Newcastle Inner City Bypass Rankin Park to Jesmond

Hollywood Shanty Town Site and the Wallsend/Plattsburg Tramway
Archaeological Salvage – low impact work







Newcastle Inner City Bypass Rankin Park to Jesmond

Hollywood Shanty Town Site and the Wallsend/Plattsburg Tramway Archaeological Salvage – low impact work submission

Transport for NSW | November 2022

COPYRIGHT: The concepts and information contained in this document are the property of Transport for NSW. Use or copying of this document in whole or in part without the written permission of Transport for NSW constitutes an infringement of copyright.

Document controls

Document status	Date	Prepared by	Reviewed by
Rev 1-0	October 2022		
Rev 2-0	November 2022		
Rev 3-0	November 2022		
Rev 4-0	November 2022		

Contents

Coi	ntents		i
1.	Intro	ductionduction	1
	1.1	Background	1
	1.2	Purpose	1
2.	Activ	rity description	2
	2.1	Location	2
	2.2	Scope of activity	
	2.3	Program and detailed activity description	
	2.4	Consultation	
	2.5	Timing	
3.		view of impacts	
4.	Envi	ronmental management	
	4.1	Summary of relevant SPIR safeguards and project approval conditions	12
5 .	Cond	clusion and approval	18
	5.1	Conclusion	
	5.2	Certification	18
Та	bles		
Tab	le 1-1	: Project stages as described in the Stage Report	1
Tab	le 2-1	: Summary of responses from agency consultation	5
Tab	le 3-1	: Review of environmental and community impacts	6
Tab	le 4-1	Summary of mitigation measures, safeguards and management strategies	12
Fiç	gure	S	
Figi	ure 2-	1 Location of Hollywood shanty town and Wallsend Plattsburg tramway	2
		2 Area from which the 10-12 houses plus associated outbuildings would be subject to detailed	
		excavation	4
Fig	ure 3-	1 Sensitive area plan (page 1 of 2)	9
Fig	ure 3-2	2 Sensitive area plan (page 2 of 2)	10
Αp	pen	dices	
App	endix	A-Historical Archaeological Research Design and Excavation Methodology	.24
App	endix	B - RP2J Hollywood Testing Report - November 2021	.86
App	endix	C - Agency Consultation	150
App	endix	D - Environmental Work Method Statement	157

1. Introduction

1.1 Background

The Newcastle Inner City Bypass Rankin Park to Jesmond (RP2J) Project (the project) is the fifth section of the Newcastle Inner City Bypass (NICB), which forms part of the Transport for NSW (formally Roads and Maritime Services) long term strategy to connect the Pacific Highway between Bennetts Green and Sandgate.

The project involves the construction of 3.4 kilometres of new four lane divided road between Lookout Road, New Lambton Heights and Newcastle Road, Jesmond. The RP2J Project, in its current form, includes interchanges at each end (both south and north) as well as an additional full interchange giving access to the John Hunter Hospital. Approval by the NSW Minister for Planning was granted on 15 February 2019.

The Conditions of Approval (CoA) for the project include an allowance for construction and operation of the project to be carried out in stages. The development of a staging report to describe the proposed staging was accepted by the NSW Planning Secretary in October 2019.

Table 1 of the instrument of approval includes a definition of construction applicable to the project. The definition specifically excludes low impact work (where it is either listed or determined by the Environmental Representative (ER) or the Planning Secretary as low impact work) from requiring approval of a Construction Environmental Management Plan (CEMP) prior to the activity being carried out.

In the project staging report the project stages were identified and defined as construction or low impact work as shown in Table 1-1. An archaeological salvage program of Hollywood shanty town was identified as Stage 1 early work and is the subject of this low impact work submission.

The archaeological salvage program would be carried out in accordance with the Historical Heritage Research Design and Excavation Methodology prepared in response to CoA E21 and E22, and the consultation requirements set out in Table 1 definition of Construction of the instrument of approval.

Table 1-1: Project stages as described in the Stage Report

Stage	Work scope	Definition
1	General early works	Low impact
2	Shared path bridge of Newcastle Road	Construction
3	Southern utilities package	Low impact
4	Main bypass work	Construction

1.2 Purpose

The purpose of this submission is to:

- Provide an overview of the proposed work including location, scope, methodology and program
- Summarise the potential environmental impacts of the activity and outline mitigation strategies that would be implemented during the work
- Assist the Planning Secretary with a determination of the work as being construction, or otherwise as
 defined in Table 1 of the project approval and to demonstrate compliance with relevant CoAs.

