

29 October 2023

[REDACTED]  
A/Director Sustainability, Environment & Planning  
Metro West  
Sydney Metro  
Transport for NSW  
PO Box K659  
HAYMARKET NSW 1240

REF: 201208(B) CFFMP REV7

Dear [REDACTED]

**RE: Sydney Metro Central Tunnelling Package: Construction Flora and Fauna Management Plan (Rev 7)**

I refer to Sydney Metro's (SM) submission of the following document required by Condition C1 of the Sydney Metro West Infrastructure Approval (SSI 10038) which was approved by the Department of Planning, Industry and Environment (DPIE) on 11 March 2021:

- Sydney Metro West, Central Tunnelling Package Construction Flora and Fauna Management Plan (SMWSTCTP-AFJ-1NL-EO-PLN-000001 Revision 07 dated 5 September 2023).

It is noted that:

- The Construction Flora and Fauna Management Plan has been prepared by Acciona Ferrovia Joint Venture (AFJV) to address the requirements of Condition C5(b) of the Infrastructure Approval.
- The Plan was updated to include tunnelling activities, which are identified as Stage B2 in the Sydney Metro West Staging Report.
- Sydney Metro has reviewed and commented on previous versions of the document.
- Revision 03 was issued as part of consultation has occurred with DPIE EES (now DPE BCD), DPI fisheries, SOPA and the relevant councils. The document has been reviewed and updated following comments from the ER, DPE Post Approval, and stakeholders.
- Revision 5 comprised a minor updated following an annual review by AFJV.
- Following the above reviews, the updated document is considered to contain information required by the Conditions of Approval (SSI 10038) in relation to the Construction Flora and Fauna Management Plan.

Noting the above, as the approved Environmental Representative for the Metro West and as required by Conditions A30(d) and C5, the Construction Flora and Fauna Management Plan (Revision 7) is endorsed in accordance with C8 (as delegated through the Phasing Report by DPE).

Yours sincerely

[Redacted signature]

[Redacted name]

Environmental Representative – Sydney Metro West

CC: [Redacted email address]





# Flora and Fauna Management Plan

SMWSTCTP-AFJ-1NL-EO-PLN-000001 Revision 07

Sydney Metro West – Central Tunnelling Package





## DOCUMENT APPROVAL

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Date:	5/9/23	5/9/2023	5/9/2023

## REVISION HISTORY

Rev:	Date:	Pages:	By:	Description:
00	16/8/21	All	GW	For submission to Sydney Metro
01	24/9/21	All	GW	Response to stakeholder comments
02	14/10/21	All	GW	Submission for ER endorsement
03	1/6/22	All	GW	Revised to include Phase B2 for consultation
04	15/7/22	All	GW	Updated to address reviewer comments
05	2/9/22	All	GW	Updated to address stakeholder comments
06	6/9/22	Appendix B	GW	Minor update to Appendix B
07	5/9/2023	1&6	SG	Annual review



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## GLOSSARY / ABBREVIATIONS

Abbreviation	Description / Definition
AFJV	Acciona Ferrovia Joint Venture (the Contractor)
AS/NZS	Australia/New Zealand Standards
Amendment Report	Sydney Metro West Westmead to The Bays and Sydney CBD Amendment Report Concept and Stage 1 (2020)
CEMP	Construction Environmental Management Plan
Construction	Includes all work required to construct Stage 1 of the CSSI as described in the documents listed in Condition A1 of Schedule 3, including commissioning trials of equipment and temporary use of any part of the CSSI, but excluding Low Impact Work.  <i>Note: As defined in Table 1 of SSI 10038 Infrastructure approval for the Project.</i>
CoA	Minister's Conditions of Approval (as relevant to Sydney Metro West Concept and Stage 1)
CTP	Central Tunnelling Package
DECC	Former Department of Environment and Climate Change (NSW) now NSW Office of Environment and Heritage.
DPIE	NSW Department of Planning, Infrastructure and Environment
DPI (Water)	NSW Department of Primary Industries (Water) (Former Office of Water)
EIS	Sydney Metro West Concept and Stage 1 Environmental Impact Statement (April 2020)
EMS	Environmental Management System
Environmental aspect	Defined by AS/NZS ISO 14001:2015 as an element of an organisation's activities, products or services that can interact with the environment
Environmental incident	An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance with the conditions of this approval. Note "material harm" is defined in this document.
Environmental impact	Defined by AS/NZS ISO 14001:2015 as any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects
Environmental objective	Defined by AS/NZS ISO 14001:2015 as an overall environmental goal, consistent with the environmental policy, that an organisation sets itself to achieve
Environment Policy	Statement by an organisation of its intention and principles for environmental performance
EPA	NSW Environment Protection Authority
EP&A Act	<i>NSW Environmental Planning and Assessment Act 1979</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act, 1999</i>
EPL	NSW Environment Protection Licence under the <i>Protection of the Environment Operations Act 1997</i>
ESCP	Erosion and Sediment Control Plan

Abbreviation	Description / Definition
EWMS	Environmental Work Method Statements
Hold point	Is a verification point that prevents work from commencing prior to release.
Material harm	This is harm that: (a) involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial or (b) results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment).
Minister, the	NSW Minister for Planning and Public Spaces
Non-compliance	An occurrence, set of circumstances or development that is a breach of this approval but is not an incident.
OCCS	Overarching Community Communication Strategy
Planning Secretary	The Planning Secretary of the Department of Planning, Industry and Environment
PoEO Act	<i>NSW Protection of the Environment Operations Act 1997</i>
Project	Sydney Metro West Concept and Stage 1
Relevant Councils	Any or all local government councils as relevant, Inner West, City of Canada Bay, Strathfield Council, Burwood, City of Parramatta
REMM	Revised Environmental Management Measure
Submissions Report	Sydney Metro West Westmead to The Bays and Sydney CBD Submissions Report Concept and Stage 1 (2020)



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# 1. INTRODUCTION

## 1.1 BACKGROUND

Sydney Metro is Australia's biggest public transport program. Services on the North West Metro Line between Rouse Hill and Chatswood started in May 2019. The Sydney Metro network also includes Sydney Metro City & Southwest, Sydney Metro West and Sydney Metro Western Sydney Airport.

Sydney Metro West is a new 24 kilometre metro line between Westmead and the Sydney CBD. This infrastructure investment will double the rail capacity of the Greater Parramatta to Sydney CBD corridor with a travel time target between the two centres of about 20 minutes.

The planning approvals and environmental impact assessment for Sydney Metro West has been split into a number of stages recognising the size of the project. This includes:

- Stage 1 – Concept and all major civil construction works including station excavation and tunnelling between Westmead and The Bays. Planning approval for this stage was granted in March 2021.
- Stage 2 – All major civil construction works including station excavation and tunnelling from The Bays to Sydney CBD
- Stage 3 – Tunnel fit-out, construction of stations, ancillary facilities and station precincts, and operation and maintenance of the Sydney Metro West line.

1.2 AN ENVIRONMENTAL IMPACT STATEMENT (EIS) (JACOBS/ARCADIS, 2020) FOR THE CONCEPT AND STAGE 1 (HEREIN REFERRED TO AS THE PROJECT) ASSESSED THE FLORA AND FAUNA IMPACTS IN RESPONSE TO THE SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS ISSUED BY THE DEPARTMENT OF PLANNING, INDUSTRY AND ENVIRONMENT (DPIE). THE FLORA AND FAUNA IMPACT ASSESSMENT IS INCLUDED IN CHAPTER 22 AND TECHNICAL PAPER 10 OF THE EIS. THE PROJECT WAS APPROVED ON 11 MARCH 2021 (SSI 10038). AN ADMINISTRATIVE MODIFICATION (MODIFICATION 1) WAS APPROVED ON 28 JULY 2021, MODIFICATION FOR CLYDE STABLING AND MAINTENANCE FACILITY (MODIFICATION 2) WAS APPROVED 3 JUNE 2022, ADMINISTRATION MODIFICATION (MODIFICATION 3) WAS APPROVED 4 JULY 2022 AND ADMINISTRATION MODIFICATION (MODIFICATION 4) WAS APPROVED 22 DECEMBER 2022.SCOPE

The Flora and Fauna Management Sub-Plan (FFMP) forms part of the Construction Environmental Management Plan (CEMP). This Plan outlines how AFJV will comply with and implement the applicable 'Project requirements' for the Central Tunnelling Package (CTP) and identify how Acciona Ferrovia Joint Venture (AFJV) will manage the construction flora and fauna impacts during construction of the CTP civils construction phase B1 and tunnelling construction phase B2 (in accordance with the Sydney Metro Phasing Report).

This FFMP outlines how AFJV will comply with and implement the applicable elements from the following documents, collectively referred to herein as the 'Project requirements':

- NSW Minister for Planning and Public Spaces Conditions of Approval (CoA)
- Revised Environmental Mitigation Measures (REMMs) and the
- Sydney Metro Construction Environmental Management Framework (CEMF).

## 2. OBJECTIVES AND TARGETS

In order to assess the environmental performance during construction, environmental objectives and targets have been established. These objectives and targets have been developed with consideration of key performance outcomes for each key issue as specified in the EIS. Refer to Section 3.3 of the CEMP for performance outcomes relating to flora and fauna management as identified in the Project EIS. The CEMP has specific objectives in relation to spoil management that will apply to construction:

- Minimise impacts on flora and fauna
- Design waterway modifications and crossings to incorporate best practice principles
- Retain and enhance existing flora and fauna habitat wherever possible
- Appropriately manage the spread of weeds and plant pathogens.

Table 1 below provides a summary of the environmental objectives and targets from Chapter 27 of the EIS related to flora and fauna management.

TABLE 1. OBJECTIVES AND TARGETS

Objective	Target	Measurement tool
The avoidance and minimisation of impacts on terrestrial and aquatic biodiversity	<ul style="list-style-type: none"> <li>• Impacts on biodiversity are avoided (where possible) and minimised, including the clearing of native vegetation</li> <li>• Significant impacts to flow regimes in receiving waterways are avoided</li> <li>• Design of waterway modifications and crossings incorporates best practice principles</li> <li>• The Concept does not contribute to key threatening processes associated with weeds and pathogens</li> </ul>	<ul style="list-style-type: none"> <li>• Pre-Clearing Procedure Permit / Hold Point</li> <li>• Biosecurity protocol</li> <li>• Fauna handling and relocation procedure</li> <li>• Tree removal register</li> <li>• Design review process</li> </ul>
Ensure project personnel are aware and competent in their responsibilities in relation to the management of flora and fauna	100% of project personnel aware of responsibilities under the CEMP and this FFMP	CTP induction register and training register



### 3. ENVIRONMENTAL REQUIREMENTS

#### 3.1 RELEVANT LEGISLATION AND GUIDELINES

The relevant legislation to the CTP is listed in Table 2.

TABLE 2. RELEVANT LEGISLATION

Legislation	Management
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	The Project EIS assessed the impacts upon Matters of National Environmental Significance; no significant impact was identified and the Project was not referred to the Commonwealth for determination.
<i>Biosecurity Act 2015</i>	Priority weeds will be managed in accordance with this Flora and Fauna Management Plan
<i>Biodiversity Conservation Act 2016</i>	Areas of biodiversity will be managed in accordance with this Flora and Fauna Management Plan
<i>Environmental Planning and Assessment Act 1979</i>	Modifications to the SSI 10038 Infrastructure approval would be assessed under the EP&A Act.
<i>Fisheries Management Act 1994</i>	Permits not required for an approved CSSI.
<i>National Parks and Wildlife Act 1974</i>	Permits not required for an approved CSSI. Potential impacts to heritage items during construction will be managed in accordance with the Heritage Management Plan.
<i>Protection of the Environment Operations Act 1997</i>	An Environment Protection Licence (EPL) will be sought for scheduled activities.

Additional guidelines and standards relating to the management of flora and fauna include:

- New South Wales Weed Control Handbook – A guide to weed control in non-crop, aquatic and bushland situations, 7th Edition, April 2018 NSW Department of Primary Industries (DPI)
- Guidelines for Threatened Species Assessment (DEC and Department of Primary Industries, 2005)
- Australian Standard 4970–2009 Protection of trees on development sites
- A Field Manual for the Surveying and Mapping of Nationally Significant Weeds (McNaught, I., Thackway, R., Brown, L. and Parsons, M 2008)
- Control Manual for Lantana (Van Oosterhout 2004)
- Best Practice Management Guidelines for *Phytophthora cinnamomi* within the Sydney Metropolitan Catchment Management Authority Area (Suddaby, T. and Liew, E. 2008)

#### 3.2 PROJECT REQUIREMENTS

The CoA and CEMF requirements relevant to the development of this FFMP are listed in Table 3.

TABLE 3: COMPLIANCE TABLE - REQUIREMENTS FOR PREPARATION OF CEMP

Project Planning Approval Conditions		
C5	Of the CEMP Sub-plans required under Condition C1 of this schedule, the following CEMP Sub-plans must be prepared in consultation with the relevant government agencies identified for each CEMP Sub-plan. Details of issues raised by a government	This document

	<p>agency during consultation must be included in the relevant CEMP Sub-plan, including copies of all correspondence from those government agencies as required by Condition A6 of this schedule. Where a government agency(ies) request(s) is not included, the Proponent must provide the Planning Secretary / ER (whichever is applicable) justification as to why:</p> <ul style="list-style-type: none"> <li>a) Noise and vibration Sub-plan; consult with SOPA (in respect of Sydney Olympic Park), Place Management NSW (in respect of The Bays) and Relevant Council(s)</li> <li>b) Flora and fauna Sub-plan; consult with DPE BCD, DPI Fisheries, SOPA (in respect of Sydney Olympic Park) and Relevant Council(s)</li> <li>c) Soil and water Sub-plan; consult with DPE BCD, Relevant Council(s), SOPA (in respect of Sydney Olympic Park) and Sydney Water (if Sydney Water's assets are affected)</li> <li>d) Heritage (Non-Aboriginal and Aboriginal) Sub-plan; consult with Heritage NSW, SOPA (in respect of Sydney Olympic Park), Place Management NSW (in respect of The Bays) and Relevant Council(s)</li> <li>(e) Spoil Sub-plan; consult with Relevant Council(s) and SOPA (in respect of Sydney Olympic Park)</li> </ul>	
C11	In addition to the relevant requirements of the CEMF, the Flora and fauna CEMP Sub-plan must include, but not be limited to:	
	(a) site specific mitigation measures to manage impacts (including proposed techniques, timing, frequency and responsibility of implementing);	Section 6.1
	(b) measures to minimise disturbance to habitat associated with Myotis macropus / Southern Myotis, including demolition inspections by a suitably qualified ecologist of any vegetation to be cleared and any buildings or structures identified as potential roosting habitat for microbats that are to be demolished or refurbished;	Section 6.1 Section 6.2
	(c) measures to minimise and mitigate disturbance to mangrove forests at the Clyde Maintenance and Stabling construction site to the extent necessary; and	N/A to the CTP package of works
	(d) details for undertaking and mitigating vegetation clearance through improved environmental outcomes.	Section 6.2 Section 6.3
<b>Construction Environmental Management Framework</b>		
3.5 a	Subject to Section 3.4 (b) the Principal Contractor will prepare issue-specific environmental sub plans to the CEMP which address each of the relevant environmental impacts at a particular site or stage of the project. Issue specific sub plans will include: v. Flora and fauna management	This document
10.2 a	Principal Contractors will develop and implement a Flora and Fauna Management Plan which will include as a minimum:	
i.	The ecological mitigation measures as detailed in the environmental approval documentation;	Section 6.1
ii.	The responsibilities of key project personnel with respect to the implementation of the plan;	Section 7.1



iii.	Procedures for the clearing of vegetation and the relocation of flora and fauna;	Section 6.2 Section 6.3 Section 6.7 Section 6.11 Appendix C
iv.	Details on the locations, monitoring program and use of nest boxes by fauna;	Section 6.4
v.	Procedures for the demarcation and protection of retained vegetation, including all vegetation outside and adjacent to the construction footprint;	Section 6.2 Section 6.9
vi.	Plans for impacted and adjoining areas showing vegetation communities; important flora and fauna habitat areas; locations where threatened species, populations or ecological communities have been recorded;	Section 6.9 CEMP Section 3.4.5
vii.	Vegetation management plan(s) for sites where native vegetation is proposed to be retained; Identification of measures to reduce disturbance to sensitive fauna;	Section 6.9
viii.	Identification of measures to reduce disturbance to sensitive fauna;	Section 6.1
ix.	Rehabilitation details, including identification of flora species and sources, and measures for the management and maintenance of rehabilitated areas (including duration of the implementation of such measures);	N/A – established construction sites are to be handed back to Sydney Metro to facilitate Stage 3 of the Sydney Metro West Project, which is outside the scope of the CTP Project.
x.	Weed management measures focusing on early identification of invasive weeds and effective management controls;	Section 6.10
xi.	A procedure for dealing with unexpected EEC threatened species identified during construction, including cessation of work and notification of the Department, determination of appropriate mitigation measures in consultation with the OEH (including relevant relocation measures) and updating of ecological monitoring or off-set requirements;	Section 6.8 Appendix C
xii.	Details on the methodology for vegetation mapping and survey;	Section 6.2 Section 6.3
xiii.	Ecological monitoring requirements; and	Section 7.3
xiv.	Compliance record generation and management.	Section 7

Other Project requirements relevant to the management of flora and fauna during the CTP can be found in **Appendix A**.

### 3.3 REVISED ENVIRONMENTAL MITIGATION MEASURES

The only flora and fauna Revised Environmental Mitigation Measures (REMMs) relevant to the CTP work is B3, LV11, LV12, LV13 and LV14. B3 states:

*Additional investigations and assessment would be completed to confirm the potential for impacts to groundwater dependant ecosystems due to groundwater drawdown, and to identify any required mitigation through design.*

REMM B3 requires groundwater modelling data that will be obtained during the preparation of the Groundwater Modelling Report required by CoA D122. As such, a comparison of groundwater drawdown impacts will be undertaken as part of the Groundwater Modelling Report required by CoA D122. This is discussed further in Section 6.12.

REMMs LV11, LV12, LV13 and LV14 are addressed in Section 6.7.

### 3.4 LICENCES AND PERMITS

An Environmental Protection License (EPL 21610) applies to the Project; however no other licences or permits are required for the CTP for the management of flora and fauna.

Note, Sydney Metro are responsible for the management and submission of biodiversity credits described in CoA D4-D6.

### 3.5 CONSULTATION

Prior to submission to the ER for endorsement, external consultation during the preparation of the FFMP was undertaken with stakeholders, as described in CoA C5, including:

- Department of Planning, Industry and Environment – Environment, Energy and Science group (DPIE EES)
- Department of Primary Industries (DPI) Fisheries
- Sydney Olympic Park Authority (SOPA) (in respect of Sydney Olympic Park) and
- Inner West Council
- City of Canada Bay
- Strathfield Council
- Burwood Council
- City of Paramatta Council.

Details of issues raised by stakeholders during consultation is provided in **Appendix B** including copies of correspondence in accordance with CoA A6.

Refer to CEMP for more information regarding ongoing consultation during delivery of the CTP.

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## 4. EXISTING ENVIRONMENT

Known biodiversity constraints within and adjacent to the Project have been identified and documented in the following environmental assessment reports, which included detailed desk top studies and field investigations:

- EIS Sydney Metro West Stage 1 Chapter 22 Biodiversity
- EIS Sydney Metro West Stage 1 Technical Paper 10 Biodiversity Development Assessment Report.

The following chapters summarise the existing flora and fauna environment and the likely CTP impacts as identified in the EIS.

### 4.1 LANDSCAPE FEATURES

The CTP is located in the Sydney Basin bioregion (as defined by the Interim Biogeographic Regionalisation for Australia, Thackway and Creswell 1995), with most of the CTP located within the Cumberland subregion. The area east of Five Dock to The Bays is located in the Pittwater subregion.

Maps indicating plant community types and key physical features in proximity to the CTP sites are included in the Figures below, as well as the boundaries of the construction sites. It should be noted that the construction site boundaries shown in Figure 4 to Figure 8 are representative of the maximum construction footprint. However, each site is divided into separable portions that would be handed back to Sydney Metro at different times. Therefore, the construction footprint at any one time may be less than that shown in Figure 4 to Figure 8.

The habitat within the construction footprint has a low degree of connectivity to other areas of habitat due to impacts of urbanisation. As indicated in the maps in Figures below, there is no naturally occurring native vegetation present at any of the surface construction sites. The vegetation at the surface construction sites consists mainly of plantings with a mixture of exotic and native species.

