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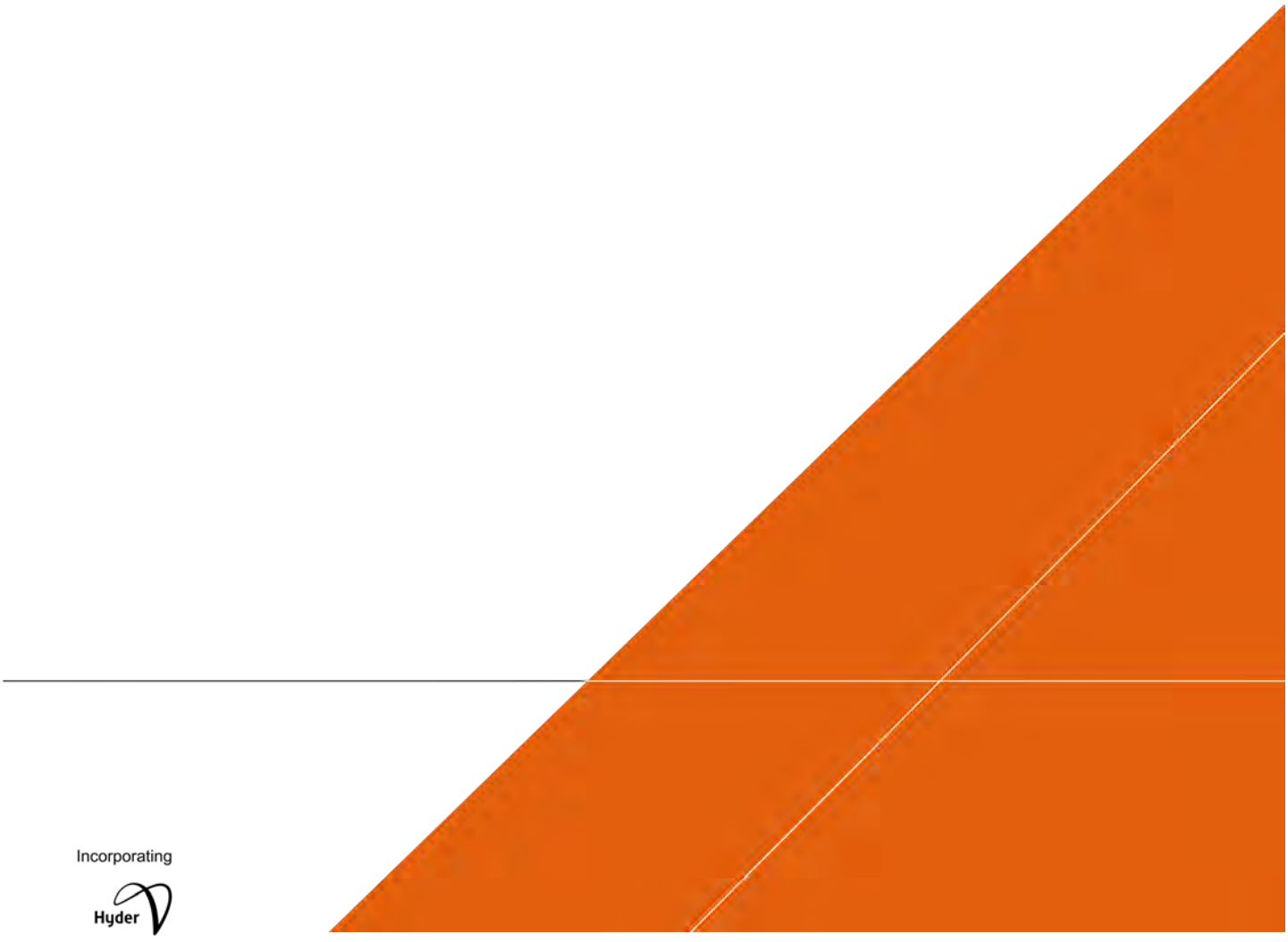
MPW CONCEPT AND STAGE 1 EARLY WORKS (SSD 5066)

Biodiversity Offset Package

08 FEBRUARY 2018



Incorporating Hyder

CONTACT

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MOOREBANK INTERMODAL COMPANY MPW CONCEPT (SSD 5066),

Biodiversity Offset Package

Author _____

Checker _____

Approver _____

Report No 001

Date 8/02/2018

Revision Text C

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REVISIONS

Revision	Date	Description	Prepared by	Approved by
A	24/11/2017	First draft		
B	16/01/2018	Final		
C	07/02/2018	Final following DPE review		

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ACRONYMS AND DEFINITIONS

Term	Explanation
BAR	Biodiversity Assessment Report
BOP	Biodiversity Offset Package
CoA	Conditions of Approval
DP&E	Department of Planning and Environment
EEC	Endangered Ecological Community
EIS	Environmental Impact Statement
EOW	Explosive ordnance waste
EPBC Act 1999	*Environmental Protection and Biodiversity Conservation Act 1999*
FBA	Framework for Biodiversity Assessment
IMT	Intermodal Terminal
IMEX	Import-Export Terminal
MPW	Moorebank Precinct West
MPW Site	The site at Moorebank as approved by the Concept Plan (SSD 5066)
OEH	Office of Environment and Heritage
PAC	Planning and Assessment Commission
PCT	Plant Community Type
RtS	Response to Submissions
SSD	State Significant Development
SIMTA	Sydney Intermodal Terminal Alliance
SSFL	Southern Sydney Freight Line
TEU	Twenty-foot equivalent units
TSC Act 1995	*Threatened Species Conservation Act 1995*
UST	Underground storage tanks
UXO	Unexploded ordnance
VIS	Vegetation Information System Database

1 INTRODUCTION

1.1 Background

The Moorebank Intermodal Company (MIC) received Concept Approval, under Part 4, Division 4.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), to develop the Moorebank Precinct West Project (MPW Project) on the western side of Moorebank Avenue, Moorebank, in south-western Sydney (the MPW site). The MPW Project involves the development of intermodal freight terminal facilities (IMT), linked to Port Botany, the interstate and intrastate freight rail network. The MPW Project includes associated commercial infrastructure (i.e. warehousing), a rail link connecting the MPW site to the Southern Sydney Freight Line (SSFL), and a road entry and exit point from Moorebank Avenue.