2. Activity description

2.1 Location

The Hollywood shanty town is located in the bushland to the south of Newcastle Road and the adjoining Jesmond Park. Wallsend Plattsburg tramway runs through the project site between the bushland to the south and Jesmond Park to the north, and currently forms part of a broader cycleway connecting Lambton and Jesmond. The location of the Hollywood shanty town and Wallsend Plattsburg tramway are shown on Figure 2-1. Noting the Wallsend Plattsburg tramway has previously been fully excavated and is not considered as part of this low impact work.

This submission applies to the Hollywood shanty town within the project boundary.

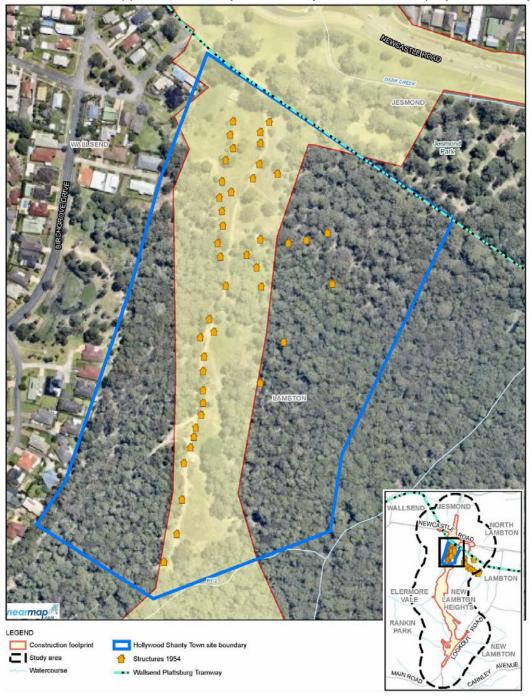


Figure 2-1 Location of Hollywood shanty town and Wallsend Plattsburg tramway

2.2 Scope of activity

The general scope and sequence of the salvage program is described below. Further detail on the activity description and associated potential impacts is provided in Section 2.3 and Chapter 3, respectively. The sequence of work would generally include:

- Establish site access adjacent to the heritage salvage area and progressive erosion and sediment control
- Undertake a pre-clearing biodiversity survey of the areas to be cleared / trimmed and setting out the limit of impact. An ecologist will be present onsite during pre-clearing surveys and during clearing if any habitat trees are identified to be felled
- Clear / trim ground cover and/or shrub layer vegetation in nominated salvage areas
- Complete historical archaeological salvage activities as per the Salvage Plan within the 'RP2J Hollywood Testing Report' (Casey & Lowe, 2021)
- Backfill, shape and stabilise disturbed ground surfaces to minimise the potential for erosion
- Collected artefacts will be stored and managed at Umwelt's office temporarily during the salvage works for analysis, before being handed over to Newcastle Museum
- A storage container at minor ancillary facility C
- Demobilise from site.

2.3 Program and detailed activity description

A detailed Historical Archaeological Research Design and Excavation Methodology (February 2021) has been developed in accordance with CoA E21 and E22 and is provided in Attachment A. Following the Testing works, the RP2J Hollywood Testing Report (November 2021) was developed and is provided in Attachment B.

The salvage program has been designed in accordance with the following:

- CoA E21 and E22
- Be consistent with the detail set out in the Newcastle Inner City Bypass Rankin Park to Jesmond Environmental Impact Statement (EIS) and Submission and Preferred Infrastructure Report (SPIR)
- The Heritage Council of NSW's Archaeological Assessment Guidelines.

The works would be completed using the following plant and equipment, including the following indicative list:

- Excavator
- Survey equipment
- Chainsaw
- Hand tools.

It is anticipated that between 10 and 12 personnel would be required to complete the salvage work including an ecologist, lead archaeologist, surveyor and field staff.

The activities involved in the salvage excavation program are detailed within Section 4.2 of the RP2J Testing Report – November 2021, see Attachment B. Based on the results of the testing program, the salvage program identifies 10-12 houses which would be subject to detailed excavation, this was recognised to be a representative sample (25 percent) of the Hollywood site, which contains in total about 43 houses and outbuildings.

The salvage locations would be located within the heritage salvage area shown on Figure 2-2 and the exact locations of salvage are subject to a site survey prior to the salvage commencing.

Site work would be performed during standard working hours which are:

- Monday to Friday, 7am to 6pm
- Saturday 8am to 5pm
- No work on Sundays or Public holidays

However, it is likely that the work would be further limited to standard hours Monday to Friday.

