TJHD	Noise and	Caller reported that noise and vibration coming from work on the Cherrybrook

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						vibration	<p>site was keeping him up at night, starting after 11pm, stopped at 1.45am, re-starting at 8.10am. Caller's home is approximately 1km from Cherrybrook site, and around 80m (horizontal distance) from the current location of TBM3, which is at a depth of around 30m.</p> <p>TJHD contacted the complainant who advised he could hear a low rumbling noise and some vibration early in the morning and that he has heard it intermittently throughout the day. TJHD advised complainant he may be experiencing ground borne noise, that TBM3 is approximately 80m from his property and will travel a further 30m away by that evening. Complainant advised that he had some concerns for potential damage to his property due to vibration. TJHD advised they will arrange further consultation in relation to noise and vibration impacts when TBM4 approaches the property shortly. TJHD advised complainant that vibration monitoring could be undertaken, however complainant did not accept it and was satisfied with this response.</p>
Q1	Castle Hill	Unavoidable/Closed	150220PLAN	19/2/2015	TJHD	Noise and vibration	<p>The complainant telephoned the TJHD Community Place Manager at 9.03pm and left a voice message enquiring when the noise would stop for the night. The complainant who is a key contact for the building reported that residents in unit 11 could also hear loud hammering noises.</p> <p>TJHD contacted the complainant to advise that the activities being undertaken in the cavern were part of the approved 24 hour works and this included rock breaking. TJHD advised that rock breaking was completed by 9pm and concreting and spoil handling would continue in the cavern for the remainder of the shift. TJHD has previously advised the complainant that rock breaking is within the approved works and stops at 10pm.</p> <p>The complainant acknowledged he is aware of worksite hours, however he called because he wanted to know how much longer the hammering would continue for that evening. The complainant confirmed he could no longer hear a hammering noise, however he could hear 'jack hammering' noise in the car park and in his apartment at 7.30pm. The resident of unit 11 also reported to the complainant they could hear hammering noises at around the same time (i.e. 7.30pm). TJHD offered to contact the resident in Unit 11 but the complainant advised he would update them. The complainant was satisfied with the response.</p> <p>NB: Site investigation was undertaken immediately and the works were within the approved scope. Noise monitoring has previously been undertaken at this address and is within the predicted levels. A construction update briefing was held for all Northpoint Apartment residents on 23/2; as at morning of 23/2, 22</p>

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							residents had accepted the invitation.
Q1	Rouse Hill	Unavoidable/Closed	150218ELBE	18/02/2015	TfNSW	Transport, traffic and access	Regarding the closure of Rouse Hill T-Way car park – stakeholder was concerned about the distance to drive to Kellyville and the extra time it adds to her journey as she has children to drop off. Stakeholder was dissatisfied with the lack of commuter car parking at the project end state at Rouse Hill and requested for a team member to contact her about the reason for this decision. TfNSW phoned complainant and discussed with her the alternative car parking for the project.
Q1	Rouse Hill	Unavoidable/Closed	150218MART	18/02/2015	TfNSW	Transport, traffic and access	Stakeholder requested for a team member to contact him to discuss why there isn't going to be a car park returned to Rouse Hill. TfNSW contacted stakeholder to explain new car park arrangements. Complainant wanted it documented that he was unhappy about his car park being taken away and that he would now drive instead of parking and catching public transport.
Q1	Kellyville station site	Unavoidable/ Closed	150218BWAD	18/02/2015	TfNSW	Transport, traffic and access	Stakeholder questioned the provision of disabled parking and stated that she has a condition which affects her ability to walk long distances and therefore the location of the new temporary car park at Riley T-way is an inconvenience. Stakeholder suggested that there should be shuttle buses to transport commuters from the temporary car park to the Riley T-Way station or the buses should be diverted to pick up commuters from the temporary car park location. ISJV advised there will be disabled car parking spaces available at the new temporary car park and complainant's suggestions and contact details were recorded.