The MPW Concept Approval was granted on 3 June 2016 by the Planning Assessment Commission (PAC). The MPW Concept Approval, in addition to a concept approval for the operation of the intermodal terminal and warehousing, included approval for works, known as Early Works (or Stage 1). A further description of these works is provided in Section 1.2. Construction of Early Works commenced in February 2017 with this construction package being identified as Land Preparation Works (LPWDR).

The MPW Concept Plan and Stage 1 Early Works (SSD 14-5066) development consent includes the requirement to prepare a Biodiversity Offset Package under condition No. D17, which states the following:

Within 12 months of the commencement of Early Works, the Applicant shall develop and implement a Biodiversity Offset Package for the approval of the Secretary. The Package shall detail how the ecological values lost as a result of the SSD will be offset. The package shall be consistent with the NSW Biodiversity Offset Policy for Major Projects (OEH 2014), unless otherwise agreed by the Secretary.

The Package shall include, but not be limited to:

- *a) The identification of the extent and types of habitat that would be lost or degraded as a result of the final design of the SSD;*
- *b) The objectives and biodiversity outcomes to be achieved;*
- *c) The final suite of biodiversity offset measures selected and secured in consultation with OEH;*
- *d) The management and monitoring requirements for compensatory habitat works and other biodiversity offset measures proposed to ensure the outcomes of the package are achieved, including:*
    - *a. The monitoring of the condition of species and ecological communities at offset (including translocation) locations;*
    - *b. The methodology for the monitoring program(s), including the number and location od offset monitoring sites, and the sampling frequency at these sites;*
    - *c. Provisions for the annual reporting of the monitoring results for a set period of time as determined in consultation with OEH; and*
    - *d. Timing and responsibilities for the implementation of the provisions of the Package.*

Where land offsets cannot solely achieve compensation for the loss of habitat, additional measures shall be provided to collectively deliver an improved or maintained biodiversity outcome for the region.

Where monitoring referred to in (e) above indicates that biodiversity outcomes are not being achieved, remedial actions shall be undertaken to ensure that the objectives of the Biodiversity Offset Package are achieved to the satisfaction of the Secretary. Such remedial actions shall be documented under the addendum to the Biodiversity Offset Package and the addendum be submitted for the approval of the Secretary, prior to the implementation of the addendum.

1.1 Purpose

This report has been prepared exclusively to satisfy Condition No. D17 as this is required to be undertaken within 12 months of the commencement of Early Works. Early Works commenced in February 2017, therefore the requirements of Condition D17 must be met prior to the end of February 2018.

This report, while satisfying D17, undertakes an alternative approach to the preparation of a BOP. As a result of Early Works not proposing any impact on native vegetation, there is no requirement to offset this aspect of the MPW Project and therefore a Biodiversity Offset Package is not required under the NSW Biodiversity Offset Policy for Major Projects (OEH, 2014). Further discussion on the approach undertaken is provided in Section 3 of this report.

1.2 Relevant approvals

MPW Concept Approval

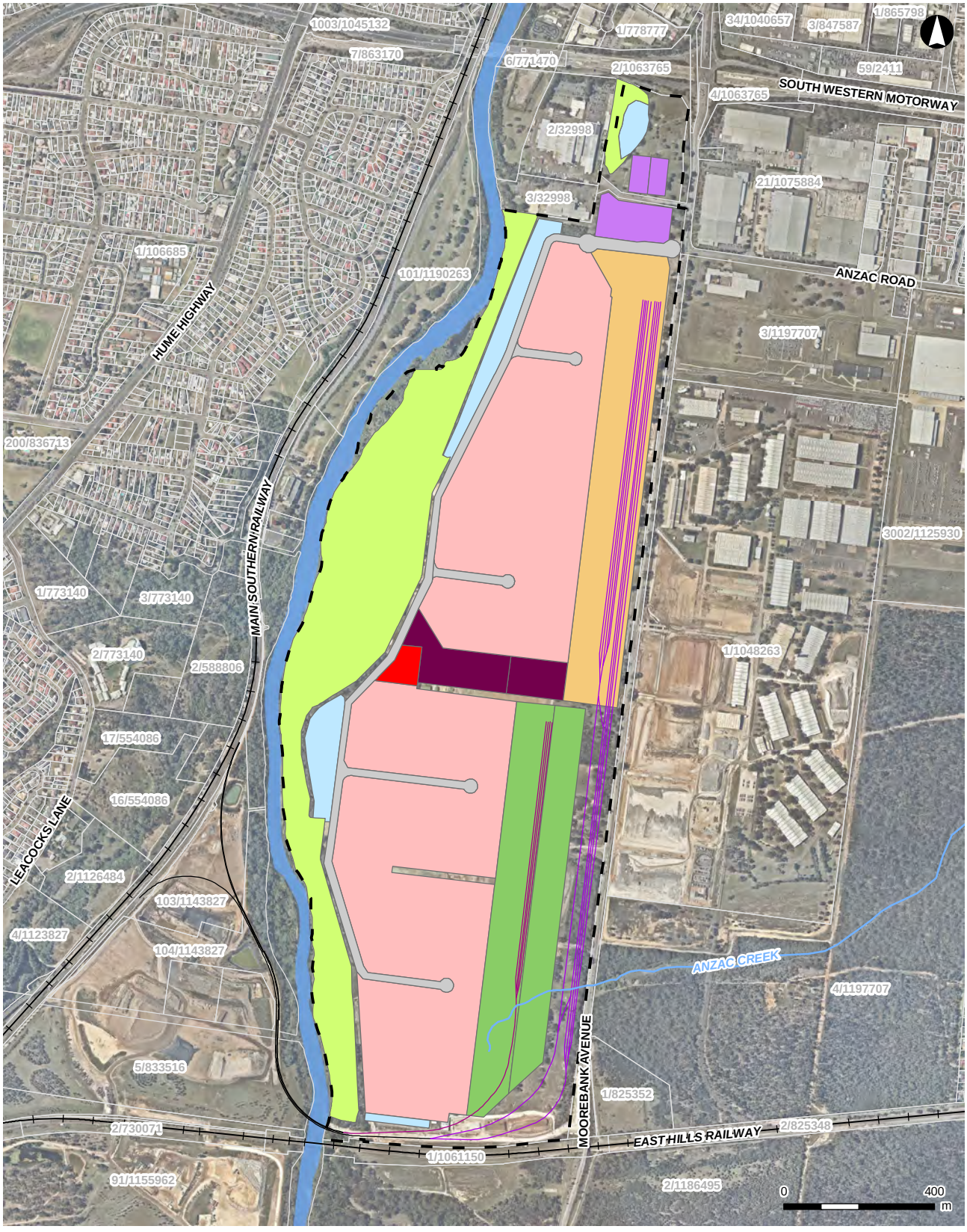
Approval for the MPW Concept (SSD 5066), under Part 4, Division 4.1 of the EP&A Act to develop the MPW Project, was received on 3 June 2016.