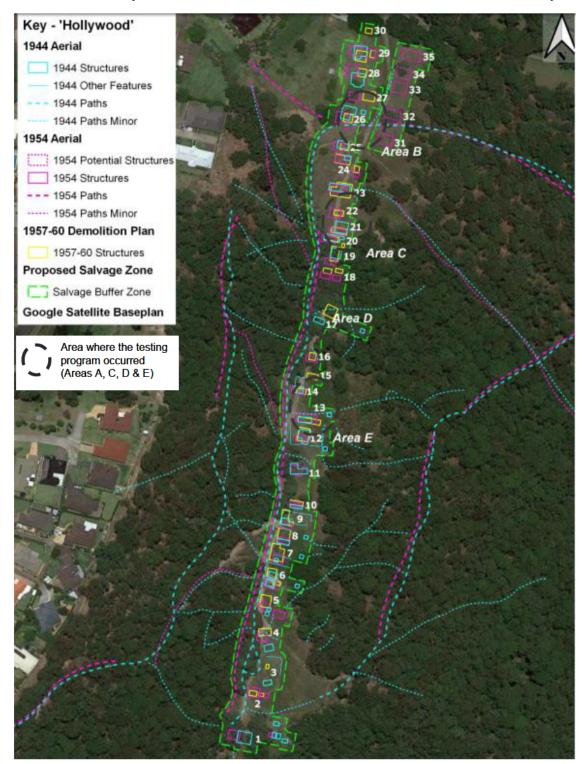


Figure 2-2 Area from which the 10-12 houses plus associated outbuildings would be subject to detailed excavation

2.4 Consultation

Consultation requirements for determining low impact work are set out in Table 1 of the instrument of approval and outlines that archaeological salvage works are permitted as low impact work in accordance with CoA A1. However, where heritage items or threatened species or threatened ecological communities (within the meaning of the former NSW *Threatened Species Conservation Act 1995*, now *NSW Biodiversity Conservation Act 2016* or *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*) are affected or potentially affected by any low impact work, that work is construction, unless otherwise determined by the Planning Secretary in consultation with the relevant heritage authority, Biodiversity Conservation Division (BCD) or DPI Fisheries (in the case of impact upon fish, aquatic invertebrates or marine vegetation).

Some elements of the proposed salvage program would take place within vegetation mapped as a threatened ecological community (TEC) and have the potential for impact on a heritage item, refer to Figure 3-1 and Figure 3-2. Accordingly, consultation has been undertaken with:

- The Department of Planning and Environment Biodiversity Conservation Division
- The Department of Planning and Environment NSW Heritage.

Copies of the letters to and responses from these agencies are provided in Attachment C. A summary of the consultation is provided in Table 2-1.

Table 2-1: Summary of responses from agency consultation

Environmental aspect	Response
Heritage NSW	Heritage NSW provided initial consultation on December 12 2022 and additional clarification was sought by Transport on the proposal meeting the definition of Low Impact. Heritage NSW provided endorsement of the work as Low Impact on December 20 2022.
Biodiversity Conservation Division	BCD requested that additional mitigation measures were considered regarding tree clearing protocols and translocation of displace fauna. These measures have been incorporated into the Environmental Work Method Statement (EWMS) (Attachment D).

2.5 Timing

Salvage work as per this submission, is intended to be completed as low impact work. This work is expected to take between six and eight weeks to complete.

This proposed low impact work would be managed as construction (as defined in Table 1 of the Instrument of Approval) once the CEMP is approved by the Planning Secretary if the work is still being carried out.

The Hollywood heritage area is located within the northern portion of the project site (refer to Figure 3-1 and Figure 3-2) and restricts access to the project site. As such there are benefits to completing the salvage works as low impact works prior to construction starting. The benefits include:

- · Safety of workers to minimise interaction between plant and people
- Protect artefacts from plant and equipment
- Provide site access to additional portions of the site
- It is a low-risk item that is permissible as low impact.

3. Overview of impacts

The potential environmental impacts from the proposed salvage work are described in Table 3-1. The sensitive area plans are shown in Figure 3-1 and Figure 3-2.

The aspects of the salvage work and how they would be managed have been considered with reference to the Newcastle Inner City Bypass – Rankin Park to Jesmond Environmental Impact Statement (EIS), Submission and Preferred Infrastructure Report (SPIR) and related specialist assessment reports.