Q1	Kellyville station site	Unavoidable/ Closed	150218WAKE	18/02/2015	TfNSW	Transport, traffic and access	Regarding the location of the new temporary car park at the Riley T-Way - stakeholder was concerned for the safety of her daughters who will be required to walk a further distance from the Riley T-Way to the new temporary car park. Stakeholder reported that there have been a few assaults at the Riley T-Way station and questioned the provision of security patrols monitoring the temporary car park and made suggestions to bus services. ISJV advised stakeholder on lighting arrangements at the car park.
Q1	Rouse Hill	Unavoidable/ Closed	150218KNOT	18/02/2015	TfNSW	Transport, traffic and access	Regarding the closure of Rouse Hill T-Way car park - stakeholder is elderly and concerned about the extra time and driving distance to get to Kellyville. Also raised concerns that there is no car park planned at Rouse Hill at end state. Stakeholder was concerned about bus connections in terms of catching a bus from another location to the Rouse Hill T-Way station and requested for a team member to contact her to discuss the future plans for a car park and the online journey planner. ISJV advised on car park numbers at Cudgegong Road station and directed stakeholder to the journey planner on the website. TfNSW phoned the complainant to discuss further and left voicemail as stakeholder was unavailable.
Q1	Showground	Unavoidable/	150224JOE	26/02/2015	TJHD	Air quality	Anonymous call to community information line complaining about dust issue at

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		Closed					Showground Station site. TJHD team immediately followed up, and at the time of inspection no dust was observed and dust mitigation measures were in place. Water carts and street sweepers are regularly in use on the access road and all spoil haulage trucks leaving site are fully covered. All haul roads are sealed and dust suppression controls are active on exposed areas such as the station box excavation and stockpile.
Q1	Cherrybrook	Unavoidable/ Closed	150226SIMP	26/02/2015	TJHD	Noise and vibration	Complainant contacted community information line about the noise coming from site. He wanted to know if this was going to continue. The conveyor system was started up for the first time on 26 February and was being commissioned. Noise monitoring of the structure has been scheduled for Tuesday 3 March. TJHD telephoned the complainant and explained the commissioning process, noting that there would be intermittent noise for the next few days whilst commissioning takes place and TJHD assesses its impact, including on local residents. Complainant was satisfied with this response. TJHD also emailed those on the Cherrybrook local resident list about this work to emphasise earlier advice, and will check back in with the complainant during commissioning.
Q1	Rouse Hill	Unavoidable/ Closed	140224VENC	24/02/2015	TfNSW	Transport, traffic and access	Complainant commented on the permanent closure of the Rouse Hill T-Way car park and expressed there was currently not enough parking at Riley T-Way, Kellyville. TfNSW provided rationale for car park closures and explained there will be an additional 61 parking spaces in April for commuters. Stakeholder understood and appreciated additional spaces will later be available.
Q1	Kellyville	Unavoidable/ Closed	150224ELHE	25/02/2015	ISJV	Noise and vibration	Resident made a complaint regarding noise which emanated from pile driving at 4.50am on 24/2 which he reported to have seen. On 25/2, stakeholder amended his initial complaint and stated that the noise was not pile diving but maintenance work on the piling rig. ISJV contacted stakeholder and indicated that no pile driving occurs at this site and particularly not at that time of the morning as it is out of hours. Further investigation of the claim with construction personnel and staff, ISJV confirmed that there was no work occurring at this time.
Q1	Kellyville	Unavoidable/ Closed	150226FAHM	26/02/2015	TfNSW	Transport, traffic and access	Resident made a complaint regarding commuters parking in his street preventing the garbage trucks from emptying the recycling bins because they could not fit on street. Stakeholder requested if notices could be placed on vehicles parked on the street that are obstructing traffic. ISJV contacted stakeholder and informed that it was not illegal to park in the local street so commuters cannot be warned against parking at that location, although the complaint can be passed on to TfNSW for further investigation. TfNSW has contacted the stakeholder to discuss the complaint.

