

ENVIRONMENTAL IMPACT STATEMENT LIGHT HORSE INTERCHANGE BUSINESS HUB, EASTERN CREEK SSD 9667

PREPARED FOR

WESTERN SYDNEY PARKLANDS TRUST

JULY 2019



URBIS

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GLOSSARY AND ABBREVIATIONS

Reference	Description
ACHAR	Aboriginal Cultural Heritage Assessment Report
ACM	Asbestos Containing Material
AQIA	Air Quality Impact Assessment
ARI	Average Recurrence Interval
BAM	Biodiversity Assessment Method
BC Act	<i>Biodiversity Conservation Act 2016</i>
BC Reg	<i>Biodiversity Conservation Regulation 2017</i>
BCC	Blacktown City Council
BDAR	Biodiversity Development Assessment Report
CEEC	Critically Endangered Ecological Community
CDA	Concept Development Application
CEMP	Construction Environmental Management Plan
CMP	Construction Management Plan
CTMP	Construction Traffic Environmental Plan
DCP	Development Control Plan
DPE	NSW Department of Planning and Environment
EPA Act	<i>Environmental Planning and Assessment Act 1979</i>
EPA Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EIS	Environmental Impact Statement
EPA	NSW Environment Protection Authority
HIPAP	Hazardous Industry Planning Advisory Paper
LEP	Local Environmental Plan
MNES	Matters of National Environmental Significance
NRAR	Natural Resource Access Regulator
OEMP	Operational Environmental Management Plan

Reference	Description
PBP	Planning for Bushfire Protection
PCT	Plant Community Type
POM	Plan of Management
PSI	Preliminary Site Investigation
SAII	Serious and Irreversible Impacts
SARs	Commonwealth Supplementary Assessment Requirements
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
Site	Part Lot 10 in Deposited Plan 1061237 and Part Lot 5 in Deposited Plan 804051
SRD SEPP	<i>State Environmental Planning Policy (State and Regional Development) 2009</i>
SSD	State Significant Development
SSDA	State Significant Development Application
TIA	Traffic Impact Assessment
UXO	Unexploded Ordnance
VIS	Vegetation Integrity Score
WMP	Waste Management Plan
WSP SEPP	<i>State Environmental Planning Policy (Western Sydney Parklands) 2009</i>
WSPT	Western Sydney Parklands Trust
WSUD	Water sensitive urban design
WWTP	Wastewater Treatment Plant

STATEMENT OF VALIDITY

SUBMISSION OF ENVIRONMENTAL IMPACT STATEMENT

Environmental Assessment prepared by:

Name	Jennifer Cooper – Bachelor of Town Planning (Hons), University of NSW
Address	Urbis Pty Ltd Level 8, 123 Pitt Street Sydney NSW 2000
Land Details	165 Wallgrove Road & 475 Ferrers Road, Eastern Creek (Lot 10 DP 1061237 & Lot 5 DP 804051)
Applicant Details	Western Sydney Parklands Trust
Applicant Address	Level 7, 10 Valentine Ave Parramatta NSW 2150
Project Summary	Concept proposal for the staged development of a 29.4 hectare business park (known as the Light Horse Interchange Business Hub) and a detailed proposal for the Stage 1 works which include: <ul style="list-style-type: none">- Site preparation and demolition of existing structures- Remediation- Bulk earthworks- Provision of infrastructure (including road access and essential services)- Subdivision

We certify that the content of the Environmental Impact Statement, to the best of our knowledge, has been prepared as follows:

- In accordance with the requirements of the Environmental Planning and Assessment Act 1979 (EP&A Act) and Environmental Planning and Assessment Regulation 2000 (EP&A Regulation);
- Containing all available information that is relevant to the environmental assessment of the development, activity or infrastructure to which the statement relates; and
- The information contained in this report is true in all material particulars and is not misleading.



Jennifer Cooper, 31 July 2019

EXECUTIVE SUMMARY

This Environmental Impact Statement (EIS) has been prepared on behalf of the Western Sydney Parklands Trust (WSPT) in support of a State Significant Development Application (SSDA) for an industrial business hub adjacent to the Light Horse Interchange at 165 Wallgrove Road and 475 Ferrers Road, Eastern Creek.

The SSDA seeks consent for the concept development of an industrial business hub and the first stage of works (including demolition, earthworks and infrastructure) on part of Lot 10 DP 1061237 and part of Lot 5 DP 804051. The proposed development has an estimated capital investment value of \$212,934,203 and accordingly, is classified as a State significant development (SSD) under clause 5 in Schedule 2 of *State Environment Planning Policy (State and Regional Development) 2011 (the SRD SEPP)*.

The proposed development forms an important component of the self-funded model for the WSPT. Business hubs, such as this proposal, are located on the perimeter of the Parklands in areas of low conservation or recreation value and close to established employment areas and the metropolitan road network. The business hubs remain in public ownership and are occupied on a leasehold basis, providing ongoing income for the WSPT to ensure its financial suitability and enable the effective management of the Parklands.

The proposed business hub will deliver economic benefits and employment generation for Western Sydney and Greater Sydney. This EIS and supporting documents confirm the site suitability and demonstrate that any potential negative environmental impacts can be appropriately mitigated, minimised or managed.

This EIS has been prepared to support the SSDA and responds to the relevant matters listed within the Secretary's Environmental Assessment Requirements (SEARs) issued on 7 October 2018 and the Commonwealth Supplementary Assessment Requirements (SARs) issued on 12 April 2019.

BACKGROUND

The WSPT is a self-funded Government agency which was formed by the NSW Parliament in 2006. The ten-year vision for the Western Sydney Parklands is contained in the *Plan of Management 2030 (POM)* which was adopted in December 2018.

The POM identifies various locations within the Western Sydney Parklands having low environmental or recreational value as suitable for the establishment of business hubs. These areas occupy approximately 2% of the parklands area and are intended for development by the WSPT as a means achieving financial sustainability and to generate revenue to support the parklands operations, including maintenance and development of new and existing facilities. These hubs also make a significant contribution to economic development, employment and training opportunities in Western Sydney.

The selection of the Light Horse Interchange site was based upon these principles. Vegetation is heavily degraded and comprises mostly regrowth following historic clearing. The development proposed and assessed within this EIS is considered to present the optimal outcome to deliver the WSPT objectives, considering the alternative options as identified and discussed below

- **Option 1 – Do Nothing:** this is not a viable option as it would be contrary to objectives and actions outlined in POM, resulting in a significant loss of revenue for the upgrade and maintenance of the WSP and a major loss of investment and employment creation within Western Sydney.
- **Option 2 – Alternative Site Within Parklands:** the subject site was strategically selected for a business hub in accordance with key criteria identified in the POM. It has low ecological value and is unsuitable for recreation use. It also benefits from excellent access to the motorway network, existing and planned utility services infrastructure and other employment generating uses with a similar scale and character. The current site was considered the most viable by WSPT as a business hub.
- **Option 3 – Alternative Business Hub Site Outside Parklands:** the purchase of land outside of the WSP boundaries would be cost prohibitive. Further, land acquisition would be contrary to the provisions of the POM to develop 2% of the WSP to generate income and provide for the financial sustainability of the WSPT. The development of land outside of the WSP is not available as an alternative project option.

- **Option 4 – Alternative Subdivision Layout:** the final siting and design of the proposed industrial subdivision was resolved through a comprehensive analysis of the site opportunities and constraints and several revisions of the subdivision layout. The project footprint was reduced to retain large patches of bushland and ensure connectivity between these patches. The proposed access from Ferrers Road was located immediately adjacent to the M4 Motorway to avoid additional fragmentation of vegetation along the Eastern Creek corridor and avoid larger changes to the flooding regimes of the Eastern Creek Floodplain.

SITE

The SSDA applies to part of Lot 10 in Deposited Plan 1061237 and part of Lot 5 in Deposited Plan 804051. The street address is 165 Wallgrove Road and 475 Ferrers Road, Eastern Creek.

The site has a total area of 33.6 hectares, including 29.4 hectares developable area plus 4.2 hectares of land accommodating the proposed access road and stormwater detention. Several waterways traverse the site, including Eastern Creek which forms the boundary between the two lots and is connected by two tributary streams (Reedy Creek and Eskdale Creek).

The site is currently accessible from a driveway via Wallgrove Road to the west (via an underpass under the M7) and Ferrers Road to the east. The site is affected by two separate infrastructure easements containing a high-pressure gas and sewer mains.

The western section of the site contains the ruins of buildings and infrastructure associated with the former military use of the site. The site is currently used for livestock agistment.

DEVELOPMENT DESCRIPTION

The SSDA is lodged as a concept development application (**CDA**) in accordance with the provisions of section 4.22 of the EP&A Act. Development consent is sought for a concept proposed for the staged redevelopment of the site as an industrial business hub and a detailed proposal for the first stage of works

The first stage of works includes the demolition of existing structures, site remediation, bulk earthworks to establish future development sites, provision of an internal access road, installation of relevant infrastructure and essential utility services and the Torrens title subdivision to create separate development lots. The future industrial buildings, ancillary offices and associated facilities and site works will be subject to separate future development applications (**DAs**) and do not form part of this application.

The key features of the concept proposal are summarised below:

- 165,500 square metres of overall floorspace which includes 157,600 square metres of industrial and light industrial floorspace and 7,900 square metres of ancillary office space to accommodate a range of land use activities including advanced manufacturing, freight and logistics and warehouse and distribution facilities.
- Concept architectural design guidelines for the future built form and landscape concept design to guide visual screening of the proposed buildings from the surrounding road network.
- Access to the proposed business park via a new roadway off Ferrers Road with the existing Wallgrove Road entry/exit driveway retained for emergency access only.
- Stormwater management works to manage the quality and quantity of water flows across the site and avoid adverse impacts to adjoining properties.
- Removal of vegetation from the site and implementation of bushfire protection recommendations.
- Delivery of utility services required to service the proposed development, including necessary upgrades and siting and design of the proposed industrial subdivision to incorporate the existing easements for high-pressure gas, high voltage electricity and sewer.

PLANNING CONTROLS

This EIS considers the relevant regulatory framework applicable to the site and the proposal and contains an assessment of the proposal against the following statutory controls and regulatory instruments:

- *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*
- *Biodiversity Conservation Act 2016*
- *Rural Fires Act 1997*
- *Western Sydney Parklands Act 2006*
- *State Environmental Planning Policy (Western Sydney Parklands) 2009*
- *Environmental Planning and Assessment Act 1979*
- *State Environmental Planning Policy (State and Regional Development) 2011*
- *State Environmental Planning Policy (Infrastructure) 2007*
- *State Environmental Planning Policy No. 55 – Remediation of Land*
- *Sydney Regional Environmental Plan No 20 – Hawkesbury-Nepean River (No 2 – 1987)*

The proposal has also been assessed in accordance with its consistency with the key planning objectives, priorities and actions outlined within relevant strategic land use and transport planning policies including:

- Premier's Priorities
- *Greater Sydney Region Plan: A Metropolis of Three Cities*
- Our Greater Sydney 2056: Central City District Plan
- Future Transport Strategy 2056
- Our Blacktown 2036 Community Strategic Plan
- Western Sydney Parklands Plan of Management 2030

STAKEHOLDER CONSULTATION

Community and stakeholder engagement has been undertaken by the WSPT in the preparation of the proposed Light Horse Interchange Business Hub. This included direct engagement and consultation with:

- Adjoining landowners and occupants
- Government, agency and utility stakeholders listed within the SEARs

The outcomes of the community and stakeholder engagement are detailed in the Consultation Report submitted with the EIS. The report identifies changes to the proposal in response to the issues raised, including:

- Increasing the width of the internal access road to comply with Council requirements for two travel lanes and two parking lanes
- Deleting the private access road which proposed to provide heavy vehicle access to the rear of the western lots
- Designing the new roundabout at the intersection of the new access road with Ferrers Road to 'future proof' its ongoing operations by allowing for its expansion to two lanes, if required
- Restricting the existing Wallgrove Road access to emergency vehicles only to respond to concerns regarding the impacts of heavy vehicles on Wallgrove Road and the adequacy of the underpass
- Providing maintenance access to the on-site stormwater detention and bio-retention basin and locating the basin within a separate lot

- Designing the on-site stormwater detention and bio-retention basin to provide adequate storage to meet likely future demands and avoid ponding on the adjoining gas pipeline easement
- Avoiding impacts on the large triangular shaped Cumberland Plain Woodland community in the south-western part of the site
- Providing an east-west pedestrian/bicycle shareway connecting from Ferrers Road in the east through the industrial subdivision and west to the cycleway adjacent to the Westlink M7 Motorway

The proposed adoption of the RMS car parking rates in lieu of the Council car parking rates has been justified in detail within the traffic impact assessment. All other matters have been addressed by way of the above changes and the detailed documentation submitted with the SSDA.

IMPACTS AND MITIGATION MEASURES

This EIS assesses the proposed development in relation to relevant planning instruments and policies and considers the likely environmental impacts of the proposal, including:

- **Traffic and Transport:** the potential impacts on the local road network have been assessed, including likely traffic generation for heavy and light vehicles. Mitigation measures include the upgrade of the Great Western Highway and Brabham Drive intersection, delivery of a new roundabout at the intersection of the new access road at Ferrers Road and new pedestrian and cycle connections.
- **Contamination:** the potential for site contamination has been identified through an intrusive soil assessment and analysis. The potential for contamination is considered low. However, mitigation measures have been provided for the decommissioning of existing buildings and structures, including treatment and disposal of asbestos material. Additional testing is also recommended for specific components to ensure the site is suitable for the proposed use.
- **Flooding:** the potential flooding impacts have been assessed using a TUFLOW model considering the proposed finished ground levels and layout for the industrial subdivision and the on-site stormwater management system. The assessment concludes there is no change to the peak flows and corresponding peak flood levels. Flood free refuge and flood free access will be available to the site. While there is a low risk of flooding, future tenants should incorporate flood management procedures in their standard emergency risk management plans
- **Hazard and Risk:** the future DAs will include preliminary risk screening in accordance with SEPP 33 once the future land use activities have been established. The potential risks posed by the high-pressure gas pipeline have been assessed in detail, considering the layout of the proposed industrial subdivision, likely future buildings and potential future populations. The risk analysis concludes the risks associated with the pipeline are low and comply with relevant risk criteria. Future DAs will be assessed based on their detailed siting and layout, land use activities, populations and associated societal risk.
- **Soils and Water:** geotechnical, stormwater management and soil and water management measures have been addressed in detail within the EIS. Appropriate mitigation measures have been incorporated to manage water quality and quantity, including a bioretention filtration system within the OSD basin. Sediment and erosion control measures will be implemented during the demolition and construction phases to avoid downstream impacts.
- **Biodiversity:** the potential impacts of the proposal on the biodiversity values of the sites and surrounding locality have been assessed in detail, including removal of vegetation and realignment of Eskdale Creek. A variety of measures are proposed to mitigate or minimise the impact of the development, including pre-clearance protocols and implementation of the stormwater management, riparian landscaping and erosion and sediment control measures. Residual impacts will be offset by retiring existing biodiversity credits and generating suitable biodiversity credits.
- **Infrastructure Requirements:** the existing utility services are adequate and/or can be extended to accommodate the needs of the future industrial development. The proposed subdivision has been designed to facilitate extension of existing services and/or the retention of existing infrastructure within building setbacks. The new bridge, roundabout, access road and pedestrian/cycle connections have been designed to comply with Council and WSP requirements.

- **Urban Design and Visual:** urban design guidelines have been prepared to facilitate the appropriate siting and design of the future industrial buildings, which will be subject to further DAs. The visual impact analysis based on the concept proposal has demonstrated that the layout of the industrial subdivision, including the landscaped setbacks, is appropriate and the future built form will be consistent and compatible with the locality, including the large-scale employment development to the north and west.
- **Heritage:** the assessment of the Aboriginal cultural heritage and Non-Aboriginal (European) heritage has demonstrated that the site is suitable for the proposed industrial use. Mitigation measures have been included to manage the potential heritage values and any unexpected finds during the demolition and construction phases, including additional consultation and documentation.
- **Noise and Vibration:** analysis of the potential impacts arising from the demolition, construction and operational phases of the development has concluded that there will be no exceedances of noise levels during the daytime hours. The potential noise exceedances during the out-of-hours work can be mitigated or minimised through implementation of recommended measures in the CMP.
- **Bushfire:** the hazard assessment concludes that the future industrial development and associated uses can be accommodated on the site. Bushfire protection measures, including defensible space around buildings and adequate access and water supply for fire fighters, will be required to mitigate potential risks and comply with the relevant requirements at the future DA stage.
- **Waste:** the demolition and construction phases of the future industrial development have been assessed in detail, with recommended measures to re-use, recycle and dispose of waste. The future DAs for the industrial buildings will address the operational phase, including the specific land use activities to take place on each of the individual lots.
- **Air Quality:** analysis of the demolition and construction phases concludes that the likely off-site air quality impacts are low. However, mitigation measures are provided to be incorporated into the CMP to reduce the risks to negligible level, including site management, monitoring, maintenance and the like.
- **Construction Impacts:** the preliminary construction management measures are considered appropriate to manage potential impacts on the site and locality during the demolition and construction phases. The preliminary CMP will be updated to incorporate any conditions of consent imposed on the Concept DA.

Each of the recommended mitigation measures has been reviewed in detail and it is considered that they can be incorporated as conditions of consent for the Concept DA and implemented during the demolition, construction and operational phases (including the Stage 1 detailed proposal and future DAs) to avoid unacceptable environmental impacts.

CONCLUSION

The EIS demonstrates that the proposal will not result in any significant departures from applicable controls or unreasonable environmental effects. Specifically, the proposed development is considered reasonable because:

- The proposed development is permitted with development consent in accordance with the relevant environmental planning legislation
- The proposal is consistent with the relevant aims for the Western Sydney Parklands and satisfactorily responds to each of the relevant matters for consideration
- The proposed industrial hub is compatible with the existing and anticipated future employment land uses in the surrounding locality
- The development is appropriately located on a site considered suitable for the proposed use, considering its access to the metropolitan road network, proximity to similar uses and potential environmental impacts
- The development is consistent with the long-term strategic planning for the use and management of the Western Sydney Parklands and will provide a valuable contribution to the financial sustainability of the Parklands operations
- It provides for the orderly development of land for industrial purposes with expected positive economic and social benefits

- The identified environmental impacts of the proposal can be adequately mitigated, minimised and/or managed to avoid negative environmental impacts

In view of the above, it is submitted that the proposal is in the public interest and should be approved subject to appropriate consent conditions.