Table 3-1: Review of environmental and community impacts

Environmental aspect	Potential impacts
Biodiversity	The work has been conservatively estimated to result in up to 3.8 hectares of vegetation clearing within the Hollywood shanty town heritage area within the project boundary and includes the Spotted Gum Red Iron Bark TEC.
	The Biodiversity Assessment Report within the SPIR (Appendix B) identified and assessed the removal of 7.1 hectares of Lower Hunter Spotted Gum Ironbark Forest TEC within the construction footprint of the RP2J project. This unavoidable direct impact is being offset with 399 ecosystem credits as per the Framework for Biodiversity Assessment (OEH 2014) and NSW Biodiversity Offsets Policy for Major Projects (OEH 2014b) as documented in the approved RP2J Biodiversity Offset Strategy.
	Based on the salvage extent and access, up to 3.8 hectares of TEC could be impacted. It should be noted that the salvage program would seek to limit vegetation impacts to ground covers and shrubs where possible. Areas containing larger trees are considered unlikely to have interpretation value as the heritage is typically destroyed or substantially altered by tree root intrusion, therefore would be less likely to be removed during this work.
	All vegetation impacts would be wholly within the project boundary.
	The biodiversity impacts would be minor with the implementation of management measures, included in Section 4.
Traffic and transportation	The salvage area is remote from public roads, but would interact with the Jesmond cycleway path and informal bush trails.
	The movement of vehicles to and from the salvage area would be infrequent and short in duration. Any impact on pedestrians would be considered minor. Access and/or alternative access along the cycleway would be maintained at all times.
	During salvage works, active work sites would be fenced and bush tracks would be maintained or alternative paths identified.
	There would be no operational impacts as a result of the salvage program.
	The traffic and transport impacts would be negligible.

Environmental aspect	Potential impacts
Noise and vibration	The works would be conducted within the area shown on Figure 2-1.
	The work will result in the generation of some noise from the use of equipment and light vehicles and would be limited to standard working hours.
	Appendix D (Technical Paper 3 – noise and vibration assessment) of the project SPIR outlined measured noise levels and adopted noise management criteria for noise catchment areas (NCA) across the project. The salvage program will be adjacent to noise catchment areas NCA 4 and 6. Day time background noise levels adopted for these NCAs are 47 dBA and 33 dBA, respectively.
	A consideration of noise impacts based on equipment and the distance of the salvage program to the nearest sensitive receivers in each NCA has been undertaken using the Transport for NSW construction noise estimator. It is predicted under a worst case scenario where a medium sized excavator (ie 13.5 tonne) is operating within 55 metres of a sensitive receiver noise levels would be 48 dBA. It should be noted that road traffic noise is the predominant noise source in this area with the nearest measured ambient noise levels recorded at 57 dBA during the day time.
	Noise impacts attributable to the salvage program would be minor. Due to the distance and equipment proposed for use, vibration impacts are not expected.
Landscape character and visual impact	The work would result in temporary visual impacts as a result of plant and equipment.
	The potential for visual impacts are considered minor, subject to implementing management measures.
Socio-economic, land use and property	The work would occur within the project boundary and would result in temporary impacts on land-use, such as temporary disruptions and delays to pedestrians on the Jesmond Cycleway Path and the informal bush tracks. The community will be kept informed on an ongoing basis through tools in the project community communications strategy.
	The potential for socio-economic, land-use and property impacts are considered minor subject to implementation of management measures included in Section 4.
Flooding and drainage	The work would not have an impact on flooding regimes and drainage and is not located in an area that is flood affected. Disturbed surfaces will be restored and progressively stabilised in accordance with the Erosion Sediment Control Plan (ESCP).
	The potential for flooding and drainage impacts are considered minor subject to implementation of management measures included in Section 4.
Soils, contamination and water quality	The work will result in minor ground disturbance from trenching and access. The disturbance areas will be contained with limited constraints on the implementation of adequate erosion and sedimentation controls.
	There will be minimal potential for impacts on water quality as a result of release of sediment or pollutants. No water ways are located in close proximity to the work.
	The potential for soils, contamination and water quality impacts are negligible subject to implementation of management measures.