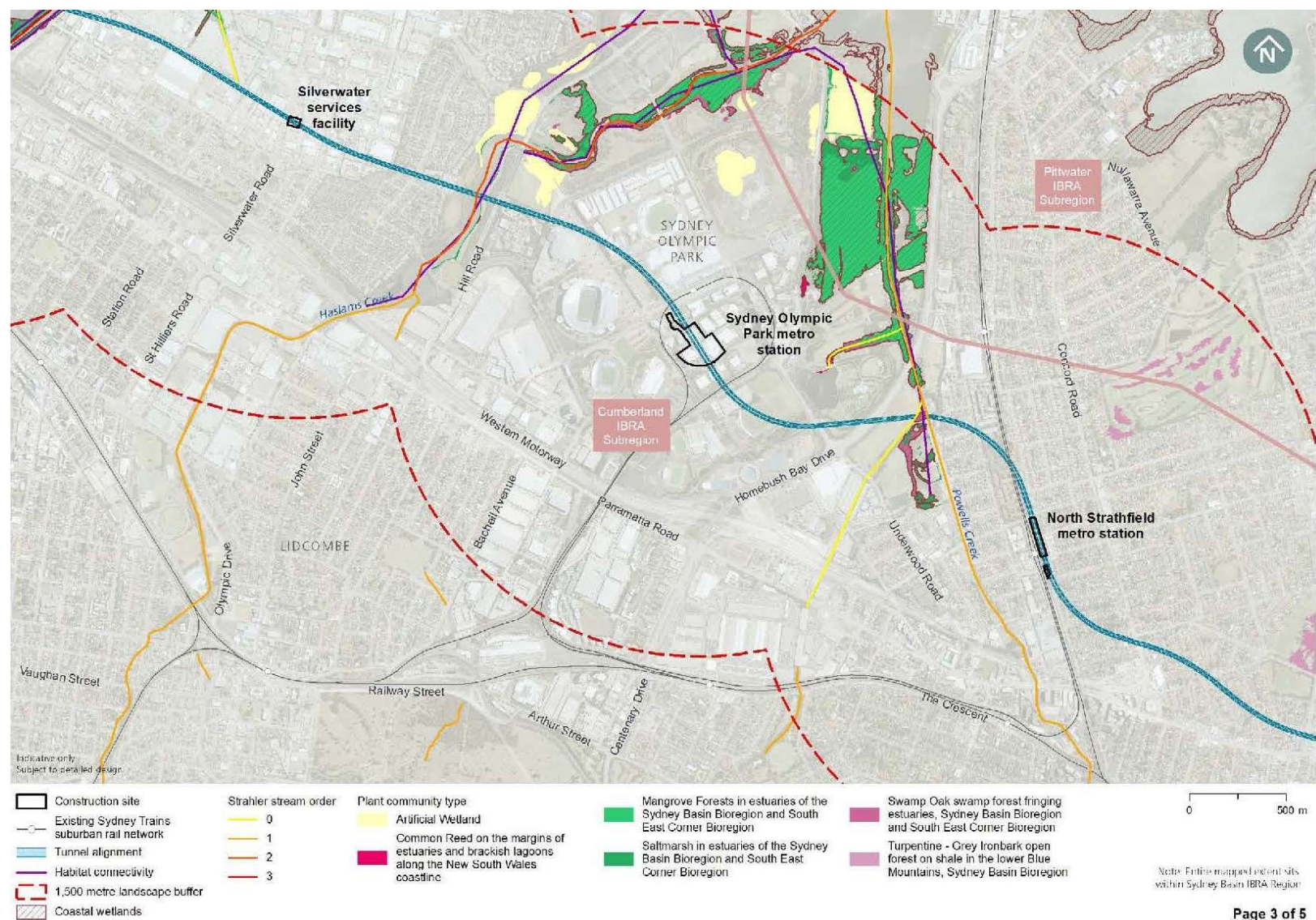
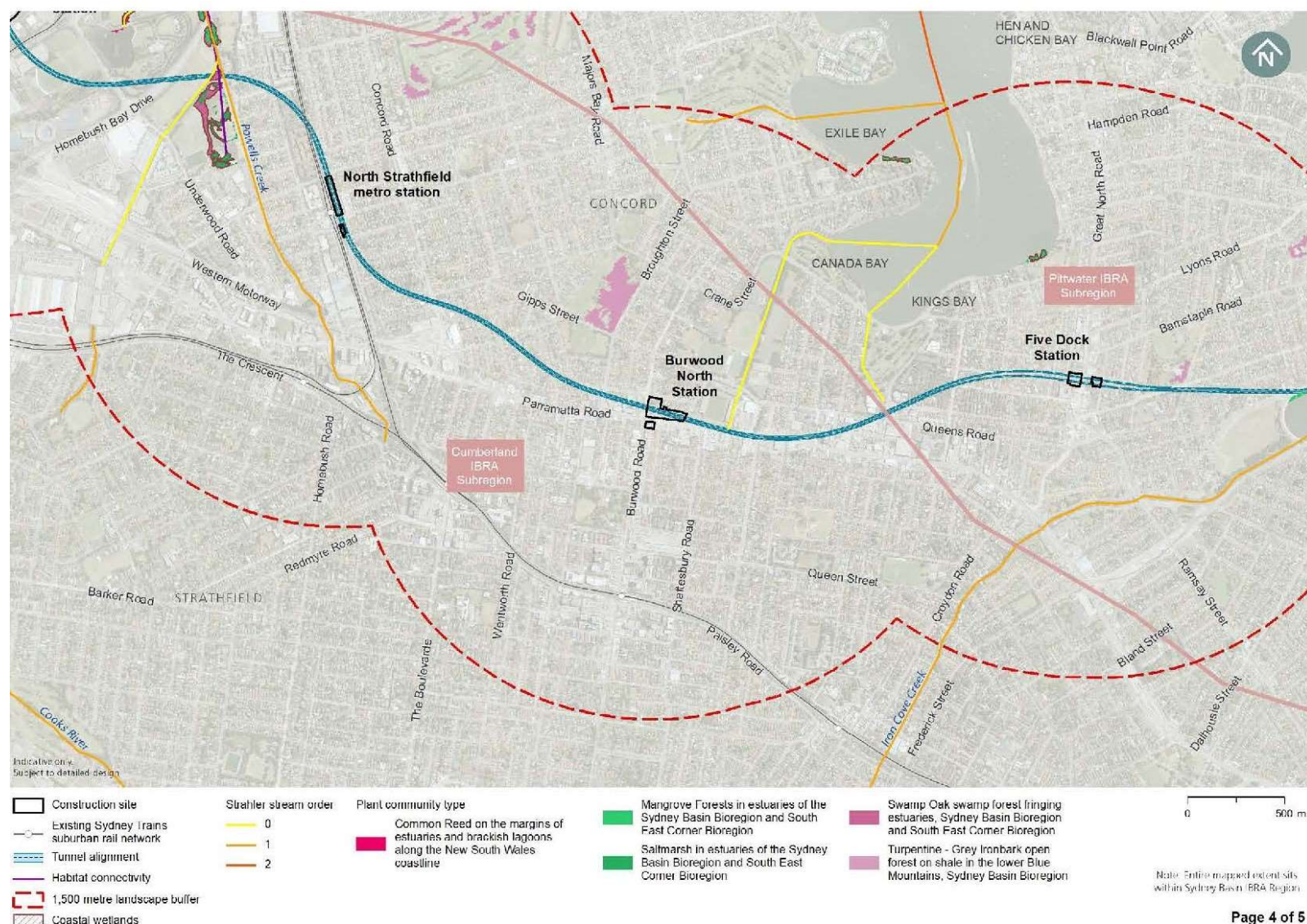


FIGURE 1. PLANT COMMUNITY TYPES, SYDNEY OLYMPIC PARK TO NORTH STRATHFIELD





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FIGURE 2. PLANT COMMUNITY TYPES, NORTH STRATHFIELD TO FIVE DOCK



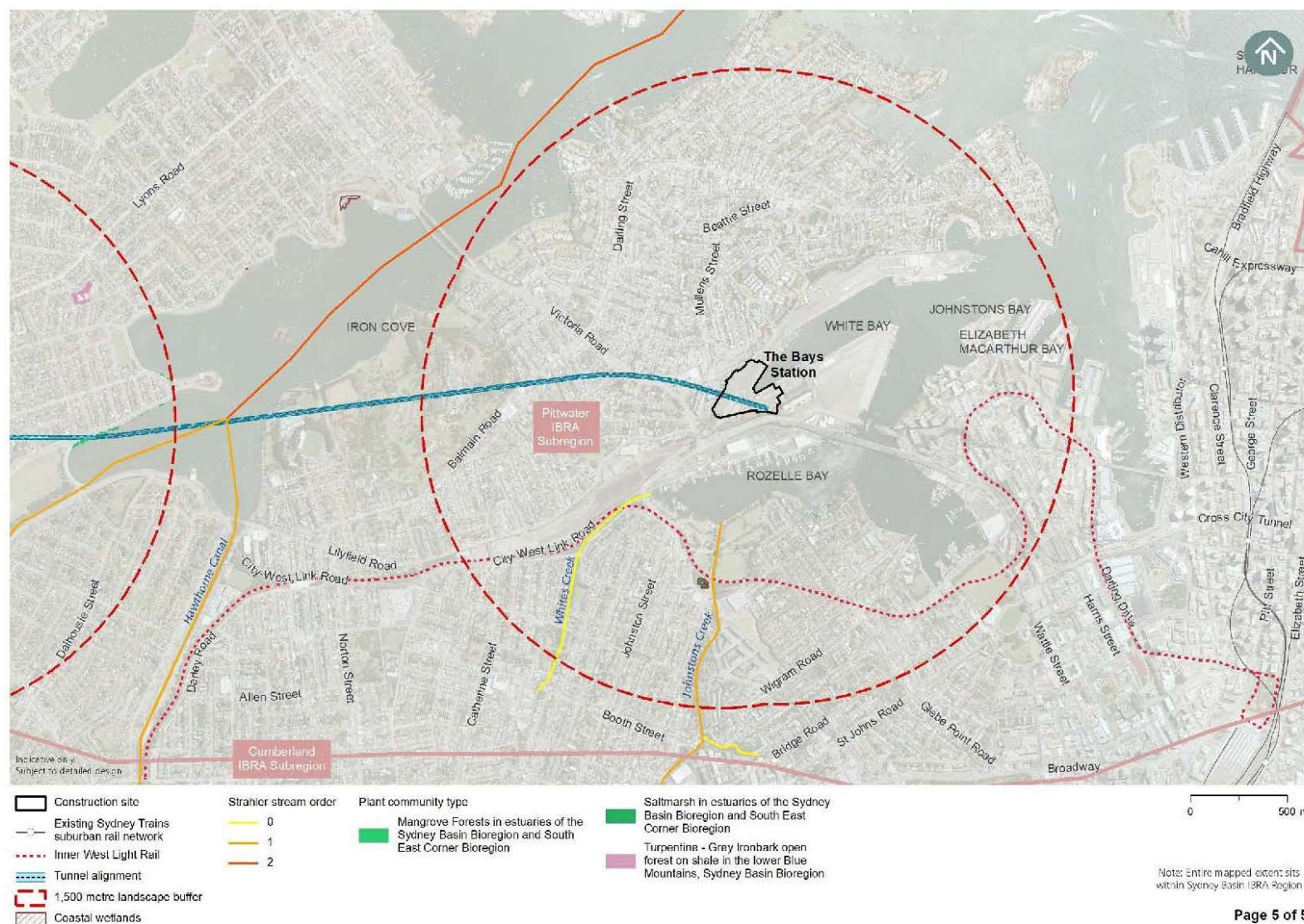


FIGURE 3. PLANT COMMUNITY TYPES, FIVE DOCK TO THE BAYS





Sydney Metro West - CTP  
The Bays construction site

Legend

Construction Sites



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FIGURE 4 THE BAYS CONSTRUCTION SITE





Sydney Metro West - CTP  
Five Dock construction site

Legend

 Construction Sites



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FIGURE 5 FIVE DOCK CONSTRUCTION SITE





Sydney Metro West - CTP  
Burwood North construction site

Legend  
 Construction Sites



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FIGURE 6 BURWOOD NORTH CONSTRUCTION SITE





Sydney Metro West - CTP

North Strathfield construction site

Legend

 Construction Sites



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FIGURE 7 NORTH STRATHFIELD CONSTRUCTION SITE



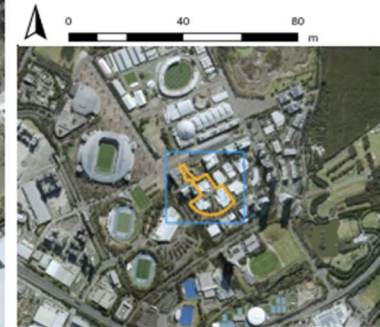


Sydney Metro West - CTP

Sydney Olympic Park construction site

Legend

 Construction Sites



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FIGURE 8 SYDNEY OLYMPIC PARK CONSTRUCTION SITE

## 4.2 WETLANDS OF INTERNATIONAL AND NATIONAL IMPORTANCE

The Project site does not contain any wetlands of international or national importance. The Bicentennial Park Wetlands and the Newington Wetlands, both at Sydney Olympic Park, are the only national important wetlands within the 1,500-metre landscape buffer, however these wetlands are unlikely to be impacted by the project.

## 4.3 THREATENED ECOLOGICAL COMMUNITIES

The surface construction sites on the CTP contain no ecological communities listed under the *NSW Biodiversity Conservation Act 2016*, nor any listed under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*.

There would be no direct impacts to EPBC Act listed Threatened Ecological Communities, however indirect impacts may occur due to groundwater drawdown, and this is discussed in the section on Groundwater Dependant Ecosystems below.

## 4.4 THREATENED FLORA SPECIES

A desktop review of databases and published information has generated a list of candidate species, documented in the EIS.

However, no threatened flora species were recorded during field surveys for the CTP and as such these species are considered unlikely to be impacted.

## 4.5 THREATENED FAUNA SPECIES

A desktop review of databases and published information generated a list of candidate species based on suitable habitat present and the findings of previous surveys.

The Project site provides some limited foraging habitat for the EPBC Act listed species; Grey-headed Flying-fox and Swift Parrot. These two species may use the street trees and garden plantings in the area for foraging on occasion but there is no breeding habitat present. The Grey-headed Flying-fox may also utilise the mangrove forest. Impacts to foraging habitat would be of low magnitude, so impacts to these species will be negligible. The White-throated Needletail may fly over the site on occasion but would not use the habitats and would not be impacted.

One fauna species, the Southern Myotis (listed as vulnerable under the Biodiversity Conservation Act 2016) is considered likely to occur provided there is suitable habitat. Foraging habitat is present downstream along the Duck River, but no potential roosting or breeding habitat is present.

The construction footprint also provides some limited foraging habitat areas for the Biodiversity Conservation Act 1999 listed species Grey headed Flying fox (may forage in the mangrove vegetation present near the footprint) and Swift Parrot (which breeds in Tasmania).

Field assessments for the Grey headed Flying fox indicated that there are no camps within the Project site. The nearest camps are at Parramatta and Clyde and they would not be affected by the CTP.

## 4.6 MIGRATORY SPECIES

While some migratory bird species are likely to use the Project area, the lands would not be classed as an 'important habitat'.

Bicentennial Park wetlands and Mason Park wetlands provide local wader habitat but are unlikely to be impacted by groundwater drawdown that may be caused by the CTP. The CTP would not substantially modify, destroy or isolate an area of important habitat for the migratory species and it would not seriously disrupt the lifecycle of an ecologically significant proportion of a population of migratory birds.

## 4.7 GROUNDWATER DEPENDENT ECOSYSTEMS

EIS Technical Paper 10 (Biodiversity development assessment report) identifies all potential groundwater dependent ecosystems (GDEs) located in proximity to (about 1.5 kilometres of) the Stage 1 construction sites and tunnel and provided outcomes including:

- No mapped aquatic GDEs within the study area
- One mapped terrestrial GDE within the study area
- One field survey identified GDE
- Predicted impacts based on groundwater modelling.

These are discussed below. As discussed in Section 3.3, additional investigations and assessment of potential impacts to GDEs would be carried out in accordance with REMM B3 and CoA D122.

### 4.7.1 MAPPED TERRESTRIAL GDES

High priority GDEs are listed in Schedule 4 of the Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources (Department of Industry, 2011). The plan lists Coastal Saltmarsh in the Sydney Basin Bioregion as high priority terrestrial vegetation GDEs, including the Saltmarsh in estuaries of the Sydney Basin Bioregion and South East Corner Bioregion in the vicinity of Sydney Olympic Park metro station and North Strathfield metro station construction sites.

Negligible impacts are expected at the saltmarsh estuaries near Sydney Olympic Park metro station and North Strathfield metro station construction sites however, as these sites are located outside of the impacted groundwater zone. Additionally, potential saline water intrusion into groundwater is not likely to impact GDEs as those GDEs that have been identified in the vicinity of potential saline water intrusion (see EIS Section 18.6.5) are tolerant of saline groundwater.

### 4.7.2 FIELD SURVEY GDES

Based on the field surveys undertaken for the EIS, there is high potential for the following terrestrial groundwater dependent ecosystem to be present within the study area:

- Turpentine – Grey Ironbark open forest on shale in the lower Blue Mountains, Sydney Basin Bioregion:
  - Concord Golf Club, approx. 650 metres northeast of North Strathfield metro station
  - Queen Elizabeth Park, approx. 450 metres northwest of Burwood North metro station
  - Five Dock Park, approx. 350 metres east of Five Dock metro station.

The GDE above is not an obligate GDE, that is, it is not entirely dependent on groundwater. This plant community type may depend on the subsurface presence of groundwater in some locations but not in others.

### 4.7.3 GROUNDWATER MODELLING OUTCOMES

According to the EIS, a conservative approach was adopted for the groundwater modelling, and the magnitude of potential drawdown was considered to be conservative. Therefore, the likelihood of the GDEs discussed above being impacted by groundwater level drawdown associated with the CTP is low. Groundwater changes will be monitored under the Groundwater Monitoring Program, which is included in the Groundwater Management Plan which forms part of the overall CEMP.

## 4.8 AQUATIC ECOLOGY

Except for The Bays station, the CTP is located within the upper estuary of the Parramatta River catchment, one of the main tributaries of Sydney Harbour. The Bays Station drains to White Bay in the lower estuary of Sydney Harbour. The catchment is highly urbanised and altered from its natural state, with pockets of open spaces and parkland. Stage 1 would drain to a number of watercourses which are sub-catchments of Parramatta River. Many of the watercourses are greatly modified with creek systems extensively channelised or hard-edged with concrete. Relevant watercourses are shown in the map and Table 4 below.



TABLE 4: WATERCOURSES RELEVANT TO THE CTP

Site	Watercourse	Receiving waters
Sydney Olympic Park	Haslams Creek	Homebush Bay
North Strathfield Metro Station	Saleyards Creek Powells Creek	Homebush Bay
Burwood North Station	St Lukes Park Canal Barnwell Park Canal	Canada Bay Hen and Chicken Bay
Five Dock Station	Dobroyd Canal / Iron Cove Creek	Iron Cove
The Bays Station	White Bay	Sydney Harbour

EIS Section 22.4.9 assesses impacts to aquatic ecology. Parramatta River, Powells Creek, Haslams Creek are mapped as Key Fish Habitat (Type 1- Highly sensitive Key Fish Habitat) (NSW Department of Primary Industries, 2013) and classified as Class 1 (major key fish habitat). Saleyards Creek is mapped as Key Fish Habitat and classified as Class 3 (minimal key fish habitat). However, following inspection, Saleyards Creek was not considered key fish habitat in accordance with relevant guidelines.

EIS Section 22.4.9 also identified that Haslams Creek, Saleyards Creek and Powells Creek were in proximity to coastal wetlands listed in the State Environment Planning Policy (Coastal Management) 2018. However, no watercourses were identified as providing habitat for threatened aquatic species listed under the *Fisheries Management Act 1994* and *Environment Protection and Biodiversity Conservation Act 1999*.

The known aquatic ecology of the Parramatta River is limited to a few publicly available historical fish surveys, and no threatened aquatic species have been recorded. As discussed in Section 6.4, the EIS desktop searches indicate a number of threatened fish species as having the potential to occur in the study locality. Of the sixteen aquatic species, thirteen were considered unlikely to occur or have a low likelihood of occurring. The Black Rockcod, White Shark and Grey Nurse Shark were considered to have a moderate to high likelihood of occurrence, see Appendix A of the EIS Technical Paper 10.

As identified in Table 22-6 of the EIS, Green and Golden Bell Frog habitat is present in the wetlands of Haslams Creek. The CTP temporary water treatment plant and sediment basins at the Sydney Olympic Park site will discharge into the local stormwater network and ultimately to Haslams Creek. The project is being designed and constructed so as to maintain the NSW Water Quality Objectives (NSW WQO) where they were being achieved at the date of the project approval, and contribute towards achievement of the NSW WQO over time where they were not being achieved as at the date of the project approval (unless an EPL in force in respect of the CSSI contains different requirements in relation to the NSW WQO, in which case those requirements must be complied with), in accordance with CoA D117. As discussed in Section 6.2 of the Groundwater Management Plan, groundwater inflows will be collected and treated at temporary water treatment plants during construction of the project. The temporary water treatment plants discharges would comply with the criteria listed in CoA D118 unless the EPL is in force. Whilst water collected on the surface within sediment basins and/or excavations would be tested and where necessary treated in accordance with the CTP's Water Reuse and Discharge Permit, as discussed in Section 6.4 of Soil and Water Management Plan. The criterion for discharge is outlined in Table 13 of the Soil and Water Management Plan. Providing the above measures are implemented, and the requirements of CoA D117 are met, it is unlikely that actions associated with the CTP would have a significant impact on any of these aquatic species (including the Green and Golden Bell Frog).

Marine vegetation is protected under the *Fisheries Management Act 1994*, however a permit under that act is not required for State Significant Infrastructure projects, and the CTP is unlikely to impact any seagrasses or any form of marine vegetation.



## 5. ENVIRONMENTAL ASPECTS AND IMPACTS

An environmental risk assessment workshop was held on 6 August 2021. The workshop was attended by senior representatives of the AFJV environmental and sustainability team, the Stakeholder and Community Engagement Manager and various representatives from the construction team, in addition to representatives from Sydney Metro, the Environmental Representative, the Acoustic Advisor, and relevant subject matter experts. The CTP and surrounding area is highly urbanised and largely disturbed. The vegetation at the surface construction sites consists mainly of plantings with a mixture of exotic and native species. As such, the CTPs anticipated ecological impact is minimal. Aspects and the potential for impacts have been considered in a risk assessment in Appendix C of the CEMP and include:

- Removal of planted vegetation
- Direct and indirect impacts to fauna
- Impacts on unexpected threatened species
- Impacts on aquatic habitats and groundwater dependant ecosystems
- Spread of weeds
- Introduction of pathogens
- Physical, chemical and biological changes to aquatic environments.

For those activities with residual environmental risks identified as 'high', the justification for accepting the residual risk was discussed with all attendees. For all activities in this category, an Environmental Work Method Statement (EWMS) will be developed for that activity where other risk assessment strategies are not already in place. No activities were identified as having a high risk for impacts to flora and fauna. However, a Pre-clearing Procedure has been prepared for the CTP project and is included in **Appendix C**.

Section 6 of this plan provides mitigation and management measures that will be implemented to avoid or minimise fauna and flora impacts during the delivery of the CTP.

Section 22.6.8 of the EIS identified that the following biodiversity offsets would be required for the entire Concept and Stage 1 project:

- Ecosystem credits required: Mangrove Forests in estuaries of the Sydney Basin Bioregion and South East Corner Bioregion (Plant Community Type 920) – three credits
- Species credits required: Southern Myotis (*Myotis macropus*) – three credits.

The Mangrove Forests in estuaries of the Sydney Basin Bioregion and South East Corner Bioregion (Plant Community Type 920) proposed for removal is located at the Clyde stabling and maintenance facility construction site (as identified in Table 22-4 of the EIS) and is therefore not relevant to the CTP project.