1. INTRODUCTION

1.1. PROJECT OVERVIEW

This Environmental Impact Statement (**EIS**) is submitted to the Department of Planning and Environment (**DPE**) on behalf of the Western Sydney Parklands Trust (**WSPT**) and in support of an application for State Significant Development (**SSD**) application number SSD18_9667.

The proposed development is located part of Lot 10 DP 1061237 and part of Lot 5 DP 804051 at 165 Wallgrove Road and 475 Ferrers Road, Eastern Creek and will be known as the Light Horse Interchange Business Hub.

The SSDA has been lodged as a Concept Development Application (**CDA**) in accordance with Division 4.4 of Part 4 of the *Environmental Planning and Assessment Act 1979*(the Act). It seeks development consent for:

- Concept Proposal for the staged redevelopment of the site as an industrial business hub with 157,600 sqm of industrial and light industrial floorspace and 7,900 sqm ancillary office floorspace
- Detailed Proposal for the first stage of development which will include demolition works, remediation, site preparation and bulk earthworks, roadworks, site infrastructure and subdivision of the site

The proposed development has an estimated capital investment value of \$212,934,203 (refer to **Appendix A**). Accordingly, the proposal is classified as a State significant development (**SSD**) under Clause 5 in Schedule 2 of *State Environment Planning Policy (State and Regional Development) 2011 (the SRD SEPP)*.

The Minister is the consent authority for the proposal in accordance with section 4.5 of the EPA Act. Accordingly, this DA is being lodged with the Department of Planning and Environment (**DPE**) as SSD seeking development consent for the concept scheme and the first stage of earthworks, subdivision, road construction and infrastructure provision.

This EIS has been prepared to support the SSDA and responds to the relevant matters listed within the Secretary's Environmental Assessment Requirements (**SEARs**) issued on 7 October 2018 (refer to **Appendix B**) and the Commonwealth Supplementary Assessment Requirements (**SARs**) issued on 12 April 2019 (refer to **Appendix C**).

1.2. PROJECT OBJECTIVES

The proposed redevelopment of the site to accommodate the Light Horse Interchange Business Hub is intended to achieve the following objectives:

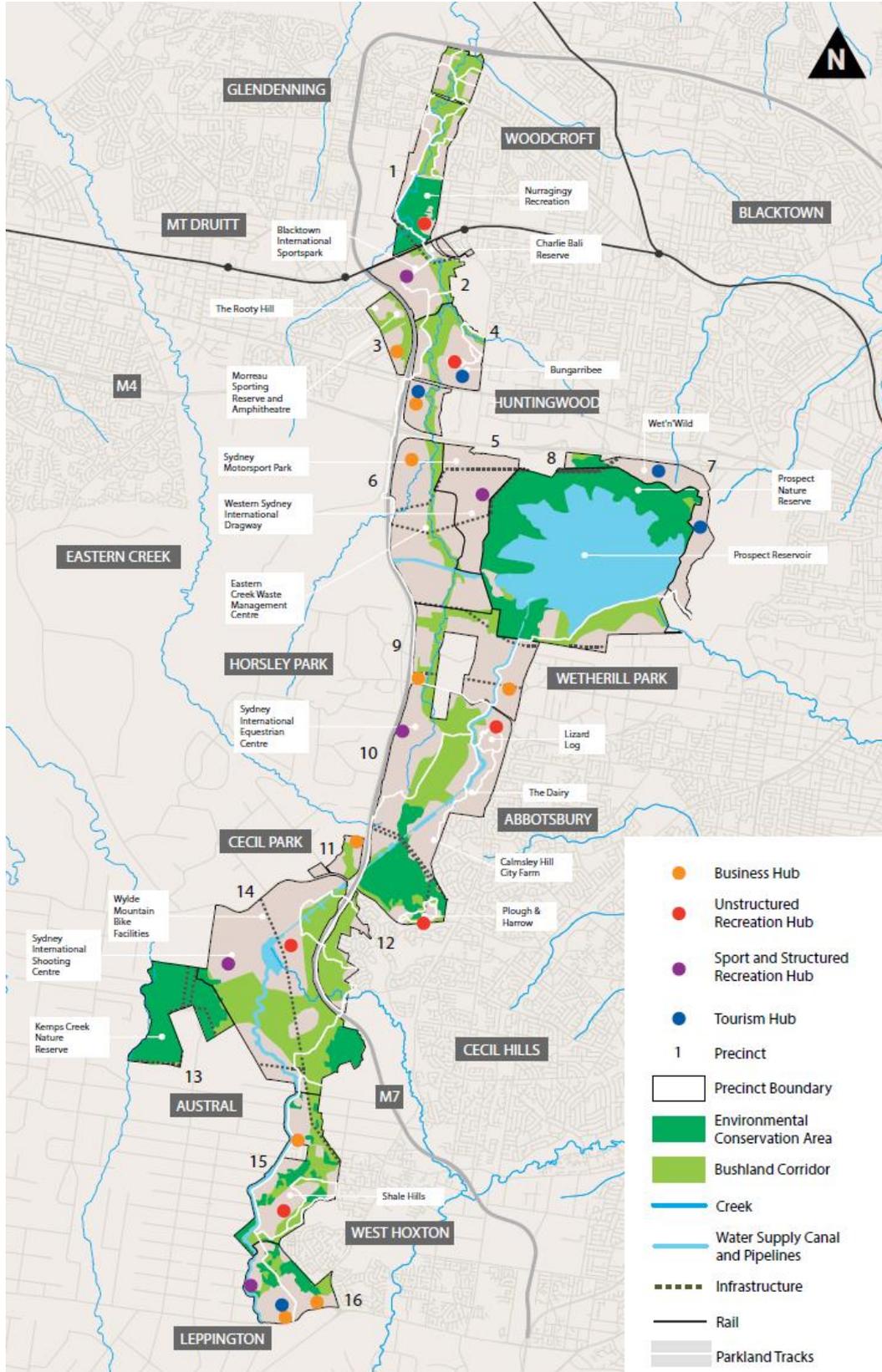
- Provide an ongoing revenue stream for the WSPT to support the Parklands operations and maintenance and the development of new and existing facilities.
- Deliver economic benefits and employment generation for Western Sydney and the Greater Sydney Region.
- Incorporate specialist technical input to provide a holistic response to the careful siting and design of the industrial subdivision and urban design guidelines for the construction of the future buildings.
- Avoid unacceptable environmental impacts through adopting recommended measures to avoid, minimise or manage potential impacts.

The WSPT is a self-funded Government agency which was formed by the NSW Parliament in 2006. The ten-year vision for the Western Sydney Parklands is contained in the *Plan of Management 2030 (POM)* which was adopted in December 2018.

The adopted POM identifies locations within the Western Sydney Parklands having low environmental or recreational value as suitable for the establishment of business hubs. These areas occupy approximately 2% of the parklands area and are intended for development by the WSPT as a means achieving financial sustainability and to generate revenue to support the parklands operations. An extract of the POM's Precinct Plan showing the land use framework and locations of the business hubs is provided in **Figure 1**.

The Precinct Plan shows the proposed business hubs generally located on the perimeter of the Parklands in areas of low conservation or recreation value and close to existing employment areas and the metropolitan road network. Occupation of the business hub premises is by leasehold tenure with revenue generated providing ongoing income for the WSPT while the lands are retained in public ownership. The business hubs aim to deliver revenue from 2% of the WSPT land holdings to fund the management and enhancement of the remaining 98% of the Parklands.

Figure 1 - Parklands Precincts (Source: Western Sydney Parklands Authority, 2018)



The proposed Light Horse Interchange Business Hub forms an important component of the self-funded model for the WSPT. The proposed development of the site is consistent and compatible with the WSPT criteria for a business hub as outlined on page 17 of the POM 2020 Supplement (see extract below).

Location: *Corner of M4 and M7 Motorways, Eastern Creek.*

Site Characteristics: *A large flat site located along the M7 and M4 Motorways and at the Light Horse Interchange. The site is adjacent to Eastern and Reedy Creeks making parts of the site flood affected. The site is located adjacent to the Eastern Creek Motor Sports precinct as well as the Eastern Creek Waste Management Centre to the south. The Western Sydney Employment Area and the former Eastern Creek Quarantine Animal Facility is located to the west and northwest of the site respectively.*

Potential Land Uses: *Industrial, infrastructure.*

Addressing Business Hub Principles: *Although this business hub is located adjacent to the M7 and M4 Motorways the site is landlocked and requires a significant investment to capitalise on the site's full potential. The site does not have significant ecological value. There is the potential for an innovative industrial facility to be located on this site to complement the proposed development in the Western Sydney Employment Area, the former Eastern Creek Quarantine Animal Facility being developed for industrial use and the Eastern Creek Waste Management Centre.*

This EIS confirms the suitability of the site for the proposed use and that the potential environmental impacts can be appropriately mitigated, minimised or managed to avoid any unacceptable impacts.

Further, the proposal will address the principles of ecologically sustainable development (ESD) in accordance with the requirements of the *Environmental Planning and Assessment Regulation 2000* and as outlined below

Precautionary Principle

The precautionary principle relates to uncertainty around potential environmental impacts and where a threat of serious or irreversible environmental damage exists, lack of scientific certainty should not be a reason for preventing measures to prevent environmental degradation.

This EIS has not identified any serious threats of environmental damage that cannot be adequately mitigated or addressed based on current scientific standards and best practices. In this regard, the proposed development can be considered generally consistent with the precautionary principle.

Intergenerational Equity

Intergenerational equity ensures the needs of future generations are considered in decision making and that environmental values are maintained or improved for the benefit of future generations.

The proposed development is intended to benefit both the current and future generations and incorporates adequate environmental protection and impact mitigation measures to ensure environmental values are maintained and improved as a result of the development.

Conservation of biological diversity and ecological integrity

The conservation of biological diversity and ecological integrity is to be a fundamental ESD consideration.

The proposed development is identified as having potential impacts on biological diversity and ecological integrity. This EIS and its supporting documentation detail how the identified impacts will be avoided and minimised where possible and offset where relevant through the enhancement and expansion of high value biodiversity sites within the Western Sydney region.

Improved valuation, pricing and incentive mechanisms

This requires the holistic consideration of environmental resources that may be affected as a result of the development including air, water and the biological realm. It places a high importance on the economic cost to environmental impacts and places a value on waste generation and environmental degradation.

The proposal has considered the environmental values of the site and the likely impacts of the development, particularly during construction activities. Appropriate management and mitigation measures have been considered and implemented in the various construction management and environmental assessment approaches taken to the development proposal.

1.3. SITE HISTORY

The Aboriginal Cultural Heritage Assessment report submitted in support of the proposal (and discussed in detail within **Section 6.10**) details the historical occupation of land within the Sydney Basin by Aboriginal people prior to 1788 and who would have had a close association with the land on which the proposal will take place. The site is identified as being near the location where the territories of multiple Aboriginal language groups met and is associated with multiple Aboriginal clans. The site is believed to be within the area associated with the Eora people but also within proximity to the territory associated with the Daruk people.

The Non-Aboriginal Heritage Assessment submitted in support of the proposal (also discussed in detail within **Section 6.10**) references the western Sydney area as being subject to early European exploratory expeditions from 1789 onwards which subsequently resulted in the area being granted for settlement and subdivision. The area containing the development site and its surrounds was occupied and developed for farming and agricultural activities from 1819 onwards until 1941 when most of the site was resumed for the establishment of the Wallgrove Army Camp. The camp was established to train military volunteers during World War II and occupied a large part of the development site as well as land on the western side of Wallgrove Road.

Following World War II, the army camp facility was temporarily used as a migrant hostel to house post-war migrants. The site remained as a military establishment up until the 1970s and the Australian Defence Force occupied the site up until the 1990s (occupying the buildings currently remaining on the site). From the 1970s onwards, parts of the site were subject to large scale infrastructure works including the construction of the M4 and M7 Motorways, the Light Horse Interchange and the Sydney to Newcastle Natural Gas Pipeline.

The aerial photographs below show the previous clearing of vegetation on the site in association with the former land use activities.

Figure 2 – Aerial Photograph 1955 (Source: WSPT)

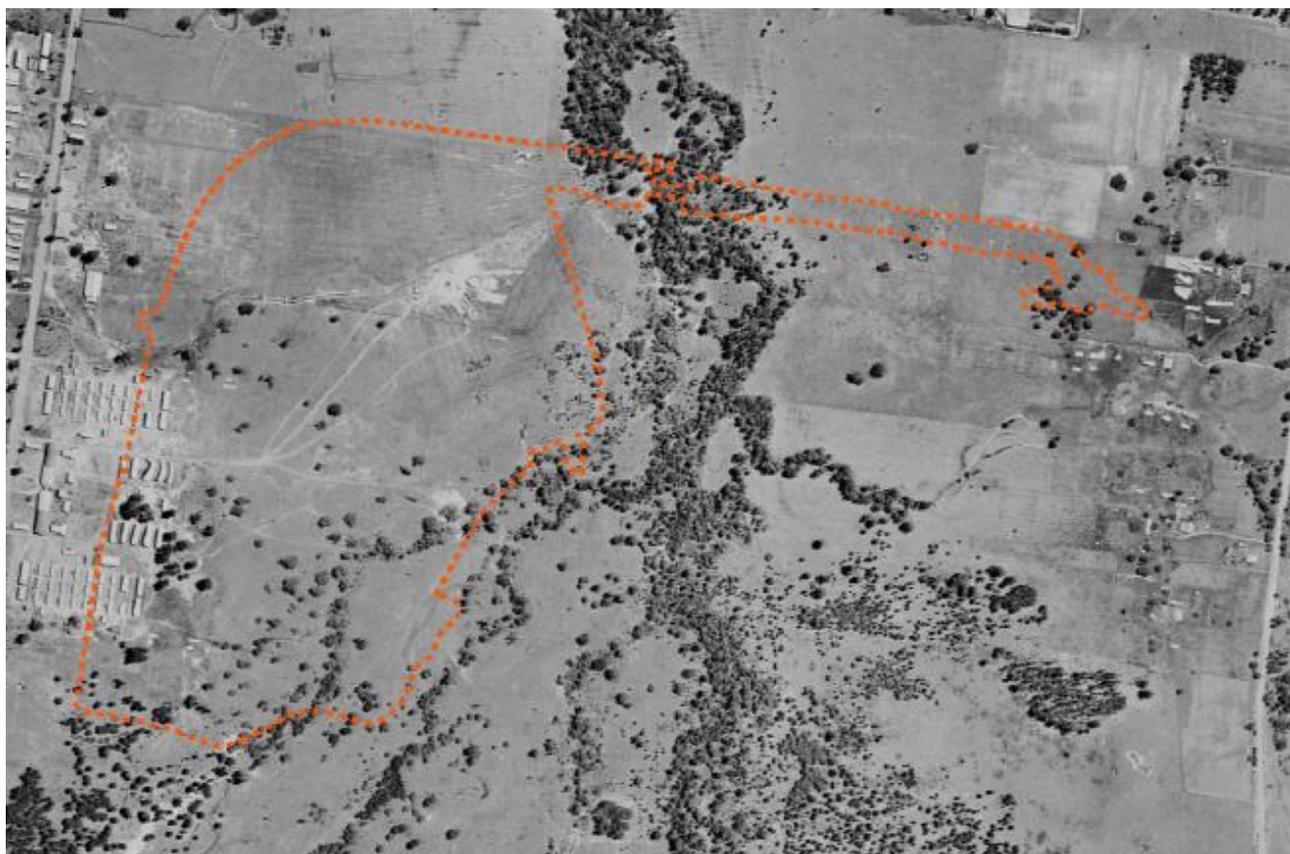


Figure 3 – Aerial Photograph 1991 (Source: WSPT)



1.4. PROJECT ALTERNATIVES

WSPT have identified three project alternatives which were considered in respect to the identified need for the Light Horse Interchange Business Hub development. Each of these options is listed and discussed as follows:

- **Option 1 – Do Nothing:** an option to leave the site in its current condition and ‘do nothing’ was considered and dismissed. This option is inconsistent with the project objectives to:
 - *Provide an ongoing revenue stream for the WSPT to support the Parklands operations and maintenance and the development of new and existing facilities.*
 - *Deliver economic benefits and employment generation for Western Sydney and the Greater Sydney Region.*

The WSPT is a self-funded agency and the provisions of POM 2030 provide for the delivery of funding through the identified business hubs. The subject site was identified as a business hub through a comprehensive and careful selection process, considering its low environmental and recreational value and proximity to existing employment development to the north, north-east and west. The site comprises only a very small part of the overall parklands area and collectively, the site and the collective 2% of land for business hubs will deliver a total of \$20 million per annum for the WSPT to achieve financial sustainability and generate revenue to support the parklands operations.

Further to the revenue stream, the business hubs are proposed to generate economic benefits and employment generation for Western Sydney. The POM 2020 Supplement estimated the proposed business and tourism hubs would generate approximately 8,800 local jobs and additional economic activity equating to approximately \$2.2 billion in 2031 within Western Sydney. The hubs would also reduce average commuter travel time by over 30 minutes per day, contributing to the efficiency and

liveability of Western Sydney and the delivery of the '30 Minute City Concept' outlined with the Region and District Plans.

The 'do nothing' approach would represent a significant loss of potential income and have a major impact on the ongoing revenue available for the WSPT to undertake their operations in accordance with the POM. It would also result in a significant impact on the potential economic benefits and employment-generating potential associated with the proposed development of the land as a business hub.

- Option 2 – Alternative Site Within Parklands:** the WSPT assessed the full WSP corridor for potential sites to accommodate the proposed business hubs. The potential sites were identified in POM 2030 which was approved by the Minister in December 2018. This site was identified as a suitable location based on its locational context and low ecological value as discussed in further detail on page 3 of this report.

Figure 4 – Blacktown LGA Business Hubs (Source: WSPT, 2014)



- **Option 3 – Alternative Business Hub Site Outside Parklands:** the potential development of land outside of the WSP as an industrial business hub is inconsistent with the *Western Sydney Parklands Act 2006* and the provisions of POM 2030.

The principal function of the WSPT is to develop the WSP into a multi-use parkland and to maintain and improve the parklands on an ongoing basis. Their functions include:

- (j) *to undertake or provide, or facilitate the undertaking or provision of, commercial, retail and transport activities and facilities in or in relation to the Parklands with the object of supporting the viability of the management of the Parklands.*

The provisions of POM 2030 enable the WSPT to generate funding through the development of 2% of their existing landholdings. The purchase of land outside of the WSP boundaries would be cost prohibitive. Further, land acquisition would be contrary to the provisions of the POM to develop 2% of the WSP to generate income and provide for the financial sustainability of the WSPT. The development of land outside of the WSP is not available as an alternative project option.