Environmental aspect	Potential impacts
Groundwater	The work will involve minor shallow excavations. Impacts on groundwater are not expected.
Aboriginal heritage	Technical Paper 10 – Aboriginal Cultural Heritage Assessment Report of the SPIR identified and confirmed the presence of a low density surface artefact scatter of disturbed context within the area of the non-Aboriginal testing and salvage program site. The site has been assessed to be of low archaeological significance and has been subject to a surface artefact collection program. Impacts on Aboriginal heritage are therefore not expected. The project Unexpected Heritage Finds and Human Remains Procedure will be
	implemented should unknown items be discovered during the salvage program work.
Air quality	The salvage program work will have potential for localised dust generation during earthworks. Given the minor nature of the work impacts on air quality from vehicle exhaust will be negligible. There will be no long-term impacts on air quality.
	The potential for air quality impacts are considered minor subject to implementation of management measures.
Resource use and waste management	The salvage program work would result in the generation of small amounts of waste including recovered material that is not a heritage item and/or relevant to the research/interpretation element of the program. Waste would be stored on site where feasible otherwise it would be removed from site and disposed of appropriately. There would be no demand for resources with limited availability.
Hazards and risks	Hazards and risk from spills or other incidents are considered minor. Incident and emergency response procedures would be implemented to respond and manage identified hazards and risk.
Greenhouse gas and climate change	Impacts to greenhouse gas emissions would be minor due to the small scale of works. Impacts from climate change are not expected.
Cumulative impacts	The location of these works is such that cumulative impacts would be minor. Cumulative impacts are not expected under this low impact work submission.

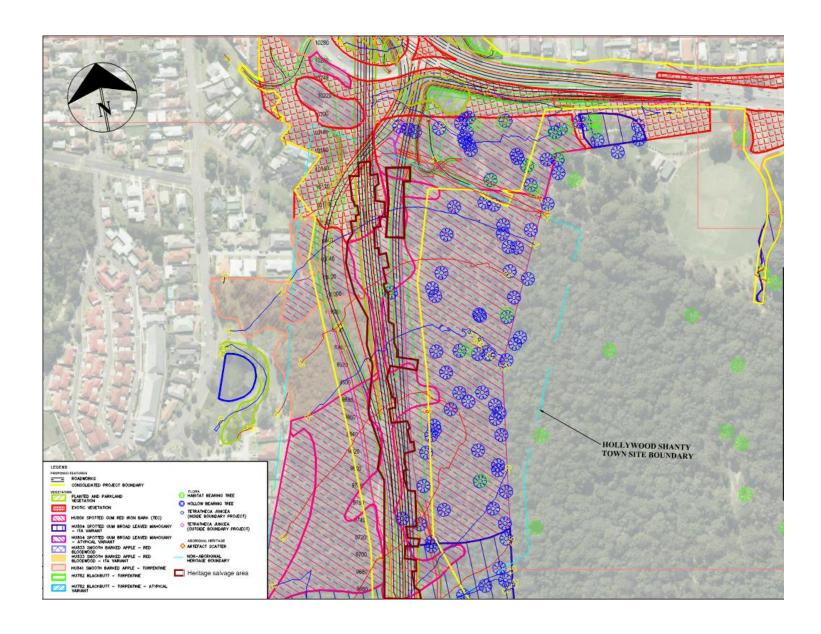


Figure 3-1 Sensitive area plan (page 1 of 2)

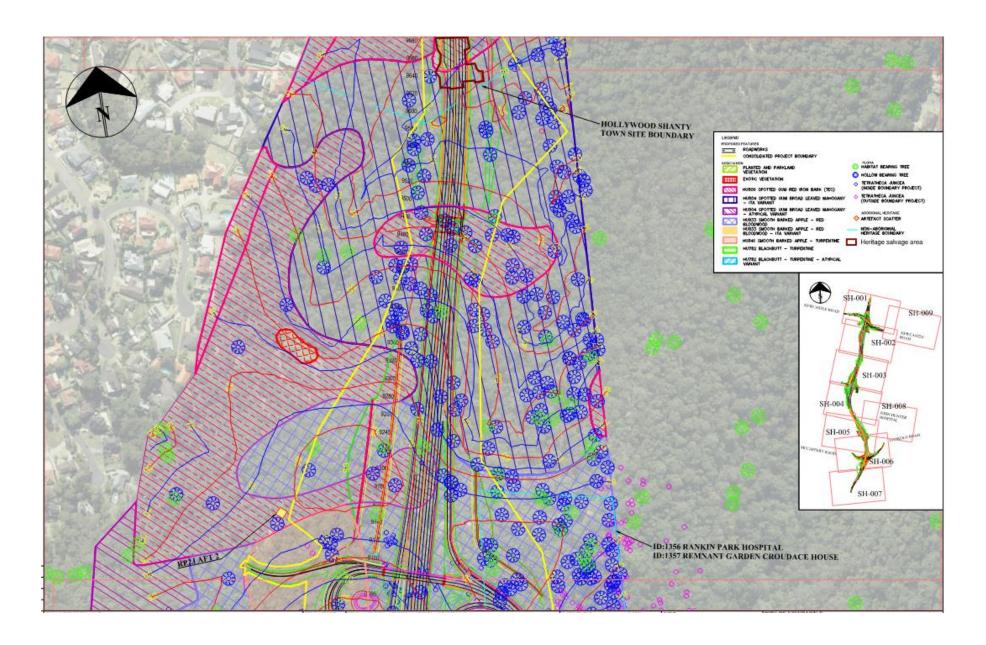


Figure 3-2 Sensitive area plan (page 2 of 2)

4. Environmental management

A number of mitigation measures, safeguards and management strategies have been identified in the project SPIR and CoA in order to avoid or minimise adverse environmental impacts that could potentially arise as a result of the project. Those relevant to the heritage salvage program are detailed in Table 4-1.