The MPW Project involves the development of intermodal freight terminal facilities (IMT), linked to Port Botany and the interstate freight rail network. It also includes associated commercial infrastructure (i.e. warehousing), a rail link connecting the MPW site to the Southern Sydney Freight Line (SSFL), and a road entry and exit point from Moorebank Avenue.

A summary of the MPW Project, as approved in the MPW Concept Approval, is as follows:

- IMEX freight terminal - maximum capacity of 550,000 TEU per annum, servicing international IMEX freight movement between Port Botany and the MPW site
- Interstate freight terminal - maximum capacity of 500,000 TEU per annum, servicing trains travelling to, from and between Sydney, regional and interstate destinations.
- Warehousing facilities - maximum of 300,000 m^2 GFA to service the IMEX and interstate terminals
- Rail link connection - between the MPW site and the SSFL
- Conservation area - to maintain and enhance riparian vegetation on the western boundary of the site, along the Georges River
- Moorebank Avenue upgrade - widening of the road to four lanes between Anzac Road and the M5 Motorway.

Figure 1-1 shows the layout of the MPW site as approved within the MPW Concept Approval.



LEGEND

- MPW site
- Existing railway
- Rail link connection
- IMEX link
- Interstate terminal link
- Watercourse
- Cadastre (NSW DFSI, 2017)
- Conservation Area
- IMEX Terminal
- Internal road
- Interstate terminal
- On Site Detention
- Fuel and services
- Truck parking
- Freight Village
- Warehousing

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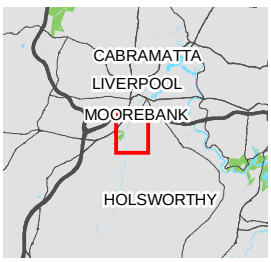