- **Option 4 – Alternative Subdivision Layout:** the final siting and design of the proposed industrial subdivision was resolved through a comprehensive analysis of the site opportunities and constraints and several revisions of the subdivision layout.

The revisions to the layout included reducing the project footprint to avoid approximately 2.2 ha of Alluvial Woodland which includes a moderately dense mid-storey of *Melaleuca decora*. The subdivision boundary was also revised, reducing the overall development footprint to retain large patches of bushland and ensure connectivity between these patches.

A range of options were explored for the site access including consideration of alternatives to minimise impacts to native vegetation. The proposed access from Ferrers Road was considered the optimal location. The access was located immediately adjacent to the M4 Motorway to avoid additional fragmentation of the vegetation along the Eastern Creek corridor and avoid larger changes to the flooding regimes of Eastern Creek Floodplain.

1.5. SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

The following table provides a summary of the SEARs and outlines where in the body of the report, or specialist consultants' reports, the requirements are addressed. It also includes a reference to the Supplementary Assessment Requirements issued on 12 April 2019 in response to the requirements of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Table 1 – Summary of SEARs

Secretary's Requirements	Reference
Statutory and Strategic Context – including:	Section 3
<ul style="list-style-type: none"> • detailed justification that the proposed land use is permissible, taking into consideration the State Environmental Planning Policy (Western Sydney Parklands) 2009 • details of any proposed consolidation or subdivision of land and • demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, adopted precinct plans, draft district plan(s) and adopted management plans and justification for any inconsistencies. The following must be addressed: <ul style="list-style-type: none"> • State Environmental Planning Policy (Western Sydney Parklands) 2009 • Greater Sydney Region Plan: A Metropolis of Three Cities • Our Greater Sydney 2056: South District Plan • Future Transport Strategy 2056. 	Section 4

Secretary's Requirements	Reference
<p>Planning Agreement/Development Contributions – demonstration that satisfactory arrangements have been or would be made to provide, or contribute to the provision of, necessary local and regional infrastructure required to support the development.</p>	<p>Section 4.3</p>
<p>Suitability of the Site – including an analysis of site constraints, such as flooding impacts and future road and road corridors.</p>	<p>Section 6.1</p>
<p>Community and Stakeholder Engagement – including:</p> <ul style="list-style-type: none"> • a detailed community and stakeholder participation strategy which identifies who in the community has been consulted and a justification for their selection, other stakeholders consulted and the form(s) of consultation, including a justification for this approach • a report on the results of the implementation of the strategy including issues raised by the community and surrounding land owners and occupiers that may be impacted by the proposal • details of how issues raised during community and stakeholder consultation have been addressed and whether they have resulted in changes to the proposal • details of the proposed approach to future community and stakeholder engagement based on the results of consultation. 	<p>Section 5</p>
<p>Traffic and Transport – including:</p> <ul style="list-style-type: none"> • a quantitative Traffic Impact Assessment prepared in accordance with relevant Blacktown City Council, Austroads and Roads and Maritime Services guidelines • details of all daily and peak traffic and transport movements likely to be generated by the development including the impact on the nearby intersections and the need/associated funding for the upgrading or road improvements works (if required) • impacts on the safety and capacity of the surrounding road network and access points, using SIDRA or similar modelling, to assess impacts from current traffic counts and cumulative traffic from existing and proposed development • demonstrate that sufficient pedestrian and cyclist facilities have been provided for the development • details and a justification of access to, from and within the site (vehicular and pedestrian) • details of road upgrades, new roads or access points required for the development, if necessary. 	<p>Section 6.2</p>
<p>Contamination – including:</p> <ul style="list-style-type: none"> • a detailed assessment of the extent and nature of any contamination of the soil, groundwater and soil vapour • an assessment of potential risks to human health and the environmental receptors in the vicinity of the site • a description and appraisal of any mitigation and monitoring measures • consideration of whether the site is suitable for the proposed development. 	<p>Section 6.3</p>
<p>Flooding – a detailed hydrological and hydraulic assessment which includes the following:</p>	<p>Section 6.4</p>

Secretary's Requirements	Reference
<ul style="list-style-type: none"> • a comprehensive assessment of the impact of flooding on the development for the full range of flood events up to the probable maximum flood. This assessment should address any relevant provisions of the NSW Floodplain Development Manual (2005) including the potential effects of climate change, sea level rise and an increase in rainfall intensity • consideration of current flooding behaviour and impacts, including on flood detention areas, how flood behaviour and impacts will change due to the proposal and how these changes will be mitigated • assessment of the impact of the development on flood behaviour (i.e., levels, velocities and duration of flooding) and on adjacent, downstream and upstream areas • detail an emergency response plan for the site, which includes consideration of a flood-free access to or from the development site in extreme flood events. 	
<p>Hazards and Risk – including:</p> <ul style="list-style-type: none"> • a preliminary risk screening completed in accordance with State Environmental Planning Policy No. 33 - Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should the preliminary risk screening indicate that the development is "potentially hazardous", a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011) • ongoing consultation with Jemena on the high-pressure gas pipeline adjacent to the development area with regards to requirements of Australian Standard AS 2885 Pipelines - Gas and liquid petroleum • a hazard analysis undertaken in accordance with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis' and Multi-Level Risk Assessment (DoP, 2011). It must include, and not be limited to, an assessment on risk exposures to potential populations within the development from the high-pressure gas pipeline located within or near the development area. The risks established in the hazard analysis must be compared against the relevant qualitative and quantitative risk criteria detailed in the Department of Planning's Hazardous Industry Planning Advisory Paper No. 10, 'Land Use Safety Planning'. If a Safety Management Study (SMS) required under AS 2885 Pipelines - Gas and liquid petroleum is available, the SMS must be included in the hazard analysis. 	Section 6.5
<p>Soils and Water – including:</p> <ul style="list-style-type: none"> • a description of the water demands and a breakdown of water supplies, including a detailed site water balance • identification of any water licensing requirements under the <i>Water Act 1912</i> or <i>Water Management Act 2000</i> • details of proposed erosion and sediment controls during construction • an assessment of potential impacts on surface and groundwater resources, drainage patterns, soil (stability, salinity and acid sulfate soils), related infrastructure, watercourses and riparian land and proposed mitigation, management and monitoring measures. 	Section 6.6

Secretary's Requirements	Reference
<p>Biodiversity – including an assessment of the proposal's biodiversity impacts in accordance with the <i>Biodiversity Conservation Act 2016</i>, including the preparation of a Biodiversity Development Assessment Report (BDAR) where required under the Act, except where a waiver for preparation of a BDAR has been granted.</p>	Section 6.7
<p>Infrastructure Requirements – including:</p> <ul style="list-style-type: none"> • a detailed written and/or geographical description of infrastructure required on the site • identification of any infrastructure upgrades required off-site to facilitate the development, and describe any arrangements to ensure that the upgrades will be implemented in a timely manner and maintained • an infrastructure delivery and staging plan, including a description of how infrastructure on and off-site will be co-ordinated and funded to ensure it is in place prior to the commencement of construction • an assessment of the impacts of the development on existing infrastructure surrounding the site. 	Section 6.8
<p>Urban Design and Visual – including:</p> <ul style="list-style-type: none"> • consideration of the layout and design of the development having regard to the surrounding vehicular, pedestrian and cycling networks • detailed plans showing suitable landscaping which incorporates endemic species. 	Section 6.9
<p>Heritage – including an Aboriginal Cultural Heritage Assessment Report prepared in consultation with Aboriginal people and in accordance with Office of Environment and Heritage guidelines.</p>	Section 6.10
<p>Noise and Vibration– including:</p> <ul style="list-style-type: none"> • a quantitative noise and vibration impact assessment undertaken by a suitably qualified person in accordance with the relevant Environment Protection Authority guidelines and including an assessment of nearby sensitive receivers • cumulative impacts of other developments • details of proposed mitigation, management and monitoring measures. 	Section 6.11
<p>Bushfire – including an assessment against the requirements of Planning for Bushfire Protection 2006, particularly access and provision of water supply for firefighting purposes.</p>	Section 6.12
<p>Waste – including:</p> <ul style="list-style-type: none"> • details of the quantities and classification of all waste streams to be generated on site during the development • details of waste storage, handling and disposal during the development and • details of the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021. 	Section 6.13
<p>Air Quality – including:</p>	Section 6.14

Secretary's Requirements	Reference
<ul style="list-style-type: none"> • an assessment of the air quality impacts (including dust) during the development, in accordance with the relevant Environment Protection Authority guidelines • details of proposed mitigation, management and monitoring measures. 	
<p>Supplementary Assessment Requirements (issued on 12 April 2019)</p> <ul style="list-style-type: none"> • Assessment documentation to address requirements of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth) 	Section 6.7

1.6. STRUCTURE OF THE EIS

The EIS provides the following sections:

- **Section 2:** describes the site, the local and regional context and site history.
- **Section 3:** provides a description of the Concept Proposal and Detailed Proposal comprising the first stage of works
- **Section 4:** details the strategic justification for the proposed works and consideration of alternatives.
- **Section 5:** provides a detailed assessment of the State environmental planning framework for the site.
- **Section 6:** analyses the State, regional and local strategic planning policies relevant to the site and proposed development.
- **Section 7:** identifies the development contributions framework and infrastructure works being delivered in association with the proposal.
- **Section 8:** details the consultation and engagement undertaken by the applicant as part of the preparation of this EIS.
- **Section 9:** provides an in-depth assessment of the existing environment, the potential impacts, and the mitigation measures for each of the key criteria in the SEARs.
- **Section 10:** provides an assessment of the proposal against the matters of consideration listed in Section 4.15 of the *Environmental Planning and Assessment Act 1979*.
- **Section 11:** lists the recommendations and mitigation measures based on the technical studies undertaken as part of this application.
- **Section 12:** identifies the principles of ecologically sustainable development and the way these have been applied in the proposal.
- **Section 13:** conclusion and justification.

1.7. PROPONENT DETAILS

This EIS has been prepared on behalf of the Western Sydney Parklands Trust (**WSPT**), a self-funded Government agency formed by the NSW Parliament in 2006. A range of specialist consultants were engaged by the WSPT to assist with the preparation of the plans and technical documentation, including:

Table 2 – Project Team

Discipline	Consultant
Applicant and Project Management	Western Sydney Parklands Trust
Statutory Planning	Urbis
Architecture, Built Form, Urban Design, Visual Impact	Nettleton Tribe Architects
Landscape Design	Nettleton Tribe Architects
Quantity Surveyor	Northcroft
Geotechnical Investigation	Dirt Doctors
Phase I Preliminary Site Investigation (Contamination)	Zoic
Phase II Detailed Site Investigation (Contamination)	Environmental Earth Sciences
Aboriginal Heritage	Extent Heritage Advisors
European Heritage	Extent Heritage Advisors
Transport and Traffic	Ason Group
Bushfire	Peterson Bushfire Consulting
Noise and Vibration	SLR Consulting
Air Quality Assessment	SLR Consulting
Civil and Hydraulic Engineering and Infrastructure Servicing	Henry & Hymas/BMT
Demolition/Construction Management	WSPT
Waste Management	Pitt & Sherry
Hazard and Risk Management	Arriscar
Consultation	WSPT
Plan of Subdivision	Landpartners

2. PROJECT DESCRIPTION

The SSDA has been lodged as a Concept Development Application (**CDA**) in accordance with Division 4.4 of Part 4 of the *Environmental Planning and Assessment Act 1979*(the Act). It seeks development consent for:

- Concept Proposal for the staged redevelopment of the site as an industrial business hub with 157,600 sqm of industrial and light industrial floorspace and 7,900 sqm ancillary office floorspace
- Detailed Proposal for the first stage of development which will include demolition works, remediation, site preparation and bulk earthworks, roadworks, site infrastructure and subdivision of the site.

The site and proposed development are discussed in further detail within the following sections of the report.

2.1. SITE AND SURROUNDING CONTEXT

The street address is 165 Wallgrove Road and 475 Ferrers Road, Eastern Creek. The legal description is part Lot 10 in Deposited Plan 1061237 and part Lot 5 in Deposited Plan 804051. A site survey showing the geographic features and contours of the site is provided in **Appendix D**. A Locality Plan showing the site location and context is provided as **Appendix E**.

The site contains minimal improvements associated with its former use as an army camp and military establishment and is currently used for livestock agistment. Several waterways traverse the site, including Eastern Creek which is the main creek alignment dissecting the site, Reedy Creek and Eskdale Creek. The biodiversity assessment (refer to **Section 6.7**) states that Eastern Creek and Reedy Creek have been assessed as 'very good' and 'good', while Eskdale Creek has been assessed as 'poor' to 'fair'.

The site is adjacent to the junction of the M4 Western Motorway and M7 Westlink Motorway, providing excellent access to the local and regional road transport network. The site is currently accessible from a driveway via Wallgrove Road to the west (via an underpass under the M7) and Ferrers Road to the east. The access to Wallgrove Road is not currently in use. Ferrers Road connects to the Great Western Highway and Doonside Road in the north and The Horsley Drive to the south.

The development site is located within the within the City of Blacktown local government area (LGA). The site is 33km west of the Sydney CBD, 15km from the Parramatta CBD, 15km from Penrith and 6km from Blacktown. The Western Sydney Airport is 15km south-west of the site. The site is south of the industrial areas at Huntingwood and Arndell Park and east of warehouse and industrial uses which form part of the Western Sydney Employment Area (**WSEA**).

The surrounding land use activities include the following:

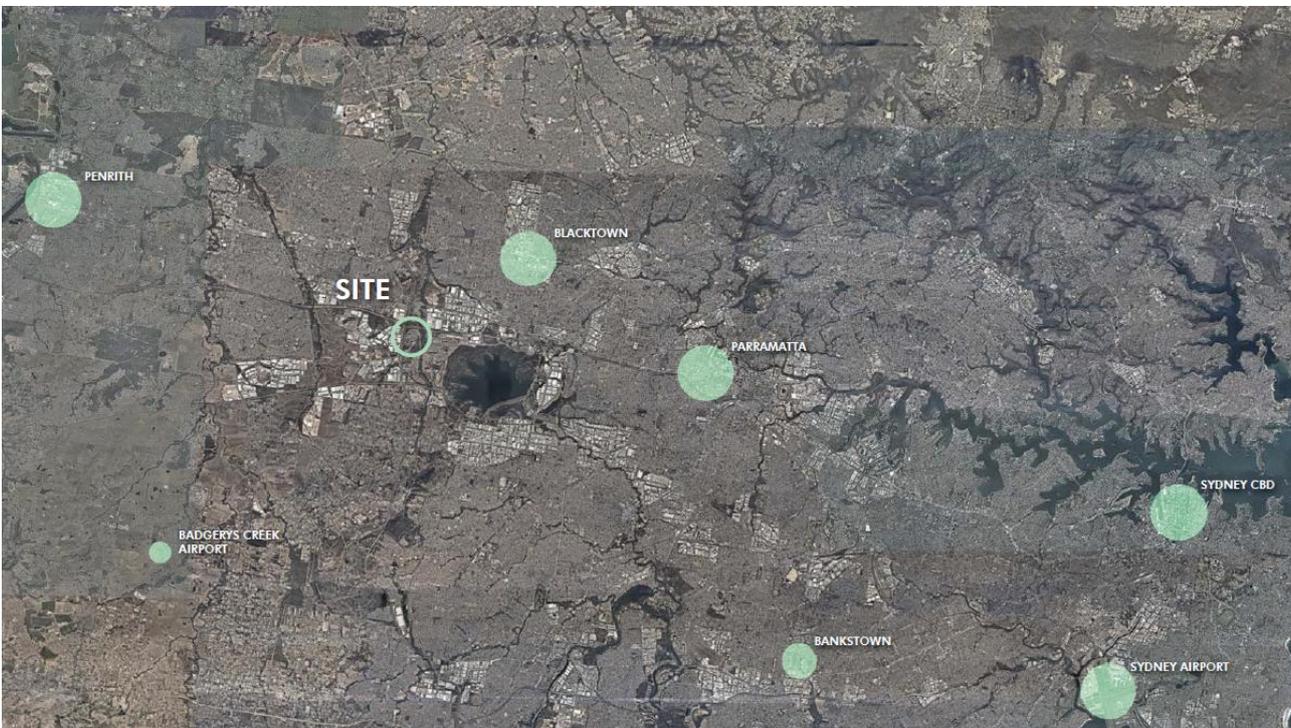
- **To the north** of the site is the M4 Western Motorway beyond which the Western Sydney Parklands continue along the alignment of Eastern Creek. To the north-east is the Huntingwood industrial and warehouse precinct.
- **To the east** of the site is the Sydney Motorsport Park and Sydney Dragway. Adjacent to the Sydney Motorsport Park is the Prospect Reservoir.
- **To the south** of the site is the Eastern Creek landfill facility.
- **To the west** of the site is the M7 Westlink Motorway and Wallgrove Road. To the west of Wallgrove Road is the Eastern Creek industrial and warehousing precinct.

The site and surrounding development is illustrated in **Figure 5** and a plan showing the regional and metropolitan context is provided as **Figure 6**.

Figure 5 –Site and Local Context (Source: Urbis, 2019)



Figure 6 – Regional Context Plan (Source: Nettleton Tribe Architects, 2019)



2.2. CONCEPT PROPOSAL

The concept development scheme and proposed layout of the site as an industrial business hub is detailed on the concept masterplan for the proposal in **Appendix F**. A reduced sized copy of the plan is provided below. An artistic impression of the concept design is shown as **Figure 7**.

Figure 7 – Concept Masterplan (Source: Nettleton Tribe Architects, 2019)



The key features of the concept masterplan are summarised in the following table.

Table 3 – Numeric Overview

Component	Area
Development Site	33.6285 hectares
Developable Area (Lots 1-7)	29.3637 hectares
On-Site Stormwater Detention (Lot 8)	2.1511 hectares
Access Road Reserve	2.1137 hectares
Total Building Area	165,500sqm
Floor Space Ratio	0.49:1

Figure 8 – Artistic Impression (Source: Nettleton Tribe Architects, 2019)



The concept proposal seeks consent for 157,600 square metres of industrial and light industrial floorspace and 8,000 square metres of ancillary office floorspace across 7 development lots. The areas and building footprints proposed for each lot are summarised in **Table 4**.