An Environmental Work Method Statement (EWMS) will be prepared to consolidate and detail the safeguards and management measures identified. The EWMS will provide a framework for establishing how these measures will be implemented and who would be responsible for their implementation.

The EWMS will be prepared prior to the work and must be reviewed and approved by the Transport for NSW Environmental Officer prior to the commencement of any on-site work. The EWMS will be a working document, subject to ongoing change and updated as necessary to respond to specific requirements.

4.1 Summary of relevant SPIR safeguards and project approval conditions

Environmental safeguards and management measures outlined in project EIS, SPIR and CoA will be incorporated into an activity specific EWMS. These safeguards and management measures will minimise any potential adverse impacts arising from the work on the surrounding environment and community. The safeguards and management measures are summarised in Table 4-1.

Table 4-1 Summary of mitigation measures, safeguards and management strategies

Potential impact	Environmental controls	Approval document reference	Responsibility
General			
Non-compliance with approval	A contractor's Environmental Work Method Statement (EWMS) for the salvage program work will be prepared and submitted for review and endorsement by the Transport for NSW RP2J environmental officer - Newcastle. As a minimum, the EWMS will contain and/or address the following: • Detail of environmental policies, guidelines, principles and approvals to be complied with and followed during the work • Detailed constraints mapping in the form of sensitive area maps or site plans with constraints identified eg flora and fauna, sensitive receivers • Detail of training and induction for employees including contractors and sub-contractors • An outline of the sequence of tasks for the work and a description of the roles and environmental responsibilities for relevant employees for those tasks and their relationship with the Principal and ER • Detail of communication requirements • An inspection program detailing the activities to be inspected and frequency of inspections • Details of managing and reporting any incidents or non-compliances • A process for rectifying non-conformances • Procedures for emergency and incident management including "stop work" processes and reporting to Transport for NSW • A process for periodic review and update of the EWMS in response to changes to site conditions or work methodology • Details of how the salvage program work will implement the identified safeguards.	SPIR BD04	Contactor
	All personnel working on site will receive training to ensure awareness of environment protection requirements to be implemented during the salvage program work. This will include up-front site induction and regular "toolbox" style briefings. Aspects covered will include, but not be limited to: Approval requirements Working hours	SPIR BD02, HH02	Contractor

Potential impact	Environmental controls	Approval document reference	Responsibility
	 The management of noise and vibration Waste streams and management requirements Environmental values of the area eg biodiversity constraints, clearing and work boundaries Stop work procedures for unexpected finds including contamination and heritage Incident response and reporting. 		
Community exposed to impacts without prior notice	Implement an approved Community Communications Strategy and notify the potentially affected community eg residents, businesses, road users of the work. Apply methods detailed in the strategy including, but not limited to: Letterbox / email notifications One on one meetings Direct phone calls, as required Information updates on the project website Responding to enquiries or complaints in accordance with the complaints management system	CoA B1 / B2	TfNSW / Contractor
Unresolved complaints	All enquires and complaints will be managed in accordance with the project Complaints Management System (CMS) outlined in the Community Communication Strategy. Key project details established in response to SSI CoA B9 include: • Phone number – 1800 818 433 • Email address – RP2JCommunity@fultonhogan.com.au • Postal address – RP2J Project – Fulton Hogan, PO BOX 186 Waratah The project phone number will be attended at all times while salvage program work is in progress so as to receive and respond to complaints eg noise.	CoA B6 – B9	TfNSW / Contractor
Pollution of the environmental / non-compliance with approval	If an incident (eg spill) occurs, the Roads and Maritime Services Environmental Incident Classification and Reporting Procedure is to be followed and the Transport for NSW Project Manager (or delegate) notified immediately. In circumstances where an incident causes or threatens to cause material harm and which may or may not be or cause a non-compliance, the Planning Secretary must be notified.	CoA A37 / A38	Contractor / TfNSW
Biodiversity			
Impacts to Flora and Fauna	The clearing of native vegetation will be limited to the greatest extent possible to facilitate the salvage program. Impacts to plant community types will not exceed those identified in the SPIR.	CoA E2, E3 / SPIR GH02, DD-CA	Contractor / TfNSW
	Pre-clearance surveys will be carried out in accordance with the Roads and Maritime Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects (Guide 1: Pre-clearing process) (RTA 2011a)	CoA E10 / SPIR BD05, BD06, BD07	Contractor