## 6. ENVIRONMENTAL CONTROLS

### 6.1 MITIGATION AND MANAGEMENT MEASURES

Construction associated with the CTP has the potential to impact flora and fauna within and adjacent to the construction footprint. In order to avoid, mitigate and/or minimise these potential impacts, a range of environmental requirements and control measures are identified in the various CSSI environmental assessment documents (including the EIS) and other guidance documents. Specific measures and requirements to address impacts on flora and fauna are outlined in Table 5.

TABLE 5. FLORA AND FAUNA MITIGATION MEASURES

Reference	Measure	When	Responsibility	Source
FF01	Training will be provided to relevant personnel, including relevant sub- contractors, on flora and fauna requirements from this plan through the induction process.	Prior to construction During construction	All staff	CEMF Section 3.10
FF02	Ongoing toolbox talks and specific training packages will be developed to address key personnel responsibilities associated with the management of flora and fauna.	Prior to construction During construction	Environment Manager	Best Practice
FF03	An appropriately qualified and experienced ecologist will be utilised as required to assist in the implementation of this FFMP.	Prior to construction	Environment Manager	Best Practice
FF04	Ensure all Project Engineers and Site Supervisors are aware of requirements for Pre-clearing Procedure and the Unexpected Threatened Species Finds Procedure.	Prior to construction During construction	Environment Manager	Best Practice
FF05	Tree pruning, maintenance work (where there is a safety risk) and root disturbance work will be carried out by an arborist with a minimum AQF Level 3 Qualification.	Prior to construction During construction	Environment Manager	Best Practice
FF06	Implement sediment and erosion controls in accordance with the Blue Book (Landcom, 2004) during construction.	During construction	Environmental coordinator	CEMF Section 12.2
FF07	Controlled use of herbicides to control weeds during and post-construction, particularly near watercourses and immediately before/during wet weather.	During construction	Site Supervisor Environmental coordinator	Best practice

FF08	Implement reasonable and feasible measures to prevent pollution of waterways and drainage lines in the area downstream of the proposed works during and post-construction.	During construction	Environmental coordinator	Best practice
FF09	Clearing of vegetation, including the clearing of native vegetation and fauna habitat, will be minimised to the greatest extent practicable (e.g. through detailed design, selecting plant to avoid impact on retained trees, retaining perimeter vegetation where possible and not in conflict with other mitigation measures or works). This includes the retention of trees and preference for canopy trimming should be considered where practicable.	Design During construction	Design Manager Environment Manager	CoA D2 CoA D9
FF10	Install exclusion fencing and signage to delineate the limits of clearing and vegetation to be retained.	Prior to construction	Site Supervisor Environment Manager	CEMF Section 10.2
FF11	An inspection in accordance with the Pre-clearing Procedure will take place with a suitable qualified ecologist and Environmental Manager (or delegate), including as a minimum: <ul style="list-style-type: none"> <li>• Identification of hollow bearing trees and other habitat features;</li> <li>• Identification of any threatened flora and fauna;</li> <li>• A check on the physical demarcation of the limit of clearing;</li> <li>• An approved erosion and sediment control plan for the worksite.</li> </ul>	Prior to construction	Project Ecologist Environment Manager	CEMF Section 10.2
FF12	No materials to be stockpiled or stored under the canopy line of trees.	During construction	Site Supervisor Environmental Coordinator	Best practice

FF13	Tree protection to be undertaken in accordance with Australian Standard AS4970 the Australian Standard for Protection of Trees on Development Sites and Adjoining Properties Trees.	Prior to construction During construction	Environment Manager	Best practice
FF14	There are no surface waterway crossings in the CTP scope, however, if any become required surface waterway crossings would be designed to incorporate best practice principles.	Prior to and during construction	Design Manager Environment Manager	CEMF Section 10.2
FF15	Impacts to plant community types will not exceed those outlined in the planning approval unless approved by the Planning Secretary.	Prior to construction During construction	Environment Manager	CoA D3
FF16	Additional investigations and assessment would be completed as part of the Groundwater Modelling Report to confirm the potential for impacts to groundwater dependant ecosystems due to groundwater drawdown, and to identify any required mitigation through design.	Prior to construction During construction	Design Manager Environmental Manager	REMM B3

## 6.2 PRE-CLEARING PROCEDURE

Prior to clearing of vegetation commencing at each site, inspections will be undertaken by the Project Ecologist in accordance with the Pre-clearing Procedure (**Appendix C**).

**The Pre-clearing Procedure includes the completion of an inspection and a Pre-clearing Permit. The inspection and Pre-clearing Permit will be implemented as a Hold Point prior to any vegetation clearing.**

The purpose of the pre-clearing inspections will include:

- Identification of hollow bearing trees, nests, dreys, logs and other habitat features. These will be marked in accordance with the fencing protocol at least three days prior to the commencement of clearing.
- Identification of any protected flora and fauna
- A check on the physical demarcation of the limit of clearing
- The completion of any other pre-clearing requirements required by any project approvals, permits or licences that may be applicable to individual locations
- Provide guidance on subsequent relocation if required for any fauna not previously identified
- Check of the approved erosion and sediment control plan for the worksite
- Mark the location of any trees which may require retention
- Confirm any pathogens and whether any further action is required
- Identify type and location of weed species and infestations
- Mark and identify any priority weeds present.

This Pre-clearing Inspection Hold Point will require sign-off from the Environmental Manager (or delegate). Clearing may not be undertaken prior to the release of this Hold Point.

A Pre-Clearing Procedure is included in **Appendix C**. Note, this may be updated between revisions of this Plan.

### 6.3 POST-CLEARING REPORT

On completion of clearing in each location, a post clearance report will be prepared that includes relevant Geographical Information System files and/or photographs, that validates the type and area of vegetation cleared, including confirmation of the number of trees removed, hollows impacted and the corresponding nest box requirements to offset these impacts.

With regards to the recording of number of trees removed, a tree removal register will be maintained to include record the number, species, canopy size and diameter at breast height of removed trees. This will assist Sydney Metro in determining the number of replacement trees and ensure there is a net increase in the number of trees in accordance with CoA C-B8.

### 6.4 NEST BOXES

It is noted that the surrounding environment is heavily urbanised and therefore if viable habitat trees are identified during pre-clearing inspections AFJV in consultation with the Project Ecologist will determine if it is practicable to install nest boxes in adjacent vegetation. Where nest boxes are installed, an offset ration of 1:1 would be applied (i.e. one nest box for every hollow identified during the pre-clearing inspections).

Where/if required, compensatory tree hollows/nest boxes would be provided prior to removing the existing tree hollows and prior to the release of the hollow dependent fauna unless the removed tree hollows can be relocated and installed on the same day they are removed. Compensatory tree hollows or nest boxes would be installed as early as practical before vegetation removal (preferably one month before) and in retained or nearby vegetation where practical (noting the project is in an urbanised environment). Where compensatory tree hollows/nest boxes are required a monitoring program would be developed which would outline, but not be limited to, the following:

- The locations of compensatory tree hollows/nest boxes
- Details on the size and type of compensatory tree hollows/nest boxes (to be determined in consultation with the project ecologist)
- Outline the monitoring requirements and methods to determine the use of compensatory tree hollows/nest boxes by fauna.

### 6.5 EROSION AND SEDIMENT CONTROL PLAN

The CTP works do not include any waterway crossings or direct encroachment onto creek banks. However, erosion and sediment control measures will be installed to minimise impacts on adjacent bodies of water and waterways. The approach to erosion and sediment control is outlined in Section 7.3 of the Soil and Water Management Plan, which addresses the erosion and sedimentation impacts associated with vegetation clearing.

### 6.6 HABITAT FEATURE IDENTIFICATION AND CLEARING PROCEDURE

As part of the Pre-clearing Procedure, the Project Ecologist will identify features that could provide potential resources for fauna. This will include assessments of ground cover and identification of hollow-bearing trees. Assessments of ground cover will identify features that should be searched and/or cleared carefully during vegetation clearance (cracks and crevices, bush rock, rubble, logs, etc.). Assessments of vegetation will identify and mark hollow-bearing trees and trees or shrubs containing nests. The Project Ecologist will watch nests and hollows for evidence of current activity. Once tree hollows have been checked by the ecologist for the presence of fauna they would be covered to ensure the hollows are not reoccupied prior to removal of the trees.



If habitat features are identified in pre-clearing inspections, a 2-stage clearing process will be utilised. The 2-stage clearing allow fauna an opportunity to move from the habitat feature reducing potential rescue efforts which can be stressful on fauna, and consists of:

- Stage 1 – understorey scrubbing and non-habitat tree removal.
- Stage 2 – habitat tree removal requiring that habitat features must not be removed until at least 48 hours after Stage 1.

All habitat trees must be felled under the supervision of the Project Ecologist. Any fauna captured will be relocated into areas of suitable habitat adjacent to the project site in accordance with the fauna rescue and relocation process described in Section 6.11. The Project Ecologist will advise the best location for release.

## 6.7 TREE MANAGEMENT

During design and construction, AFJV will avoid removal of trees and tree canopy wherever possible in accordance with CoA D2, D9 and REMM LV11. Trees to be retained will be protected prior to the commencement of construction in accordance with Australian Standard AS4970 the Australian Standard for Protection of Trees on Development Sites and Adjoining Properties Trees, as required by REMM LV12. Trees to be removed will be replaced to achieve no net loss of the number of trees or canopy in proximity to the site of removal by Sydney Metro in accordance with REMM LV13 (AFJV will inform Sydney Metro of the number, location and canopy area of trees removed). CoA C-B8 requires Sydney Metro to replace mature trees at a ratio of 2:1. Where feasible and reasonable, opportunities would be investigated with the relevant local council(s) to provide plantings in proximity to the impacted areas prior to construction commencing in accordance with REMM LV14 by Sydney Metro. Additionally, replacement trees should consist of native species of local provenance to improve local biodiversity.

## 6.8 UNEXPECTED SPECIES FINDS

In the event protected species are unexpectedly encountered during construction, all works in the vicinity of the find will cease and immediate guidance will be sought from the Project Ecologist to determine whether the species is threatened. Notification will be made to Sydney Metro, the ER and other stakeholders as appropriate.

However, generally the CTP is located within highly urbanised locations and there is negligible contiguous native vegetation to be retained, including vegetation for native fauna habitat.

In the event that a protected species or endangered ecological community not previously identified and considered in EIS is encountered by the Project Ecologist during a pre-clearing inspection, the following actions will be implemented:

1. Stop all physical works likely to impact on the species in that location
2. Notify the Supervisor and Environment Manager
3. The Environment Manager (or delegate) will arrange for the Project Ecologist to confirm species identification and, once confirmed, conduct an assessment of likely impact and develop management recommendations
4. Depending on the outcomes of the assessment, work with Sydney Metro to obtain further approvals if required (may include a Consistency Assessment or Project Modification depending on its significance)
5. In coordination with Sydney Metro, implement the Project Ecologist's recommendations, and once approvals are given, continue physical works

## 6.9 ENVIRONMENTAL CONTROL MAPS

Environmental Control Maps will be prepared for each construction site as described in the CEMP, showing areas of environmental sensitivity, potential weed infestations identified in the EIS or during Pre-clearing Inspections, no-go zones, clearing limits and the project boundary.

Information obtained from the Pre-clearing Inspections, such as the identification of unexpected flora, fauna species or weeds, areas of retained vegetation and no-go zones will be included on the Environmental Control Maps where appropriate and in this way the Environmental Control Maps will act as Vegetation Management Plans requirement (CEMF 10.2 a vii) where required.

All staff and subcontractors involved in the construction activities must be made aware of the clearing limits and are prohibited to encroach on areas beyond the boundaries of the identified clearing limits.

Where vegetation is identified for retention, this vegetation will be demarcated and protected on site. The areas would be demarcated using temporary fencing, flag tape, para-webbing and/or rope as required.

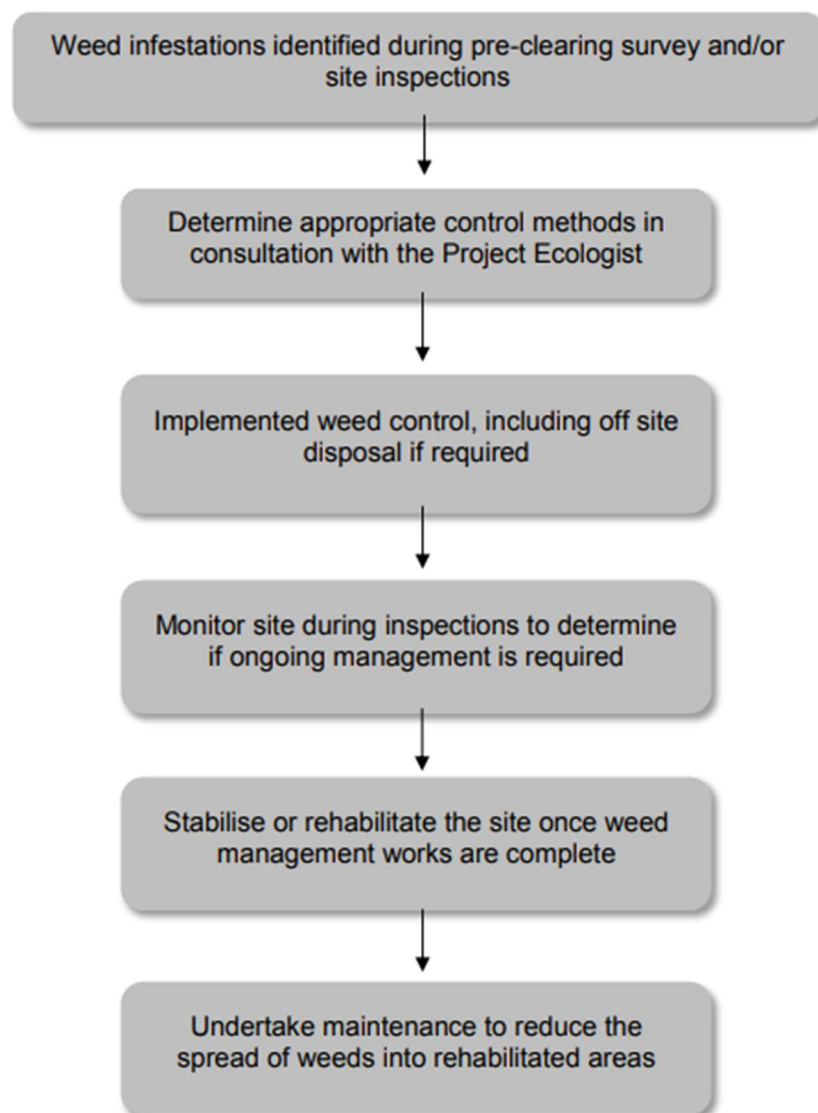
## 6.10 WEED AND PATHOGEN MANAGEMENT

As part of the scope of the Pre-clearing Procedure, site areas will be reviewed for weed infestation and all priority weeds tagged according to the fencing protocol. All staff will be made aware of any priority weeds present on-site during induction, toolbox talks and through inclusion onto the Environmental Control Map. Where a priority weed exists, requirements of the *Biosecurity Act 2015* will be included into the Pre-start content for this location.

Where practicable, weed removal will occur prior to disturbance to minimise potential spread. Ongoing weed management may be required with manual removal methods preferred, however if chemical pesticide is required approval will be first sought from the environmental manager to ensure chemical applications processes are met. All weed management will be undertaken in consideration of the *New South Wales Weed Control Handbook – A guide to weed control in non-crop, aquatic and bushland situations*, 7<sup>th</sup> Edition, April 2018 NSW Department of Primary Industries (DPI).

Removed weeds will be disposed of in accordance with the requirements of the Waste Management Sub Plan at an appropriately licensed facility.

The flow chart below outlines the weed management process.



## 6.11 FAUNA RESCUE AND RELOCATION

The following steps will be taken if fauna is encountered that:

- Is injured
- Is in a location where works has the potential to cause harm to the animal
- Poses a risk to site personnel.

Steps to be undertaken include:

1. Stop all work in the vicinity of the fauna and immediately notify the Site Foreman who will notify the Environmental Manager and Project Ecologist
2. Preferably allow fauna to leave the area without intervention, if it is safe for the animal to do so and if the animal does not pose a risk to site personnel.
3. Use a licensed fauna ecologist or wildlife carer with specific animal handling experience to carry out any fauna handling, and identify the species and whether it is threatened
4. Hollow dependent fauna found using tree hollows that are able to be removed should not be relocated and released prior to compensatory tree hollows being provided.

5. Any nocturnal fauna found must be captured and re-released to nearby suitable habitat, at a time suitable for the subject species and they are not left to find habitat on their own accord during daylight hours.
6. If the animal cannot be handled (i.e. venomous reptiles):
  - a. Exclude all personnel from the vicinity with fencing and/or signage
  - b. Record the exact location of the animal and provide to the Project Ecologist or appropriate rescue agency.
7. Call the appropriate rescue agency immediately and follow any advice provided by the agency. Once the rescue agency arrives at the site, they are responsible for the animal. Any decisions regarding the care of the animal will be made by the rescue agency.

The contact details for the relevant fauna rescue services and local veterinary services contact details are provided in Table 6.

TABLE 6: CONTACT DETAILS FOR FAUNA RESCUE SERVICES AND LOCAL VETERINARY SERVICES

Agency/business	Contact Number
Wildlife Rescue – WIRES	1300 094 737
Sydney Snake Catcher	1300 699 938
Animal Referral Hospital	9758 8666
Five Dock Veterinary Hospital	9713 7364

In the event the rescue service and/or local veterinary service cannot be contacted, the injured animal will be delivered to the rescue service and/or local veterinary service as soon as practically possible.

Further detail is provided in **Appendix C**.

## 6.12 DECEASED FAUNA

If deceased wildlife is found the following will occur:

1. Stop all work in the vicinity of the fauna and immediately notify the Site Foreman who will notify the Environment Manager and Project Ecologist
2. If the Project Ecologist identifies the deceased fauna as a threatened species, the Environment Manager will stop all work in the area where the deceased animal was found and the environmental incident protocol will be followed
3. All protected deceased fauna found on site will be recorded in the project Deceased Fauna Register, including details of:
  - a. Species
  - b. Location and time found
  - c. Cause of death (if known)
  - d. Disposal location.

## 6.13 GROUNDWATER DEPENDANT ECOSYSTEMS MANAGEMENT

As described in Section 3.3, the requirement of REMM B3 will be met as part of the Groundwater Modelling Report required by CoA D122. The Groundwater Modelling Report will compare the outcomes of the CTP groundwater modelling to the outcomes of EIS groundwater modelling. This will be used to identify if any mitigation measures are required in accordance with REMM B3, where the CTP groundwater modelling outcomes are worse than those predicted in the EIS.

Groundwater monitoring will be conducted in accordance with the CTP Groundwater Monitoring Program, this will confirm whether the outcomes of the Groundwater Modelling Report required by CoA D122 are correct. Where the CTP groundwater modelling outcomes are consistent with (or better than) the EIS modelling, groundwater monitoring will be conducted annually (and at the same time each year) for the duration of construction in the vicinity of GDEs. Where the CTP groundwater modelling outcomes are not consistent with the EIS modelling (ie where they are worse), groundwater monitoring will be conducted quarterly for the duration of construction in the vicinity of GDEs.



It should be noted that REMM B3 applies to the Five Dock, Burwood North and North Strathfield sites only. As such GDEs to be monitored include the areas of Turpentine – Grey Ironbark open forest on shale in the lower Blue Mountains, as listed on Section 4.7.2. However, AFJV will also apply REMM B3 to the Saltmarsh in estuaries of the Sydney Basin Bioregion and South East Corner Bioregion in the vicinity of Sydney Olympic Park metro station, as discussed in Section 4.7.1.

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## 7. COMPLIANCE MANAGEMENT

### 7.1 PEOPLE, RESPONSIBILITIES AND COMMUNICATION

Refer to CEMP for full details on people, responsibilities and communication.

In addition to those listed in the CEMP for general environmental management, the AFJV will engage a suitably qualified ecologist as the Project Ecologist, to fulfil the responsibilities listed within this CEMP.

### 7.2 TRAINING

Refer to CEMP for full details on the delivery of flora and fauna management including:

- Environmental induction – for CTP specific flora and fauna management
- Toolbox talks and awareness – for site specific flora and fauna management.

### 7.3 MONITORING, INSPECTIONS & AUDITS

Review and confirmation of the implementation of flora and fauna management measures described in this document will be undertaken as part of the auditing and inspection regimes described in the CEMP. Site environmental inspections will confirm the implementation of ecological mitigation measures and the project boundary fencing. Confirmation of site boundaries will be confirmed by surveyors and any environmentally sensitive areas will be clearly demarcated.

Refer to the CEMP for more information on monitoring, inspections and audits.

### 7.4 REPORTING AND RECORDS

Refer to the CEMP for full details on reporting and record keeping requirements and processes. As discussed in Section 6.3, a post clearance report, including any relevant Geographical Information System files, will be produced that validates the type and area of vegetation cleared including confirmation of the number of hollows impacted and the corresponding nest box requirements to offset these impacts (if required).

In addition to any records listed in the CEMP, the following compliance records will be kept by AFJV:

- Records of pre-clearing and post-clearing inspections undertaken;
- Records from arborist;
- Records of the release of the pre-clearing inspection hold point; and
- Records of ecological inspections undertaken.

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## **8. REVIEW AND IMPROVEMENT**

### **8.1 CONTINUOUS IMPROVEMENT**

The Flora and Fauna Management Plan forms part of the CTP CEMP. Refer to Section 3.11 of the CEMP for the process on continuous improvement and sub plan update and amendment.