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Q1	Rouse Hill	Unavoidable/ Closed	140302CAMU	28/02/2015	TfNSW	Transport, traffic and access	Complainant reported inconvenience experienced at Hedge St, Rouse Hill due to closure of Rouse Hill commuter parking as the street is now congested with parked cars. Complainant observed that more people are taking the T Way bus at Sanctuary Road and parking wherever there is a spot causing double parking and safety hazards. TfNSW has responded to the stakeholder via email.
Q1	Cherrybrook	Avoidable/Closed	150303GAL	03/03/2015	TJHD	Transport, traffic and access	Call from complainant that a contractor in a large truck had blocked 2 sets of traffic lights at McMullen St, Castle Hill holding up 3 lanes of traffic. Earlier a spoil truck from Cherrybrook heading westbound on McMullen Avenue had rear-ended a car resulting in traffic congestion on McMullen Avenue. Due to the existing congestion on McMullen Avenue the segment truck was unable to complete the turn and as a result obstructed traffic on Old Northern Rd for two changes of lights. RB Informed the Complainant that the worker behaviour had been addressed. Complainant was pleased with the outcome.
Q1	Cherrybrook	Unavoidable/ Closed	150315 PARR	05/03/2015	TJHD	Air Quality	Complainant phoned regarding dust coming from spoil pile and conveyor system. Wanted to know if watering was being used to mitigate this. It is noted that as part of the commissioning of the conveyor system that a recycled water system had been installed within the conveyor acoustic hoarding to apply water to the spoil when travelling on the conveyor to minimise dust generation. Further mitigation is currently being investigated for the spoil chute that directs spoil into the daytime spoil bund. Complainant was satisfied with this response and the place manager agreed to make contact with him again when she had more information. The place manager informed the Cherrybrook Project Manager and Site Superintendent of this complaint.
Q1	Cherrybrook	Unavoidable/ Closed	150306LACH	06/03/2015	TJHD	Transport, traffic and access	Complainant advised by email about what he believed was dangerous driving including tailgating, racing each other and also using exhaust brakes. He advised that none of the trucks had any branding. TJHD contacted the complainant and explained about the induction process and drivers Code of Conduct that all drivers attend and suggested that if he witnessed this behaviour in the future, to make note of the registration plate number.
Q1	Cherrybrook	Unavoidable/ Closed	150306VLAT	06/03/2015	TJHD	Air quality	Complainant advised that that she and her husband could see a large pile of dirt on the Cherrybrook site, and believed that it was bringing dust into their property and especially onto their cars. The place manager explained that the conveyor system and the chute were currently being tested and that a recycled water system had been installed within the conveyor acoustic hoarding to apply water to the spoil when travelling on the conveyor to minimise dust generation.

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							The place manager advised that she and TJHD's Project Environment Manager would be conducting an inspection around Robert Rd later today. HJ agreed to update complainant following this inspection. Complainant was satisfied with this response.
Q1	Cherrybrook	Unavoidable/Closed	150309PARK	09/03/2015	TJHD	Transport, traffic and access	Complainant advised via email 6 or 7 trucks queuing along Castle Hill Road waiting to enter the Cherrybrook site at 7am causing an issue with traffic in the area. TJHD emailed the complainant and asked him to provide a phone number. TJHD spoke with complainant who advised that he travelled along this road every day and this was the first time he had encountered the issue. TJHD investigated with the site manager and the issue on that morning was a new security guard. The guard has since been briefed on procedures and the complainant contacted with the outcome.
Q1	Castle Hill	Unavoidable/ Closed	150312KITC	12/03/2015	TJHD	Transport, traffic and access	Complainant reported that he was concerned by what he described as aggressive driving of trucks along Showground and Windsor Roads which he believed to be coming from the Castle Hill site. Complainant provided details of the truck including the registration plate. TJHD contacted the complainant by email and requested a contact phone number. TJHD's Senior Project Manager in charge of the haulage is investigating the complaint. He has requested the sub-contractor review their records and report back to TJHD in relation to the vehicle and driver.