Table 4 – Proposed Lot Areas

Developable Lot	Lot Area	Warehouse Area	Office Area	Total Floor Area
Lot 1	41,270m ²	19,000m ²	1,000m ²	20,000m ²
Lot 2	34,141m ²	16,900m ²	800m ²	17,700m ²
Lot 3	41,112m ²	23,200m ²	1,200m ²	24,400m ²
Lot 4	38,686m ²	21,400m ²	1,000m ²	22,400m ²
Lot 5	44,193m ²	24,700m ²	1,300m ²	26,600m ²
Lot 6	38,406m ²	20,000m ²	1,000m ²	21,000m ²
Lot 7	55,829m ²	32,400m ²	1,600m ²	34,000m ²
TOTAL		157,600m²	7,900m²	165,500m²

The built form and specific building footprints on each of the proposed lots will be addressed within the future development applications. Urban Design Guidelines have been prepared to guide the siting and design of the future industrial buildings (see **Appendix G**). Landscape plans have also been prepared to outline the landscape treatment of the future industrial lots, as well as the detailed works in Stage 1 discussed in detail within **Section 2.3**. A copy of the landscape plans is attached as **Appendix H**.

The proposed development is expected to generate approximately 400 full time equivalent jobs during its construction phase and approximately 400-415 full time equivalent ongoing jobs through the future industrial uses of the site.

2.3. DETAILED PROPOSAL (STAGE 1 WORKS)

The Concept DA also includes a detailed proposal to facilitate the commencement of the first stage of the business hub development, including:

- Demolition of existing structures
- Remediation
- Site preparation and bulk earthworks
- Construction of road access and installation of essential infrastructure services
- Provision of flood and stormwater management infrastructure works
- Subdivision

Each of the individual components of the first stage of works are described in further detail below.

2.3.1. Demolition

The buildings and structures associated with the former military use of the site are in a derelict and dilapidated state. All existing and remaining building elements and associated infrastructure are proposed to be removed from the site as part of the Stage 1 demolition works.

Relevant heritage and contamination aspects of the remaining buildings and infrastructure on the site are addressed in detail within the assessment of the environmental impacts in **Section 6** of the EIS and the specialist documentation submitted with the SSDA.

2.3.2. Remediation

The potential for contamination of the soil, groundwater and soil vapour has been assessed in accordance with the SEARs and considering the former uses of the site as an army compound, wastewater treatment plant and general soil disturbances.

Stage 1 works will include the remediation of the site to address the contamination identified in the Contamination Assessment Report submitted in support of the proposal (see **Appendix I**). All remediation works will be undertaken in accordance with the recommendations for the management of the identified contamination in accordance with the specialist report and the final CMP.

2.3.3. Site Preparation and Bulk Earthworks

The Stage 1 works will include the preparation of the site for the future development of the proposed industrial lots. This will include clearing of vegetation, establishing construction site access and implementation of construction management works.

Bulk earthworks will also be undertaken as part of Stage 1 to prepare the site for construction works and establish site levels to facilitate the future stages of the development. The proposed works include the realignment of Eskdale Creek to facilitate the proposed industrial subdivision. These works will include the introduction of a swampy meadow and chain of ponds connecting to Reedy Creek to minimise potential biodiversity impacts.

Details of the Stage 1 earthworks are provided in the engineering drawings submitted in support of the proposal (see **Appendix J**). The Stage 1 site preparation, bulk earthworks and associated construction activities will be managed in accordance with the Construction Management Plan submitted in support of the proposal (see **Appendix K**).

2.3.4. Access Road and Essential Infrastructure

The proposed access road, including the roundabout intersection at Ferrers Road and the bridge crossing over Eastern Creek, will be constructed as part of Stage 1 works as detailed in the Civil Engineering Report and associated engineering drawings submitted in **Appendix J**.

Street tree planting will be provided in accordance with the landscape plans submitted as **Appendix H**. Essential utility service infrastructure services, including water, sewer, electricity and communications will be delivered in accordance with the Civil Engineering Report (**Appendix J**).

2.3.5. Stormwater Management

The stormwater management infrastructure required to service the future industrial development will be delivered as part of the Stage 1 works (refer to **Appendix J**).

The proposed industrial lots will be graded to enable future stormwater runoff to be directed to sediment and erosion control basins at the downstream end of each individual lot, connecting via the local drainage system to the communal basin. The Stage 1 works include temporary stormwater management infrastructure to will manage stormwater runoff until the lots are further developed in subsequent stages of the proposal.

As noted in **Section 2.3.3**, the proposed site works include the realignment and restoration of Eskdale Creek to facilitate the proposed industrial subdivision. WSUD principles will improve the water quality, regulate creek flow rates and enhance both the function and appearance of the site. The proposed works aim to activate the flood plain similar to the creek conditions prior to the development which currently exists on the site, while minimising potential impacts to existing native vegetation.

The riparian planting along the realigned Eskdale Creek and within the bioretention basin is shown in the landscape plans (refer to **Appendix H**).

2.3.6. Subdivision

The Stage 1 works include the subdivision of the site to create seven separate Torrens title lots that will accommodate the future stages of the development of the site as a business hub. The proposed Plan of Subdivision is provided in **Appendix L**.

The subdivision includes the dedication of land containing the access road as a public road and the creation of a separate lot (Lot 8) that will contain the stormwater management infrastructure that will service the development.

3. STRATEGIC CONTEXT

A range of strategic planning policies and design guidelines are also identified in the SEARs that are required to be addressed. These include:

- Premier's Priorities
- Greater Sydney Region Plan: A Metropolis of Three Cities
- Our Greater Sydney 2056: Western City District Plan
- Future Transport Strategy 2056.
- Our Blacktown 2036 Community Strategic Plan
- Western Sydney Parklands Plan of Management 2010.

The proposal is consistent with the following planning strategies, district plans and adopted management plans as detailed below.

3.1. PREMIER'S PRIORITIES

The NSW Premier has identified 12 priority areas essential for the growth and development of NSW. These include the creation of jobs and delivery of infrastructure. The proposal will contribute to the achievement of these priorities through the provision of new employment and business infrastructure that will contribute to the and the generation of new job, particularly in Western Sydney.

3.2. GREATER SYDNEY REGION PLAN

The Greater Sydney Region Plan, *A Metropolis of Three Cities*, is the NSW Government's overarching strategic plan for growth and change in Sydney. It is a 20-year plan with a 40-year vision that seeks to transform Greater Sydney into a metropolis of three cities being the Western Parkland City, the Central River City and the Eastern Harbour City. It identifies key challenges facing Sydney including increasing the population to eight million by 2056, 817,000 new jobs and a requirement of 725,000 new homes by 2036. The objectives of the Greater Sydney Region Plan seek to expand and invest in economic development and business activity with focus on the Greater Parramatta and Western Sydney Airport areas.

The proposal is consistent with the strategic directions and objectives identified in the Greater Sydney Region Plan and will contribute to the provision of additional industrial space. The proposal will provide additional employment and economic growth to support the region. The proposal also contributes to the ongoing management and improvement of the Western Sydney Parklands by providing a sustainable source of funding for the operation and management of the environmental and recreation facilities.

3.3. CENTRAL CITY DISTRICT PLAN

The Central City District Plan is a 20-year plan to manage growth in the context of economic, social and environmental matters to implement the objectives of the Greater Sydney Region Plan. The intent of the District Plan is to inform local strategic planning statements and local environmental plan and guide the planning and support for growth and change across the district.

The District Plan contains planning priorities relating to infrastructure provision, establishing land use and transport structure, environmental protection and growing investment, business opportunities and jobs in strategic centres. It recognises the importance of industrial land supply within the Central River City and the Blacktown LGA, noting:

In Blacktown Local Government Area, a major industry cluster of transport and logistics, storage, warehousing and distribution is developing. This cluster, together with more established industrial precincts, will capitalise on the growth of the Western Parkland and Central River cities.

The proposal is consistent with the objectives and outcomes identified in the Central City District Plan and will provide for development that addresses the plan's priorities. The proposal will result in increased investment, business opportunities and jobs through the provision of general industrial and light industrial uses with good access to transport infrastructure.

3.4. FUTURE TRANSPORT STRATEGY 2056

The Future Transport Strategy is a 40-year vision for the transport system of NSW and seeks to ensure that transport planning is prepared for technological changes and new ways of travel into the future. The Strategy acknowledges the vital role that transport plays in the land use, tourism and economic development of cities and towns with a focus on integrated solutions. The strategy outlines six state-wide outcomes to guide investment, policy and reform and service provision providing a framework for planning an investment to support a modern, innovative transport network. The strength of the economy supported by an advanced transport system is recognised in the strategy.

The proposed Light Horse Interchange Business Hub is generally consistent with the strategic outcomes identified in the Future Transport Strategy 2056. The proposed development will connect to existing transport networks and enable adaptability to new technological advances in transport related to industrial and warehouse land uses.

The site is adjacent to an established cluster of similar land uses with connectivity to the local road network and the M4 and M7 transport corridors. It is expected the primary land uses that will take place on the site will relate to freight delivery, management and logistics and associated business services that will be highly adaptable to future transport technological advances. The nature of the land uses proposed means access to the site will be primarily by motorised vehicular transport, however, provision is made in the design to enable access by alternative transport means including pedestrian, bicycle and public transport.

3.5. OUR BLACKTOWN 2036 COMMUNITY STRATEGIC PLAN

Our Blacktown 2036 contains the strategic visions and aspirations of Blacktown City Council that informs the growth and development of the local area. The strategic directions specified in the plan include planning for a smart and prosperous economy with the sustainable growth, attraction of investment and fostering local business and employment. The plan also expresses a desire to achieve quality environmental outcomes by minimising and reversing negative impacts on the natural and built environment.

The proposed development contributes to the identified strategic directions above as it will provide for business development, economic growth and job creation within the Blacktown LGA. The proposal will facilitate the development of the site while preserving, maintaining and improving natural environmental outcomes. The development also creates environmental benefits outside the site boundaries through its funding for the Western Sydney Parklands, benefitting the wider Blacktown City community.

3.6. WESTERN SYDNEY PARKLANDS PLAN OF MANAGEMENT 2030

The Western Sydney Parklands Plan of Management 2030 (**POM**) was adopted in December 2018 and provides for the development of business hubs within the Western Sydney Parklands as a means of achieving sustainable financial outcomes for the ongoing operation and management of the Parklands. The areas identified in the POM for business development comprise approximately 2% of the Parklands area. The sites are identified as having low environmental or recreational value and in proximity to existing business or industrial areas and transport connections.

The proposed Light Horse Interchange Business Hub forms an important component of the self-funded model for the WSPT as provided in the POM. The proposed development of the site is consistent and compatible with the WSPT criteria for a business hub as outlined on page 43 of the POM.

The proposed development will deliver an ongoing revenue stream for the WSPT to support the operations of the Parklands and provide support for the maintenance and development of new and existing facilities. It will also deliver economic benefits and employment generation for Western Sydney and the Greater Sydney Region. This EIS confirms the suitability of the site for the proposed use and that the potential environmental impacts can be appropriately mitigated, minimised or managed to avoid any unacceptable impacts.

4. STATUTORY CONTEXT

Various legislative and statutory planning instruments require consideration in the assessment of the proposal. In accordance with the SEARs, this EIS considers the following applicable to the proposal:

- *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*
- *Biodiversity Conservation Act 2016*
- *Rural Fires Act 1997*
- *Western Sydney Parklands Act 2006*
- *State Environmental Planning Policy (Western Sydney Parklands) 2009*
- *Environmental Planning and Assessment Act 1979*
- *State Environmental Planning Policy (State and Regional Development) 2011*
- *State Environmental Planning Policy (Infrastructure) 2007*
- *State Environmental Planning Policy No. 55 – Remediation of Land*
- *Sydney Regional Environmental Plan No 20 – Hawkesbury-Nepean River (No 2 – 1987)*
- *Blacktown Local Environmental Plan 2015*

The permissibility of the proposed development and the application of the relevant statutory planning instruments that apply to the site and the proposed development are addressed in detail below.

4.1. PERMISSIBILITY

The proposed development is permitted with development consent in accordance with Clause 11(2) of *State Environmental Planning Policy (Western Sydney Parklands) 2009* (**the WSP SEPP**).

Clause 11(2) states that development not specified in clauses 11(1), 11(1A) or 11(3) can be carried out with development consent. Each of the listed clauses is addressed as follows:

- Clause 11(1) states that the following development may be carried out on land in the Western Parklands without consent, but only if it is carried out by or on behalf of a public authority:

amenity facilities; community facilities; depots; entertainment facilities; environmental facilities; environmental protection works; function centres; information and education facilities; kiosks; public administration buildings; recreation areas; recreation facilities (outdoor); restaurants or cafes; roads; signage (for directional, informative, or interpretative purposes); ticketing facilities.

The proposed industrial use is not listed within the above list of permitted uses and accordingly, is not captured by clause 11(1)

- Clause 11(1A) enables development for the purposes of extensive agriculture, other than farm buildings, to be carried out on public land in the WSP without consent unless the land is in an environmental conservation area. The proposed land use activities so not include extensive agriculture and accordingly, clause 11(1A) does not apply to the proposed development.
- Clause 11(3) states that residential accommodation is prohibited in the Western Parklands. The proposal does not include residential accommodation and accordingly, clause 11(3) does not apply.

Clauses 11(1), 1(A) or (3) do not apply to the proposal as outlined above. Accordingly, the proposed development is permitted with development consent in accordance with clause 11(2) of the WSP SEPP.

Detailed consideration has also been given to the compliance of the proposal with the other provisions of the WSP SEPP, including the aims of the Policy as outlined in clause 2 and the matters for consideration listed in clause 12. Each of these matters is addressed within the following assessment tables.

Table 5 – Compliance with Aims of WSP SEPP

Aim	Response	Complies
<i>(a) allowing for a diverse range of recreational, entertainment and tourist facilities in the Western Parklands, and</i>	This aim is not directly relevant to the proposed development, however, it will provide a revenue stream to fund the delivery of facilities within the WSP	NA
<i>(b) allowing for a range of commercial, retail, infrastructure and other uses consistent with the Metropolitan Strategy, which will deliver beneficial social and economic outcomes to western Sydney, and</i>	The proposed development of the site as an industrial business hub will provide a revenue stream for the WSP operations, including maintenance and development of new and existing facilities. It will also deliver employment opportunities and economic development within Western Sydney, aligned with the provisions of the Greater Sydney Region Plan (refer to Section 3.2)	YES
<i>(c) continuing to allow for and facilitate the location of government infrastructure and service facilities in the Western Parklands, and</i>	This aim is not relevant to the proposal	NA
<i>(d) protecting and enhancing the natural systems of the Western Parklands, including flora and fauna species and communities and riparian corridors, and</i>	A Biodiversity Development Assessment Report (BDAR) has been prepared which assesses the biodiversity impacts of the proposal. The BDAR outlines actions to avoid and minimise impacts on native vegetation and habitat and biodiversity through the siting and design of the proposed industrial subdivision. The biodiversity offset requirement for the residual impacts have been calculated to achieve the 'no net loss standard' under the relevant legislation, including allocation of ecosystem and species credits. These matters are addressed in detail within Section 6.7 of this report.	YES
<i>(e) protecting and enhancing the cultural and historical heritage of the Western Parklands, and</i>	An Aboriginal Cultural Heritage Assessment Report (ACHAR) and Preliminary Non-Aboriginal Heritage Assessment have been prepared to identify and assess the potential impacts of the proposed development regarding cultural and heritage significance and provide mitigation measures to avoid unacceptable impacts. Each of these matters is addressed in detail within Section 6.10 of this report.	YES

Aim	Response	Complies
(f) <i>maintaining the rural character of parts of the Western Parklands by allowing sustainable extensive agriculture, horticulture, forestry and the like, and</i>	This aim is not relevant to the proposal	NA
(g) <i>facilitating public access to, and use and enjoyment of, the Western Parklands, and</i>	The proposed industrial subdivision includes the delivery of pedestrian and cycle connections to the broader local and regional network. These connections will be provided in accordance with local Council requirements and the WSP Design Manual	YES
(h) <i>facilitating use of the Western Parklands to meet a range of community needs and interests, including those that promote health and well-being in the community, and</i>	This aim is not directly relevant to the proposed development, however, it will provide a revenue stream to fund the delivery of facilities within the WSP	NA
(i) <i>encouraging the use of the Western Parklands for education and research purposes, including accommodation and other facilities to support those purposes, and</i>	This aim is not relevant to the proposal	NA
(j) <i>allowing for interim uses on private land in the Western Parklands if such uses do not adversely affect the establishment of the Western Parklands or the ability of the Trust to carry out its functions as set out in section 12 of the Western Sydney Parklands Act 2006, and</i>	This aim is not relevant to the proposal	NA
(k) <i>ensuring that development of the Western Parklands is undertaken in an ecologically sustainable way</i>	The proposed development includes ESD principles and measures to avoid unacceptable environmental impacts, including WSUD measures to manage water quality and water quantity for both the upstream and downstream properties. The proposed subdivision has been designed to encourage use of alternative forms of transport. The future DAs will incorporate ESD principles for the development of individual industrial buildings.	YES

Table 6 – Compliance with WSP SEPP Matters for Consideration

Matter for Consideration	Response	Complies
<i>(a) the aim of this Policy, as set out in clause 2,</i>	The proposed development is consistent with the aims of the WSP SEPP as detailed in the table above.	YES
<i>(b) the impact on drinking water catchments and associated infrastructure,</i>	The site is not located within a drinking water catchment.	NA
<i>(c) the impact on utility services and easements,</i>	The Civil Engineering Report outlines the infrastructure requirements for the concept proposal, including the availability of existing utility services and the likely future requirements to facilitate the delivery of water, sewer, gas, power, street lighting and telecommunications. Each of these matters is addressed in detail within Section 6.8.	YES
<i>(d) the impact of carrying out the development on environmental conservation areas and the natural environment, including endangered ecological communities,</i>	A Biodiversity Development Assessment Report (BDAR) has been prepared which assesses the biodiversity impacts of the proposal. The BDAR outlines actions to avoid and minimise impacts on native vegetation and habitat and biodiversity through the siting and design of the proposed industrial subdivision. The biodiversity offset requirement for the residual impacts have been calculated to achieve the ‘no net loss standard’ under the relevant legislation, including allocation of ecosystem and species credits. These matters are addressed in detail within Section 6.7 of this report.	YES
<i>(e) the impact on the continuity of the Western Parklands as a corridor linking core habitat such as the endangered Cumberland Plain Woodland,</i>	The BDAR provides a comprehensive assessment of the potential impacts of the development on the continuity of the corridor and specifically regarding the Cumberland Plain Woodland in accordance with the BC Act and EPBC Act. These matters are addressed in detail within Section 6.7 of this report.	YES
<i>(f) the impact on the Western Parkland’s linked north-south circulation and access network and whether the development will enable access to all parts of the Western Parklands that are available for recreational use,</i>	The site has been identified as suitable for the proposed development due to its isolation and poor suitability for recreational use. The proposal will not impact on the linked north-south circulation and access network.	YES