Figure 1-1: MPW Concept Approval

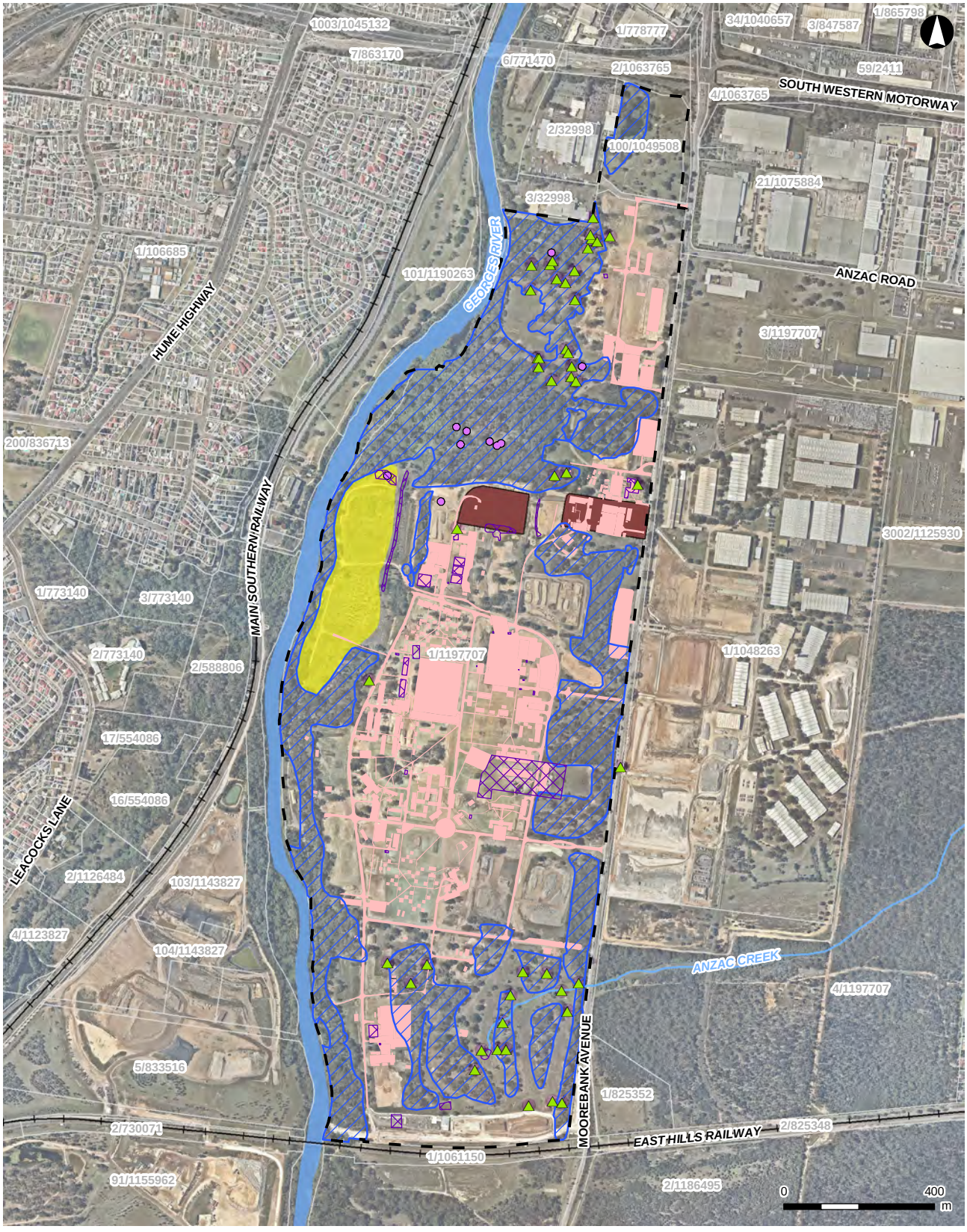
Early Works

Approval for the Early Works phase was granted as Stage 1 of the MPW Project within the MPW Concept Approval, and works for this phase commenced in February 2017. The Early Works footprint is shown in Figure 1-2 and Figure 1-3 and includes the following:

- The demolition of existing buildings and structures
- Service utility terminations and diversion/relocation
- Removal of existing hardstand/roads/pavements and infrastructure associated with existing buildings
- Rehabilitation of the excavation/earthmoving training area (i.e. 'dust bowl')
- Remediation of contaminated land and hotspots, including areas known to contain asbestos, and the removal of:
  - Underground storage tanks (USTs)
  - Unexploded ordnance (UXO) and explosive ordnance waste (EOW) if found
  - Asbestos contaminated buildings
- Archaeological salvage of Indigenous and European sites
- Establishment of a conservation area along the Georges River
- Establishment of construction facilities (which may include a construction laydown area, site offices, hygiene units, kitchen facilities, wheel wash and staff parking) and access, including site security
- Vegetation removal, including the relocation of hollow-bearing trees, as required for remediation/demolition purposes.

Of particular, importance is that although permitted for the purpose of Early Works by Condition D18[1], no threatened species or communities were cleared during Early Works and an exclusion zone was established around the threatened species and communities on site. The exclusion of native vegetation (including threatened species or communities) clearing in the Early Works is shown in Figure 1-2 and Figure 1-3. As such, the pre-construction and construction works for the Early Works package (LPWDR) have not removed native vegetation, threatened species or threatened ecological communities.

[1] Condition D18 states the following: "*subject to future Development Applications, no threatened species or communities can be cleared other than that required for Early Works……*"



LEGEND

- MPW site
- Hollow bearing tree
- Detected asbestos zone
- Watercourse
- Vegetation exclusion area
- Area for remediation
- Area to be rehabilitated
- Existing railway
- Proposed works compound
- Existing buildings and hardstand to be deomlished
- Cadastre (NSW DFSI, 2017)