## APPENDIX A OTHER CONDITIONS OF APPROVAL, REMMS AND CEMF REQUIREMENTS RELEVANT TO THIS PLAN

Minister's Conditions of Approval Modification 3 (4 July 2022) (SSI 10038)		
Ref	Requirement	Where addressed
A6	<p>Where the conditions of this approval require a document or monitoring program to be prepared, or a review to be undertaken, in consultation with identified parties, evidence of the consultation undertaken must be submitted to the Planning Secretary with the document. The evidence must include:</p> <ul style="list-style-type: none"> <li>(a) documentation of the engagement with the party identified in the condition of approval that has occurred before submitting the document for approval;</li> <li>(b) a log of the dates of engagement or attempted engagement with the identified party and a summary of the issues raised by them;</li> <li>(c) documentation of the follow-up with the identified party(s) where feedback has not been provided to confirm that the party(s) has none or has failed to provide feedback after repeated requests;</li> <li>(d) outline of the issues raised by the identified party(s) and how they have been addressed; and</li> <li>(e) a description of the outstanding issues raised by the identified party(s) and the reasons why they have not been addressed.</li> </ul>	Appendix B
C11	<p>In addition to the relevant requirements of the CEMF, the Flora and fauna CEMP Sub-plan must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>(a) site specific mitigation measures to manage impacts (including proposed techniques, timing, frequency and responsibility of implementing);</li> <li>(b) measures to minimise disturbance to habitat associated with <i>Myotis macropus</i> / Southern Myotis, including demolition inspections by a suitably qualified ecologist of any vegetation to be cleared and any buildings or structures identified as potential roosting habitat for microbats that are to be demolished or refurbished;</li> <li>(c) measures to minimise and mitigate disturbance to mangrove forests at the Clyde Maintenance and Stabling construction site to the extent necessary; and</li> <li>(d) details for undertaking and mitigating vegetation clearance through improved environmental outcomes.</li> </ul>	Section 6.1
D2	The clearing of native vegetation must be minimised to the greatest extent practicable with the objective of reducing impacts to threatened ecological communities and threatened species habitat.	Section 6.1 Section 6.2
D3	Impacts to plant community types must not exceed those identified in the documents listed in Condition A1 of this schedule, unless otherwise approved by the Planning Secretary. In requesting the Planning Secretary's approval,	Section 6.1

	an assessment of the additional impact(s) to plant community types and an updated ecosystem and / or species credit requirement under Condition D4 below, if required, must be provided.	
D4	<p>Before any vegetation clearing or tree removal that must be offset, the relevant credits specified in Table 3 below must be purchased and retired. The retirement of credits must be carried out in accordance with the offset rules of the BC Act.</p> <ul style="list-style-type: none"> <li>• Mangrove Forests in estuaries of the Sydney Basin Bioregion and South East Corner Bioregion (Plant Community Type 920) - Poor: 3 Ecosystem Credits</li> <li>• Myotis macropus / Southern Myotis (Fauna): 3 Species Credits for Threatened Species</li> <li>• Acacia pubescens / Downy Wattle (Flora): 1 Species Credit for Threatened Species</li> <li>• Note: Credits have been calculated using the Biodiversity Assessment Method.</li> </ul>	NOTE: clearing requiring offset limited to Westmead metro station and Clyde stabling and maintenance facility – not applicable to CTP
D5	The requirement to retire credits in Condition D4 above may be satisfied by payment to the Biodiversity Conservation Fund of an amount equivalent to the class and number of species credits, as calculated by the Biodiversity Offsets Payment Calculator.	As per CoA D4
D6	The Proponent must submit evidence of the retirement of credits required by Condition D4 above to the Planning Secretary for information within one (1) month of receiving evidence of the retirement of credits and / or a certificate confirming payment under Condition D5 above before any vegetation clearing or tree removal that must be offset.	As per CoA D4
D9	As many mature trees and as much urban canopy as practicable must be retained during construction. Canopy trimming should be considered where practicable prior to any mature tree removal.	Table 5

Revised Environmental Management Measures		
Ref	Requirement	Where addressed
B3	Additional investigations and assessment would be completed to confirm the potential for impacts to groundwater dependant ecosystems due to groundwater drawdown, and to identify any required mitigation through design.	Section 3.3 Section 6.1
LV11	Opportunities for the retention and protection of existing street trees and trees within the site would be identified during detailed construction planning.	Section 6.7
LV12	Existing trees to be retained would be protected prior to the commencement of construction in accordance with Australian Standard AS4970 the Australian Standard for Protection of Trees on Development Sites and Adjoining Properties.	Section 6.7
LV13	Trees removed by Stage 1 would be replaced to achieve no net loss to tree numbers and/or canopy in proximity to the	Section 6.7



	site as a minimum in the long term (and part of future stages of Metro West).	
LV14	Opportunities would be investigated with the relevant local council to provide plantings in proximity to the impacted areas prior to construction commencing where feasible and reasonable	Section 6.7

Construction Environmental Management Framework		
Ref	Requirement	Where addressed
10.1 a	The following flora and fauna management objectives will apply to construction:	
i	Minimise impacts on flora and fauna;	Section 2 Section 6.1
ii	Design waterway modifications and crossings to incorporate best practice principles;	Section 2 Section 6.1
iii	Retain and enhance existing flora and fauna habitat wherever possible; and	Section 2 Section 6.1
iv	Appropriately manage the spread of weeds and plant pathogens.	Section 2 Section 6.1 Section 6.10 Appendix C
10.2 b	Principal Contractors would undertake the following ecological monitoring as a minimum:	
i	A pre-clearing inspection will be undertaken prior to any native vegetation clearing by a suitable qualified ecologist and the Contractor's Environmental Manager (or delegate). The pre-clearing inspection will include, as a minimum: <ul style="list-style-type: none"> <li>• Identification of hollow bearing trees or other habitat features; Identification of any threatened flora and fauna;</li> <li>• A check on the physical demarcation of the limit of clearing;</li> <li>• An approved erosion and sediment control plan for the worksite; and</li> <li>• The completion of any other pre-clearing requirements required by any project approvals, permits or licences.</li> </ul>	Section 6.2 Section 6.6 Appendix C
ii	The completion of the pre-clearing inspection will form a Hold Point requiring sign-off from the Contractor's Environmental Manager (or delegate) and a qualified ecologist; and	Section 6.2
iii	A post clearance report, including any relevant Geographical Information System files, will be produced that validates the type and area of vegetation cleared including confirmation of the number of hollows impacted and the corresponding nest box requirements to offset these impacts	Section 6.3

10.2 c	The Principal Contractor's regular inspections will include a check on the ecological mitigation measures and project boundary fencing.	Section 7.3
10.2 d	<p>The following compliance records would be kept by the Principal Contractor:</p> <ul style="list-style-type: none"> <li>i. Records of pre-clearing inspections undertaken;</li> <li>ii. Records of the release of the pre-clearing hold point; and</li> <li>iii. Records of ecological inspections undertaken.</li> </ul>	Section 7.4

## **APPENDIX B CONSULTATION**



CoA C5 Flora and Fauna Management Plan consultation		
Government Agency / Council	Date consulted with	Date of response
DPI EES	16/08/2021	27/08/2021
DPI Fisheries	16/08/2021	20/08/2021
SOPA	16/08/2021	22/09/2021
Burwood Council	16/08/2021	13/09/2021
City of Canada Bay Council	16/08/2021	30/09/2021
Inner West Council	16/08/2021	10/09/2021
Strathfield Council	16/08/2021	6/10/2021
City of Parramatta Council	16/08/2021	1/10/2021



Our ref: DOC21/731797

Senders ref: SSI-10038

[REDACTED]  
Sydney Metro West  
PO Box K659  
HAYMARKET NSW 1240

Attention: [REDACTED] - Acciona Ferrovia Joint Venture (AFJV)

Dear [REDACTED]

**Subject: EES comments on Sydney Metro West Project – Stage 1 - Central Tunnel Package SSI-10038 – Flora and Fauna Management Plan - between The Bays and Sydney Olympic Park**

I refer to emails received on 16, 17 and 23 August 2021 requesting comments on the draft Flora and Fauna Management Plan (FFMP) for the Sydney Metro West Project – Central Tunnel Package (CTP).

The Environment, Energy and Science Group (EES) has reviewed the draft FFMP for the CTP and provides its recommendations and comments at Attachment A.

If you have any queries regarding this matter, please contact [REDACTED], Senior Conservation Planning Officer on [REDACTED] or at [REDACTED].

Yours sincerely

[REDACTED]

27/08/21

[REDACTED]  
**Senior Team Leader Planning  
Greater Sydney Branch  
Biodiversity and Conservation Division**

**CC:** [REDACTED] – Department of Planning, Industry and Environment

**Subject: EES comments on Sydney Metro West Project – Stage 1 - Central Tunnel Package SSI-10038 – Flora and Fauna Management Plan - between The Bays and Sydney Olympic Park**

The following EES comments are provided on the Sydney Metro West Project – Central Tunnel Package (CTP) - SSI-10038 – draft Flora and Fauna Management Plan (FFMP) – 16 August 2021 (Document No SMWSTCTP-AFJ-INL-EO-PLN-000001).

**Table 3 - Compliance Table - Requirements for Preparation of CEMP**

Table 3, Condition C11 requires that the FFMP must include

- (a) site specific mitigation measures to manage impacts (including proposed techniques, timing, frequency, and responsibility of implementing)
- (b) measures to minimise disturbance to habitat associated with *Myotis macropus* / Southern Myotis, including demolition inspections by a suitably qualified ecologist of any vegetation to be cleared and any buildings or structures identified as potential roosting habitat for microbats that are to be demolished or refurbished.

Table 3 indicates this condition is addressed in Section 7.2 of this document but Section 7.2 of the FFMP does not address the timing or frequency of the site specific measures, nor does it include measures to minimise disturbance to habitat associated with Southern Myotis.

Appendix A of the FFMP indicates that Condition C11(b) is addressed in Section 6.2 of the FFMP but Section 6.2 does not include measures to minimise disturbance to habitat associated with Southern Myotis (any buildings or structures identified as potential roosting habitat that are to be demolished or refurbished).

Section 4.5 of the FFMP states “the Southern Myotis (listed as vulnerable under the Biodiversity Conservation Act 2016) is considered likely to occur provided there is suitable habitat. Foraging habitat is present downstream along the Duck River, but no potential roosting or breeding habitat is present”. The BDAR which accompanied the EIS states “there are no human made structures in the development site that would be suitable for these bats to use as roosting habitat. The buildings are subject to a high amount of human use so would be at best marginal as roost sites. Condition 11, however requires measures to minimise disturbance to habitat associated with Southern Myotis, including any buildings or structures identified as potential roosting habitat for microbats that are to be demolished. It is recommended the FFMP is amended to specifically include measures to minimise disturbance to habitat associated with Southern Myotis, as per Condition C11(b).

EES requests that the FFMP be revised to include: a requirement that if any Southern Myotis are located during searches of human-built structures and consequent surveys, then a report on the surveys undertaken for Southern Myotis should be furnished to EES. The report should document methods and equipment used, dates/times, effort expended, weather conditions (including temperature ranges, wind speed and direction, amount, and nature of precipitation) recorded *on-site during* the surveys.

If signs of bats are found, the FFMP should be revised considering the results of the surveys and further consultation with EES undertaken and the revised FFMP must address how the impacts to microbats will be avoided, minimised and mitigated.

### **6.2 Pre-Clearing Inspection**

Section 6.2 of the FFMP states that “Prior to clearing of native vegetation commencing at each site, Pre-Clearing Inspections will be undertaken by a suitably qualified ecologist.” The FFMP should identify the timing of when these inspections are to be undertaken.



Section 6.2 indicates the purpose of the pre-clearing inspections includes among other things:

- identification of hollow bearing trees and other habitat features
- identification of any threatened flora and fauna
- provide guidance on subsequent relocation if required for any threatened fauna not previously identified
- mark hollow bearing trees where special attention may be required during vegetation clearing.

This section should specify that pre-clearance inspections should be conducted for all trees/vegetation and other habitat features that have been approved for removal.

EES recommends Section 6.2 is amended to include:

The purpose of the pre-clearing inspections will be to:

- ~~Identification of~~ **Identify** hollow bearing trees and other habitat features **including any nests, dreys, logs, bush rock etc. Prior to clearing and felling:**
  - **the ecologist /arborist will endeavour to individually remove sections of a tree containing a hollow or other habitat features for relocation and reuse by the project to enhance habitat.**
  - **native trees that are approved for removal (including hollows and tree trunks (greater than approximately 25-30cm in diameter and 2m in length) and other habitat features (such as logs and bush rock) should be relocated and reused by the project. Where trees/habitat features are not able to be reused by the project the proponent should consult with relevant public authorities, local community restoration/rehabilitation groups, Landcare groups etc to determine if there is an interest for the reuse of suitable timber and root balls, bush rock etc in habitat enhancement and rehabilitation work off-site.**
- **apply to all “protected animals” under the Biodiversity Conservation Act 2016 (BC Act) and not just threatened fauna. Protected animals are defined in Schedule 5 of the BC Act to include any of the following that are native to Australia or that periodically or occasionally migrate to Australia (including their eggs and young) -**
  - **amphibians - frogs or other members of the class amphibia**
  - **birds - birds of any species**
  - **mammals - mammals of any species (including aquatic or amphibious mammals but not including dingoes)**
  - **reptiles - snakes, lizards, crocodiles, tortoises, turtles or other members of the class reptilia.**
- Provide guidance on subsequent relocation if required for **any protected native fauna (including any threatened fauna not previously identified) found during the inspections. Any protected fauna found that is unable to relocate on its own must be relocated to appropriate nearby habitat.**

It is important that the FFMP clarifies that the pre-clearings inspections and the relocation of native fauna applies to all “protected animals”. The pre-clearings inspections and relocation of fauna should not only apply to threatened fauna.

- Mark hollow bearing trees, **nests, dreys, logs** where special attention may be required during vegetation clearing

### 6.3 Post-Clearing Report

Section 6.3 indicates that on completion of clearing in each location a post clearance report will be prepared, and it confirms the number of hollows impacted and the corresponding nest box requirements. The FFMP should outline that if the pre-clearance inspections identify native fauna using existing hollows, compensatory tree hollows should be provided prior to removing the tree

hollows unless the removed hollows can be relocated and installed on the same day they are removed and prior to the release of the hollow dependent native fauna.

Condition C-B8 of the approval requires that “there must be a net increase in the number of mature trees provided at a ratio of 2:1 which are not subject to a biodiversity offset. The number of trees to be removed needs to be documented to determine the number of replacement trees and ensure there is a net increase in the number of trees. It is unclear if the post clearance reports will identify the total number of trees to be removed (not subject to a biodiversity offset). The FFMP should include this as part of the vegetation clearing procedure.

#### *6.5 Habitat Feature Identification*

Section 6.5 states “any fauna captured will be relocated into areas of suitable habitat adjacent to the project site in accordance with the fauna rescue and relocation process described in Section 6.9”. As noted above the FFMP should outline that where hollow dependent native fauna are found using existing hollows, compensatory tree hollows should be provided prior to removing the tree hollows and prior to the release of the hollow dependent fauna unless the removed tree hollows can be relocated and installed on the same day they are removed. It is recommended section 6.9 (Fauna Rescue and Relocation) is amended accordingly.

End of Submission

Our Ref: C21/470

20 August 2021

Your Ref: CSSI-10038

[REDACTED]  
Environmental Manager  
Acciona Ferrial Joint Venture (AFJV)  
c/o: [REDACTED]  
(Representing Transport for NSW)

[REDACTED]

**Consultation as per Condition C5 of the Conditions of Approval for the Sydney Metro West  
(Stage 1 – Central Tunneling Package (CTP)) CSSI-10038**

Thank you for your referral of 10/08/2021 seeking comment on the Draft Flora and Fauna Management Plan which is a Construction Environment Management Plan (CEMP) sub-plan. This consultation is a requirement as per Condition C1 and C5 of the Conditions of Approval for the Sydney Metro West (Stage 1 – Central Tunneling Package (CTP)) CSSI-10038.

DPI Fisheries is responsible for ensuring that fish stocks are conserved and that there is no net loss of key fish habitats upon which they depend. To achieve this, DPI Fisheries ensures that developments comply with the requirements of the *Fisheries Management Act 1994* (FM Act) (namely the aquatic habitat protection and threatened species conservation provisions in Parts 7 and 7A of the Act, respectively), and the associated *Policy and Guidelines for Fish Habitat Conservation and Management (2013)*. DPI Fisheries is also responsible for ensuring the sustainable management of commercial, recreational and Aboriginal cultural fishing, aquaculture, marine parks and aquatic reserves within NSW.

DPI Fisheries has reviewed *Draft Flora and Fauna Management Plan, Sydney Metro West (Stage 1 – Central Tunneling Package (CTP)) CSSI-10038* (16/08/2021, Document Number SMWSTCTP-AFJ-1NL-EOPLN-000001).

DPI Fisheries has no objections to the proposed Flora and Fauna Management Plan. DPI Fisheries notes no flora or fauna protected under the Fisheries Management Act (1994) will be affected in Stage 1 – Central Tunneling Package.

If you require any further information, please contact [REDACTED] on [REDACTED] or [REDACTED]

Yours sincerely,

[REDACTED]

[REDACTED]

Senior Fisheries Manager, Coastal Systems Unit



[REDACTED]

---

From: [REDACTED] >  
Sent: Wednesday, 22 September 2021 12:11 PM  
To: [REDACTED]  
Subject: FW: TRIMs: RE: SMW-CTP Environmental Management Plans - Flora & Fauna Management Plan (Rev00)  
Attachments: SMW-CTP Flora and Fauna Management Plan (Rev00).pdf; AFJV Comments Review sheet - FFMP.xlsx

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From: [REDACTED]  
Sent: Monday, 23 August 2021 8:33 PM  
To: [REDACTED] >  
Cc: [REDACTED] >  
Subject: TRIMs: RE: SMW-CTP Environmental Management Plans - Flora & Fauna Management Plan (Rev00)

I forgot about it and missed your deadline. A couple of comments:

1. Mapping errors - Mapping on page 3 of 5
  - Mapping does not identify existence of Boundary Creek (the tunnel passes under it)
  - Mapping does not identify existence of Lake Belvedere (a deep wetland that the tunnel passes very close to)
  - Waterbird Refuge is classified as a constructed wetland rather than an estuarine wetland containing saltmarsh, mudflats and open water.
2. The assessment considers groundwater impacts to groundwater-dependent ecosystems only. It does not consider hydrological impacts to the waterways and wetlands that the tunnel passes under or close to. I raised this when reviewing the SEE.
  - Will aquifers be affected or will the bases of creeks or wetlands be fractured by the drilling / vibration in the following wetlands/waterways: Northern Water Feature, Lake Belvedere, Haslams Creek, Boundary Creek, Mason Park Wetlands (the latter outside SOP, but ecologically very connected). What monitoring will be in place to detect any such impacts; what contingencies are in place should such impacts occur ?
  - Since the existence of Lake Belvedere and Boundary Creek are not even identified in the mapping, I wonder how impacts of tunnelling to their hydrology will be identified and managed ?
3. Polluted stormwater runoff from construction of the Sydney Olympic Park metro station presents a significant risk to Green and Golden Bell Frog habitat in the Northern Water Feature. Sydney Olympic Park is a 'priority managed site' for the Green and Golden Bell frog under the NSW Government Saving Our Species program. The report does not identify this risk, or provide details of how risk to bell frogs will be managed and monitored.

[REDACTED]

[REDACTED]  
Senior Manager Environment & Ecology  
Sydney Olympic Park Authority  
[REDACTED]

---

From: [REDACTED] >  
Sent: Tuesday, 17 August 2021 2:31 PM

To: [REDACTED] >  
Subject: FW: SMW-CTP Environmental Management Plans - Flora & Fauna Management Plan (Rev00)  
Importance: High

Hi [REDACTED]

I hope that you are well.

Please see the attached F&F for the SMW site in central precinct – please could you review and let me know if you have any comments to make?

A response by COB Friday 20<sup>th</sup> August would be great ? – unfortunately the turnaround time with Metro is quite limited – but one would hope the F&F at this site would be quite straightforward?!...

Regards

[REDACTED]  
Urban Planner

**Sydney Olympic Park Authority**

[REDACTED]  
[REDACTED]  
Level 8, 5 Olympic Boulevard, Sydney Olympic Park, NSW, 2127

[sydneyolympicpark.com.au](http://sydneyolympicpark.com.au)

**We acknowledge the Wangal as the first Custodians of the land, air and waters now known as Sydney Olympic Park. We pay respect to all First Nations People and our community Elders past, present and emerging.**

The information that you voluntarily provide to the Sydney Olympic Park Authority (5 Olympic Boulevard, Sydney Olympic Park NSW 2127) is collected for administrative purposes and may be held in a data base shared with the Office of Sport and Venues NSW. You have the right to access and correct the information.

---

From: [REDACTED] >  
Sent: Tuesday, 17 August 2021 11:39 AM  
To: [REDACTED] >  
Cc: [REDACTED] >  
Subject: FW: SMW-CTP Environmental Management Plans - Flora & Fauna Management Plan (Rev00)  
Importance: High

Hi [REDACTED]

Can you please forward this one to Kerry for a response, and let her know I'm trying to line up a briefing from the Metro team next week? If you could manage these responses until John has decided who is going to manage this that would be great. Hopefully I'll know sooner rather than later.

Cheers

[REDACTED]  
Director, Environment and Planning  
Sydney Olympic Park Authority

From: [REDACTED] >  
Sent: Monday, 16 August 2021 9:37 PM  
To: [REDACTED] >  
Cc: [REDACTED] >  
Subject: SMW-CTP Environmental Management Plans - Flora & Fauna Management Plan (Rev00)  
Importance: High

Dear [REDACTED]

Thank you for your, [REDACTED] time over Teams last week at our introductory discussion. As discussed, Acciona Ferrovial Joint Venture (AFJV) are engaged with Sydney Metro to construct the tunnel and station boxes of the Sydney Metro West – Central Tunneling Package between The Bays and Sydney Olympic Park. The project was approved with Conditions of Approval (SSI 10038) issued on 28 July 2021. Condition C5 requires that a number of the CEMP Subplans required under Condition C1 are provided to relevant government agencies and stakeholders. The table provided is copied directly from Condition C5 for easy reference:

	<b>Required CEMP Sub-plan</b>	<b>Relevant government agencies to be consulted for each CEMP Sub-plan</b>
(a)	Noise and vibration	SOPA (in respect of Sydney Olympic Park), Place Management NSW (in respect of The Bays) and Relevant Council(s)
(b)	Flora and fauna	DPIE EES, DPI Fisheries, SOPA (in respect of Sydney Olympic Park) and Relevant Council(s)
(c)	Soil and water	DPIE EES, Relevant Council(s), SOPA (in respect of Sydney Olympic Park) and Sydney Water (if Sydney Water's assets are affected)
(d)	Heritage (Non-Aboriginal and Aboriginal)	Heritage NSW, SOPA (in respect of Sydney Olympic Park), Place Management NSW (in respect of The Bays) and Relevant Council(s)
(e)	Spoil	Relevant Council(s) and SOPA (in respect of Sydney Olympic Park)

AFJV invites Sydney Olympic Park Authority to review the CEMP Subplan-Flora & Fauna Management Plan for the project.