Matter for Consideration	Response	Complies
	<p>The proposed industrial subdivision includes the delivery of pedestrian and cycle connections to the broader local and regional network. These connections will be provided in accordance with local Council requirements and the WSP Design Manual</p>	
<p>(g) <i>the impact on the physical and visual continuity of the Western Parklands as a scenic break in the urban fabric of western Sydney,</i></p>	<p>The proposed industrial subdivision is located within the north-western corner of the two lots which is located adjacent to the Lighthouse Interchange and has been largely cleared of vegetation.</p> <p>Large areas of existing vegetation surrounding the developable area will be retained, maintaining an effective visual buffer between the site and its immediate surrounds. The proposal will not unreasonably impact on the physical and visual continuity of the parklands and its contribution to the scenic and urban fabric of western Sydney.</p>	YES
<p>(h) <i>the impact on public access to the Western Parklands,</i></p>	<p>There is currently no public access to this part of the Western Parklands and the site is not identified for future public recreation facilities due to its isolation and access constraints. The proposal will provide for improved connectivity through the site for pedestrians and cyclists, including an east-west connection to the cycleway adjacent to the Westlink M7 Motorway via the underpass.</p>	YES
<p>(i) <i>consistency with:</i></p> <p>(i) <i>any plan of management for the parklands, that includes the Western Parklands, prepared and adopted under Part 4 of the Western Sydney Parklands Act 2006, or</i></p> <p>(ii) <i>any precinct plan for a precinct of the parklands, that includes the Western Parklands, prepared and adopted under that Part,</i></p>	<p>The site is identified in the adopted Plan of Management as one of several sites considered suitable for commercial use due to its low environmental and recreational value. The proposed business hub will generate revenue to support the WSP operations, including maintenance and development of new and existing facilities. It will also make a significant contribution to economic development, employment and training opportunities in Western Sydney.</p>	YES

Matter for Consideration	Response	Complies
(j) <i>the impact on surrounding residential amenity,</i>	There are no residential areas in proximity to the development site. The environmental impact assessment has demonstrated that the proposed development will not result in any unacceptable impacts on the surrounding residential amenity, considering traffic, flooding, noise, air quality and the like. Each of these matters is addressed in detail within Section 6 of this report.	YES
(k) <i>the impact on significant views,</i>	The proposed development will not negatively impact on significant views. A Visual Impact Analysis has been undertaken which identifies and analyses the impacts of the development from the surrounding road network. It is concluded that the proposed development is compatible and consistent with the surrounding employment uses and will not result in unacceptable impacts regarding views.	YES
(l) <i>the effect on drainage patterns, ground water, flood patterns and wetland viability,</i>	The potential impacts of the proposal regarding drainage, water, flooding and biodiversity are assessed in detail within Section 6 of this EIS. It has been demonstrated that the water quality and water quantity measures will avoid unacceptable impacts to the upstream or downstream properties. It has also been demonstrated that the residual impacts for biodiversity can be offset through ecosystem and species credits.	YES
(m) <i>the impact on heritage items,</i>	An Aboriginal Cultural Heritage Assessment Report (ACHAR) and Preliminary Non-Aboriginal Heritage Assessment have been prepared to identify and assess the potential impacts of the proposed development regarding cultural and heritage significance and provide mitigation measures to avoid unacceptable impacts. Each of these matters is addressed in detail within Section 6.10 of this report.	YES

Matter for Consideration	Response	Complies
(n) <i>the impact on traffic and parking.</i>	<p>The proposed industrial subdivision and access road network has been designed to accommodate B-double vehicles, with two travel lanes and two parking lanes.</p> <p>The traffic and parking requirements are assessed in detail within Section 6.2 of this report. It has been demonstrated that the traffic and parking impacts of the proposal are acceptable, subject to the implementation of the recommended mitigation measures, which include construction of a new roundabout, extension of pedestrian/bicycle connections and upgrade to the Greater Western Highway/Brabham Drive intersection.</p>	YES

Overall, it is considered that the proposed development is permitted with development consent in accordance with clause 11(2) of the WSP SEPP. The proposal complies with the aims of the Policy listed in clause 2 and satisfactorily addresses each of the relevant matters for consideration listed in clause 12. Accordingly, development consent may be granted in accordance with clause 4.38 of the EPA Act 1979.

4.2. REVIEW OF STATUTORY INSTRUMENTS

The following table summarises the relevant statutory instruments applying to the site and where these matters are addressed within the environmental impact assessment of the proposed development.

Table 7 – Review of Statutory Instruments

Instrument	Considerations	Reference
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	<p>The ecological assessment undertaken for the proposal has identified the site as containing endangered ecological communities and habitat for threatened species. The potential impacts to Greyheaded Flying-fox and Cumberland Plain Woodland need to be assessed in accordance with the EPBC Act</p> <p>The proposal has been referred to the Commonwealth Department of Environment and Energy and it was determined the proposed action is a controlled action and the project will be assessed by the NSW Government as an accredited assessment in accordance with the SSD provisions and the Commonwealth Supplementary Assessment Requirements (SARs)</p> <p>The Biodiversity Development Assessment Report (BDAR) submitted with the SSDA assesses each of the relevant matters.</p>	Section 6.7 - Biodiversity

Instrument	Considerations	Reference
<p><i>Biodiversity Conservation Act 2016</i></p>	<p>The site contains threatened, endangered and critically endangered ecological communities as well as habitat for threatened species under the provisions of the Biodiversity Conservation Act 2016 (BC Act).</p> <p>This includes the identified Cumberland Plain Woodland on the site which is identified under the BC Act provisions as a candidate community at risk for Serious and Irreversible Impacts (SAII). The proposed development will also result in prescribed impacts under the BC Act on biodiversity values including impacts to water quality and hydrological processes.</p> <p>The biodiversity impacts of the development need to be assessed in accordance with the BC Act and the Biodiversity Assessment Method. The BDAR submitted with the SSDA assesses each of the relevant matters in accordance with the BC Act.</p>	<p>Section 6.7 - Biodiversity</p>
<p><i>Rural Fires Act 1997</i></p>	<p>The site is included within Vegetation Category 3 and a bushfire assessment has been prepared to assess the potential bushfire hazards in accordance with <i>Planning for Bushfire Protection</i></p>	<p>Section 6.12 – Bushfire</p>
<p><i>Western Sydney Parklands Act 2006</i></p>	<p>The site is located within the Western Parklands in accordance with Schedule 2 of the Western Sydney Parklands Act 2006 (WSP Act). A Plan of Management is required to facilitate the identification and assessment of proposals for income-earning activities within the WSP.</p> <p>The proposed development is consistent with the <i>Western Sydney Parklands Plan of Management 2030</i> which identifies the site as a business hub to generate revenue to support the Parklands operations, including the maintenance and development of new facilities.</p>	<p>Section 1.2 – Project Objectives</p> <p>Section 6.1 – Suitability of the Site</p>
<p><i>State Environmental Planning Policy (Western Sydney Parklands) 2009</i></p>	<p>The permissibility of the development relies upon compliance with Clause 11(2) of <i>State Environmental Planning Policy (Western Sydney Parklands) 2009</i> (WSP SEPP).</p> <p>The aims and clause 12 matters for consideration also need to be addressed in determining the appropriateness of a proposal within the WSP.</p> <p>Each of these matters have been addressed in detail within the previous section of the report. The proposed development is permissible, complies with the aims of the Policy and appropriately responds to the relevant matters for consideration listed in the SEPP.</p>	<p>Section 1.2 – Project Objectives</p> <p>Section 4.1 - Permissibility</p> <p>Section 6.1 – Suitability of the Site</p>

Instrument	Considerations	Reference
<i>Environmental Planning and Assessment Act 1979</i>	The proposed development is classified as State significant development in accordance with the provisions of Part 4 Division 4.7 of the EPA Act. The SSDA has been lodged as a Concept DA in accordance with section 4.22.	Section 1.1 – Project Overview
<i>State Environmental Planning Policy (State and Regional Development) 2011</i>	The site is located within the Western Sydney Parklands and has a capital investment value over \$10 million. Accordingly, the proposed development is classified as State significant development under clause 5 in Schedule 2 of the SRP SEPP. The Minister for Planning (or his delegate) is the consent authority for SSD pursuant to section 4.5 of the EP&A Act.	Section 1.1 – Project Overview
<i>State Environmental Planning Policy (Infrastructure) 2007</i>	The concept proposal seeks to deliver a total of approximately 157,600m ² of industrial floor space and 7,900m ² ancillary office space. The proposal is identified as ‘traffic generating development’ in accordance with clause 104 of the Infrastructure SEPP as it provides over 20,000m ² light industrial floorspace and/or over 8,000m ² of warehouse or distribution centre floor space. A referral to the NSW Roads and Maritime Services will be required to assess the potential impacts on the regional road network.	Section 5 – Community and Stakeholder Engagement Section 6.2 – Traffic and Transport
<i>State Environmental Planning Policy No 33 – Hazardous and Offensive Development</i>	The Concept DA outlines a concept proposal for the future industrial development and a detailed proposal for the demolition, site remediation, subdivision, infrastructure and associated site works. Additional DAs will be required to facilitate the construction of individual buildings. The provisions of SEPP 33 will be addressed once the future land use activities have been resolved and as part of the associated future DAs.	Section 6.1 – Suitability of Site Section 6.5 – Hazard and Risk
<i>State Environmental Planning Policy No 55 – Remediation of Land</i>	The site has potential to be contaminated from previous land use activities and a contamination assessment is required to confirm the site is suitable for the proposed use. Detailed site investigations have been undertaken and lodged with the SSDA to confirm the current site conditions and the remediation measures required to facilitate the proposed industrial use.	Section 6.3 – Contamination
<i>Sydney Regional Environmental Plan No. 20 – Hawkesbury-Nepean River (No 2 – 1987)</i>	The site is located within the Hawkesbury-Nepean River catchment system. Each of the general planning considerations listed in clause 5 has been considered in detail and addressed within the detailed technical reports submitted with the SSDA. The stormwater management system and WSUD measures will improve and maintain the environmental attributes of the Hawkesbury-Nepean River in its regional context. Further, the	Section 1.4 - Alternatives Section 6.1 – Suitability of the Site

Instrument	Considerations	Reference
	<p>proposal is consistent with the strategic planning intentions and the potential environmental impacts have been thoroughly assessed, including measures to mitigate, minimise and/or manage these impacts to achieve an acceptable outcome.</p> <p>The project alternatives have also been assessed in detail and it is concluded that the proposed development will provide the optimal outcome for the site, balancing the environmental impacts with the economic and social benefits, including the delivery of funding for the maintenance and delivery of new facilities within the WSP.</p>	<p>Section 6.6 – Soils and Water</p> <p>Section 6.7 - Biodiversity</p>
<p><i>Blacktown Local Environmental Plan 2015</i></p>	<p>The site is excluded from the Blacktown LEP, however, it is considered appropriate to assess the compatibility of the proposal with surrounding land uses which are affected by the LEP controls</p>	<p>Section 6.1 – Suitability of the Site</p>

4.3. PLANNING AGREEMENTS AND DEVELOPER CONTRIBUTIONS

No planning agreements are proposed as part of the development and the development of the site is not subject to the levy of developer contributions under section 7.11 (formerly section 94) of the *Environmental Planning and Assessment Act 1979*. Provision for relevant road upgrades and improvements to the local road network have been considered as part of the proposal.

The proposed Light Horse Interchange Business Hub will be retained and managed by the WSPT as part of their business model to generate commercial revenue that will be reinvested into the operation, management and improvement of the Western Sydney Parklands. In this regard, the proposed development will result in public benefit through the revenue generated by the WSPT that will be reinvested in community infrastructure for the use and benefit of the public.

5. COMMUNITY AND STAKEHOLDER ENGAGEMENT

Community and stakeholder engagement has been undertaken by the WSPT in the preparation of the proposed Light Horse Interchange Business Hub. This included direct engagement and consultation with:

- Adjoining landowners and occupants
- Government, agency and utility stakeholders listed within the SEARs

The community and stakeholder engagement undertaken has sought to address the requirements of the SEARs and includes:

- Details of the community and stakeholder participation strategy identifying who has been consulted and the justification for the selection, and
- Details of the results of the implementation of the strategy including issues raised and how these have been addressed.

Details of the outcomes of the community and stakeholder engagement is contained in the Consultation Report submitted in support of the proposal and provided in **Appendix M**. A summary of the responses to issues raised by stakeholders during the engagement process is provided in the table below.

Table 8 – Community and Stakeholder Engagement: Issues and Responses

Issues Raised	Stakeholder	Response
<p>Flooding</p> <ul style="list-style-type: none"> • Pre and post development flood scenarios and impacts • Impacts to M4 Motorway 	<p>DPE</p> <p>Council</p>	<p>A comprehensive assessment of flooding has been undertaken using a TUFLOW two-dimensional model to analyse local flow behaviour on the site and adjoining properties, including pre and post development flood scenarios and impacts for both upstream and downstream properties in accordance with feedback from DPE and Council.</p> <p>The flooding analysis has concluded that there is no change to peak flows and corresponding peak flood levels downstream. Risk to life is effectively managed in providing areas of floor free refuge and the new bridge and access road will provide floor free access.</p> <p>The potential flooding impacts and mitigation measures are discussed in detail within Section 6.4 of this report.</p>
<p>High pressure gas easement</p>	<p>Jemena</p> <p>DPE</p>	<p>The high-pressure gas pipeline along the eastern boundary of the development site has been assessed in detail to understand the potential risk exposure to the future populations and respond to feedback from both DPE and Jemena.</p> <p>Additional consultation was undertaken with Jemena to obtain relevant data and complete a detailed assessment in accordance with HIPAP No 1. Hazard identification and consequence analysis was completed and the analysis has concluded the risks are low and comply with relevant criteria. Regardless, recommended mitigation measures have been provided and will be implemented in the future</p>

Issues Raised	Stakeholder	Response
		<p>DAs for individual buildings. Further detail is provided in Section 6.5 of this report.</p> <p>The stormwater management design (refer below) also responds to the feedback provided by Jemena regarding water ponding. The on-site stormwater detention and bioretention basin has been designed to accommodate the forecast demands and avoid impacts on the adjoining easement.</p>
<p>Stormwater management, drainage and flooding</p> <ul style="list-style-type: none"> Existing overland flow paths, stormwater management, and water quality and quantity. 	<p>Council DPE WaterNSW</p>	<p>The proposed development incorporates a stormwater management system that will effectively manage stormwater flows across the site, including water quantity and water quality measures to avoid impacts on the downstream properties. The Civil Engineering Report provides a comprehensive description of the proposed measures and responds to each of the feedback provided by DPE, Council and Water NSW.</p> <p>The on-site basin provides both on-site stormwater detention storage and a bioretention basin with stormwater quality improvement devices and emergency overland flowpaths during major events or blockages. WSUD measures will be implemented along the realigned Eskdale Creek to improve water quality, regulate flow rates, enhance existing landscaping and provide aesthetic benefits.</p> <p>The stormwater management system is described in further detail within Section 6.6 of this report.</p>
<p>Eskdale Creek realignment</p>	<p>Council WaterNSW</p>	<p>The proposed realignment of Eskdale Creek and its associated impacts have been assessed in detail, responding to feedback provided by Council and WaterNSW.</p> <p>The final subdivision layout avoids the large triangular shaped Cumberland Plain Woodland community in the south-western part of the site. The location of the Eskdale Creek realignment is consistent with the preliminary discussions.</p> <p>Mitigation measures are included to avoid unacceptable biodiversity impacts, including pre-clearance protocols, implementation of the stormwater management system, salvaging hollow-bearing trees, protecting and enhancing riparian vegetation and implementing soil erosion and sediment controls measures.</p> <p>Each of these matters is addressed in greater detail within Section 6.7 of this report.</p>

Issues Raised	Stakeholder	Response
<p>Subdivision</p> <ul style="list-style-type: none"> Lack of clarity on basin lot. 	Council	<p>The Draft Plan of Subdivision was updated to respond to feedback provided by Council and others, including:</p> <ul style="list-style-type: none"> Deleting the private access road at the rear of the industrial lots Designing the access road to comply with Council's DCP requirements Providing maintenance access to the estate basin and a designated lot for the basin
<p>Contamination</p>	DPE Council	<p>Detailed site investigations were undertaken to assess the potential contamination of the site, including unexploded ordnance as requested by Council.</p> <p>The assessment report (refer to Section 6.3) concludes the site is suitable for the proposed development pending the implementation of the recommended remediation works, including additional analysis prior to or during the demolition phase.</p>
<p>Consultation</p> <ul style="list-style-type: none"> Emphasised importance of consultation 	DPE	<p>WSPT has liaised with adjoining landowners and occupants as well as relevant government, agency and utility stakeholders as outlined within the Consultation Report (refer to Appendix M).</p>
<p>Emergency access</p>	Council	<p>The Draft Plan of Subdivision was updated to incorporate an emergency vehicle access point via the existing underpass from Wallgrove Road. The right of access is limited to 6 metres in accordance with Council's feedback</p>
<p>Biodiversity</p>	DPE Council	<p>The biodiversity values of the site have been assessed in detail and in response to feedback provided by DPE and Council.</p> <p>Mitigation measures are proposed to avoid or minimise potential biodiversity impacts. The required ecosystem credits and species credits to offset the residual impacts of the proposal will be generated from existing Biobanking sites and potentially new Biodiversity Stewardship Agreements.</p> <p>Each of these matters is addressed in detail within Section 6.7 of this report.</p>

Issues Raised	Stakeholder	Response
Heritage	DPE Council	<p>The site has been assessed for both Aboriginal and non-Aboriginal heritage values as outlined in Section 6.10 of this report.</p> <p>Further detailed assessments will be undertaken prior to commencing work on the site in accordance with the recommended mitigation measures to avoid potential heritage impacts.</p>
Bushfire	DPE Council	<p>A Bushfire Assessment has been prepared and lodged with the SSDA in accordance with the feedback provided by DPE and Council. The report concludes that the site can accommodate the proposed development subject to the adoption of the recommended mitigation measures, including provision of defensible space around the buildings.</p> <p>The bushfire assessment is discussed in detail within Section 6.12.</p>
Traffic <ul style="list-style-type: none"> • Site access and corresponding impacts 	RMS Council	<p>The Draft Plan of Subdivision was updated to respond to concerns raised regarding vehicle access and road design to address relevant technical standards, including the requirements of the Blacktown DCP.</p>
Connectivity <ul style="list-style-type: none"> • Connection to M7 Cycleway suggested 	RMS nroads	<p>The Concept Masterplan and supporting technical reports were updated to include a shareway access from the proposed industrial subdivision to the Westlink M7 Motorway cycleway via the underpass access which is otherwise restricted to emergency vehicles.</p> <p>The proposed pedestrian and cycle connections are documented in the Traffic Impact Assessment and Civil Engineering Report which are discussed in detail within Section 6.2 and Section 6.8.</p>
Car Parking <ul style="list-style-type: none"> • To adopt BCC DCP car parking rates 	Council	<p>The Traffic Impact Assessment provides detailed justification for the use of the RMS car parking rates in lieu of Council's significantly higher rates. This matter is addressed within Section 6.2 of the report.</p>
Setbacks <ul style="list-style-type: none"> • Requested 20m building setback and 10m carpark setback along the Motorway frontages. 	Council	<p>The setbacks requested by Council have been incorporated in the Urban Design Guidelines which are discussed in Section 6.9 of this report.</p>

6. ENVIRONMENTAL IMPACT ASSESSMENT

This section describes the way in which the key issues identified in the SEARs have been assessed. It provides a comprehensive description of the specialist technical studies undertaken regarding the potential impacts of the proposed development and recommended mitigation, minimisation and management measures to avoid unacceptable impacts.