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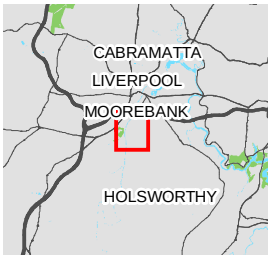
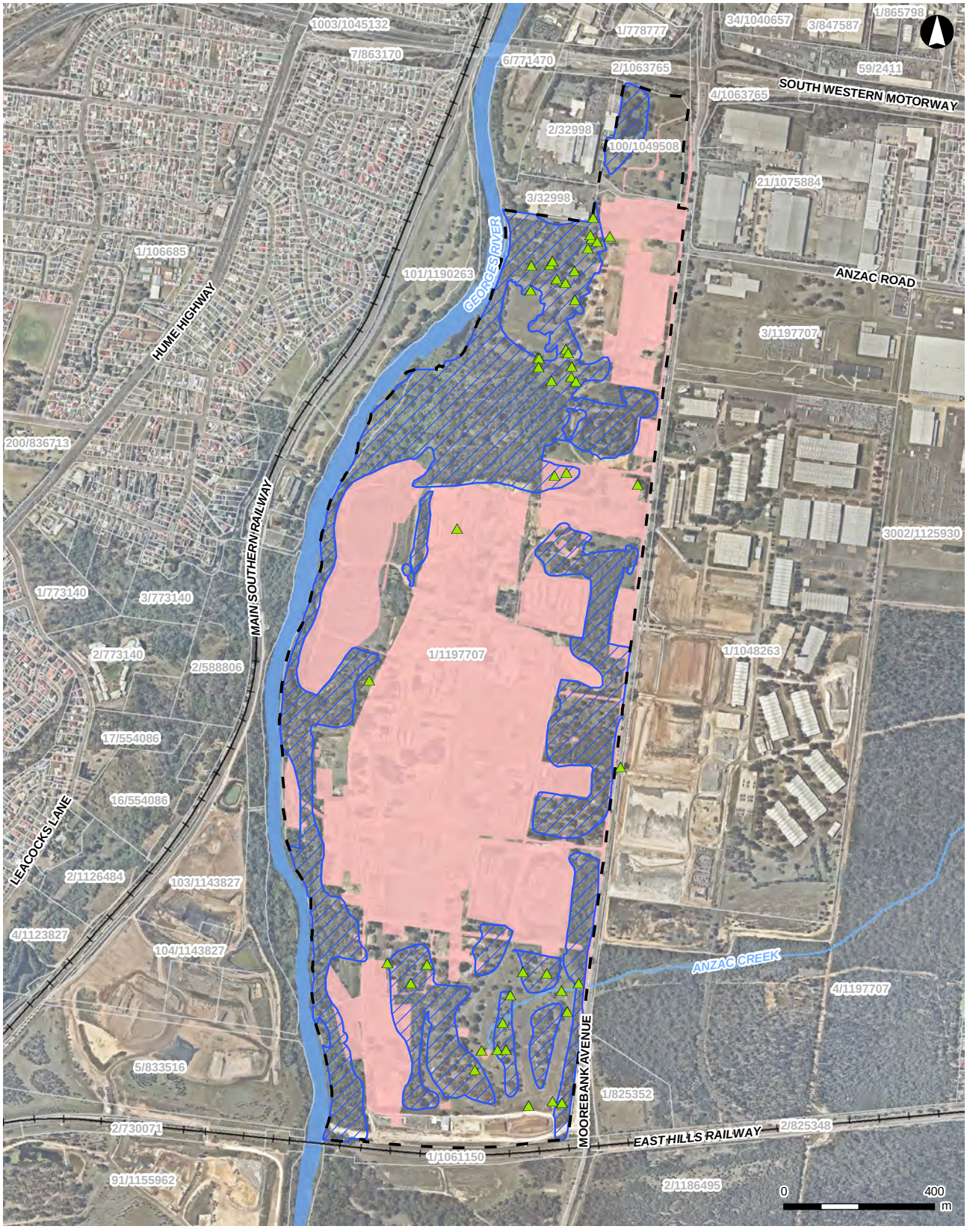


Figure 1-2: MPW Project Early Works



LEGEND

- MPW site
- Hollow bearing tree
- Vegetation exclusion area
- Approximate Early Works footprint
- Existing railway
- Watercourse
- Cadastre (NSW DFSI, 2017)

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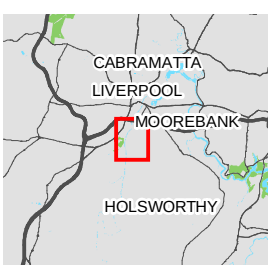


Figure 1-3: Approximate Early Works footprint

2 IMPACT ASSESSMENT

2.1 Native vegetation

For the purposes of this report, native vegetation is defined as areas of plant community types mapped by Arcadis and WSP in the Moorebank Precinct West being a consolidation of all assessments for the Moorebank Precinct conducted since 2011. All stands of native vegetation with the MPW site are equivalent to endangered ecological communities (EECs) under Commonwealth and/or NSW legislation. The area of native vegetation (including the associated EECs) within the vicinity of the MPW Project are detailed in Section 2.2 and is shown in *Figure* 1-2.

2.2 Threatened ecological communities

The MPW Concept Plan and Stage 1 Early Works EIS biodiversity assessment (Parsons Brinkerhoff 2014) identified several PCTs within the MPW site. This vegetation mapping was later refined as a part of the MPW Stage 2 BAR (Arcadis 2017). Three native plant community types (PCTs) were recorded in the MPW site. These PCTs and the vegetation impact requirements for the Early Works are shown in Table 1.

Table 1. Ecosystem credit requirements

Vegetation zone	Associated TECs	Area to be impacted
Hard-leaved Scribbly Gum - Parramatta Red Gum heathy woodland of the Cumberland Plain, Sydney Basin (ME003)	Castlereagh Scribbly Gum Woodland in the Sydney Basin bioregion (TSC Act – Vulnerable) Castlereagh Scribbly Gum and Agnes Banks Woodlands of the Sydney Basin Bioregion (EPBC Act – Endangered)	0 ha
Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin	River-flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South-east Corner bioregions	0 ha
Parramatta Red Gum woodland on moist alluvium of the Cumberland Plain, Sydney Basin (ME005): Moderate/Good - Medium	Castlereagh Swamp Woodland (TSC Act – Endangered)	0 ha

2.3 Threatened species

The MPW Concept Plan and Stage 1 Early Works EIS biodiversity assessment (Parsons Brinkerhoff 2014) identified several threatened flora species within the MPW precinct. Additional targeted surveys undertaken as a part of the MPW Stage 2 EIS BAR (Arcadis 2017) and for the MPW Stage 2 RtS BAR (Arcadis 2017). Table 2. Species credit requirements outlines the flora species that have been identified as occurring in the MPW Site, and the number of each that would be impacted by the MPW Stage 1 Early Works project.