Attached is an AFJV Comments Review Sheet – FFMP to record comments / feedback and to be returned to AFJV. Please note that a Teambinder issue of the attached documents will be forthcoming in the 48 hours and for tracking of document review invitation.

We are currently targeting a 10 business day review opportunity with comments back 1<sup>st</sup> September 2021.

AFJV noted from our initial meeting that your preference is that AFJV provide the opportunity for a workshop / discussion with the AFJV environment team to discuss the content of the plans.

We would be pleased to arrange for such a workshop / discussion as soon as possible and request that this be arranged through contacting myself or [REDACTED] Interface Manager, Sydney Metro, [REDACTED].

We can discuss in more detail this Flora & Fauna Management Plan plus other plans at a more targeted discussion.

Kind regards

[REDACTED]



[REDACTED]  
Environment Manager  
Acciona Ferrovial Joint Venture  
[REDACTED]  
Sydney Metro West  
Central Tunnelling Package  
[REDACTED]

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[REDACTED]

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From: [REDACTED] <[REDACTED]>  
Sent: Monday, 13 September 2021 3:21 PM  
To: [REDACTED]  
Cc: [REDACTED]  
Subject: Re: Comments on Environmental Documents.  
Attachments: image001.png

Hi [REDACTED]

We will be providing comment for the Heritage Management plan abs noise and vibrant job plans. No comments on the others.

Regards ,

[REDACTED]  
Director City Strategy  
T: [REDACTED]  
E: [REDACTED]  
2 Conder Street, Burwood, NSW, 2134



On 13 Sep 2021, at 2:58 pm, [REDACTED] > wrote:

Hi [REDACTED]

Following my email last week, can you please confirm if Burwood Council will be providing comment on the following documents, provided for the Sydney Metro West Central Tunnelling Package:

- Noise and Vibration Management Plan and Monitoring Program
- Flora and Fauna Management Plan
- Soil and Water Management Plan including Surface Water Monitoring Program
- Heritage Management Plan
- Spoil Management Plan.

Your response would be appreciated as soon as possible if one is to be provided, as the consultation and review phase has now been completed.

Thanks,

■

<image001.png>

■  
Environmental Approvals Manager  
Acciona Ferrovia Joint Venture

*Sydney Metro West  
Central Tunnelling Package*  
■

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On 13 Sep 2021, at 2:58 pm, Erran Woodward <■> wrote:

Hi

■

Following my email last week, can you please confirm if Burwood Council will be providing comment on the following documents, provided for the Sydney Metro West Central Tunnelling Package:

- Noise and Vibration Management Plan and Monitoring Program
- Flora and Fauna Management Plan
- Soil and Water Management Plan including Surface Water Monitoring Program
- Heritage Management Plan
- Spoil Management Plan.

Your response would be appreciated as soon as possible if one is to be provided, as the consultation and review phase has now been completed.

Thanks,

■

<image001.png>

■  
Environmental Approvals Manager  
Acciona Ferrovia Joint Venture

*Sydney Metro West  
Central Tunnelling Package*  
■

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this email.

[REDACTED]

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From: [REDACTED] >  
Sent: Monday, 30 August 2021 6:51 PM  
To: [REDACTED]  
Subject: Environmental Management Plans - SMW - CTP  
Attachments: Copy of AFJV Comments Review sheet - FFMP.xlsx; AFJV Comments Review sheet - Soil & Water.xlsx; AFJV Comments Review sheet - Spoil .xlsx; AFJV Comments Review sheet - Surface Water Monitoring Program.xlsx; Metro - AFJV Comments Review sheet - Heritage.xlsx

Hi [REDACTED]

Thank you for providing Council with the opportunity to provide feedback on the Environmental Management Plans for the tunnel and stations excavation associated with Sydney Metro West.

Should I receive any further feedback, I will send it through.

Regards

[REDACTED]

[REDACTED] | **Manager, Strategic Planning**  
City of Canada Bay

---

1a Marlborough St Drummoyne NSW 2047 | [www.canadabay.nsw.gov.au](http://www.canadabay.nsw.gov.au)  
T: [REDACTED] | [REDACTED]



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Item	Date of review	Revision No.	Raised By	Company	Doc. Reference (e.g., Section, Table)	Comment (Please include one comment per item)
1		Rev00		City of Canada Bay	Page 6 - FF12	This should include Tree protection fencing to be installed prior to and maintained throughout construction. Responsibility- Site Arborist.
2						
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16						
17						
18						

## Erran Woodward

---

**From:** [REDACTED] >  
**Sent:** Friday, 10 September 2021 2:40 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: Pending comments from Inner West Council

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hi [REDACTED]

Please see below our comments:

### Flora and Fauna Management Plan:

- Section 6.2 states that pre-clearance inspections should be undertaken prior to clearing of native vegetation. As native wildlife also use non-native vegetation for nesting and roosting and other purposes pre-clearance inspections should be undertaken prior to non-native and native vegetation clearance.
- The wharf/jetty infrastructure in White Bay is possible roosting habitat for *Myotis Macropus* (fishing bats) so this infrastructure needs to be inspected/surveyed by qualified ecologist prior to any demolition/disturbance.
- To reduce impacts on various native wildlife best practice lighting guidelines should be followed for any temporary or permanent lighting – see Appendix A of the National Light Pollution Guidelines for Wildlife - <https://www.environment.gov.au/biodiversity/publications/national-light-pollution-guidelines-wildlife>

### Spoil Management Plan:

- Is there a way to ensure that the council streets will be cleaned? Which council street will be impacted the most (i.e. what streets around the tunnel dive site at The Bays?)

### Soil and Water Management Plan:

- You mention there will be ongoing reporting. Will there be any remediation reports made available at the end of the works?
- Also, page 1 of the Acid Sulphate Soil section is missing the project title and there is a formatting error in various tables and sections.

### Noise and Vibration Monitoring Plan:

- At The Bays, would there be any cumulative noise and vibration effects from the Eastern tunnel package that need to be considered?
- Have other major projects' CEMPs been considered in these Central Tunnelling CEMPs?

I'm yet to hear back on the Heritage Management Plan, but I'll let you know next week on that one.

Regards

[REDACTED]  
Road Access Project Engineer

p [REDACTED]



Council acknowledges the Traditional Custodians of these lands, the Gadigal-Wangal people of the Eora Nation.



---

**From:** [REDACTED] >

**Sent:** Friday, 10 September 2021 1:58 PM

**To:** [REDACTED] >

**Cc:** [REDACTED]

[REDACTED] >

**Subject:** Pending comments from Inner West Council

Some people who received this message don't often get email from [erran.woodward@ctp-afjv.com.au](mailto:erran.woodward@ctp-afjv.com.au). [Learn why this is important](#)

Hi [REDACTED]

I reached out via phone this morning to follow up on comments on documents provided to Inner West Council for review for the Sydney Metro West Central Tunnelling Package project.

To date the Acciona Ferrovia Joint Venture has provided the following documents to Inner West Council for their opportunity to comment:

- Noise and Vibration Management Plan including Monitoring Program
- Flora and Fauna Management Plan
- Soil and Water Management Plan including Monitoring Program
- Heritage Management Plan
- Spoil Management Plan

Could you please confirm if Council is intending on providing comment on these documents, as the review period has now reached completion.

Thanks,



[REDACTED]  
Environmental Approvals Manager  
**Acciona Ferrovia Joint Venture**

*Sydney Metro West  
Central Tunnelling Package*  
[REDACTED]

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this email.

## Erran Woodward

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**From:** [REDACTED] >  
**Sent:** Friday, 1 October 2021 4:05 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: SMW - CTP Environmental Documents

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hi [REDACTED]

I am sorry for not getting back to you. I can confirm that CoP will not be able to review within the timeframes you are working to consider these plans. I note that most of these works are outside of Parramatta's LGA, and those that are in our City, I believe are within the responsibility of the Sydney Olympic Park Authority. If Council has any issues we wish to raise, we will raise them through any of public, official, or stakeholder communication channels with the project.

Thank you for consulting with City of Parramatta.

Kind regards

[REDACTED]  
Transport Planning Manager | City Strategy

[REDACTED]

City of Parramatta  
126 Church Street, Parramatta NSW 2150  
PO Box 32, Parramatta NSW 2124  
[cityofparramatta.nsw.gov.au](http://cityofparramatta.nsw.gov.au)



I acknowledge the Traditional Owners of the land I work on, the Darug Peoples, and pay my respects to their Elders past and present.

---

**From:** [REDACTED] >  
**Sent:** Friday, 1 October 2021 3:54 PM  
**To:** [REDACTED] >  
**Subject:** RE: SMW - CTP Environmental Documents

\*\*\*[EXTERNAL EMAIL] Stop and think before opening attachments, clicking on links or responding. \*\*\*



Hi [REDACTED]

Just to close out the review, can you please confirm if City of Parramatta will not be providing comment on documents provided by the AFJV for the Sydney Metro West Central Tunnelling Package, including:

- Noise and Vibration Management Plan and Monitoring Program
- Flora and Fauna Management Plan
- Soil and Water Management Plan including Surface Water Monitoring Program
- Heritage Management Plan
- Spoil Management Plan.

Thanks,  
[REDACTED]



[REDACTED]  
Environment Manager  
**Acciona Ferrovia Joint Venture**

*Sydney Metro West  
Central Tunnelling Package*  
[REDACTED]

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**From:** [REDACTED]  
**Sent:** Wednesday, 22 September 2021 3:37 PM  
**To:** [REDACTED] >  
**Subject:** RE: SMW - CTP Environmental Documents

Hi [REDACTED]

Noting that we are still waiting on response on the Sydney Metro West Central Tunnelling Package environmental documentation sent to you (on behalf of Parramatta City Council) in August, I am sorry to provide the update that this review period is now completed. We still welcome your comments but note that these may need to be considered as part of future revisions.

Can you please confirm you are comfortable with this solution.

Thanks,  
[REDACTED]



[REDACTED]  
Environmental Approvals Manager  
**Acciona Ferrovia Joint Venture**

*Sydney Metro West  
Central Tunnelling Package*

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**From:** [REDACTED]  
**Sent:** Wednesday, 15 September 2021 5:50 PM  
**To:** [REDACTED] >  
**Subject:** RE: SMW - CTP Environmental Documents

Hi [REDACTED]

Thanks for letting me know.

Thanks,  
[REDACTED]



[REDACTED]  
Environmental Approvals Manager  
**Acciona Ferrovia Joint Venture**

*Sydney Metro West  
Central Tunnelling Package*  
[REDACTED]

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**From:** [REDACTED] >  
**Sent:** Monday, 13 September 2021 3:29 PM  
**To:** [REDACTED] >  
**Subject:** FW: SMW - CTP Environmental Documents

Hi [REDACTED]

I am very sorry to say that I do not think I have distributed these around Council for officer comments. I am afraid I was receiving a volume of similar reports for Parramatta and Westmead enabling works, and I must have conflated the two stages. I am not likely to have comments to you in time. But if you don't mind, I will send to responsible officers as an FYI now and collect and return any comments later? (Also noting the impacted land is SOPA land and we are unlikely to have any comments for areas we don't administer.)

Regards

[REDACTED]  
Transport Planning Manager | City Strategy

[REDACTED]

City of Parramatta  
126 Church Street, Parramatta NSW 2150  
PO Box 32, Parramatta NSW 2124  
[cityofparramatta.nsw.gov.au](http://cityofparramatta.nsw.gov.au)



I acknowledge the Traditional Owners of the land I work on, the Darug Peoples, and pay my respects to their Elders past and present.

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**From:** [REDACTED] >

**Sent:** Monday, 13 September 2021 3:19 PM

**To:** [REDACTED] >

**Cc:** [REDACTED] >; [REDACTED]

**Subject:** SMW - CTP Environmental Documents

**\*\*\*[EXTERNAL EMAIL]** Stop and think before opening attachments, clicking on links or responding. **\*\*\***

Hi [REDACTED]

Following my email last week, can you please confirm if Parramatta City Council will be providing comment on the following documents, provided for the Sydney Metro West Central Tunnelling Package:

- Noise and Vibration Management Plan and Monitoring Program
- Flora and Fauna Management Plan
- Soil and Water Management Plan including Surface Water Monitoring Program
- Heritage Management Plan
- Spoil Management Plan.

Your response would be appreciated as soon as possible if one is to be provided, as the consultation and review phase has now been completed.

Thanks,

[REDACTED]



[REDACTED]  
Environmental Approvals Manager  
**Acciona Ferrovial Joint Venture**

*Sydney Metro West  
Central Tunnelling Package*

[REDACTED]

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[REDACTED]

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**From:** [REDACTED] >  
**Sent:** Wednesday, 6 October 2021 4:42 PM  
**To:** [REDACTED]  
**Subject:** RE: Documents for Review

Hi [REDACTED]

Please see below notes on the flora and fauna assessment.

Soil and water I will send to you tomorrow.

Thank you,

[REDACTED]

Overall the Flora and Fauna Management Plan produced by Acciona Ferrovia Joint Venture on the Sydney Metro project has mapped out a sound plan to minimise and where possible eliminate risks to native flora and fauna. However, there are a few points that may need adjustment.

Section 4.2, 'Wetlands of International and National Importance' does not include Mason Park Wetlands. It is mentioned under section 4.6 'Migratory Species'.

Mason Park Wetlands is a valuable habitat for local and migratory bird species and is subject to the provisions of the China-Australia Migratory Bird Agreement (CAMBA) and Japan-Australia Migratory Bird Agreement (JAMBA). Additionally, the site is listed on the Register of the National Estate. The planned tunnel construction takes place very near/directly under this site, which is not preferred. This site should be recognised under the report as a wetland of national and international importance.

There are several references to 'noxious weeds'. This term is outdated, as the *Noxious Weeds Act 1993* (this act is referenced in section 6.8) has been repealed and replaced by the *Biosecurity Act 2015*. The term currently used to reference weed species flagged in legislation or in regional or local weed management plans is 'priority weeds'. Regional priority weeds are identified in the Greater Sydney Regional Strategic Weed Management Plan 2017-2022.

[REDACTED]  
ENVIRONMENTAL PROJECTS OFFICER - BIOSECURITY



[REDACTED] | Manager, Environmental Services

P [REDACTED]  
65 Homebush Rd, Strathfield NSW 2135  
[www.strathfield.nsw.gov.au](http://www.strathfield.nsw.gov.au)



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COVID-19 Health Updates | [health.gov.au](https://health.gov.au) or 24/7 Coronavirus Hotline 1800 020 080

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**From:** [REDACTED]  
**Sent:** Wednesday, 6 October 2021 11:47 AM  
**To:** [REDACTED] >  
**Subject:** RE: Documents for Review  
**Importance:** High

Hi [REDACTED],

The comments from Strathfield Council are still pending for

- Flora and Fauna Management Plan
- Soil and Water Management Plan including Monitoring Program.

These documents will shortly be submitted to DPIE for approval, noting that these were first submitted to Council on 30 August.

On the 24 September you indicated a response by 1 October, can you please provide a status update on any comments from Council on the above-mentioned documents.

Thanks,

[REDACTED]



[REDACTED]  
Environment Manager  
**Acciona Ferrovia Joint Venture**

*Sydney Metro West  
Central Tunnelling Package*  
[REDACTED]

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**From:** [REDACTED] >  
**Sent:** Friday, 24 September 2021 11:09 AM  
**To:** [REDACTED] >  
**Subject:** RE: Documents for Review

Thank you [REDACTED]

Yes we will make comment on the documents you have attached.

I will have them to you by next week.

Thank you,



[REDACTED] | Manager, Environmental Services

P [REDACTED]  
65 Homebush Rd, Strathfield NSW 2135  
[www.strathfield.nsw.gov.au](http://www.strathfield.nsw.gov.au)



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COVID-19 Health Updates | [health.gov.au](http://health.gov.au) or 24/7 Coronavirus Hotline 1800 020 080

From: [REDACTED] [mailto:[REDACTED]]

Sent: Friday, 24 September 2021 9:17 AM

To: [REDACTED] >

Subject: RE: Documents for Review

Hi [REDACTED]

Noting that these documents were originally sent to Strathfield Council in August, I am sorry to provide the update that this review period is now completed. We still welcome your comments but note that these may to be considered as part of future revisions.

Can you please confirm whether you intend on providing comment to be considered for future updates of the:

- Flora and Fauna Management Plan
- Soil and Water Management Plan including Monitoring Program.

Thanks,



[REDACTED]  
Environmental Approvals Manager  
Acciona Ferrovia Joint Venture

Sydney Metro West  
Central Tunnelling Package  
[REDACTED]

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**From:** [REDACTED] >  
**Sent:** Wednesday, 22 September 2021 12:40 PM  
**To:** [REDACTED] >  
**Subject:** Documents for Review

Hi [REDACTED]

Can you please send me the flora and fauna assessment and the soil and water assessment for Strathfield Council to comment on.

I don't have a log in for the portal where the documents are.

Thank you,  
[REDACTED]



[REDACTED] | *Manager, Environmental Services*  
P [REDACTED]  
65 Homebush Rd, Strathfield NSW 2135  
[www.strathfield.nsw.gov.au](http://www.strathfield.nsw.gov.au)



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# REVIEW COMMENTS SHEET

COMPANY	RAISED BY	REVIEW DOC. NO.*	COMMENTS / RESPONSE
City of Canada Bay		SMWSTCTP-AFJ-1NL-EO-PLN-000001	This should include Tree protection fencing to be installed prior to and maintained throughout construction. Responsibility- Site Arborist.
			Added measure to state that tree protection will be undertaken in accordance with Australian Standard AS4970 the Australian Standard for Protection of Trees on Development Sites and Adjoining Properties Trees.
DPIE EES		SMWSTCTP-AFJ-1NL-EO-PLN-000001	Table 3, Condition C11 requires that the FFMP must include (a) site specific mitigation measures to manage impacts (including proposed techniques, timing, frequency, and responsibility of implementing) (b) measures to minimise disturbance to habitat associated with Myotis macropus / Southern Myotis, including demolition inspections by a suitably qualified ecologist of any vegetation to be cleared and any buildings or structures identified as potential roosting habitat for microbats that are to be demolished or refurbished.  Table 3 indicates this condition is addressed in Section 7.2 of this document but Section 7.2 of the FFMP does not address the timing or frequency of the site specific measures, nor does it include measures to minimise disturbance to habitat associated with Southern Myotis.
			Reference updated to Section 6.1 and Section 6.2. Timing/frequency of measures is outlined in Section 6.1. As discussed in Section 6.2, all vegetation removal would be subject to a pre-clearing inspection, thereby meeting the requirements of (b). As per CoA D7, buildings and structures that represent roosting habitat are located at Clyde and therefore not relevant to CTP.
DPIE EES		SMWSTCTP-AFJ-1NL-EO-PLN-000001	Appendix A of the FFMP indicates that Condition C11(b) is addressed in Section 6.2 of the FFMP but Section 6.2 does not include measures to minimise disturbance to habitat associated with Southern Myotis (any buildings or structures identified as potential roosting habitat that are to be demolished or refurbished).
			Reference updated to Section 6.1 As discussed in Section 6.2, all vegetation removal would be subject to a pre-clearing inspection, thereby meeting the requirements of (b). As per CoA D7, buildings and structures that represent roosting habitat are located at Clyde and therefore not relevant to CTP.

COMPANY	RAISED BY	REVIEW DOC. NO.*	COMMENTS / RESPONSE
DPIE EES		SMWSTCTP-AFJ-1NL-EO-PLN-000001	Section 4.5 of the FFMP states “the Southern Myotis (listed as vulnerable under the Biodiversity Conservation Act 2016) is considered likely to occur provided there is suitable habitat. Foraging habitat is present downstream along the Duck River, but no potential roosting or breeding habitat is present”. The BDAR which accompanied the EIS states “there are no human made structures in the development site that would be suitable for these bats to use as roosting habitat. The buildings are subject to a high amount of human use so would be at best marginal as roost sites. Condition 11, however requires measures to minimise disturbance to habitat associated with Southern Myotis, including any buildings or structures identified as potential roosting habitat for microbats that are to be demolished. It is recommended the FFMP is amended to specifically include measures to minimise disturbance to habitat associated with Southern Myotis, as per Condition C11(b).
			There have been no areas of habitate for Southern Myotis identified in the CTP Project area. As discussed in Section 6.2, all vegetation removal would be subject to a pre-clearing inspection, thereby meeting the requirements of (b). As per CoA D7, buildings and structures that represent roosting habitat are located at Clyde and therefore not relevant to CTP.
DPIE EES		SMWSTCTP-AFJ-1NL-EO-PLN-000001	EES requests that the FFMP be revised to include: a requirement that if any Southern Myotis are located during searches of human-built structures and consequent surveys, then a report on the surveys undertaken for Southern Myotis should be furnished to EES. The report should document methods and equipment used, dates/times, effort expended, weather conditions (including temperature ranges, wind speed and direction, amount, and nature of precipitation) recorded on-site during the surveys. If signs of bats are found, the FFMP should be revised considering the results of the surveys and further consultation with EES undertaken and the revised FFMP must address how the impacts to microbats will be avoided, minimised and mitigated.
			CoA D7 states that survey of demolition of structures identified as potential roosting sites for microbats is required at the Clyde Stabling and Maintenance Facility site only.
DPIE EES		SMWSTCTP-AFJ-1NL-EO-PLN-000001	Section 6.2 of the FFMP states that “Prior to clearing of native vegetation commencing at each site, Pre-Clearing Inspections will be undertaken by a suitable qualified ecologist.” The FFMP should identify the timing of when these inspections are to be undertaken.
			Section 6.2 states they would undertaken prior to the clearing, updated to state they would be undertaken no more than three days prior to clearing.