Q1	Epping	Unavoidable/ Closed	150314 MCKA	14/03/15	TJHD	Construction hours	Complainant phoned about construction hours stating that works were still going at Epping on a Saturday after 1pm. Past notifications have been provided to residents letting them know of the work hours. Copies of these notices were sent via email to the complainant
Q1	Cherrybrook	Unavoidable/ Closed	150316LACH	16/03/2015	TJHD	Transport, traffic and access	Call from complainant regarding a truck leaving Cherrybrook site taking up two lanes during turn from site and holding up traffic. TJHD contacted the complainant by phone and explained that the trucks are not restricted to left hand land use only on roads with the speed limit of 80km or less. TJHD also advised that the drivers would be reminded about the TJHD driver code of conduct and courteous driver behaviours.
Q1	Cherrybrook	Unavoidable/ Closed	150318PINK	18/03/2015	TJHD	Noise and vibration	Complainant lives at Castle Hill Road , West Pennant Hills. They telephoned and said they have been hearing drilling and other works occurring during the night and wanted to know how long they should expect this type of noise to go for. TJHD spoke with complainant who said they had received notifications however had thrown them away. They have heard a hammering noise from about 7 pm to 10 pm each night for the past week.

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							TJHD explained that this was cross passage construction which would temporarily cease in a few days until TMB 4 passed, and would then resume and be slightly more noticeable than TBM 3 as it was closer to their property. A noise monitor has been installed at the front property nearer to tunnelling (complainant lives in battle-axe property). Monitoring will be undertaken when cross passage XP 74 recommences later this week. TJHD contacted complainant on the following day to discuss programming and further works. TJHD advised that they would be contacted again prior to starting the next cross passage, with further information including duration.
Q1	Cherrybrook	Unavoidable/ Closed	150320GOSS	20/03/2015	TJHD	Air quality	Complainant phoned TJHD and said that he had arrived home to find a lot of dust in his backyard and that he could see 'plumes' of dust arising from the spoil pile. Complainant noted that he is asthmatic and is worried about the effects of this on his health. TJHD advised they would investigate. The Cherrybrook Site Supervisor noted that it had been dry and windy however the current rain may help the situation. TJHD explained the current works and use of the conveyor system and noted that they were currently investigating ways of mitigating the dust. She noted that a solution appears to have been found by using screening around the spoil pile and water sprayers on the conveyor, and she agreed to get back to complainant with more information and to check whether the dust situation has improved. The Project Environment Manager was advised of the complaint and will follow up with the Project Manager.
Q1	Epping	Unavoidable/Closed	150321KRU	21/03/2015	TJHD	Noise and vibration	Complainant emailed regarding noise coming from construction site. They described three different types of noise coming from the site, a dropping sound, a metallic and engine whine sound and a compressor. The complainant asked where she could access a copy of the EPA License. TJHD attempted to contact complainant which went to voicemail and left a message asking for a suitable time to phone them and discuss. Complainant was contacted a number of times but has failed to respond to the contacts.
Q1	Cherrybrook	Unavoidable/ Closed	150323WHIT	23/3/2015	TJHD	Air quality	Complainant phoned stating that he had issues with dust over the weekend and had spent time hosing down his house and car. Dust had also entered the complainant's home and he'd had to clean some surfaces. TJHD spoke with the complainant and indicated that while measures are in place to mitigate the escape of dust to neighbouring properties, further measures were being implemented including the additional wetting down of the spoil. Additional mitigation measures were implemented.