Table 2. Species credit requirements

Threatened species	Conservation status	Number of plants impacted by MPW Stage 1 Early Works
Grevillea parviflora subsp. parviflora Small-flowered Grevillea	EPBC Act: Vulnerable TSC Act: Vulnerable	Nil
Hibbertia puberula subsp. puberula	EPBC Act: not listed TSC Act: Endangered	Nil
Persoonia nutans Nodding Geebung	EPBC Act: Vulnerable TSC Act: Endangered	Nil

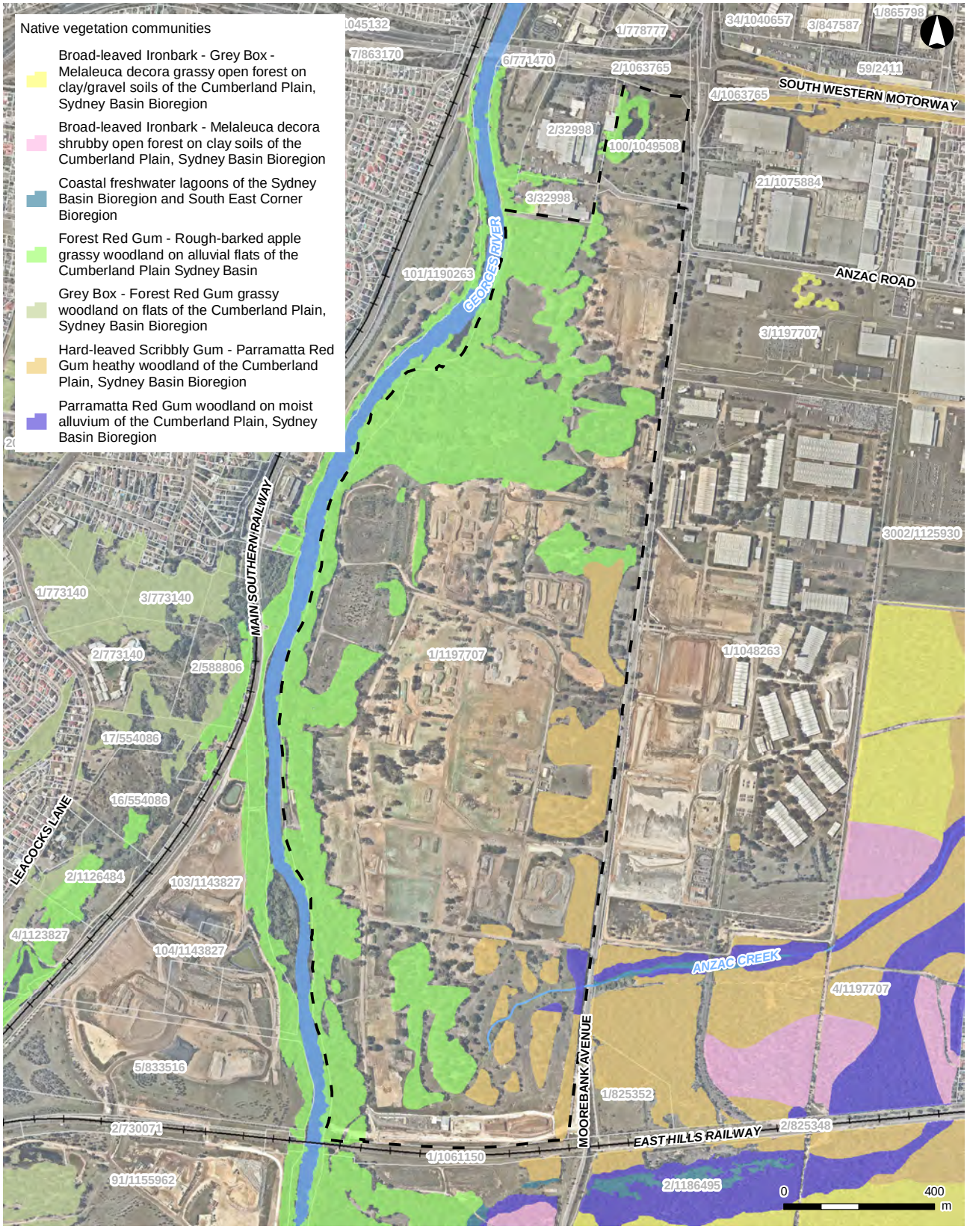
Three additional threatened flora species have been recorded within the Moorebank Precinct, namely *Hibbertia fumana*, Downy Wattle *Acacia pubescens* and Tiny Wattle *Acacia bynoeana.* Seasonally appropriate targeted surveys have been conducted for these species as a part of the MPW Stage 1 and Early Works EIS and subsequently for the MPW Stage 2 BAR (Arcadis 2017). These species were not recorded during these surveys. Further, pre-clearance surveys have been conducted as a part of the vegetation clearing procedure for MPW Stage 1 and Early Works and none of these species were recorded.

Hibbertia fumana occurs in Cooks River/Castlereagh Ironbark Forest and Castlereagh Scribbly Gum Woodland at the southern extent of the Moorebank Precinct (outside of the MPW Site. Habitat for this species is not particularly well understood since it was only rediscovered in 2016, having previously been presumed extinct. Seasonally appropriate and validated targeted surveys for this species have been undertaken and it was not recorded within the MPW Site. The MPW Early Works Site is not considered likely to provide potential habitat for the species.

Downy Wattle is associated with Cooks River/Castlereagh Ironbark Forest, Shale Gravel Transition Forest and Shale Plains Woodland and is typically found on gravelly soils. In the Moorebank Precinct, it has been found in Cooks River/Castlereagh Ironbark Forest and on the intergrade of this community and Castlereagh Scribbly Gum Woodland. It is a conspicuous species and is readily recorded (and identified) when present. Since it has not been recorded within the MPW Site, it is considered unlikely to occur.

Tiny Wattle occurs on sandy soils and has been recorded in Castlereagh Scribbly Gum Woodland in the Moorebank Precinct (outside of the MPW Site). The species also has an affinity for mild ground disturbance, such as the margins of fire trails and walking tracks. The Castlereagh Scribbly Gum Woodland on the MPW Site is considered potential habitat for the species, however it has not been recorded during seasonally appropriate targeted flora surveys. The MPW Early Works Site is not considered likely to provide potential habitat for the species.