Potential impact	Environmental controls	Approval document reference	Responsibility
	Vegetation clearing will be carried out in accordance with the Roads and Maritime <i>Biodiversity Guidelines:</i> Protecting and managing biodiversity on RTA projects (Guide 4: Clearing of vegetation and removal of bushrock) (RTA 2011a)	SPIR BD04	Contractor
	Any unexpected threatened species finds will be dealt with in accordance with the Roads and Maritime Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects (RTA 2011a)	SPIR BD06	Contractor
	Exclusion zones will be identified and demarcated in accordance with the Roads and Maritime <i>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects (Guide 2: Exclusion zones)</i> (RTA 2011a)	SPIR BD07	Contractor
	Protocols for preventing or minimising the spread of noxious and environmental weeds will be developed and implemented in accordance with the Roads and Maritime <i>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects (Guide 6: Weed Management)</i> (RTA 2011a)	CoA E9 / SPIR BD12	Contractor
	Protocols for preventing the introduction and/or spread of disease causing agents such as bacteria and fungi will be developed and implemented in accordance with the Roads and Maritime <i>Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects (Guide 7: Pathogen Management)</i> (RTA 2011a)	CoA E9 / SPIR BD13	Contractor
	Fauna handling, rescue and release will be conducted in accordance with the Roads and Maritime Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects (Guide 9: Fauna handling) (RTA 2011a)	SPIR BD14	
Traffic and transport			
Access and pathways affected	Pedestrian and cyclist access on existing formal paths will be maintained where possible. Where closure of a formal path is required alternative access and appropriate signage will be provided.	SPIR SL13 / CoA E70	Contractor
	Emergency vehicle access to the bushland areas surrounding the project will be provided at all times.	SPIR SL14	Contractor
	Consultation with emergency services, including the Rural Fire Service and Fire and Rescue NSW to: • Ensure access is maintained during and after the work • To identify hazard reduction burns in the locality of the project.	SPIR HR02	TfNSW
Noise and vibration			
Excessive noise & vibration impacts	Where practical, equipment will be selected to minimise noise emissions. Equipment will be fitted with appropriate silencers and be in good working order. Machines found to produce excessive noise compared to normal industry expectations will be removed from the site or stood down until repairs or modifications can be made.	SPIR NV13	Contractor

Potential impact	Environmental controls	Approval document reference	Responsibility
	Mitigation measures must be implemented with the aim of achieving the following construction noise management levels and vibration criteria:	CoA E34	Contactor
	(a) construction 'Noise affected' noise management levels established using the Interim Construction Noise Guideline (DECC, 2009);		
	(b) vibration criteria established using the Assessing vibration: a technical guideline (DEC, 2006) (for human exposure);		
	(c) Australian Standard AS 2187.2 - 2006 "Explosives - Storage and Use - Use of Explosives";		
	(d) BS 7385 Part 2-1993 "Evaluation and measurement for vibration in buildings Part 2" as they are "applicable to Australian conditions"; and		
	(e) The vibration limits set out in the German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures (for structural damage).		
	Reasonable work practices to minimise noise and vibration to be implemented during the salvage program work will include:		Contractor
	 Avoiding shouting and slamming doors Where practical, operating machines at low speed / power and switching them off when not in use rather than leaving them idling for prolonged periods Minimising the reversing of machines Avoiding dropping materials from height Limiting deliveries outside normal working hours as far as practicable Avoiding metal to metal contact on materials as far as practical Avoiding the use of horns for communication between plant and trucks (the use of two-way radios / phones would be prioritised). 		
	In the event of a valid noise complaint, monitoring will be carried out and reported as soon as possible. If exceedances are detected, the situation will be reviewed to attempt to identify reduce the impact to acceptable levels, where practicable.	SPIR NV15	Contractor
Landscape characte	r and visual amenity		
	Disturbed areas would be progressively stabilised during the work.	SPIR LC05	Contractor
Soil, contamination a	and water quality		
Impacts to soils and	Spill kits and adequate quantities of suitable material to counteract spillage would be kept readily available.	SPIR SW08	Contractor
water quality	The refuelling of plant and maintenance of machinery will be carried out in designated refuelling areas. Refuelling would be attended at all times.	SPIR SW09	Contractor