COMPANY	RAISED BY	REVIEW DOC. NO.*	COMMENTS / RESPONSE
DPIE EES		SMWSTCTP-AFJ-1NL-EO-PLN-000001	<p>Section 6.2 indicates the purpose of the pre-clearing inspections includes among other things:</p> <ul style="list-style-type: none"> <li>• identification of hollow bearing trees and other habitat features</li> <li>• identification of any threatened flora and fauna</li> <li>• provide guidance on subsequent relocation if required for any threatened fauna not previously identified</li> <li>• mark hollow bearing trees where special attention may be required during vegetation clearing.</li> </ul> <p>This section should specify that pre-clearance inspections should be conducted for all trees/vegetation and other habitat features that have been approved for removal.</p>
			Please refer to Section 6.5 which discusses habitat feature identification and management. Additionally this has been corrected throughout the document to note 'all' vegetation clearing, not just native.
DPIE EES		SMWSTCTP-AFJ-1NL-EO-PLN-000001	<p>EES recommends Section 6.2 is amended to include:</p> <p>The purpose of the pre-clearing inspections will be to:</p> <ul style="list-style-type: none"> <li>• <del>Identification of</del> <b>Identify</b> hollow bearing trees and other habitat features <b>including any nests, dreys, logs, bush rock etc. Prior to clearing and felling:</b> <ul style="list-style-type: none"> <li>o the ecologist /arborist will endeavour to individually remove sections of a tree containing a hollow or other habitat features for relocation and reuse by the project to enhance habitat.</li> <li>o native trees that are approved for removal (including hollows and tree trunks (greater than approximately 25-30cm in diameter and 2m in length) and other habitat features (such as logs and bush rock) should be relocated and reused by the project. Where trees/habitat features are not able to be reused by the project the proponent should consult with relevant public authorities, local community restoration/rehabilitation groups, Landcare groups etc to determine if there is an interest for the reuse of suitable timber and root balls, bush rock etc in habitat enhancement and rehabilitation work off-site.</li> </ul> </li> </ul>
			Please refer to Section 6.5 which discusses habitat feature identification and management of potential clearing/removal of habitat features. No Councils or other authorities have indicated a desire to be offered habitat features, however this will be considered and granted (as reasonable and feasible) upon such requests.
DPIE EES		SMWSTCTP-AFJ-1NL-EO-PLN-000001	<p>EES recommends Section 6.2 is amended to include:</p> <ul style="list-style-type: none"> <li>• <b>apply to all “protected animals” under the Biodiversity Conservation Act 2016 (BC Act) and not just threatened fauna. Protected animals are defined in Schedule 5 of the BC Act to include any of the following that are native to Australia or that periodically or occasionally migrate to Australia (including their eggs and young) -</b> <ul style="list-style-type: none"> <li>o amphibians - frogs or other members of the class amphibia</li> <li>o birds - birds of any species</li> <li>o mammals - mammals of any species (including aquatic or amphibious mammals but not including dingoes)</li> <li>o reptiles - snakes, lizards, crocodiles, tortoises, turtles or other members of the class reptilia.</li> </ul> </li> </ul>

COMPANY	RAISED BY	REVIEW DOC. NO.*	COMMENTS / RESPONSE
			SM CEMF requires the pre-clearing inspection be applied to 'threatened' species, this wording has been used specifically to comply with the CEMF as is required under the CoA. The scope and scale of clearing for the CTP works is unlikely to impact any protected animals, as determined in the EIS.
DPIE EES		SMWSTCTP-AFJ-1NL-EO-PLN-000001	<p>EES recommends Section 6.2 is amended to include:</p> <ul style="list-style-type: none"> <li>• Provide guidance on subsequent relocation if required for <b>any protected native fauna (including any threatened fauna not previously identified) found during the inspections. Any protected fauna found that is unable to relocate on its own must be relocated to appropriate nearby habitat.</b></li> </ul> <p>It is important that the FFMP clarifies that the pre-clearings inspections and the relocation of native fauna applies to all "protected animals". The pre-clearings inspections and relocation of fauna should not only apply to threatened fauna.</p>
			Please refer to response above.
DPIE EES		SMWSTCTP-AFJ-1NL-EO-PLN-000001	<p>EES recommends Section 6.2 is amended to include:</p> <ul style="list-style-type: none"> <li>• Mark hollow bearing trees, <b>nests, dreys, logs</b> where special attention may be required during vegetation clearing.</li> </ul>
			Section updated
DPIE EES		SMWSTCTP-AFJ-1NL-EO-PLN-000001	Section 6.3 indicates that on completion of clearing in each location a post clearance report will be prepared, and it confirms the number of hollows impacted and the corresponding nest box requirements. The FFMP should outline that if the pre-clearance inspections identify native fauna using existing hollows, compensatory tree hollows should be provided prior to removing the tree hollows unless the removed hollows can be relocated and installed on the same day they are removed and prior to the release of the hollow dependent native fauna.
			Please refer to Section 6.5 which discusses habitat feature identification and management of potential clearing/removal of habitat features.
DPIE EES		SMWSTCTP-AFJ-1NL-EO-PLN-000001	Condition C-B8 of the approval requires that "there must be a net increase in the number of mature trees provided at a ratio of 2:1 which are not subject to a biodiversity offset. The number of trees to be removed needs to be documented to determine the number of replacement trees and ensure there is a net increase in the number of trees. It is unclear if the post clearance reports will identify the total number of trees to be removed (not subject to a biodiversity offset). The FFMP should include this as part of the vegetation clearing procedure.
			Updated section 6.3 as recommended and included a Tree Removal Register.

COMPANY	RAISED BY	REVIEW DOC. NO.*	COMMENTS / RESPONSE
DPIE EES		SMWSTCTP-AFJ-1NL-EO-PLN-000001	Section 6.5 states “any fauna captured will be relocated into areas of suitable habitat adjacent to the project site in accordance with the fauna rescue and relocation process described in Section 6.9”. As noted above the FFMP should outline that where hollow dependent native fauna are found using existing hollows, compensatory tree hollows should be provided prior to removing the tree hollows and prior to the release of the hollow dependent fauna unless the removed tree hollows can be relocated and installed on the same day they are removed. It is recommended section 6.9 (Fauna Rescue and Relocation) is amended accordingly.
			Refer to Fauna Handling and Relocation Procedure, the Project will take the guidance of the project ecologist in the handling and management of fauna. If fauna are to be relocated it will be undertaken in a manner that best allows the relocated fauna to adapt to its new location.
SOPA		SMWSTCTP-AFJ-1NL-EO-PLN-000001	Mapping errors - Mapping on page 3 of 5 <ul style="list-style-type: none"> <li>•Mapping does not identify existence of Boundary Creek (the tunnel passes under it)</li> <li>•Mapping does not identify existence of Lake Belvedere (a deep wetland that the tunnel passes very close to)</li> <li>•Waterbird Refuge is classified as a constructed wetland rather than an estuarine wetland containing saltmarsh, mudflats and open water.</li> </ul>
			AFJV note the presence of Boundary Creek and Lake Belvedere. However, the mapping is from the EIS Biodiversity technical paper which does not include these features.  The 'waterbird refuge' is classified in Figure 1 as an artificial wetland, as opposed to a Plant Community Type. This area is not classified as a Plant Community Type in the NSW BioNet Vegetation Classification application.
SOPA		SMWSTCTP-AFJ-1NL-EO-PLN-000001	The assessment considers groundwater impacts to groundwater-dependent ecosystems only. It does not consider hydrological impacts to the waterways and wetlands that the tunnel passes under or close to. I raised this when reviewing the SEE. <ul style="list-style-type: none"> <li>•Will aquifers be affected or will the bases of creeks or wetlands be fractured by the drilling / vibration in the following wetlands/waterways: Northern Water Feature, Lake Belvedere, Haslams Creek, Boundary Creek, Mason Park Wetlands (the latter outside SOP, but ecologically very connected). What monitoring will be in place to detect any such impacts; what contingencies are in place should such impacts occur?</li> <li>•Since the existence of Lake Belvedere and Boundary Creek are not even identified in the mapping, I wonder how impacts of tunnelling to their hydrology will be identified and managed ?</li> </ul>
			Adressed as part of the GWMP response. Section 6.12 added to FFMP to address potential GDE impacts.
SOPA		SMWSTCTP-AFJ-1NL-EO-PLN-000001	Polluted stormwater runoff from construction of the Sydney Olympic Park metro station presents a significant risk to Green and Golden Bell Frog habitat in the Northern Water Feature. Sydney Olympic Park is a 'priority managed site' for the Green and Golden Bell frog under the NSW Government Saving Our Species program. The report does not identify this risk, or provide details of how risk to bell frogs will be managed and monitored.

COMPANY	RAISED BY	REVIEW DOC. NO.*	COMMENTS / RESPONSE
			Section 4.8 updated. Stormwater runoff will be managed in accordance with Section 6.4 of the SWMP. Water collected on the surface within sediment basins and/or excavations would be tested and where necessary treated in accordance with the CTP's Water Reuse and Discharge Permit. The criterion for discharge is outlined in Table 13 of the Soil and Water Management Plan.
Inner West Council	D Crosby	SMWSTCTP-AFJ-1NL-EO-PLN-000001	Section 6.2 states that pre-clearance inspections should be undertaken prior to clearing of native vegetation. As native wildlife also use non-native vegetation for nesting and roosting and other purposes pre-clearance inspections should be undertaken prior to non-native and native vegetation clearance.
			Section 6.2 updated to refer to any vegetation.
Inner West Council		SMWSTCTP-AFJ-1NL-EO-PLN-000001	The wharf/jetty infrastructure in White Bay is possible roosting habitat for Myotis Macropus (fishing bats) so this infrastructure needs to be inspected/surveyed by qualified ecologist prior to any demolition/disturbance.
			It is not proposed to demolish this structure. It should be noted that the EIS determined no human made structures in the Stage 1 footprint represented potential Myotis Macropus roosting habitat.
Inner West Council		SMWSTCTP-AFJ-1NL-EO-PLN-000001	To reduce impacts on various native wildlife best practice lighting guidelines should be followed for any temporary or permanent lighting – see Appendix A of the National Light Pollution Guidelines for Wildlife – <a href="https://www.environment.gov.au/biodiversity/publications/national-light-pollution-guidelines-wildlife">https://www.environment.gov.au/biodiversity/publications/national-light-pollution-guidelines-wildlife</a>
			Addressed via management measures LVMM7 + LNMM8 in the CTP Visual Amenity Management Plan.
Strathfield Council		SMWSTCTP-AFJ-1NL-EO-PLN-000001	Section 4.2, 'Wetlands of International and National Importance' does not include Mason Park Wetlands. It is mentioned under section 4.6 'Migratory Species'.  Mason Park Wetlands is a valuable habitat for local and migratory bird species and is subject to the provisions of the China-Australia Migratory Bird Agreement (CAMBA) and Japan-Australia Migratory Bird Agreement (JAMBA). Additionally, the site is listed on the Register of the National Estate. The planned tunnel construction takes place very near/directly under this site, which is not preferred. This site should be recognised under the report as a wetland of national and international importance.
			The EPBC Act Protect Matters Search Tool does not identify Mason Park Wetlands as either an internationally or nationally important wetland (it's not identified at all). It is assumed this is because it is not listed by RAMSAR or the Federal Government as an important wetland. This is why it's not listed in the EIS or FFMP as such. The FFMP does recognise Mason Park wetlands as important habitat for wader species.
Strathfield Council		SMWSTCTP-AFJ-1NL-EO-PLN-000001	There are several references to 'noxious weeds'. This term is outdated, as the Noxious Weeds Act 1993 (this act is referenced in section 6.8) has been repealed and replaced by the Biosecurity Act 2015. The term currently used to reference weed species flagged in legislation or in regional or local weed management plans is 'priority weeds'. Regional priority weeds are identified in the Greater Sydney Regional Strategic Weed Management Plan 2017-2022.
			References to the Noxious Weeds Act changed to the Biosecurity Act. Future revision will include document update to change 'noxious weeds' to 'priority weeds'. This change has been captured in the register of required revisions.

CoA C5(e) Flora and Fauna Management Plan Consultation Phase 2 – Tunnelling Works		
Government Agency/Stakeholder	Date consulted	Date of Response
DPE BCD	06/06/2022	16/06/2022 + 28/7/2022
DPI Fisheries	03/06/2022	09/06/2022
SOPA	03/06/2022	No response following reminder on: 24/6/2022 01/07/2022
Burwood Council	03/06/2022	01/07/2022
City of Canada Bay Council	03/06/2022	17/06/2022
Inner West Council	03/06/2022	No response following reminder on: 24/6/2022 01/07/2022
Strathfield Council	03/06/2022	No response following reminder on: 24/6/2022 01/07/2022
City of Parramatta Council	03/06/2022	17/06/2022



Our Ref: C22/352

9 June 2022

Your Ref: CSSI-10038

[REDACTED]  
Environmental Manager  
Acciona Ferrovia Joint Venture (AFJV)  
c/o: [REDACTED]

**Consultation for CSSI-10038 – Sydney Metro West – Central Tunnelling Package (CTP) – CEMP Sub-plan Flora and Fauna Management Plan (Rev 3) – Condition of Approval C5(b)**

Thank you for your referral of 06/06/2022 seeking comment on the Flora and Fauna Management Plan which is a Construction Environment Management Plan (CEMP) sub-plan. This consultation is a requirement as per and C5(b) of the Conditions of Approval for the Sydney Metro West (Stage 1 – Central Tunnelling Package (CTP)) (Revision 3) CSSI-10038.

This office has previously provided advice on the Flora Fauna Management Plan (FFMP) as C21/470 on 20/08/2021. At this time it was noted that no flora or fauna protected by the Fisheries Management Act (1994) would be affected by the proposed works. DPI Fisheries understands this updated FFMP now includes tunnelling activities from other stages of the Sydney Metro West.

DPI Fisheries is responsible for ensuring that fish stocks are conserved and that there is no net loss of key fish habitats upon which they depend. To achieve this, DPI Fisheries ensures that developments comply with the requirements of the *Fisheries Management Act 1994* (FM Act) (namely the aquatic habitat protection and threatened species conservation provisions in Parts 7 and 7A of the Act, respectively), and the associated *Policy and Guidelines for Fish Habitat Conservation and Management (2013)*. DPI Fisheries is also responsible for ensuring the sustainable management of commercial, recreational and Aboriginal cultural fishing, aquaculture, marine parks and aquatic reserves within NSW.

DPI Fisheries has reviewed the proposal and makes the following comments:

1. Page 18 of the FFMP (AFJV, 2022) states:  
*"Marine vegetation is protected under the Fisheries Management Act 1994, however a permit under that act is not required for State Significant Infrastructure projects, and the CTP is unlikely to impact any seagrasses or any form of marine vegetation."*
2. While Part 7 permits are not required for SSI, this project is still subject to *NSW Biodiversity Offsets for Major Projects* to be applied for aquatic offsets under the FM Act.
3. Please confirm that no marine vegetation will be harmed (as defined by the FM Act) as part of this updated scope of works for the Central Tunnelling Package.

If you require any further information, please contact me on [REDACTED] or [REDACTED]

Yours sincerely,

[REDACTED]

[REDACTED]

Fisheries Manager, Coastal Systems Unit

## Department of Planning and Environment

Our ref: DOC22/451199

Your ref: SSI-10038

[REDACTED]  
Sydney Metro West  
PO Box K659  
Haymarket NSW 1240

16 June 2022

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Subject: Environment and Heritage Group comments on the post approval draft Flora and Fauna Management Plan for Sydney Metro West – Central Tunnelling Package – Sydney Olympic Park to The Bays – Phase B1 and B2 tunnelling activities - SSI-10038

Dear [REDACTED]

Thank you for your email of 6 June 2022 requesting comments on the post approval Flora and Fauna Management Plan (FFMP) for this State significant infrastructure proposal (SSI-10038). EHG has reviewed the draft FFMP and provides its comments and recommendations at Attachment A.

EHG would appreciate receiving a track change version of any updates to the FFMP as well as a 'clean' version to readily identify where amendments have been made and assist with the review. EHG's request for a track change version as well as a 'clean' version for this SSI also applies to any other future SSI referrals where management plan reports are updated and require further assessment.

If you have any queries regarding this matter, please do not hesitate to contact [REDACTED], Senior Conservation Planning Officer on [REDACTED] or at [REDACTED].

Yours sincerely,

[REDACTED]

[REDACTED]

Senior Team Leader Planning  
Greater Sydney Branch, Biodiversity and Conservation  
Environment and Heritage Group

CC: [REDACTED] Infrastructure Assessment, DPE

**Subject:** EHG comments on the post approval draft Flora and Fauna Management Plan for Sydney Metro West – Central Tunnelling Package – Sydney Olympic Park to The Bays – construction of the CTP civils construction phase B1 and tunnelling construction Phase B1 and B2 - SSI-10038

The Environment and Heritage Group (EHG) has reviewed the draft Flora and Fauna Management Plan (FFMP) – revision 03 (dated 1 June 2022) for this State Significant Infrastructure proposal (SSI) and provides the following comments.

*Construction Environmental Management Framework' 10.2a*

Table 3 under the heading 'Construction Environmental Management Framework' 10.2a (iv) indicates "details on the locations, monitoring program and use of nest boxes by fauna" is addressed in Section 6.4 of the FFMP. Section 6.4 however makes no reference to the nest box monitoring program. The FFMP needs to include details on the nest box monitoring program including:

- the number of nest boxes to be monitored
- the GPS locations of the nest boxes
- the characteristics of all nest boxes to be monitored / the native fauna species that the boxes are designed for
- the duration and frequency of monitoring
- how the nest boxes are to be monitored (e.g., visual checks, installation of wildlife cameras which are motion activated)
- the reporting program.

Table 3 under the heading 'Construction Environmental Management Framework' 10.2a (xi) indicates "a procedure for dealing with unexpected 'EEC threatened species' (sic) identified during construction, including cessation of work and notification of the Department" is addressed in Section 6.7 of the FFMP but this section relates to 'Tree Management'. It is recommended the Table is amended to refer to the correct section.

*4.1 Landscape Features*

Section 4.1 states "the construction site boundaries shown in Figure 4 to Figure 8 are representative of the maximum construction footprint" and "as indicated in the maps in Figures below, there is no naturally occurring native vegetation present at any of the surface construction sites". It is suggested the legend on Figures 1-3 is amended to include the word 'surface' in front of the words 'construction site'.

*6.2 Pre-Clearing Procedure*

EES in its submission of 27 August 2021 advised the FFMP should identify the timing of when the pre-clearing inspections are to be undertaken. The applicant's response to this issue in Appendix B (Consultation) - Review Comments Sheet indicates that Section 6.2 has been "updated to state they would be undertaken no more than three days prior to clearing" but this amendment does not appear to be included in Section 6.2. It is noted, however that Section 6.2 indicates that habitat features will be marked at least 7 days prior to the commencement of clearing.

Section 6.2 of the FFMP indicates the purpose of the pre-clearing inspections will include

- Identification of any threatened flora and fauna
- Provide guidance on relocation if required for any threatened fauna not previously identified.

## Department of Planning and Environment

EES previously recommended that the pre-clearing inspections and the relocation of native fauna apply to all “protected animals” under the Biodiversity Conservation Act 2016 (BC Act) and should not just apply to threatened fauna. The applicant’s response to this issue in Appendix B (Consultation) - Review Comments Sheet states that “SM CEMF requires the pre-clearing inspection be applied to ‘threatened’ species, this wording has been used specifically to comply with the CEMF as is required under the CoA. The scope and scale of clearing for the CTP works is unlikely to impact any protected animals, as determined in the EIS” (see page 70/83). EHG considers the pre-clearing inspections, and the relocation of native fauna should apply to all “protected animals” and not only threatened fauna found.

EES recommended that prior to clearing and felling:

- the ecologist /arborist will endeavour to individually remove sections of a tree containing a hollow or other habitat features for relocation and reuse by the project to enhance habitat
- native trees that are approved for removal (including hollows and tree trunks (greater than approximately 25-30cm in diameter and 2m in length) and other habitat features (such as logs and bush rock) should be relocated and reused by the project
- where trees/habitat features are not able to be reused by the project the proponent should consult with relevant public authorities, local community restoration/rehabilitation groups, Landcare groups etc to determine if there is an interest for the reuse of suitable timber and root balls, bush rock etc in habitat enhancement and rehabilitation work off-site.

The applicant’s response to this issue in Appendix B (Consultation) - Review Comments Sheet states “No Councils or other authorities have indicated a desire to be offered habitat features, however this will be considered and granted (as reasonable and feasible) upon such requests” (see page 70/83). It is unclear if the applicant has contacted local councils and other authorities to determine if there is an interest for the reuse of suitable timber, or if they are waiting for agencies to approach them. The FFMP should clarify this.

The FFMP should also outline that tree hollows once they have been checked by the ecologist for the presence of native fauna should be covered to ensure the hollows are not reoccupied prior to removal of the trees.

### *Clearing Procedure*

EHG recommends the FFMP includes a clearing procedure section as at present it currently includes sections for a pre-clearing procedure (section 6.2) and a post-clearing report (section 6.3). The clearing procedure should outline that

- the project ecologist should supervise the actual clearing of trees and shrubs (native and exotic) and other habitat to capture, treat and/or relocate any displaced native fauna to an appropriate nearby location.
- the clearing of trees and shrubs should be avoided where possible in late winter/spring during breeding/nesting period for birds.

### *6.4 Nest Boxes*

Section 6.4 notes the Project Ecologist will determine if it is practicable to install nest boxes in adjacent vegetation. It states, “Where nest boxes are installed, an offset ratio of 1:1 would be applied, where feasible (i.e. one nest box for every hollow identified during the pre-clearing inspections)”. EHG recommends the words ‘where feasible’ are removed from this sentence. As a minimum the offset ratio should be at least 1:1.

## Department of Planning and Environment

EHG recommends Section 6.4 includes the following:

- Where tree hollows are to be removed, and/or hollow dependent native fauna are found using existing hollows, compensatory tree hollows/nest boxes be provided prior to removing the tree hollows and prior to the release of the hollow dependent fauna unless the removed tree hollows can be relocated and installed on the same day they are removed.
- The applicant should:
  - provide details on the size, type, number, and location of nest boxes required – this would be based on the results of the pre-clearing survey
  - install replacement nest boxes in trees being retained or in nearby appropriate habitat
  - install replacement nest boxes prior to any vegetation removal (preferably one month prior), to provide alternate habitat for hollow-dependent fauna displaced during clearing
  - salvage and relocate the tree hollows approved for removal to appropriate locations on the same day the tree hollows are removed and prior to the release of any native fauna found using the tree hollows.