6.1. SUITABILITY OF THE SITE

Preliminary investigations were undertaken early in the strategic planning process to identify sites within the WSP which could be suitable to accommodate a business hub. The WSP Plan of Management 2020 (**POM 2020**) dated December 2010 sought to commence consulting with local Councils and relevant State government agencies regarding the opportunity to develop land and improve the WSP income base through generating long term revenue. Four key criteria were applied to identify appropriate sites:

1. *Land uses should generate an appropriate commercial return and also add to the amenity of adjacent communities.*
2. *Land uses must generate additional employment and training opportunities for local and regional communities.*
3. *Development must be undertaken in a manner that will minimise the environmental impact of such development.*
4. *The development of Business Hubs will only be permitted to occur on sites with low environmental and recreational values.*

The WSP POM 2020 Supplement dated March 2014 outlines the outcomes of the consultation and assessment process to accommodate the 2% of land for business hubs to service local and regional communities and deliver \$20 million per annum in revenue to service the facilities and activities of the WSP over the long term. The Supplement states:

...two percent of the Parklands, with low ecological value has been selected to become nine business hubs servicing local and regional communities. These hubs are generally located on the Parklands' margins, adjacent to motorways, major arterial roads and regional employment areas in each of the region's three local government areas: Liverpool, Fairfield and Blacktown.

The characteristics of the subject site are described as follows:

A large flat site located along the M7 and M4 Motorways and at the Light Horse Interchange. The site is adjacent to Eastern and Reedy Creeks making parts of the site flood affected. The site is located adjacent to the Eastern Creek Motor Sports precinct as well as the Eastern Creek Waste Management Centre to the south. The Western Sydney Employment Area and the former Eastern Creek Quarantine Animal Facility is located to the west and northwest of the site respectively.

The suitability of the site to accommodate the proposed development has since been assessed in further detail in preparing this EIS. This includes a comprehensive assessment of its consistency with the relevant strategic land use and transport policies and level of compliance with the statutory planning controls that apply to the site and the proposed development. The potential environmental impacts of the proposal have also been assessed in accordance with the SEARs and as outlined within the following sub-sections of the EIS.

Each of the planning and technical specialist assessments has been considered in assessing the suitability of the site to accommodate the industrial business hub as outlined within the Plan of Management 2030 and as proposed within this SSDA. The site is considered suitable for the proposed use for the reasons summarised below:

- The site benefits from excellent access to the regional and local road network. It is strategically located adjacent to the intersection of the M4 Western Motorway and Westlink M7 Motorway and the proposed roundabout connection to Ferrers Road provides a north-south connection to the Great Western Highway and The Horsley Drive.

- The proposed development is consistent and compatible with the large-scale employment uses within the immediate vicinity of the site, including the Huntingwood and Arndell Park industrial areas to the north and north-east and the Eastern Creek employment hub to the west of the Westlink M7 Motorway and the Wallgrove Road.
- The proposal represents a significant investment in the Central City District with an estimated capital investment value of approximately \$213 million and is expected to generate 400 full-time equivalent jobs during construction and 400-415 full-time equivalent jobs in the operational phase. The site is well-located close to the growing residential population of Western Sydney, providing the opportunity for jobs closer to home and achieving the '30 Minute City' concept.
- Utility services required to service the future industrial development are available within the immediate locality and additional connections can provide essential infrastructure to the individual lots within the proposed subdivision.
- The proposed industrial business hub is located well away from sensitive land use activities, including residential development, to avoid unacceptable amenity impacts including noise, air and the like. The site is adjacent to a major transport interchange between two major motorways, a motorsport park, a waste facility and a quarry. The transport interchange provides a clear separation between the site and the closest residential properties. The existing activities on the surrounding land are less sensitive uses and unlikely to be detrimentally impacted by the land use activities to be accommodated on the site.
- The proposed industrial subdivision is located on land which has been predominantly cleared in association with its former use as an army camp and military establishment. The potential biodiversity impacts associated with the proposed site works, including the realignment of Eskdale Creek, can be minimised through the implementation of the recommendations in the biodiversity assessment with the residual impacts offset by the retirement or generation of ecosystem and species credits.
- The proposed redevelopment of the site to accommodate an industrial subdivision will not result in any impacts to the peak flood levels to the neighbouring properties and the future buildings can be designed to comply with the relevant guidelines. The proposed access road and existing emergency access route will provide floor-free access in extreme flood events and site-based flood management plans can be prepared with the future DAs to address flood warning and emergency response opportunities.
- The contamination assessment has identified the areas of potential contamination across the developable area of the site and provided remediation measures to ensure the site is suitable for the proposed industrial use.

Overall, it is considered that the proposed development is consistent with the strategic and statutory planning provisions which apply to the site. The potential environmental impacts of the development have been comprehensively assessed and can be mitigated, minimised and/or managed to avoid unacceptable impacts to the site or the locality. Accordingly, the site is considered suitable for the proposed use.

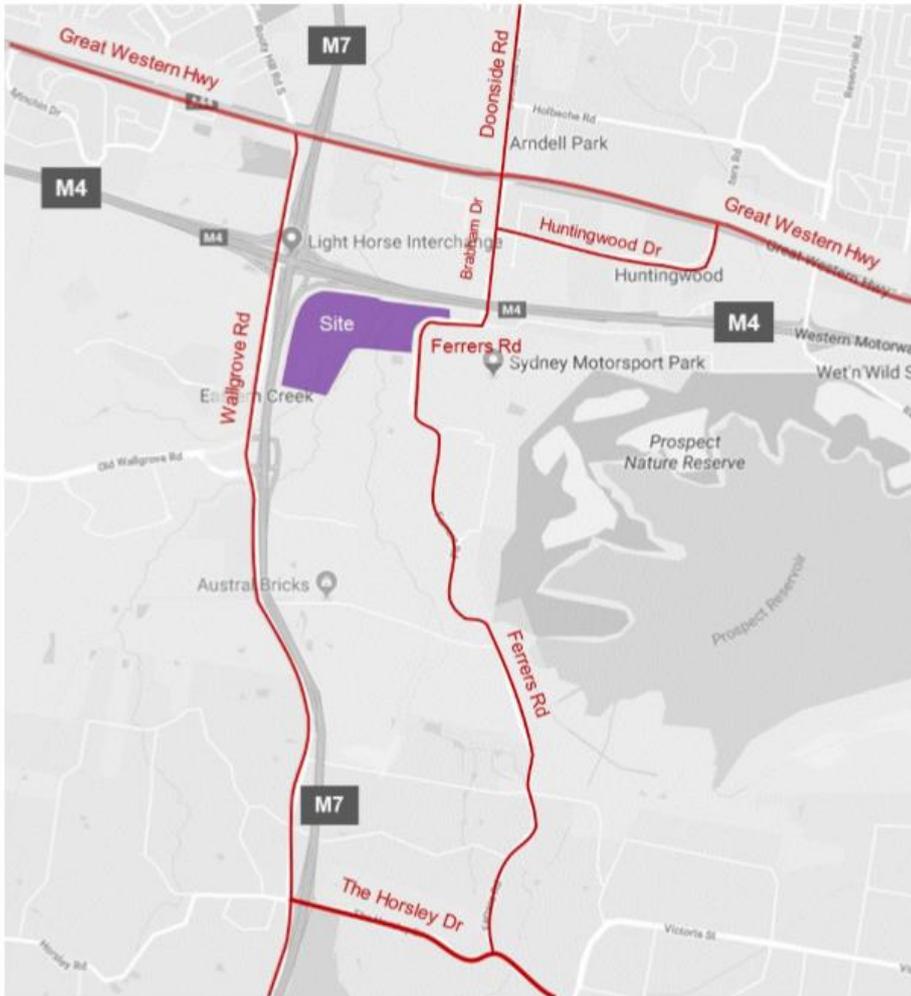
6.2. TRAFFIC AND TRANSPORT

Ason Group was engaged to prepare a Traffic Impact Assessment (**TIA**) to identify and analyse the potential traffic-related impacts associated with the Concept Proposal and Detailed Proposal for the Stage 1 works (refer to **Appendix N**). The report has been prepared in accordance with the SEARs issued for the SSDA, including the appended submissions from relevant transport authorities, as well as legislative requirements and relevant guidelines, including Council's DCP.

The TIA includes a review of the existing and future road network, including a description of regional and local roads, public transport and pedestrian and cycle access. Traffic surveys were undertaken to quantify the existing and future traffic flows along key roads and performance of key intersections, including:

- Great Western Highway / Huntingwood Road
- Great Western Highway / Brabham Drive / Doonside Road
- Brabham Drive / Huntingwood Drive
- Brabham Drive / Ferrers Road / Peter Brock Drive
- Ferrers Road / The Horsley Drive

Figure 9 – Existing Road Network (Source: Ason Group, 2019)



The report assesses the potential traffic generation and distribution of traffic for the future development and the adequacy of the proposed internal access, parking and service provisions. Consideration is given to the growth rate for background traffic, as well as the implications associated with planned road network upgrades at:

- Great Western Highway / Doonside Road / Brabham Drive
- Along The Horsley Drive
- The Horsley Drive / Ferrers Road intersection

The SIDRA analysis indicates that the key intersections would operate satisfactorily under the 2036 base scenario except for the Great Western Highway / Brabham Drive / Doonside Road intersection which would operate at LoS F during the AM peak. Accordingly, further upgrades may be required to this intersection, regardless of the proposed development.

Intersection performance under the existing condition, future 2036 base case and project case are depicted in Figure 10, Figure 11, and Figure 12.

Figure 10 – Intersection Performance – Existing Conditions (Source: Ason Group, 2019)

Intersection	Control Type	Period	Intersection Delay	Level of Service
Great Western Highway / Doonside Road / Brabham Drive	Signals	AM	57	E
		PM	52	D
Great Western Highway / Huntingwood Drive	Signal	AM	9	A
		PM	23	B
Brabham Drive / Huntingwood Drive	Roundabout ¹	AM	14	A
		PM	14	A
Ferrers Road / Brabham Drive / Peter Brock Drive	Roundabout ¹	AM	11	A
		PM	15	B
The Horsley Drive / Ferrers Road	Signals	AM	38	C
		PM	20	B

Note 1: Intersection delay / LoS for roundabouts, as well as other types of priority-controlled intersections, relates to Worst Movement result. For signalized intersections, reported delay relates to overall average intersection delay, weighted by turn volumes.

Figure 11 – Intersection Performance – 2036 Base Case (Source: Ason Group, 2019)

Intersection	Control Type	Period	Intersection Delay	Level of Service
Great Western Highway / Doonside Road / Brabham Drive (Planned Upgrades)	Signals	AM	73	F
		PM	53	D
Great Western Highway / Huntingwood Drive	Signal	AM	11	A
		PM	26	B
Brabham Drive / Huntingwood Drive	Roundabout	AM	15	B
		PM	17	B
Ferrers Road / Brabham Drive / Peter Brock Drive	Roundabout	AM	13	A
		PM	21	B
The Horsley Drive / Ferrers Road (Planned Upgrades)	Signals	AM	19	B
		PM	21	B

Figure 12 – Intersection Performance – Project Case (Source: Ason Group, 2019)

Intersection	Control Type	Period	Intersection Delay	Level of Service
Great Western Highway / Doonside Road / Brabham Drive (Planned Upgrades)	Signals	AM	81	F
		PM	62	E
Great Western Highway / Huntingwood Drive	Signal	AM	12	A
		PM	27	B
Brabham Drive / Huntingwood Drive	Roundabout	AM	18	B
		PM	19	B
Ferrers Road / Brabham Drive / Peter Brock Drive	Roundabout	AM	19	B
		PM	28	B
The Horsley Drive / Ferrers Rd (Planned Upgrades)	Signals	AM	20	B
		PM	26	B
Ferrers Road / LIBH Access	Roundabout	AM	51	D
		PM	30	C

The proposed development as outlined within the Concept Proposal has the potential to generate 7,078 vehicle trips per day, using the RMS Guide daily trip rates of 4 per 100m² GFA for warehouse floorspace, and 10 trips per 100m² GFA for office floorspace. The peak hour trip generation has also been assessed based on trip rates surveyed by the RMS at sites with similar land uses, including:

- Erskine Park Industrial Estate, Erskine Park
- Wonderland Business Park, Eastern Creek
- Riverwood Business Park, Riverwood

The assessment for the proposed development adopts trip rates that are conservatively higher than the average of the three sites in order to provide a robust assessment – 0.25 trips per 100m² of GFA for the AM Rate and 0.2 trips per 100m² of GFA for the PM Rate. This results in a potential traffic generation of 420 vehicle trips in the AM peak and 340 vehicle trips in the PM peak.

It is expected that 28% of vehicle trips would be for heavy vehicles, based on surveys of similar industrial sites (as above). Arrivals and departures would be split 80:20 arrival/departure in the AM peak and 20:80 arrival/departure in the PM peak.

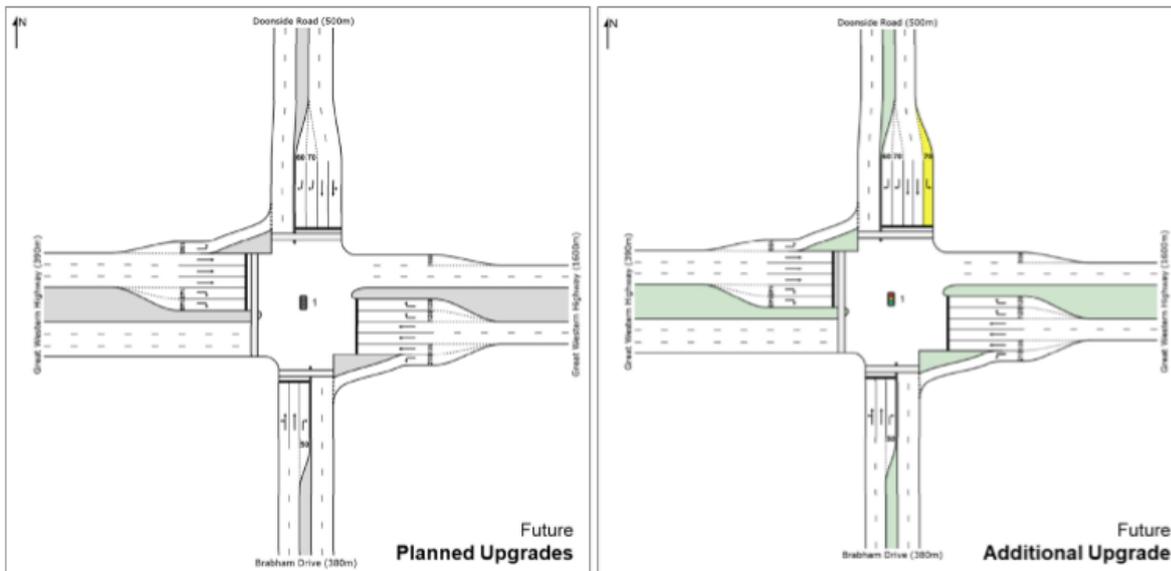
The operation of all key intersections has been assessed for the 'Project Case' which includes-

- Project case traffic volumes (2036 background plus traffic generated by the development)
- Planned upgrades at the intersections of Great Western Highway / Brabham Drive / Doonside Road and The Horsley Drive / Ferrers Road
- Layout for the proposed roundabout on Ferrers Road, providing access to the development site
- Existing road geometry at the remaining intersections.

The SIDRA analysis confirms the key intersections would continue to operate satisfactorily with the traffic generated by the proposed development. The Levels of Service and delays are expected to be similar to the 2036 base scenario. However, the Great Western Highway / Brabham Drive intersection is forecast to have a slight increase in average vehicle delays, equating to approximately 8 seconds in the AM peak and 9 seconds in the PM peak. The changes to the PM peak result in a change in the Level of Service from D to E, while the AM peak would continue to operate at Level of Service F.

An upgrade to the Great Western Highway / Brabham Drive intersection has been identified that could mitigate the potential impacts of the proposed development. An additional 70 metre lane on the north approach (Doonside Road) to the Great Western Highway could be dedicated as a left-turn only lane. The proposed upgrade would provide two lanes for southbound through traffic, resulting in an improved intersection performance, particularly in the AM peak.

Figure 13 – GWH / Doonside Road / Brabham Drive – Potential Upgrade (Source: Ason Group, 2019)



The TIA also seeks to establish appropriate car parking rates for the future industrial development. The report identifies the rates listed with Council’s DCP and the RMS Guide, benchmarking these against standard use demands from other similar developments. It is proposed that on-site parking would be provided for the future industrial buildings in accordance with the following rates:

- Warehouse/distribution: 1 space per 300m²
- Office: 1 space per 40m²
- Accessible: 1 space for every 100 car parking spaces or part thereof

All car parking and service vehicle areas should be required to be designed in accordance with the relevant Australian Standards including, AS2890.1 AS 2890.2 and AS2890.6.

The TIA recognises the existing dominance of private vehicle transport as well as the opportunities to deliver improved access to public and active transport. Existing bus services travel along Wallgrove Road and through the industrial areas to the north. However, there is limited potential to accommodate safe pedestrian access to north-bound services on the western side of Wallgrove Road. Additional bus services could be provided to the proposed development over the medium to long term, travelling north along Ferrers Road to Mount Druitt or Blacktown and south to Fairfield or Liverpool.

A 3.5 metre wide shared bicycle/pedestrian path is proposed from Wallgrove Road via the underpass, which is limited to emergency vehicles, providing connections to the shared path that runs parallel to the Westlink M7 Motorway. A 2.5 metre wide shared bicycle/pedestrian path is also proposed from Ferrers Road, providing a connection to the extensive off-road cycle access network to the east. A 1.2 metre wide pedestrian pathway will also be provided on the eastern side of the access road. Appropriate on-site cycle facilities (eg storage, lockers and shower facilities) should be provided within the future industrial developments.