Potential impact	Environmental controls	Approval document reference	Responsibility
	Machinery will be checked daily to ensure that there are no oil, fuel, or other liquid leaks.	SPIR SW11	Contractor
	In the event that indicators of contamination are encountered during work (such as odours or visually contaminated materials), work in the area will cease until advice on the need for remediation or other action is obtained from the Roads and Maritime project manager.	SPIR SW12	Contractor
	All reasonably practicable erosion and sediment controls must be installed and appropriately maintained to prevent water pollution. When implementing such controls, any relevant guidance in the Managing Urban Stormwater series must be considered. Measures will include, but not be limited to: • Diverting upstream water around or through disturbed areas so it is not polluted by the work • Scour protection measures for access tracks when these are an erosion hazard due to either their steepness, soil erodibility or potential for concentrating runoff flow • Measures to minimise erosion and control sedimentation from stockpiles • Controls in runoff flow paths to reduce flow velocities and minimise the potential for erosion.	CoA E57 / DPE 1	Contractor
	Erosion and sediment control measures will be inspected at a minimum of weekly intervals and within 24 hours of rainfall events exceeding 10mm in a 24 hour period. All identified problems must be rectified without delay. Regular routine maintenance (and records to illustrate this maintenance) will be undertaken to ensure appropriate operation of controls, replacement of damaged sediment control structures and improvement or implementation of other temporary measures as required. In the event of forecast storm events, heavy rainfall (over 10mm in a 24 hour period) inspect the site to ensure that all erosion/sedimentation and stabilisation controls are in place and in effective working order.		Contractor
	The project Unexpected Contaminated Land and Asbestos Finds Procedure must be followed should unexpected contaminated land or asbestos (or suspected contaminated land or asbestos) be excavated or otherwise discovered during works. The Unexpected Contaminated Land and Asbestos Finds Procedure must be implemented for the duration or work.	CoA E59, E60 / SPIR SW12	Contractor
Aboriginal heritage			•
	The project Unexpected Heritage Finds and Human Remains Procedure will be implemented. Note: Human remains that are found unexpectedly during works are under the jurisdiction of the NSW State Coroner and must be reported to the NSW Police immediately.	CoA E14, E15, E16 / SPIR AH02	Contractor / TfNSW

Potential impact	Environmental controls	Approval document reference	Responsibility
Non-Aboriginal herita	age		
	The project Unexpected Heritage Finds for Human Remains Procedure will be implemented. Note: Human remains that are found unexpectedly during works are under the jurisdiction of the NSW State Coroner and must be reported to the NSW Police immediately.	CoA E16 / SPIR HH03	Contractor / TfNSW
Air quality			
W-4	 During the salvage program works the following controls will be implemented, where relevant: Scheduling of work and/or avoiding / modifying activities that would generate dust during strong winds and rainfall Minimising areas of exposed surfaces Maintaining and operating all equipment in accordance with manufacturer specifications. Progressive stabilisation of areas disturbed by activities and treating areas stripped of topsoil to prevent dust generation; Switching off engines of plant and vehicles when not in use No burning off of waste materials. 	CoA E1 / SPIR SW16, AQ02	Contactor
Waste management	Waste generated during works will be dealt with in accordance with the following priorities:	MCoA E81	Contractor / TfNSW
	(a) waste generation must be avoided and where avoidance is not reasonably practicable, waste generation must be reduced; (b) where avoiding or reducing waste is not possible, waste is to be re-used, recycled, or recovered; and (c) where re-using, recycling or recovering waste is not possible, waste is to be treated or disposed of.		
	All waste must be classified in accordance with the EPA's Waste Classification Guidelines, with appropriate records and disposal dockets retained for audit purposes.	MCoA E84	Contractor
	A waste register detailing types of waste collected, amounts, date, time, transportation method and details of disposal will be maintained.	SPIR RW01	Contractor

5. Conclusion and approval

5.1 Conclusion

The low impact work submission has considered the various stages of activity, potential impacts on the environment and community for the respective stages, and outlined mitigation measures and safeguards to avoid or minimise those potential impacts. The activity would result in some localised vegetation impacts, ground disturbance and the generation of a small amount of waste.

Through the application of appropriate mitigation measures as outlined in Section 4, it is considered that the work would be consistent with the definition of low impact work as per Table 1 of the project Infrastructure Approval (SSI 6888).

5.2 Certification

This document provides a true and fair consideration of the scope and potential impacts of the work as outlined in the EIS / SPIR and aligns with the stages defined in the Staging Plan.