### 6.6 Habitat Feature Identification

Section 6.6 states “any fauna captured will be relocated into areas of suitable habitat adjacent to the project site in accordance with the fauna rescue and relocation process described in Section 6.11”. As previously advised by EES the FFMP should outline that where hollow dependent native fauna are found using existing hollows, compensatory tree hollows should be provided prior to removing the tree hollows and prior to the release of the hollow dependent fauna unless the removed tree hollows can be relocated and installed on the same day they are removed. EES recommended the Fauna Rescue and Relocation section is amended accordingly.

The applicant’s response to this issue in Appendix B (Consultation) - Review Comments Sheet states that the Project will take the guidance of the project ecologist in the handling and management of fauna. If fauna are to be relocated it will be undertaken in a manner that best allows the relocated fauna to adapt to its new location” (see page 72/83). EHG considers it is important the FFMP outlines:

- hollow dependent fauna found using tree hollows that are to be removed should not be relocated and released without compensatory tree hollows being provided (see comments above for Section 6.4 – nest boxes)
- any nocturnal fauna found must be captured and re-released to nearby suitable habitat, at a time suitable for the subject species and they are not left to find habitat on their own accord during daylight hours (see comments under Section 6.11).

### 6.7 Tree Management

Section 6.7 states “Trees to be removed will be replaced to achieve no net loss of the number of trees or canopy”. EHG recommends the replacement trees consist of native species of local provenance to improve local biodiversity and the FFMP states this.

### 6.8 Unexpected Species Finds

Section 6.8 states “in the event threatened species are unexpectedly encountered during construction, all works in the vicinity of the find will cease and immediate guidance will be sought from the Project Ecologist”. Unless the ecologist is present during the construction works the construction personnel may not have the expertise to identify threatened species or an endangered ecological community to know to contact the project ecologist so it is unclear as to whether the proposed stop works will occur.



## Department of Planning and Environment

### *6.9 Environmental Control Maps*

Section 6.9 states “Where vegetation is identified for retention, this vegetation will be demarcated and protected on site”. Further details are required on how the vegetation is to be demarcated and this maintained until constructions works are completed and the work area stabilised.

### *6.11 Fauna Rescue and Relocation*

Section 6.11 states “In the event the rescue service and/or local veterinary service cannot be contacted, the injured animal will be delivered to the relevant agency as soon as practically possible”. EHG requests this sentence is amended to clarify who the relevant agency is. If the rescue service and/or local veterinary service can’t be contacted it is unclear what is meant by the injured animal will be delivered to the ‘relevant agency’. Clarification is required on this. If WIRES, the Animal Referral Hospital, or the Five Dock Veterinary Hospital can’t be contacted then the injured animal should be taken without delay to another vet.

EHG considers it is important the FFMP outlines:

- hollow dependent fauna found using hollows to be removed should not be relocated and released without compensatory tree hollows being provided (see comments above for Section 6.4 – nest boxes).
- any nocturnal fauna found must be captured and re-released to nearby suitable habitat, at a time suitable for the subject species and they are not left to find habitat on their own accord during daylight hours.

### *Appendix B (Consultation) - Review Comments Sheet*

EHG recommends *Appendix B (Consultation) - review comments sheet* clearly distinguishes between the government agency comments and the applicant’s responses.

End of Submission

## Department of Planning and Environment

Our ref: DOC22/644106

Your ref: SSI-10038

██████████  
Infrastructure Assessment,  
Department of Planning and Environment  
4 Parramatta Square, 12 Darcy Street  
Parramatta NSW 2150

28 July 2022

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**Subject:** Environment and Heritage Group comments on the post approval updated draft Flora and Fauna Management Plan for Sydney Metro West – Central Tunnelling Package – Sydney Olympic Park to The Bays – Phase B1 and B2 tunnelling activities - SSI-10038 - Rev04

Dear ██████████

Reference is made to a phone call and email received on 20 July 2022 from Sydney Metro requesting Environmental and Heritage Group (EHG) confirm if it is happy to close the comments on the draft Flora and Fauna Management Plan (FFMP) for the Sydney Metro West – Central Tunnelling Package - (SSI-10038). Sydney Metro provided EHG with an updated draft FFMP (Rev04) and a Comments Register which includes responses by Acciona Australia and Ferrovial Australia Joint Venture to EHG's previous comments on the FFMP dated 16 June 2022.

EHG understands from Sydney Metro's phone call on 20 July that most of EHG's comments on the FFMP were not considered relevant because the works are for tunnelling. Also, according to the Acciona Australia and Ferrovial Australia Joint Venture responses in the Comments Register most of EHG's issues/comments raised were 'outside the B2 scope' and that the 'section in the FFMP has not changed as a result of the CEMP update'.

According to the Comments Register EHG's comments/issues on the following sections in the FFMP are outside the B2 scope and these sections have not been amended in the updated version of the FFMP:

- 6.11 Fauna Rescue and Relocation
- 6.9 Environmental Control Maps
- 6.8 Unexpected Species Finds
- 6.6 Habitat Feature Identification
- 6.4 Nest Boxes
- 4.1 Landscape Features
- Table 3 under the heading 'Construction Environmental Management Framework' 10.2a (iv)

EHG also requested the FFMP include a Clearing Procedure section but the Comments Register indicates this is also outside the B2 scope (see item 73 and 73.01).

The Department needs to be satisfied as to whether EHG's comments on the FFMP are outside the B2 scope for the Central Tunnel works or whether any of EHG's recommendations need to be included in the FFMP.

The Comments Register is confusing in that the contractor's response at item 72.01 implies that pre-clearing inspections are required and that surface works and clearing of vegetation may occur as part of the tunnel alignment works. It is noted the response at item 70.01 states "to date no viable habitat trees have been identified/cleared" while the response at item 72.01 indicates that clearing has generally been completed and no habitat trees or features have been identified. It is of concern

## Department of Planning and Environment

that EHG has been asked to review the draft FFMP if vegetation clearing has 'generally been completed'.

EHG in its submission of 16 June 2022 recommended that the pre-clearing inspections and the relocation of native fauna apply to all "protected animals" under the Biodiversity Conservation Act 2016 (BC Act) and not just to threatened fauna. In response Acciona Australia and Ferrovial Australia Joint Venture reiterate in the Comments Register at Item 72.01 that "as previously stated the CEMF requirement is for pre-clearing inspections to apply to threatened species. To date no threatened species have been identified."

EHG repeats that it considers the pre-clearing inspections, and the relocation of native fauna should apply to all 'protected animals' and not only threatened fauna. All Construction Environmental Management Framework (CEMF) prepared for other SSI proposals need to identify that pre-clearing inspections and the relocation of native fauna should apply to all 'protected animals'.

EHG requests that for any other FFMP referrals associated with this SSI and other SSI projects if Conditions of Approval and the CEMF requirements do not apply /are not relevant to the proposed works or if clearing has 'generally been completed' that the sections in the FFMP clearly identify and include this detail to avoid any confusion. For example, Table 3 in the draft FFMP currently identifies the relevant sections in the FFMP which apply to:

- 'Procedures for the clearing of vegetation and the relocation of flora and fauna'
- 'Details on the locations, monitoring program and use of nest boxes by fauna'

It would be helpful if the table identified if these issues and the sections in the FFMP are relevant to the proposed works.

EHG notes the Comments Register provides no response in relation to EHG's comments on *Section 6.7 - Tree Management*.

Please note EHG is unable to provide any further comment on the FFMP due to the number of requests for the advice on other major projects.

If you have any queries regarding this matter, please email [REDACTED].

Yours sincerely,

[REDACTED]

[REDACTED]

Senior Team Leader Planning  
Greater Sydney Branch,  
**Biodiversity and Conservation**

CC to M [REDACTED] at Sydney Metro

[REDACTED]

---

**From:** [REDACTED] >  
**Sent:** Friday, 1 July 2022 12:46 PM  
**To:** [REDACTED]  
**Subject:** RE: Closure of document review period

[REDACTED]

No further comments on the updated management plans. However, I would note that I cannot identify a specific response to the points raised below and as per out previous submission.

Do you have a comments register which notes the AAJV response to these issues?

### **Noise and Vibration Management Plan**

The consideration of noise and vibration impacts outlines a number of issues in terms of intrusive activities and assumed impact upon local residents and business. The basis of this appears sound but is based upon traditional considerations of daily life. It is suggested that there has been an increase in working from home, which means an increased number of residents at home between 9am and 5pm Monday to Friday, which within the noise and vibration management plan is period when increase construction noise and activity is likely to occur.

Similarly, from a local business perspective, it is likely that business, in particularly hospitality, is striving to return to business normality. For hospitality in particular this will likely mean increase use of outdoor spaces in response to venue capacity limits, which will be more directly impacted by construction activities.

It is requested that consideration be given to likely or potential business or working practices that may occur in response to COVID restrictions and management procedures. This will mean further consideration of impacts of noise and vibration on a cumulative basis and upon those living and working from home and broader consideration of impacts.

### **Heritage Management Plan**

No additional comments on the content of the management plan. However, we request that copies of any photos during the demolition and construction phases of the project, be provided to Burwood Council library. Council has historian and archivist officers, and records of major construction projects such as the Sydney Metro Burwood North station offer invaluable insight into the development of the locality and record of these events can be retain in our library records.

Further on this point, we provided feedback on the Heritage Assessment for the property on the corner of the Burwood Road and Parramatta Road, which concluded that these was potential for this property to meet the threshold for heritage listing, despite being noted for demolition. The updated management plan did not appear to make a response to this point.

Regards

[REDACTED]  
Director City Strategy  
T: [REDACTED]  
E: [REDACTED]  
2 Conder Street, Burwood, NSW, 2134



**Burwood** Inc.1874

Burwood . Burwood Heights . Croydon . Croydon Park . Enfield . Strathfield



How would you rate my service?



It takes 10 seconds and our management reads every response.

**From:** [REDACTED] >

**Sent:** Friday, 1 July 2022 9:32 AM

**To:** [REDACTED]

**Subject:** Closure of document review period

This email is addressed to:

- Sydney Olympic Park Authority
- City of Canada Bay Council
- Burwood Council
- Inner West Council
- Strathfield Municipal Council
- City of Parramatta Council
- Place Management NSW

Hi,

Acciona Ferrovial Joint Venture (AFJV) would like to acknowledge your assistance in review the Sydney Metro West Central Tunnelling Package (CTP) Construction Environmental Management Plan update to include tunnelling activities.

Document review period for all documents will be closed by end of business today. If you have not provided comments on documents provided to you for review by this time, it will be understood that no comments will be provided.

Document	Response due by	Status
Flora and Fauna Management Plan	17/6/22	Closed
Heritage Management Plan	17/6/22	Closed
Spoil Management Plan	24/6/22	Closed
Noise and Vibration Management Plan	24/6/22	Closed
Soil and Water Management Plan	01/7/22	Closed

Thanks,







Environment Manager  
Acciona Ferrovia Joint Venture

Sydney Metro West  
Central Tunnelling Package

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**From:** [redacted] <[redacted]>

**Sent:** Friday, 1 July 2022 9:32 AM

**To:** [redacted]

**Subject:** Closure of document review period

This email is addressed to:

- Sydney Olympic Park Authority
- City of Canada Bay Council
- Burwood Council
- Inner West Council
- Strathfield Municipal Council
- City of Parramatta Council
- Place Management NSW

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Document	Response due by	Status
Flora and Fauna Management Plan	17/6/22	Closed

Heritage Management Plan	17/6/22	Closed
Spoil Management Plan	24/6/22	Closed
Noise and Vibration Management Plan	24/6/22	Closed
Soil and Water Management Plan	01/7/22	Closed

Thanks,



Environment Manager  
**Acciona Ferrovial Joint Venture**

*Sydney Metro West  
Central Tunnelling Package*

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**From:** [REDACTED] <[REDACTED]>  
**Sent:** Friday, 17 June 2022 2:56 PM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: WDR#0051: Sydney Metro West Central Tunneling Package - Flora and Fauna Management Plan (Rev3) - Tunneling Update [K3.1.1#F451C0.6414E93]  
**Attachments:** SMWST1 External Comments Template (2) - Copy.xlsx

Hi [REDACTED]

Please see attached City of Canada Bay Council's Comments. For your convenience, the comments is below.

*This document has been well researched and presented. Inline with Canada Bay Council Urban Tree Canopy Strategy and Biodiversity Action Plan we are aiming to increase canopy cover from 18% to 25% by 2040. This will only be achievable if we take account of the area of canopy that is being lost due to development and endeavour to replace this in the shortest possible timeframe. We would like to see a 4:1 replanting ratio with advanced trees 90L and larger in the areas affected. These measures are not arbitrary and being adopted by many councils and in line with state govt targets. Thanks, [REDACTED] Urban Forester*

Should you have any questions ,don't hesitate to contact me.

Kind regards,

[REDACTED]  
Sydney Metro Interface Engineer

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**From:** [REDACTED] >  
**Sent:** Friday, 3 June 2022 4:41 PM  
**To:** [REDACTED] <[REDACTED]>  
**Cc:** [REDACTED] >  
**Subject:** RE: WDR#0051: Sydney Metro West Central Tunneling Package - Flora and Fauna Management Plan (Rev3) - Tunneling Update [K3.1.1#F451C0.6414E93]

Hi [REDACTED].

Please find document attached.

Please let me know if you are having further issues.

Thanks,



[REDACTED]  
Environment Manager  
Acciona Ferrovial Joint Venture

Sydney Metro West  
Central Tunnelling Package  
[REDACTED]

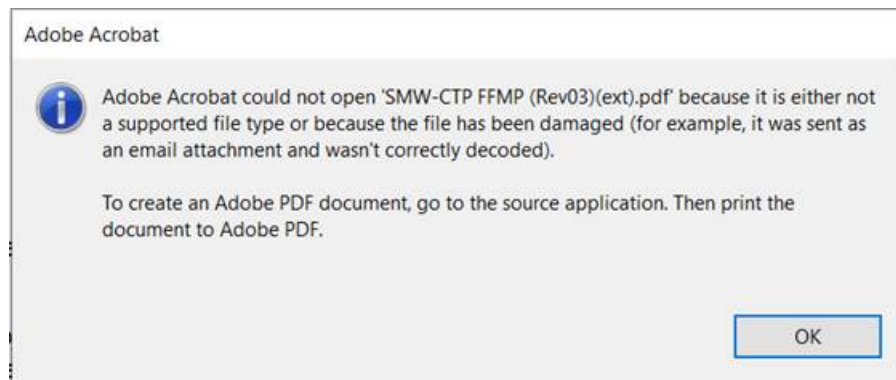
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**From:** [REDACTED] <[REDACTED]>  
**Sent:** Friday, 3 June 2022 4:39 PM  
**To:** [REDACTED] <[REDACTED]>  
**Cc:** [REDACTED] <[REDACTED]>  
**Subject:** RE: WDR#0051: Sydney Metro West Central Tunneling Package - Flora and Fauna Management Plan (Rev3) - Tunneling Update [K3.1.1#F451C0.6414E93]

Hi [REDACTED]

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Should you have any questions, don't hesitate to contact me.

Kind regards,

[REDACTED]  
Sydney Metro Interface Engineer

[REDACTED] | **Sydney Metro Interface Engineer**  
City of Canada Bay

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15-17 Regatta Road Five Dock NSW 2046 | [www.canadabay.nsw.gov.au](http://www.canadabay.nsw.gov.au)

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**From:** [REDACTED] <[REDACTED]>  
**Sent:** Friday, 3 June 2022 4:09 PM  
**To:** [REDACTED] <[REDACTED]>  
**Subject:** FW: WDR#0051: Sydney Metro West Central Tunneling Package - Flora and Fauna Management Plan (Rev3) - Tunneling Update [K3.1.1#F451C0.6414E93]

Hi Eric

Flora and Fauna report provided by AFJV for Council Officer review and comment.

██████████ | **Manager, Strategic Planning**  
City of Canada Bay

1a Marlborough St Drummoyne NSW 2047 | [www.canadabay.nsw.gov.au](http://www.canadabay.nsw.gov.au)

T: ██████████



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**From:** ██████████ >  
**Sent:** Friday, 3 June 2022 4:04 PM  
**To:** ██████████ <██████████>  
**Subject:** WDR#0051: Sydney Metro West Central Tunneling Package - Flora and Fauna Management Plan (Rev3) - Tunneling Update [K3.1.1#F451C0.6414E93]

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# Working Document Review

STATUS FOR REVIEW

ISSUED 3-JUN-22 04:01 PM

DUE 10-JUN-22 04:01 PM

COLLABORATORS	AUTHOR	COMPANY	PHONE	MOBILE
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		Acciona Ferrovia Joint Venture		
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## Sydney Metro West Central Tunneling Package - Flora and Fauna Management Plan (Rev3) - Tunneling Update

DESIGN LOT Non-Design

DISCIPLINE Environment and Planning : Ecology

### Comment

Hi,  
Acciona Ferrovia Joint Venture (AFJV) would like provide the Sydney Metro West Central Tunneling Package Flora and Fauna Management Plan (Rev03) for your review. This document has been updated to include tunneling activities, which are identified as Stage B2 in the Sydney Metro West Staging Report. These updates are minimal in nature and have been highlighted in the text, to assist your review.

We invite your feedback on highlighted changes and seek a response by 17June2022 .

If you have any questions please do not hesitate to contact me on the details below.

Thanks,

Environment Manager

AFJV Sydney Metro West Central Tunneling Package

### ATTACHMENTS

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## COMMENTS

[REDACTED]

FOR REVIEW

3-JUN-22 04:01 PM

**Sydney Metro West Central Tunneling Package - Flora and Fauna Management Plan (Rev3) - Tunneling Update** Issued to AFJV

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## Oliver Gilroy-Sarkies

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**From:** [REDACTED] <[REDACTED]>  
**Sent:** Wednesday, 15 June 2022 11:56 AM  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** FW: SMWSTCTP-AFJ-1NL-EO-PLN-000001 Revision 03 - Flora and Fauna Management Plan

Hi [REDACTED], please note Parramatta Councils response to SMWSTCTP-AFJ-1NL-EO-PLN-000001 Revision 03 - Flora and Fauna Management Plan

Kind regards  
[REDACTED]

---

**From:** [REDACTED] <[REDACTED]>  
**Sent:** Wednesday, 15 June 2022 9:21 AM  
**To:** [REDACTED] <[REDACTED]>  
**Cc:** [REDACTED] <[REDACTED]>  
**Subject:** SMWSTCTP-AFJ-1NL-EO-PLN-000001 Revision 03 - Flora and Fauna Management Plan

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Good morning [REDACTED]

Please be advised that Council has no comments to offer on the Flora and Fauna Management Plan – Rev 03.

Kind regards

[REDACTED]  
Project Officer, Parramatta Light Rail Program  
[REDACTED]

Part time – **Monday to Thursday**  
*I am privileged to live and work on Darug Land in the Eora Nation*

City of Parramatta  
Level 11, 126 Church Street, Parramatta NSW 2150  
PO Box 32, Parramatta, NSW 2124

[cityofparramatta.nsw.gov.au](http://cityofparramatta.nsw.gov.au)



I acknowledge the Traditional Owners of the land I work on, the Darug Peoples, and pay my respects to their Elders past and present.