The report concludes that the proposed development is supported on traffic grounds, providing each of the above mitigation measures are implemented during the construction and operation of the future development. It is anticipated that conditions of consent will be imposed which require the completion of the road upgrade works, delivery of car parking in accordance with the established rates and compliance with the relevant Australian Standards.

6.3. CONTAMINATION

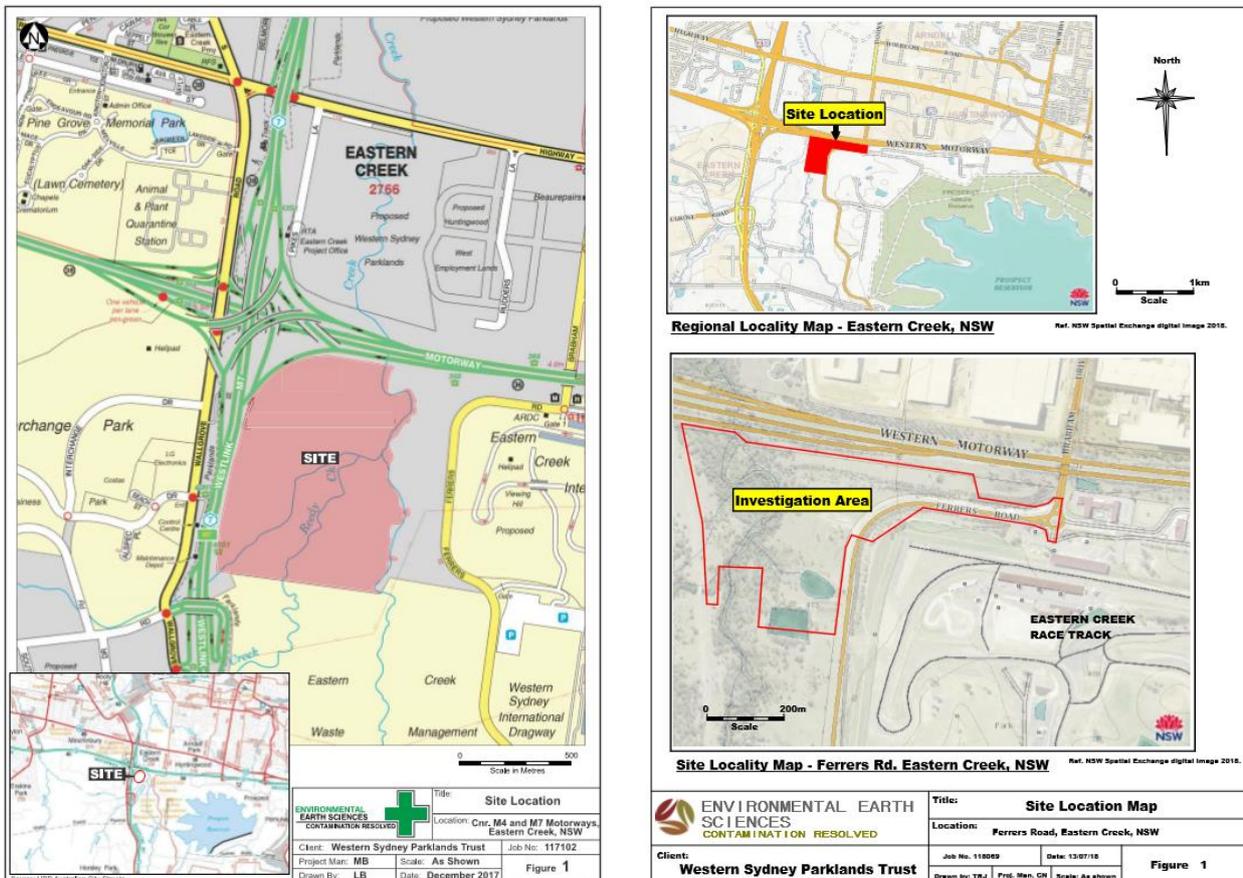
Environmental Earth Sciences (EES) was engaged by WSPT to assess the potential for contamination of the soil, groundwater and soil vapour in accordance with the SEARs. A copy of the Contamination Assessment is attached as **Appendix I**.

The key objectives for both site investigations were established by EES to be as follows:

- Assess the potential for site contamination through the identification of potential contamination sources and potential contaminants of concern.
- Undertake a limited intrusive soil assessment to ascertain general soil contamination conditions of fill materials and consequent risk profile.
- Provide recommendations for any additional DSI to further delineate suspected soil and/or groundwater contamination to ascertain if any unacceptable risk exists for future users of the site and the environment.

The report assesses the site conditions of the western portion of the site which is proposed to accommodate the industrial subdivision (Lot 10 in DP 1061237) and the eastern portion of the site which will accommodate the access road and new roundabout (part of Lot 5 in DP804051).

Figure 14 – Site Contamination Study Areas – Western and Eastern Portions (Source: EES, 2019)

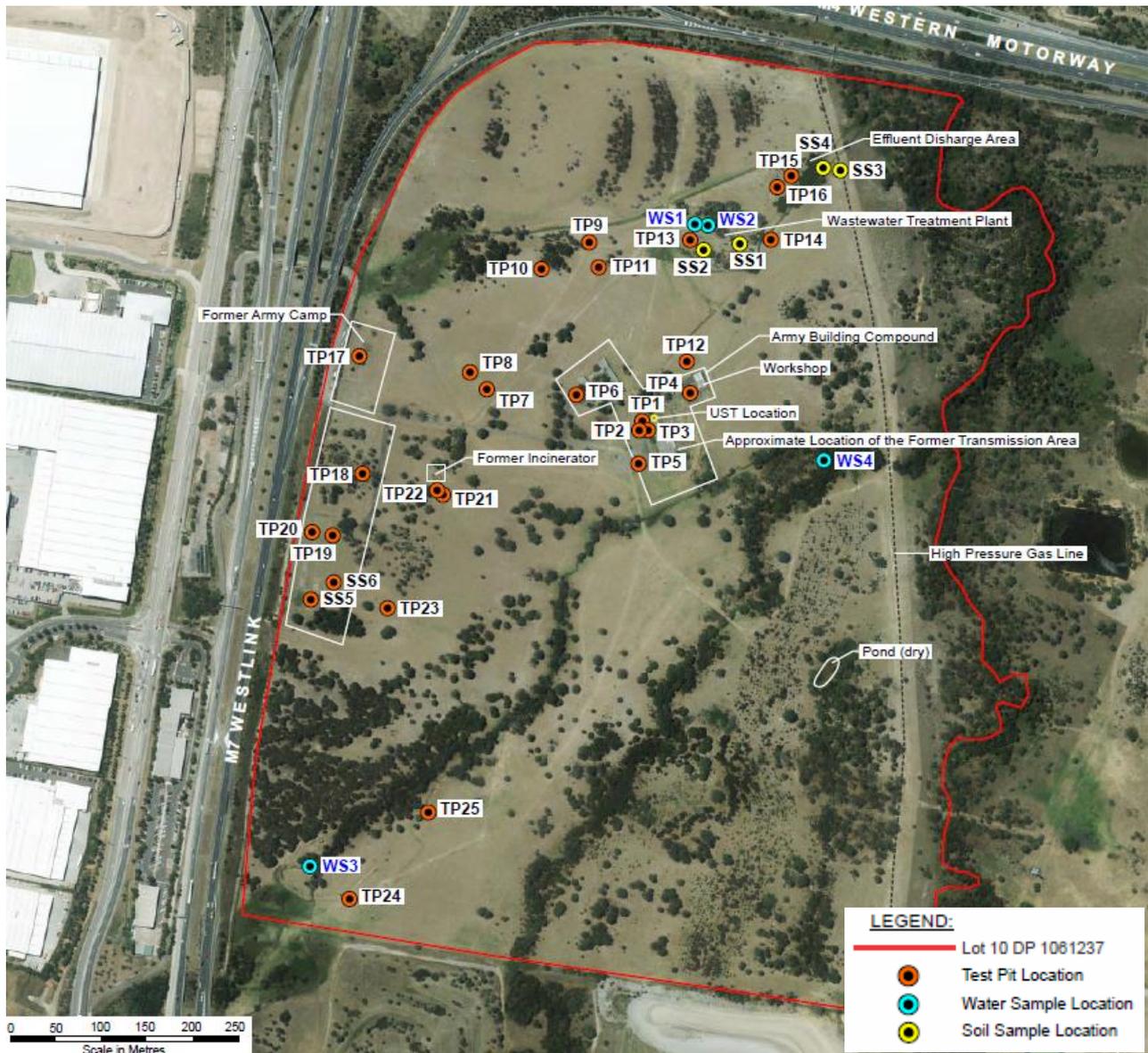


The scope of work for the western portion included an initial review of the Preliminary Site Investigation Report (PSI) completed by Zoic Environmental in 2017 and preparation of a sampling plan in response to the SEARs.

The PSI indicated five different settings as areas of potential environmental concern – the former army compound, former army camp, wastewater treatment plant (WWTP), general soil disturbance (potential buried waste among the site), and surface waters. Intrusive works for the supplementary assessment included:

- 26 x test pits using a 9-tonne excavator for soil assessment and sampling
- 6 x shallow soil cores using a hand auger for soil assessment and sampling

Figure 15 – Site Layout and Sampling Locations – Western Portion (Source: EES, 2019)



The main findings of the investigation are summarised in the report as follows:

- *All analysed samples were below the health investigation/ health screening criteria for a commercial/ industrial land use scenario (HIL-D and HSL-D).*
- *Hydrocarbon leak was detected from the two underground storage tanks (USTs) located at the former army compound.*
- *The horizontal extent of the impact was observed to be constrained by the high plasticity clay soils surrounding the UST and appeared to be limited with the sand bedding of the USTs.*
- *The vertical extent of the impact may require further investigation, this can be done after the removal of the USTs.*
- *As there were no indications of the site ever being involved in bulk storage and/or use of aqueous firefighting foams (AFFF), investigation for per- and poly-fluoroalkyl substances (PFAS) chemicals was not required.*
- *Potential for lead contamination deriving from remnant bullets in soils within the study area was considered low as the site did not host a rifle range (<http://www.defence.gov.au/UXO/Where/Default.asp>) and no ordinance debris was observed during the investigation. However, as the site was a military site the potential still remains for lead debris associated with military activity.*
- *A preliminary review for potential unexploded ordinance (UXO) risk was undertaken based on department of defence UXO mapping. Findings reported a low risk for the site.*

Bonded asbestos containing material (**ACM**) was detected at the former army compound. Bonded asbestos fragments were also observed on the topsoil around the impacted buildings. Water was observed in four of the tanks of the wastewater treatment plant (**WWTP**), grit chamber, two primary sedimentation tanks and a distribution chamber. The initial water quality assessment indicated that the water may not require treatment, however, this should be confirmed by assessment of potential settled solids in the bottom of the tanks.

Soil mounds and piles were subject to visual assessment and soil testing at various locations. Exceedances of relevant environmental criteria were noted at some locations. However, all results were well below the relevant health criteria. Bonded ACM was noted in fill material at four locations. One sample was collected from the junction point of the two onsite creeks (downstream) to establish the on-site baseline surface water quality. The results of the analysis indicated that the surface water quality at this location satisfied the drinking and freshwater criteria.

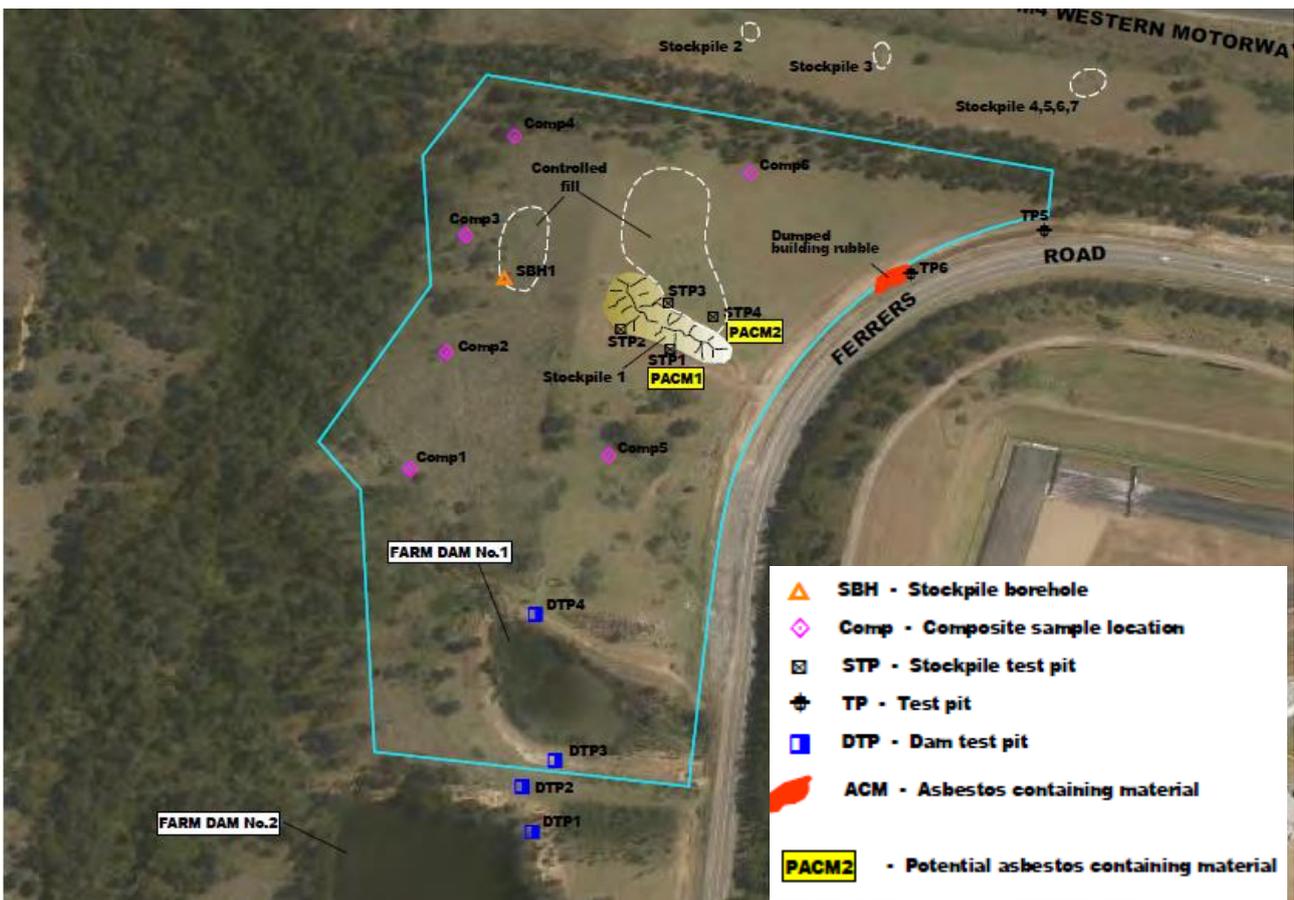
The additional analysis undertaken for the eastern portion of the site included assessment of the contamination status of soils and surface water. Intrusive works included a combination of mechanical methods (5-tonne excavator) and manual methods (hand auger/shovel). Investigations were undertaken for both coverage and targeted purposes at six locations, including areas east and west of Eastern Creek, the proposed new access road corridor, the area of redevelopment at Ferrers Road and two farm dams.

All soil results were reported to be below the adopted interim human health criteria for general and light industrial land use or below laboratory detection. The risk posed by contamination was generally confined to fill materials within the seven stockpiles on the eastern side of eastern creek and the proposed new access road portions. The key findings for the eastern portion of the site are listed in the report as follows:

- *Two portions of low-lying controlled filling were noted within the eastern offset area to the north and west of Stockpile 1. This material appeared to be reworked natural material with inspection noting no visible / olfactory indications of contamination and associated negligible risk.*
- *Coverage assessment undertaken on the surface / near-surface at east / west offset storage areas and the proposed access road there were no visible / olfactory indications of contamination. Results of composite laboratory sampling confirmed observations of negligible contamination and associated low risk.*
- *The targeted assessment of the Ferrers Road (western verge) was did not note any visible / olfactory indications of contamination. Results of composite laboratory sampling confirmed observations of negligible contamination and associated low risk.*
- *As there were no indications of the site ever being involved in bulk storage and/or use of aqueous firefighting foams (AFFF), investigation for per- and poly-fluoroalkyl substances (PFAS) chemicals was not undertaken.*

- A preliminary review for potential unexploded ordinance (UXO) risk was undertaken with findings reporting no known risk for the site.
- The targeted assessment of the Ferrers Road (western verge) was did not note any visible / olfactory indications of contamination. Results of composite laboratory sampling confirmed observations of negligible contamination and associated low risk.
- Several stockpiles of uncontrolled poor-quality fill were assessed (Stockpiles 2 – 7) in the proposed access road and eastern offset portions. Chemical results for Stockpiles 2 – 5 (respective sample locations SBH2 – SBH5) reported elevated PAH concentrations in excess of the ESL for benzo(a)pyrene; and lead and benzo(a)pyrene in excess of GSW thresholds in the Waste Guidelines. Bonded asbestos was encountered within material in Stockpile 1 at two separate locations. A small mound of material which appeared to have been illegally tipped on the western verge of Ferrers Road tested negative for asbestos however this material should be treated with suspicion and further assessed prior to a decision on management being made.
- Assessment of fill material within the levee walls of both farm dams did not report any visible / olfactory indications of contamination, which was backed up by the laboratory results that reported all contaminants of potential concern either below laboratory detection and/or adopted criteria.
- Assessment of surface water in Farm Dam No.1 reported elevated detections for biological parameters (e.coli, faecal coliforms and bacterial plate count), with zinc exceeding the ANZECC/ARMCANZ (2000) freshwater quality criteria for protection of 95% species.