For the reasons outlined above, these three species are considered unlikely to be present within the MPW Site and are therefore unlikely to be impacted by the MPW Project.



LEGEND

- MPW site
- Existing railway
- Watercourse
- Cadastre (NSW DFSI, 2017)

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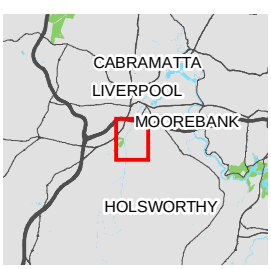

Figure 1-4: MPW Stage 1 Early Works area and Native vegetation

3 BIODIVERSITY OFFSETS

3.1 NSW Biodiversity Offset Policy for Major Projects

The NSW Biodiversity Offset Policy for Major Projects (OEH 2014a) outlines the decision thresholds for how unavoidable impacts can be dealt with by a proponent. It states that offsets are not required for:

- Vegetation below a certain condition level
- Vegetation that is not an endangered ecological community, critically endangered community or habitat for a threatened species or population.

The Framework for Biodiversity Assessment (OEH 2014b) provides greater detail on how the assessor determines whether an offset is required for a given impact. As detailed in Section 2, the MPW Early Works project did not result in the clearing of native vegetation or threatened species. The way in which these impacts are considered by the FBA is further detailed in Table 3 below.

Table 3: Consideration of the FBA impact thresholds

Impact thresholds identified by the assessor	Landscape features	Native vegetation	Species and populations	Relevance to MPW Stage 1 Early Works
I. Impacts that require further consideration by consent authority	Impacts that will substantially reduce the width of vegetation in the riparian buffer zone bordering rivers and streams 4th order or greater Impacts in state biodiversity links Impacts on important wetlands and their buffers Impacts in the buffer zone along estuaries	Any impact on a CEEC (unless specifically excluded in the SEARs) because it is likely to: cause the extinction of the CEEC from the IBRA subregion, or significantly reduce the viability of the CEEC Any impact on an EEC nominated in the SEARs because it is likely to: cause the extinction of the EEC from the IBRA subregion, or significantly reduce the viability of the EEC.	Impacts on areas of land that the Minister for Environment has declared as critical habitat in accordance with section 46 of the TSC Act and which is listed on the Register of Critical Habitat in NSW Any impact on a critically endangered species (unless specifically excluded in the SEARs) Any impact on a threatened species or population nominated in the SEARs because it is likely to: cause the extinction of a species or population from an IBRA subregion, or significantly reduce the viability of a species or population Any impact on a threatened species or population that has not previously been recorded in the IBRA subregion according to records in the NSW Wildlife Atlas	*Hibbertia fumana* is both a critically endangered species and a species that has not previously been recorded within the IBRA subregion. This species has been targeted during seasonally appropriate and validated targeted surveys and has not been recorded within the MPW site. The MPW Stage 1 Early Works impacts are therefore not consistent with any of the impacts that require further consideration by the consent authority
II. Impacts for which the assessor is required to determine an offset	Not applicable to the FBA	Impacts on CEECs that are specifically excluded from requiring further consideration in the SEARS Impacts on PCTs that are EECs not specifically nominated as requiring further consideration in the SEARs	Impacts on a critically endangered species that is specifically excluded from requiring further consideration in the SEARS Impacts on threatened species, populations and threatened species habitat not specifically nominated as requiring further consideration in the SEARs	The MPW Stage 1 Early Works impacts are not consistent with any of the impacts for which the assessor is required to determine an offset. No threatened species or

Impact thresholds identified by the assessor	Landscape features	Native vegetation	Species and populations	Relevance to MPW Stage 1 Early Works
		Impacts on PCTs associated with threatened species habitat and which have a site value score ≥17	Impacts on threatened species habitat associated with a PCT and which has a site value score of ≥17	EECs have been impacted.
III. Impacts for which the assessor is not required to determine an offset	Not applicable to the FBA	Impacts on PCTs that: have a site value score <17, or are not identified as CEECs / EECs Impacts on PCTs that are not associated with threatened species habitat and are not identified as CEECs / EECs	Impacts on non-threatened species and populations that do not form part of a CEEC or EEC Impacts on threatened species habitat associated with a PCT within a vegetation zone with a site value score of <17	The MPW Stage 1 Early Works impacts are consistent with impacts for which an assessor is not required to determine an offset. No PCTs (EEC or otherwise) have been impacted. Only non-threatened species were impacted.

4 PLANNING ASSESSMENT

The MPW Concept Approval (SSD 5066) is categorised into the following:

- Project description and key details (Schedule 1) – name of the applicant, consent authority, land and project description (i.e. works for which approval is granted)
- Terms of Approval (Schedule 2) – criteria to guide the operation of the MPW Project
- Conditions to be met for Early Works (Stage 1) (Schedule 3) – conditions to guide the undertaking of construction works for Early Works[2].
- Conditions to be met in Future Development Applications (Schedule 4) – identification of further information to be submitted to DP&E as part of future Development Applications for future stages of development (Stages 2[3] onwards).

Condition D17 is contained within Schedule 3 of the MPW Concept Approval, and therefore as a result relates exclusively to Early Works. It is noted that Condition D17 states that the BOP "*shall detail how the ecological values lost as a result of the SSD will be offset".* As Condition D17 clearly included in Schedule 3, which relates exclusively to Early Works, this BOP need only consider offsets in relation to Early Works..

Regardless of the potential for clearance provided in Condition D18, which indicates that threatened species or communities may be cleared for the purpose of Early Works, clearing of threatened species or communities has not occurred as part of Early Works, and offsets are therefore not required.