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DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*
9/06/2022	DPI Fisheries		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	<p>Page 18 of the FFMP (AFJV, 2022) states: "Marine vegetation is protected under the Fisheries Management Act 1994, however a permit under that act is not required for State Significant Infrastructure projects, and the CTP is unlikely to impact any seagrasses or any form of marine vegetation."</p> <p>While Part 7 permits are not required for SSI, this project is still subject to NSW Biodiversity Offsets for Major Projects to be applied for aquatic offsets under the FM Act. Please confirm that no marine vegetation will be harmed (as defined by the FM Act) as part of this updated scope of works for the Central Tunnelling Package.</p>	Observation
15/07/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	AFJV can confirm that there would be no harm to marine vegetation as a result of the updated scope.	Observation
16/06/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	<p>Construction Environmental Management Framework' 10.2a Table 3 under the heading 'Construction Environmental Management Framework' 10.2a (iv) indicates "details on the locations, monitoring program and use of nest boxes by fauna" is addressed in Section 6.4 of the FFMP. Section 6.4 however makes no reference to the nest box monitoring program. The FFMP needs to include details on the nest box monitoring program including:</p> <ul style="list-style-type: none"> <li>•the number of nest boxes to be monitored</li> <li>•the GPS locations of the nest boxes</li> <li>•the characteristics of all nest boxes to be monitored/ the native fauna species that the boxes are designed for</li> <li>•the duration and frequency of monitoring</li> <li>•how the nest boxes are to be monitored (e.g., visual checks, installation of wildlife cameras which are motion activated)</li> <li>•the reporting program.</li> </ul>	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	<p>It is noted that this comment is outside the B2 scope and that this section has not changed as a result of the CEMP update.</p> <p>Section 6.3 also states that the if viable habitat trees are identified during pre-clearing inspections then AFJV in consultation with the Project Ecologist will determine whether it is practicable to install nest boxes in adjacent vegetation. To date no viable habitat trees have been identified/cleared and as such the trigger to prepare a nest box monitoring program has not been met.</p> <p>Section 6.4 has been updated to include nest box monitoring program requirements, if they are triggered.</p>	Observation

DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*
16/06/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	Table 3 under the heading 'Construction Environmental Management Framework' 10.2a (xi) indicates "a procedure for dealing with unexpected 'EEC threatened species' (sic) identified during construction, including cessation of work and notification of the Department" is addressed in Section 6.7 of the FFMP but this section relates to 'Tree Management'. It is recommended the Table is amended to refer to the correct section.	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001	N/A	N/A	Reference has been updated to 6.8	Observation
16/06/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	4.1 Landscape Features Section 4.1 states "the construction site boundaries shown in Figure 4 to Figure 8 are representative of the maximum construction footprint" and "as indicated in the maps in Figures below, there is no naturally occurring native vegetation present at any of the surface construction sites". It is suggested the legend on Figures 1-3 is amended to include the word 'surface' in front of the words 'construction site'.	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	It is noted that this comment is outside the B2 scope and that this section has not changed as a result of the CEMP update.  The 'construction site boundaries' is a term used consistently throughout all sub-plans. Given that the tunnel alignment is also included in these figures there is little room for confusion. Additionally, the construction sites also include deep excavations, with some sites including underground caverns, therefore 'surface' may not be completely accurate.	Observation

DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*
16/06/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	<p>6.2 Pre-Clearing Procedure</p> <p>EES in its submission of 27 August 2021 advised the FFMP should identify the timing of when the pre-clearing inspections are to be undertaken. The applicant's response to this issue in Appendix B (Consultation) - Review Comments Sheet indicates that Section 6.2 has been "updated to state they would be undertaken no more than three days prior to clearing" but this amendment does not appear to be included in Section 6.2. It is noted, however that Section 6.2 indicates that habitat features will be marked at least 7 days prior to the commencement of clearing. Section 6.2 of the FFMP indicates the purpose of the pre-clearing inspections will include:</p> <ul style="list-style-type: none"> <li>•Identification of any threatened flora and fauna</li> <li>•Provide guidance on relocation if required for any threatened fauna not previously identified.</li> </ul> <p>EES previously recommended that the pre-clearing inspections and the relocation of native fauna apply to all "protected animals" under the Biodiversity Conservation Act 2016 (BC Act) and should not just apply to threatened fauna. The applicant's response to this issue in Appendix B (Consultation) - Review Comments Sheet states that "SM CEMF requires the pre-clearing inspection be applied to 'threatened' species, this wording has been used specifically to comply with the CEMF as is required under the CoA. The scope and scale of clearing for the CTP works is unlikely to impact any protected animals, as determined in the EIS" (see page 70/83). EHG considers the pre-clearing inspections, and the relocation of native fauna should apply to all "protected animals" and not only threatened fauna found.</p>	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	<p>AFJV were seeking to increase the pre-clearing timeframe as three days is not always practical. However, given that clearing is largely complete this has been revised back to three days.</p> <p>The CEMF requirement is for pre-clearing inspections to apply to threatened species. Regardless, AFJV have updated the plan for it to apply 'protected species'.</p>	Observation



DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*
16/06/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	<p>EES recommended that prior to clearing and felling:</p> <ul style="list-style-type: none"> <li>the ecologist /arborist will endeavour to individually remove sections of a tree containing a hollow or other habitat features for relocation and reuse by the project to enhance habitat</li> <li>native trees that are approved for removal (including hollows and tree trunks (greater than approximately 25-30cm in diameter and 2m in length) and other habitat features (such as logs and bush rock) should be relocated and reused by the project</li> <li>where trees/habitat features are not able to be reused by the project the proponent should consult with relevant public authorities, local community restoration/rehabilitation groups, Landcare groups etc to determine if there is an interest for the reuse of suitable timber and root balls, bush rock etc in habitat enhancement and rehabilitation work off-site.</li> </ul> <p>The applicant's response to this issue in Appendix B (Consultation) - Review Comments Sheet states "No Councils or other authorities have indicated a desire to be offered habitat features, however this will be considered and granted (as reasonable and feasible) upon such requests"(see page 70/83). It is unclear if the applicant has contacted local councils and other authorities to determine if there is an interest for the reuse of suitable timber, or if they are waiting for agencies to approach them. The FFMP should clarify this. The FFMP should also outline that tree hollows once they have been checked by the ecologist for the presence of native fauna should be covered to ensure the hollows are not reoccupied prior to removal of the trees.</p>	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	<p>All councils have had opportunity to review the FFMP and AFJV are in regular contact with them. To date, no councils have expressed any interest in reusing the trees.</p> <p>Section 6.6 has been updated to state that if hollows are encountered they would be covered after being checked by the ecologist.</p>	Observation
16/06/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	<p>Clearing Procedure</p> <p>EHG recommends the FFMP includes a clearing procedure section as at present it currently includes sections for a pre-clearing procedure (section 6.2) and a post-clearing report (section 6.3). The clearing procedure should outline that:</p> <ul style="list-style-type: none"> <li>the project ecologist should supervise the actual clearing of trees and shrubs (native and exotic) and other habitat to capture, treat and/or relocate any displaced native fauna to an appropriate nearby location.</li> <li>the clearing of trees and shrubs should be avoided where possible in late winter/spring during breeding/nesting period for birds.</li> </ul>	Observation

DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	<p>It is noted that this comment is outside the B2 scope and that this section has not changed as a result of the CEMP update.</p> <p>The project ecologist is required to be onsite for clearing of habitat trees. Section 6.6 includes the process for clearing trees that have any habitat features. This section has been titled 'Habitat feature identification and clearing procedure'.</p>	Observation
16/06/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	<p>6.4 Nest Boxes Section 6.4 notes the Project Ecologist will determine if it is practicable to install nest boxes in adjacent vegetation. It states, "Where nest boxes are installed, an offset ratio of 1:1 would be applied, where feasible (i.e. one nest box for every hollow identified during the pre-clearing inspections)". EHG recommends the words 'where feasible' are removed from this sentence. As a minimum the offset ratio should be at least 1:1.</p> <p>EHG recommends Section 6.4 includes the following:</p> <ul style="list-style-type: none"> <li>•Where tree hollows are to be removed, and/or hollow dependent native fauna are found using existing hollows, compensatory tree hollows/nest boxes be provided prior to removing the tree hollows and prior to the release of the hollow dependent fauna unless the removed tree hollows can be relocated and installed on the same day they are removed.</li> <li>•The applicant should: <ul style="list-style-type: none"> <li>o provide details on the size, type, number, and location of nest boxes required –this would be based on the results of the pre-clearing survey</li> <li>o install replacement nest boxes in trees being retained or in nearby appropriate habitat</li> <li>o install replacement nest boxes prior to any vegetation removal (preferably one month prior), to provide alternate habitat for hollow-dependent fauna displaced during clearing</li> <li>o salvage and relocate the tree hollows approved for removal to appropriate locations on the same day the tree hollows are removed and prior to the release of any native fauna found using the tree hollows.</li> </ul> </li> </ul>	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	Where feasible' has been removed. Section 6.4 updated to include detail on what would be done if habitat trees are encountered and what a nest box monitoring program would cover.	Observation

DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*
16/06/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	<p>6.6 Habitat Feature Identification</p> <p>Section 6.6 states "any fauna captured will be relocated into areas of suitable habitat adjacent to the project site in accordance with the fauna rescue and relocation process described in Section 6.11". As previously advised by EES the FFMP should outline that where hollow dependent native fauna are found using existing hollows, compensatory tree hollows should be provided prior to removing the tree hollows and prior to the release of the hollow dependent fauna unless the removed tree hollows can be relocated and installed on the same day they are removed. EES recommended the Fauna Rescue and Relocation section is amended accordingly. The applicant's response to this issue in Appendix B (Consultation) -Review Comments Sheet states that the Project will take the guidance of the project ecologist in the handling and management of fauna. If fauna are to be relocated it will be undertaken in a manner that best allows the relocated fauna to adapt to its new location"(see page 72/83). EHG considers it is important the FFMP outlines:</p> <ul style="list-style-type: none"> <li>•hollow dependent fauna found using tree hollows that are to be removed should not be relocated and released without compensatory tree hollows being provided (see comments above for Section 6.4 –nest boxes)</li> <li>•any nocturnal fauna found must be captured and re-released to nearby suitable habitat, at a time suitable for the subject species and they are not left to find habitat on their own accord during daylight hours(see comments under Section 6.11.</li> </ul>	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	The first part of this comment about hollows has been addressed as per the previous comment. Section 6.11 has been updated to address the relocation comments.	Observation
16/06/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	<p>6.7 Tree Management</p> <p>Section 6.7 states "Trees to be removed will be replaced to achieve no net loss of the number of trees or canopy". EHG recommends the replacement trees consist of native species of local provenance to improve local biodiversity and the FFMP states this.</p>	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	Section 6.7 has been updated to state this, noting it is a Sydney Metro responsibility.	Observation

DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*
16/06/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	6.8 Unexpected Species Finds Section 6.8 states "in the event threatened species are unexpectedly encountered during construction, all works in the vicinity of the find will cease and immediate guidance will be sought from the Project Ecologist". Unless the ecologist is present during the construction works the construction personnel may not have the expertise to identify threatened species or an endangered ecological community to know to contact the project ecologist so it is unclear as to whether the proposed stop works will occur.	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	Wording has been altered to remove 'threatened' - therefore works would stop if a species is encountered. Note, any unexpected EEC's would be captured during pre-clearing inspections.	Observation
16/06/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	6.9 Environmental Control Maps Section 6.9 states "Where vegetation is identified for retention, this vegetation will be demarcated and protected on site". Further details are required on how the vegetation is to be demarcated and this maintained until constructions works are completed and the work area stabilised.	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	Section 6.9 updated to explain how areas would be marked.	Observation
16/06/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	6.11 Fauna Rescue and Relocation Section 6.11 states "In the event the rescue service and/or local veterinary service cannot be contacted, the injured animal will be delivered to the relevant agency as soon as practically possible". EHG requests this sentence is amended to clarify who the relevant agency is. If the rescue service and/or local veterinary service can't be contacted it is unclear what is meant by the injured animal will be delivered to the 'relevant agency'. Clarification is required on this. If WIRES, the Animal Referral Hospital, or the Five Dock Veterinary Hospital can't be contacted then the injured animal should be taken without delay to another vet.	
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	If the relevant agency (ie WIRES, Animal Referral Hospital, Five Dock Vet etc) can't be contacted, AFJV would deliver the animal to said agency, as opposed to waiting to make contact. 'relevant agency' has been replaced with 'rescue service and/or local veterinary service' to make this clearer.	

DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*
17/06/2022	CCB		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Section 6.7	NA	This document has been well researched and presented. Inline with Canada Bay Council Urban Tree Canopy Strategy and Biodiversity Action Plan we are aiming to increase canopy cover from 18% to 25% by 2040. This will only be achievable if we take account of the area of canopy that is being lost due to development and endeavour to replace this in the shortest possible timeframe. We would like to see a 4:1 replanting ratio with advanced trees 90L and larger in the areas affected. These measures are not arbitrary and being adopted by many councils and in line with state govt targets. Thanks, Darin Wills Urban Forester	Observation
15/07/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	It is noted that this comment is outside the B2 scope and that this section has not changed as a result of the CEMP update.  However, the replanting ratio has been set at 2:1 via condition of approval C-B8, as discussed in Section 6.7. As per the Sydney Metro West Phasing Report AFJV is not responsible for replanting and as such this consideration should be addressed directly with Sydney Metro.	Observation
16/06/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	Comment from DPIE EES, received 16/6/22. Refer to letter attached to comment Item # 69. EHG recommends Appendix B (Consultation) - review comments sheet clearly distinguishes between the government agency comments and the applicant's responses.	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	Noted	Observation
28/07/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	According to the Comments Register EHG's comments/issues on the following sections in the FFMP are outside the B2 scope and these sections have not been amended in the updated version of the FFMP: <ul style="list-style-type: none"> <li>• 6.11 Fauna Rescue and Relocation</li> <li>• 6.9 Environmental Control Maps</li> <li>• 6.8 Unexpected Species Finds</li> <li>• 6.6 Habitat Feature Identification</li> <li>• 6.4 Nest Boxes</li> <li>• 4.1 Landscape Features</li> <li>• Table 3 under the heading 'Construction Environmental Management Framework' 10.2a (iv)</li> </ul>	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	The items above have been addressed as per the updated responses to the previous BCD comments from 16/06/2022.	Observation
28/07/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	EHG also requested the FFMP include a Clearing Procedure section but the Comments Register indicates this is also outside the B2 scope (see item 73 and 73.01).	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	This item has been addressed as per the updated responses to the previous BCD comment on this issue from 16/06/2022. To clarify, the Phase B2 scope involves tunnelling activities - which do not require clearing. Hence why it was stated this comment was outwith the phase B2 scope.	Observation

DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*
28/07/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	The Comments Register is confusing in that the contractor's response at item 72.01 implies that pre-clearing inspections are required and that surface works and clearing of vegetation may occur as part of the tunnel alignment works. It is noted the response at item 70.01 states "to date no viable habitat trees have been identified/cleared" while the response at item 72.01 indicates that clearing has generally been completed and no habitat trees or features have been identified. It is of concern that EHG has been asked to review the draft FFMP if vegetation clearing has 'generally been completed'.	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	To clarify, the project has been staged into a Phase B1 and Phase B2. The Phase B1 CEMP applied to civil works, this has been updated to include Phase B2 (tunnelling) in the same CEMP (ie it covers both phases). EES reviewed the draft Phase B1 CEMP on 27/8/21, and clearing was undertaken after the Phase B1 CEMP was approved.	Observation
28/07/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	EHG in its submission of 16 June 2022 recommended that the pre-clearing inspections and the relocation of native fauna apply to all "protected animals" under the Biodiversity Conservation Act 2016 (BC Act) and not just to threatened fauna. In response Acciona Australia and Ferrovial Australia Joint Venture reiterate in the Comments Register at Item 72.01 that "as previously stated the CEMP requirement is for pre-clearing inspections to apply to threatened species. To date no threatened species have been identified."	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	This item has been addressed as per the updated responses to the previous BCD comment on this issue from 16/06/2022 - threatened has been replaced with protected.	Observation
28/07/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	EHG requests that for any other FFMP referrals associated with this SSI and other SSI projects if Conditions of Approval and the CEMP requirements do not apply /are not relevant to the proposed works or if clearing has 'generally been completed' that the sections in the FFMP clearly identify and include this detail to avoid any confusion. For example, Table 3 in the draft FFMP currently identifies the relevant sections in the FFMP which apply to: <ul style="list-style-type: none"> <li>• 'Procedures for the clearing of vegetation and the relocation of flora and fauna'</li> <li>• 'Details on the locations, monitoring program and use of nest boxes by fauna'</li> </ul> It would be helpful if the table identified if these issues and the sections in the FFMP are relevant to the proposed works.	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	Noted. BCD were provided with a document that highlighted changes to the approved Phase B1 document - highlighting the updates for Phase B2.	Observation
28/07/2022	DPE BCD		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	Flora and Fauna Management Plan	N/A	EHG notes the Comments Register provides no response in relation to EHG's comments on Section 6.7 - Tree Management.	Observation
2/09/2022	AFJV		SMWSTCTP-AFJ-1NL-EO-PLN-000001 Rev 04	N/A	N/A	This item has been addressed as per the updated responses to the previous BCD comment on this issue from 16/06/2022.	Observation



## **APPENDIX C PRE-CLEARING PROCEDURE**





# Pre-clearing procedure

SMWSTCTP-AFJ-1NL-EO-PRO-000001 Revision 01

Sydney Metro West – Central Tunnelling Package







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## DOCUMENT APPROVAL

	Prepared By	Reviewed By	Approved By
Name:	██████████	██████████	██████████
Position:	Environmental Advisor	Environment Manager	Environment Manager
Date:	2/9/22	2/9/22	2/9/22

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## REVISION HISTORY

Rev:	Date:	Pages:	By:	Description:
00	01/06/22	All	██████████	Update for ER approval
01	2/9/22	All	██████████	Minor updates

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# 1. INTRODUCTION

## 1.1 SCOPE

This Procedure details control measures to minimise impacts of vegetation clearing to be implemented throughout the construction of the Project.

## 1.2 BACKGROUND

Sydney Metro is Australia's biggest public transport program. Services on the North West Metro Line between Rouse Hill and Chatswood started in May 2019. The Sydney Metro network also includes Sydney Metro City & Southwest, Sydney Metro West and Sydney Metro Western Sydney Airport.

Sydney Metro West is a new 24 kilometre metro line between Westmead and the Sydney CBD. This infrastructure investment will double the rail capacity of the Greater Parramatta to Sydney CBD corridor with a travel time target between the two centres of about 20 minutes.

The planning approvals and environmental impact assessment for Sydney Metro West has been split into a number of stages recognising the size of the project. This includes:

- Stage 1 – Concept and all major civil construction works including station excavation and tunnelling between Westmead and The Bays. Planning approval for this stage was granted in March 2021.
- Stage 2 – All major civil construction works including station excavation and tunnelling from The Bays to Sydney CBD
- Stage 3 – Tunnel fit-out, construction of stations, ancillary facilities and station precincts, and operation and maintenance of the Sydney Metro West line

An Environmental Impact Statement (EIS) (Jacobs/Arcadis, 2020) for the Concept and Stage 1 (herein referred to as the Project) assessed the biodiversity water quality impacts in response to the Secretary's Environmental Assessment Requirements issued by the Department of Planning, Industry and Environment (DPIE). The biodiversity impact assessment is included in Chapter 22 and Technical Paper 10 of the EIS. The Project was approved on 11 March 2021 (SSI 10038). An administrative modification (Modification 1) was approved on 28 July 2021.

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# 2. RESPONSIBILITIES

TABLE 1 RESPONSIBILITIES

Role	Responsibility
Environment Manager	Ensure implementation of this procedure. Issuing of the Pre-Clearing Inspection Hold Point prior to the removal or trimming of any vegetation.
Arborist (level 3)	Complete tree trimming, pruning and root disturbance work.
Ecologist	Undertake pre-clearing assessment, for any vegetation, to safely re-locate any fauna from vegetation identified to be impacted. Collect relevant information to populate the tree register. Assess any unexpected threatened flora / fauna / EEC identified during construction. Complete fauna rescue / relocation if required during construction.
Site Supervisor	Ensure the Pre-Clearing Inspection Hold Point has been released and issued by the Environmental Manager prior to the removal or trimming of any vegetation.



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## 3. PROCEDURES

### 3.1 PRE-CLEARING PROCEDURE

Prior to clearing of vegetation commencing at each site, Pre-Clearing Inspections will be undertaken by the Project Ecologist no more than three days prior to clearing.

**Pre-Clearing Inspections will be implemented as a Hold Point prior to any trees, vegetation or other habitat feature clearing/removal.**

During the course of the pre-clearing inspection the Project Ecologist will undertake the following steps:

- Identification of hollow bearing trees, nests, dreys, logs, bush rock and other habitat features. These will be marked in accordance with the fencing protocol at least seven days prior to the commencement of clearing.
- Identification of any threatened flora and fauna
- A check on the physical demarcation of the limit of clearing
- Provide guidance on relocation (if required) for any threatened flora or fauna not previously identified
- Confirm the installation of erosion and sediment controls for the worksite
- Mark the location of any trees confirmed for retention
- Identify any pathogens and provide guidance on management required
- Identify type and location of weed species and infestations and provide guidance on management required
- Mark and identify any priority weeds present and provide guidance on management required.

#### Habitat Tree Removal

- Habitat trees will be inspected by the Project Ecologist prior to their removal to ensure animal exodus. Excavator operator to knock or disturb the habitat tree prior to felling, with the intent to encourage the passive removal of fauna from hollows and nests.
- Under-scrubbing and non-habitat trees will be removed at least 48 hours prior to the removal of habitat trees.
- All habitat trees to be felled under the supervision of the Project Ecologist.
- Habitat trees must be felled using equipment that allows the trees to be lowered to the ground with minimal impact (e.g. claw extension).
- Felled trees will be left for a short period of time, determined by the Project Ecologist, to give any fauna trapped in the trees an opportunity to escape.
- Injured fauna will be taken to local vet or a WIRES representative as soon as possible.

A Pre-clearing Permit will be completed prior to the removal of any trees (refer to **Appendix A**). An inventory of trees will be developed as part of the pre-clearing surveys to form the Tree Removal Register (**Appendix B**). The inventory will include details of the location of each tree and their characteristics such as species and diameter at breast height (DBH), position and canopy size.

### 3.2 WEED AND PATHOGEN MANAGEMENT

As part of the scope of the Pre-clearing Inspection, site areas will be reviewed for weed infestation. All staff must be made aware of any priority weeds present on-site through inclusion onto the Environmental Control Map. Where a priority weed exists, requirements of the *Biosecurity Act 2015* will be included into the Pre-start content for this location. Weed and pathogens would be managed in accordance with Section 6.10 of the FFMP.

## APPENDIX A PRE-CLEARING PERMIT

Pre-clearing permit				
Project:		Permit No:		
Requested by:		Date inspected:		
Vegetation clearing date:		Expected completion date:		
Subcontractor:		List of machinery:		
Vegetation clearing Locations (Attach drawings/sketches)				
GPS coordinates		Location	Comments	
<b>Following sections to be completed by Engineer and checked by Project Ecologist and Environmental Officer</b>				
#	Control measure	Yes	No	Comments (Note N/A if required)
1.	Are the proposed works covered by an existing Approval? <i>Note which document covers the works in Comments section: (e.g. EIS or another approval).</i>			
2.	Have all pre-clearing assessments required by the FFMP been undertaken by the Project Ecologist and have the checks for animals occurred at the appropriate times? <i>Where required, state how survey was completed, including results?</i>			
3.	Are any animals present? <i>(If Yes, relocation required)</i>			
4.	Are any active nests present? <i>(If Yes, relocation required)</i>			
5.	Has the vegetation to be cleared been clearly delineated and checked by the Project Ecologist?			
6.	Have all trees / vegetation to be retained been identified by survey and exclusion areas fenced off and sign-posted? <i>State how identified in Comments section.</i>			
7.	Has the required threatened flora been translocated or fenced off prior to clearing?			
8.	Have all hollow bearing trees, potential hollow bearing trees, trees containing nests, bush rocks, dreys and hollow logs been clearly marked by the Project Ecologist prior to the commencement of clearing?			
9.	If soil disturbance is to occur, has an ESCP been created and have these controls been installed?			
10.	Has weed management been undertaken, if required?			
11.	Have the signatories to this permit walked the area concerned and confirmed the clearing boundary and sensitive areas are clearly			

	demarcated (with appropriate durable delineation)?			
Brief description of sensitive areas / sites or threatened species within clearing zone:				
Inspection completed by Project Ecologist:		Signature:		Date:
Approved by EO/EM:		Signature:		Date:
Approved by Survey Manager/Surveyor:		Signature:		Date:
<b>ENVIRO &amp; FOREMAN SIGN-OFF: (Works Personnel to Sign-off Toolbox Form)</b>				
12.	Have relevant workers (including the clearing subcontractor) been toolboxed on the limit of clearing, sensitive area locations, no go areas, fauna descriptions and handling procedures and clearing?	Yes/No:	Comments:	

## APPENDIX B TREE REMOVAL REGISTER

[illegible]