Q1	Cherrybrook	Unavoidable/ Closed	150324WHAR	24/3/2015	TJHD	Noise and vibration	Complainant phoned asking whether the trucks were going to be washed down. His concern was about dust coming from the wheels of the trucks. Complainant

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							claimed to have seen plumes of dust coming from truck wheels. Complainant was advised that measures are in place to minimise the potential for dust to impact the surrounding community including a sprinkler system embedded in the haul road to minimise tracking.
Q1	West Pennant Hills	Unavoidable/ Closed	201503SHAR	26/3/2015	TJHD	Noise and vibration	Complainant phoned advised that for the past four days her house had been shaking from 7pm onwards, causing some unspecified property damage. TJHD spoke to complainant and indicated that the TBM was still some 75 metres from her home and while it's possible that she has felt some vibrations, it is unlikely because of the distance from her property. Complainant was offered earplugs but declined. NB: It's possible that the noise came from nearby road works unrelated to TJHD operations. Complainant advised during follow up that she slept in another room and did not hear the noise, and will call if she has any further issues with noise.
Q1	Cherrybrook	Unavoidable/ Closed	150326STAP	26/3/2015	TJHD	Transport, traffic and access	Complainant emailed concerning noise from truck movements at Cherrybrook, advising that the noise has been bad all week. Complainant was offered noise monitoring but declined. Complainant advised he intends to hire noise monitoring equipment to take his own measurements of the noise.
Q1	Cherrybrook	Unavoidable/ Closed	150327TROU	26/3/2015	TJHD	Noise and vibration	Complainant phoned to inquire whether a rumbling noise she had heard from her home was from tunnelling activities. Complainant lives at Beecroft. TJHD confirmed that there was tunnelling in the area and offered to provide monitoring. They also advised that the machine was passing quickly and would pass the complainant's property in a few days. Monitoring was scheduled to be put in place on 27/3, together with ground borne noise monitoring. Complainant was happy with this course of action.
Q1	Cherrybrook	Unavoidable/Closed	150326RODR	26/3/2015	TJHD	Noise and vibration	Complainant phoned about level of noise from drilling overnight. It's possible that the noise came from nearby road works which are not related to TJHD operations. Complainant advised about the TBM in her area. She thinks it could also be noise from the ETTT project. Was offered earplugs which she declined. Said she would call again if she was disturbed during the night.
Q1	Cherrybrook	Unavoidable/ Closed	150327BABI	27/3/2015	TJHD	Noise and vibration	Complainant phoned stating that she was unable to sleep due to night works and that this was impacting her health. Complainant lives in Grace Avenue, Beecroft. TJHD confirmed that there was tunnelling in the area, was offered monitoring which was compliant. Caller was also advised that the machine would be past the complainant's property in several days' time. Complainant was offered regular updates on the works and was happy with this.
Q1	Cherrybrook	Unavoidable/ Closed	150327CUNN	27/3/2015	TJHD	Noise and vibration	Complainant phoned about the noise from the TBM. Caller lives in Grace Avenue, Beecroft. Noise monitoring was conducted at his property.

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							Complainant to be provided with tunnelling update and contacted in advance of the TBM4 traverse.
Q1	Cherrybrook	Unavoidable/ Closed	150330RODR	30/03/2015	TJHD	Noise and Vibration	Complainant phoned to say that the noise from the tunnelling was worse than it had been on the previous occasion that she had called and she was concerned that it would disturb her sleep once again. Complainant was advised that TBM 3 was closest to her property but that it would be moving away overnight. When contacted the next day, the complainant advised that she was able to get some sleep as she had moved into a different bedroom which made a difference. The TBM has now moved away from the property.
Q1	Rouse Hill	Unavoidable/ Closed	150330KATE	30/03/15	ISJV	Air quality	Complainant stated that there had been a large volume of trucks entering the site throughout the day and that there was a considerable amount of dust being generated. Caller stated that she had not sighted a water truck all day. ISJV contacted the superintendent to organise a water cart to attend the site immediately. Upon investigation, it was confirmed that water carts were being used on site. Complainant was satisfied with the response.