Table 4 summarises how each of the elements of Condition D17 have therefore been satisfied.

Table 4: Consideration of the elements of CoA D17

Condition D17 element	Response
Within 12 months of the commencement of Early Works, the Applicant shall develop and implement a Biodiversity Offset Package for the approval of the Secretary. The Package shall detail how the ecological values lost as a result of the SSD will be offset. The package shall be consistent with the NSW Biodiversity Offset Policy for Major Projects (OEH 2014), unless otherwise agreed by the Secretary.	This report demonstrates that there are no impacts for which a biodiversity offset is required (in accordance with the FBA) as a result of the SSD (Early Works) and therefore a BOP is not required. This report has been submitted to the Secretary for Approval within 12 months of commencement of Early Works as required by the condition. Early Works commenced on 22 February 2017.
The Package shall include, but not be limited to: *(a)The identification of the extent and types of habitat that would be lost or degraded as a result of the final design of the SSD;*	Early Works did not result in the clearing of any native vegetation. Therefore, no habitat would be lost or degraded as a result of these works.
(b)The objectives and biodiversity outcomes to be achieved;	The objectives are to firstly to avoid and minimise impacts, and then to offset residual impacts to native vegetation and threatened species. Direct impacts to native vegetation for Early Works have been entirely avoided

[2] Refer to description of Early Works in Section 1.2 of this report.

[3] Approval for Stage 1 (Early Works) was granted in the MPW Concept Approval as discussed in Section 1.2 of this report.

Condition D17 element	Response
	and minimised. Therefore, there are no unavoidable, residual impacts to offset.
(c)The final suite of biodiversity offset measures selected and secured in consultation with OEH;	As no native vegetation is being cleared for Early Works, no offset measures are required to be secured and consultation with OEH is not required.
(d)The management and monitoring requirements for compensatory habitat works and other biodiversity offset measures proposed to ensure the outcomes of the package are achieved, including: *(e)The monitoring of the condition of species and ecological communities at offset (including translocation) locations;* *(f)The methodology for the monitoring program(s), including the number and location of offset monitoring sites, and the sampling frequency at these sites;* *(g)Provisions for the annual reporting of the monitoring results for a set period of time as determined in consultation with OEH; and* *(h)Timing and responsibilities for the implementation of the provisions of the Package.*	As no native vegetation is being cleared for Early Works, no management and/or monitoring for compensatory habitat works or other biodiversity offset measures would be required for this stage.
Where land offsets cannot solely achieve compensation for the loss of habitat, additional measures shall be provided to collectively deliver an improved or maintained biodiversity outcome for the region.	This BOP has demonstrated that offsets are not required for Early Works therefore additional measures will not be required.
Where monitoring referred to in (e) above indicates that biodiversity outcomes are not being achieved, remedial actions shall be undertaken to ensure that the objectives of the biodiversity offset package are achieved to the satisfaction of the Secretary. Such remedial actions shall be documented under an addendum to the Biodiversity Offset Package and the addendum submitted for the approval of the secretary, prior to the implementation of that addendum.	No offsets are required for Early Works therefore no monitoring or remedial actions for compensatory habitat works and other biodiversity offset measures would be required.

Future stages of development under the MPW Concept Approval (namely MPW Stage 2 Proposal (SSD 7709, currently under assessment)) would result unavoidable impacts to threatened species and ecological communities that would result in an offset requirement. It is expected that the approach to demonstrating the offset of unavoidable impacts arising from MPW Stage 2 will be documented in a BOP and could include:

- Retiring credits available on the adjoining offset sites (as per biobanking agreement (submitted to OEH in February 2017) and as referenced in the MPW Concept assessment documents)
- Retiring credits sourced from alternative biobank sites where there is a shortfall in those available from the Moorebank Precinct biobank sites
- Consolidating offsets with other Moorebank Precinct projects, such as the MPE Stage 2 Proposal, which includes in its draft recommended conditions of approval the provision to retire credits, pay into the fund, or provide supplementary measures (condition B103) and to do so in combination with other MPE or MPW projects B104 a.

The final suite of offset measures will be developed as the planning and assessment process for MPW Stage 2 progresses.

5 CONCLUSION

This report has been prepared to satisfy part of the condition of approval No. D17 for the MPW Stage 1 Early Works project (SSD 5066) to provide a biodiversity offset package in accordance with the NSW Biodiversity Offset Policy for Major Projects.

This report has demonstrated that condition D17 relates specifically to the Early Works phase of the MPW project. Despite being permitted under CoA D18, no clearing of threatened species or communities has been undertaken for Early Works. In accordance with the FBA (2014b) and the NSW Biodiversity Offset Policy for Major Projects (2014a), no biodiversity offsets are required for impacts associated with the MPW Early Works. Accordingly, this document has been prepared in a way that demonstrates compliance with CoA D17, without prescribing a quantum of offsets to be acquired or retired, as offsets are not required.

Future stages of MPW (namely MPW Stage 2 Proposal (SSD 7709, currently under assessment)) would result in an offset requirement (see threshold II of Table 3) which would require the preparation of a BOP. Several approaches have been considered for meeting the offset requirement for MPW Stage 2 and these will be developed as the proposal progresses through the assessment process.

6 REFERENCES

OEH 2014a. NSW Biodiversity Offset Policy for Major Projects

OEH 2014b. Framework for Biodiversity Assessment

Arcadis, 2017, Biodiversity Assessment Report MPW Stage 2

Parsons Brinckerhoff (2014) Moorebank Intermodal Terminal Project. Environmental Impact Statement. Chapter 13: Biodiversity Assessment