Figure 16 – Eastern Storage Area – Sampling Locations (Source: EES, 2019)



The following recommendations were provided for the management of the identified contamination on the western portion

- *Former Army Compound USTs:*
 - *Ex-situ decommissioning of two identified USTs and removal of impacted material (sand and purge water) are recommended to be undertaken.*
- *Asbestos at Former Army Compound Buildings:*
 - *Prior to the decommissioning of these buildings an asbestos removal specialist should be engaged and all ACM should be removed from the structures to be decommissioned.*
 - *For the surface soil impacted with bonded ACM, the recommended strategy for remediation would be to remediate soil by emu picking and clearing as much visible asbestos impact as possible to enable onsite reuse of soils.*
- *WWTP:*
 - *The results indicated that the water stored at the WWTP may not require treatment before discharge. However, the data gap associated with the settled solids at the bottom of these tanks should be eliminated by additional sampling before any discharge is made.*
 - *Disturbance of the settled solids at the bottom of the tanks can cause mixing of contaminants into the standing water; this should be avoided as much as practicable.*
 - *Before making any discharge to any receiving point, discharge permits should be taken from the relevant authorities (EPA for discharge to the environment and Sydney Water for discharge into the sewer).*
- *Soil Mounds and Piles Among the Site:*
 - *For the localised fill materials impacted with bonded ACM, the recommended strategy for remediation would be to remediate soil by emu picking and clearing as much visible asbestos impact as possible so soil can be reused onsite.*
 - *Additional sampling of one pile of soil, which had a sample exceeding the environmental criteria for benzo(a)pyrene, is recommended prior to commencing earthworks in that location.*

The report recommended further assessment be undertaken on the eastern portion of the site for the following matters:

- *Conduct further asbestos assessment of the tipped pile of rubble on the western verge of Ferrers Road.*
- *Conduct assessment on the chemical quality of the sediments at the bottom of each farm dam.*
- *Conduct additional leachate analyses for soil in stockpiles SBH2 – SBH5 to potentially revise-down the provisional waste classification should offsite management of these materials be opted.*

It is also recommended to prepare a Construction Environmental Management Plan (CEMP) that will document procedures for management of reported contamination and asbestos and general environmental controls to mitigate potential human health risk and environment harm.

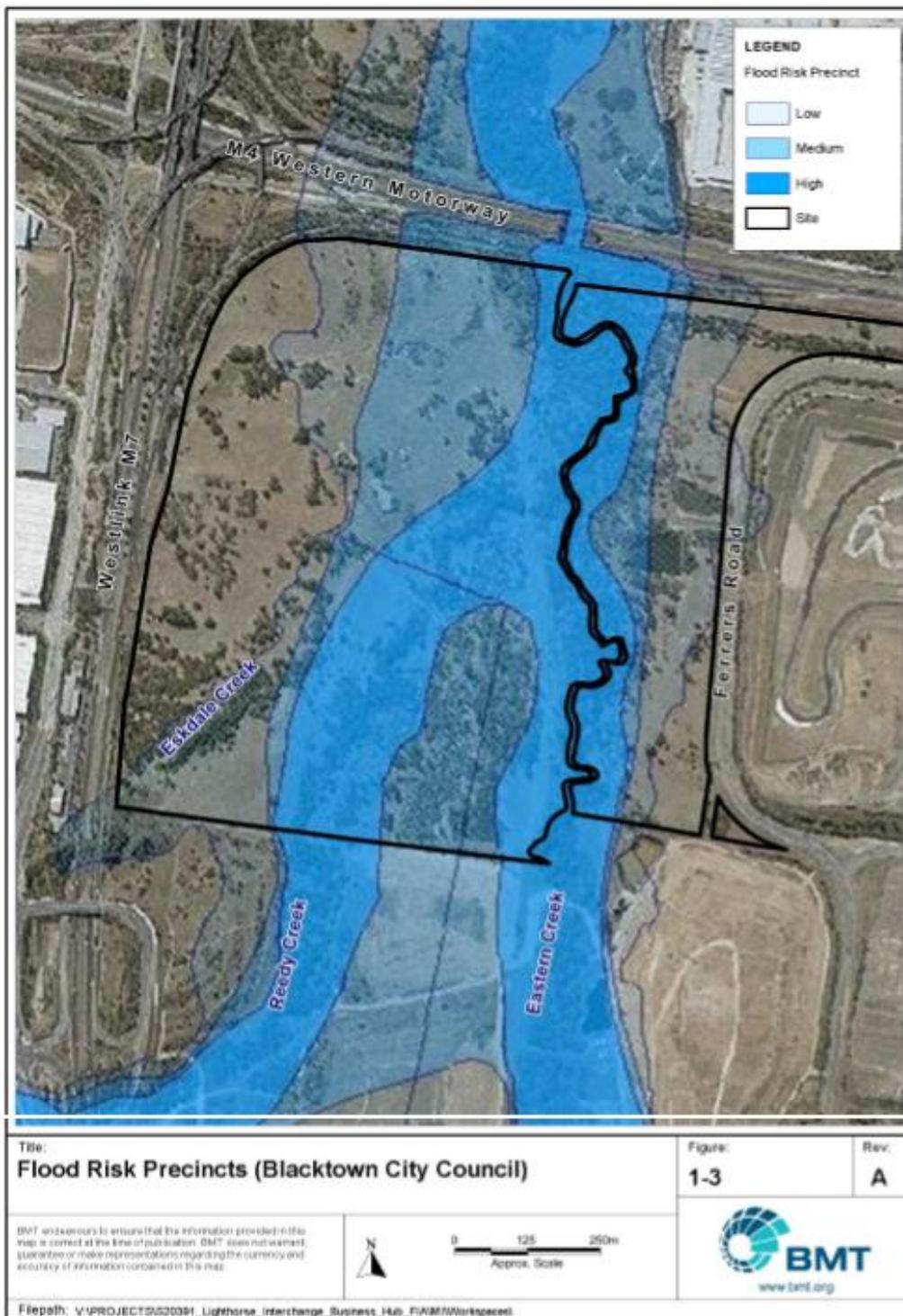
The report concludes the site is suitable for the proposed development pending implementation of the recommendations for the eastern and western portions. Conditions of consent can be imposed on the development application which require completion of the additional investigations and preparation of the CEMP prior to the commencement of construction as part of the Stage 1 works. Any additional remediation works would be completed in accordance with the recommendations in the Contamination Assessment.

6.4. FLOODING

BMT Eastern Australia Pty Ltd (**BMT**) was engaged to prepare a Flood Assessment Report (**Appendix O**) that addresses the future staged redevelopment of the site and the completion of the preliminary Stage 1 works in accordance with the requirements listed in the SEARs.

The report notes that the site is located within the floodplain of Eastern Creek, with the main creek alignment dissecting the site. It has a total catchment area of approximately 25km² including the tributary catchments of Reedy Creek and Eskdale Creek. Council provides indicative existing flood inundation extents through its Flood Risk Precinct mapping, including low, medium and high flood risks as shown in **Figure 12**.

Figure 17 – Flood Risk Precincts (Source: BMT, 2019)



A TUFLOW two-dimensional model was developed to provide a detailed representation of local flow behaviour on the site and adjoining properties within the floodplain. Simulated peak flood depths and inundation extents showed that flows from the three principal tributaries combine within the site to provide for extensive area of flood inundation. The M4 Western Motorway embankment impacts on flood behaviour and conveyance of flood flow downstream.

The potential impacts of the development were then modelled based on the proposed finished ground levels and layout for the industrial subdivision, including the access road and bridge to Ferrers Road, the Eskdale Creek diversion and stormwater detention basins to manage local run-off. The potential changes to existing flood behaviour are identified in the report as follows:

- *An increase in catchment runoff due to an increase in impervious surfaces;*
- *Increase in flood levels through impedance of overland flow paths and loss of temporary flood storage;*
- *Redistribution of flow and changes to peak flood velocities arising from cut and fill works on the floodplain; and*
- *Concentration of discharges and subsequent impact on downstream areas.*

The post-development scenario was modelled by incorporating the proposed finished ground levels and lot layout in the TUFLOW hydraulic model. The report noted the following regarding the development site:

- *Flood inundation of the proposed development extent on the Site is limited. The design levels of the proposed bulk earthworks platform provides for flood immunity for all lots up to the Extreme Flood magnitude. Only the detention basins at the eastern perimeter of the fill platform are subject to inundation at the Extreme Event level. The detention basins have flood immunity at the design 1% AEP flood level.*
- *The access road between Ferrers Road and the development lots traverses Eastern Creek and has 1% AEP design flood immunity. The access road is inundated to significant depth at the Extreme Flood level (as per the existing M4 Western Motorway)*

The potential flood impacts arising from the proposed development have also been assessed considering the upstream and downstream impacts. The report concludes there are no increases in peak flood levels to the neighbouring properties for a 1% AEP Event as all impacts are contained within the property. There are no increases in peak flood level upstream or downstream of the site as a result of the proposed development.

Under an Extreme Flood condition, the increases in peak flood levels are generally limited to within the site boundary. An area of increased flood level across the M4 Western Motorway corridor may arise due to a change in the flow distribution across the road corridor. However, this area would already be untrafficable under the existing flood conditions.

The report concludes that there is no change to peak flows and corresponding peak flood levels downstream of the site and accordingly, there is potentially no requirement for additional flood mitigation measures. This also means that risk to life is effectively managed in providing areas of flood free refuge. Flood-free access is available up to and including extreme flood events, via the access road to Ferrers Road and the emergency vehicle access via Wallgrove Road.

Despite the low risk, site based emergency management plans can be developed to incorporate flood warning and emergency response opportunities. These plans may provide for future tenants to include flooding considerations in their individual emergency management plans, including alternative access routes in the unlikely event that Ferrers Road is not trafficable (only for rare events in excess of 1% AEP). Based on the low flood risk of the broader estate, there is no requirement for any estate specific flood warning system or response plan.

An appropriate condition of consent can be imposed on the development application requiring the preparation of a flood management plan prior to the completion of the Stage 1 works and compliance with the minimum habitable floor levels in the future DAs for warehouse construction.

6.5. HAZARD AND RISK

Arriscar Risk Engineering Solutions was engaged to prepare a Hazards and Risk Assessment (see **Appendix P**) that addresses each of the matters listed within the SEARs.

The report recognises that the SSDA has been lodged as a Concept Proposal for the staged redevelopment of the site with a Detailed Proposal for the Stage 1 works. The specific land use activities for each of the future industrial buildings has not yet been established and accordingly, it is not yet possible to undertake a preliminary risk screening in accordance with SEPP 33. It is proposed that this matter would be addressed in the future DAs for the construction of these buildings and in accordance with Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis (**HIPAP No 6**).

However, the report also recognises the significance of the high-pressure natural gas pipeline which is located within an easement immediately east of the proposed industrial business hub and the need to assess the risk exposure to potential future populations as part of the Concept Proposal assessment. Consultation was undertaken with Jemena during the preparation of the risk assessment to obtain relevant data for the trunk pipeline and complete a detailed assessment in accordance with Hazardous Industry Planning Advisory Paper No. 10 - Land Use Safety Planning (**HIPAP No 10**).

The hazard identification was based on a review of the Jemena data, consideration of the properties of natural gas and potential failure modes and consequences if a leak was to occur from the pipeline. A consequence analysis was undertaken of different scenarios associated with the release of flammable gas and fire. The frequency and likelihood of these events was assessed based on State and international data sources.

The risk analysis and assessment concluded the risks associated with the Jemena gas pipeline are low and comply with the relevant risk criteria in HIPAP No. 10. Compliance with the relevant societal risk criteria is based on estimates of the future worker population. While the estimates are conservative, it may be necessary to review the societal risk exposure as part of the subsequent DAs.

The report also concludes that the Concept DA is appropriate, subject to the following recommendations being incorporated in the future detailed DAs.

1. *Future DAs relating to the specific use of each lot (including construction of structures or buildings) in the proposed industrial business hub should consider the risks imposed from the JGN Trunk Pipeline (Particularly societal risk). If the development will result in significant changes to any key parameters used in this risk assessment (e.g. population estimates, etc.) then this should be addressed accordingly in the future DA.*
2. *Future occupied buildings in the proposed industrial business hub should be constructed with due regard of the fire and explosion hazards posed by the JGN Trunk Pipeline. This should be commensurate with the risk exposure and is therefore primarily relevant for Lot 7 (Refer to Figure 5) as the risk exposure at the other lots is low (Refer to Section 8).*

In future detailed DAs, the proponent should demonstrate how reasonably practicable measures to protect the building occupants has been incorporated into the building design (e.g. through use of appropriate non-combustible materials (cladding etc.), fire-rated walls or other barriers, sizing and location of windows and balconies, measures to minimise smoke ingress, measures to prevent ingress of gas into underground basements / car parks / utilities, etc.).

3. *Emergency refuge and/or egress arrangements should be provided for all future occupied areas in the proposed industrial business hub. This is to ensure the safety of the occupants in the event of an incident involving the JGN Trunk Pipeline. The proponent should demonstrate how this has been incorporated into the design (e.g. emergency egress stairwells, egress to a safe location on the far side of the building away from the pipeline, shelter-in-place facilities, etc.) and the occupier should prepare appropriate emergency response plan/s.*

Each of these provisions can be incorporated into a condition for the Concept DA approval to facilitate the mitigation, minimisation and management of potential risks associated with the Jemena gas pipeline.

6.6. SOILS AND WATER

Dirt Doctors Pty Ltd were engaged to complete the geotechnical investigations required to confirm the suitability of the site to accommodate the proposed industrial development (refer to **Appendix Q**). The objectives of this assessment are stated in the report as follows:

- *Identify the subsurface conditions of the site*
- *Conduct laboratory testing on subsurface materials*
- *Determine soil reactivity and aggressiveness to steel and concrete (refer salinity assessment)*
- *Recommend site preparation and fill methodologies for bulk earthworks operations*
- *Determine footing types and soil bearing capacity*
- *Assess the suitability of the site for potential development based on its current condition and the findings of this investigation.*

The site investigations included excavation of 32 boreholes to a maximum depth of 3.6 metres below the existing surface level or to bedrock. Detailed analysis of the boreholes was undertaken to determine subsurface conditions, including groundwater, with recommended measures to be implemented during the construction phases for Stage 1 and the future detailed DAs, including:

- Site preparation
- Subgrade preparation
- Engineered fill
- Earthworks inspection and testing
- Batter slopes
- Edge compaction
- Service trenches
- Additional earthworks requirements

Each of the matters identified within the geotechnical investigations can be incorporated into the CEMP for the proposed development. An appropriate condition of consent can be imposed on the development consent in this regard.

Henry & Hymas was engaged by the WSPT to prepare a Civil Engineering Report (refer to **Appendix I**) which addresses the civil engineering matters to support the proposed development, including the required site works, stormwater management and sediment and erosion control. The report should be read in association with the attached Civil Engineering Drawings which show the proposed infrastructure design (also held as **Appendix J**). Each of the relevant matters is discussed below:

- **Site works:** the proposed industrial lots are above the 100 year ARI floor level, however, filling will be required to accommodate pipe drainage runs and the location of the OSD outlet above the 100 year ARI flood level. Approximately 905,000m³ fill will be imported to meet the needs of the development. Earthwork batters and retaining walls will be provided as part of the Stage 1 site works, accommodating level changes associated with the stormwater management system and as outlined further below.
- **Stormwater works:** the proposed stormwater management system has been designed to accommodate the future industrial development in accordance with relevant policies and guidelines, including:
 - Institution of Engineers, Australia publication “Australian Rainfall and Runoff” (1987 Edition), Volumes 1 and 2 (AR&R)
 - AS 3500.3: National Plumbing and Drainage Code Part 3 – Stormwater Drainage
 - Australian Disaster Resilience Guideline 7-3: Technical flood risk management guideline: Flood hazard, 2014, Australian Institute for Disaster Resilience CC BY-NC

- Blacktown City Councils relevant planning policies and control plans, specifically:
 - Development Control Plan Part J – Water sensitive urban design and integrated water cycle management
 - Blacktown City Council's Engineering Guide for Development 2005
 - Council's Water Sensitive Urban Design Standard Drawings.

The stormwater system has been designed in accordance with Council's requirements for design recurrence intervals, with minor systems designed to convey flows induced by 20 year average recurrence interval (**ARI**) storm event and major system drainage designed to convey the 100-year ARI storm event with a 50% blockage factor applied to all inlet pits/headwalls. The grading of the infrastructure works will direct overland flows induced by the 100 ARI storm event towards the proposed access road reserve without negatively impacting any proposed flood levels or access paths.

The proposed industrial subdivision includes large individual lots with prepared and benched pads, graded to intermediate catch drains that direct stormwater to sediment and erosion control basins at the downstream end of each lot. Stub drainage lines allow for each lot to be connected to the local drainage system and connect to the communal basin. Rainwater tanks will also be incorporated into the future DAs to accommodate water re-use on each of the industrial lots.

The proposed basin includes a combined on-site stormwater detention storage and bioretention basin, designed in accordance with Council requirements and best industry practise for water management basins. The proposed basin will accommodate the required OSD volume of 15,592m³ for the new development. Stormwater quality improvement devices will include gross pollutant traps for each of the inlets within the basin, passive screen pit baskets within other areas potentially affected by pollution and litter and a bioretention filtration system within the basin. Minor and major external overland flows from the upstream catchments have been addressed within the flooding assessment (refer to **Section 6.4** in this report). An emergency overland flow path will be provided to enable upstream overland flow to be directed around the development during major flooding events or blockages.

The stormwater management system includes a realignment of Eskdale Creek which has been refined in consultation with Ecoplanning to respond to both stormwater requirements and biodiversity impacts. The final design incorporates Water Sensitive Urban Design principles to improve water quality, regulate creek flow rates, enhance the surrounding landscape and ecology and provide aesthetic benefits.

Consideration has also been given to concerns raised by Council regarding the potential for overland flooding from the upstream catchment west of Wallgrove Road. It is proposed to transition the existing drainage channel to a large drainage sump located adjacent to the emergency access road. The transition channel will be sized to accommodate the upstream flow and the underpass road. An emergency overland flow channel around the perimeter of the development will accommodate a severe blockage or extreme storm event.

- **Sediment and erosion control:** appropriate sediment and erosion control measures have been included in the engineering drawings to ensure downstream receiving waters are not adversely impacted by construction activities. These measures have been designed in accordance with relevant State and local requirements and will be implemented as part of the CEMP.

The Civil Engineering Report also confirms that adequate utility services are available to service the proposed future industrial development, including potable water, as outlined in detail within **Section 6.8** of this report.

It is considered that the potential impacts of the proposal can be satisfactorily mitigated, minimised or managed through the measures identified within the Civil Engineering Report and associated engineering drawings. These documents can form part of the approval for the Concept DA to enable their implementation during the demolition, construction and operational phases for Stage 1 and the future DAs.

6.7. BIODIVERSITY

Ecoplanning was engaged to prepare a Biodiversity Development Assessment Report (**BDAR**) to assess the biodiversity impacts of the proposal, including the staged redevelopment outlined in the Concept Plan and the Stage 1 works in the Detailed Proposal. A copy of the report is attached as **Appendix R**.

The BDAR has been prepared to address the provisions listed within the SEARs and the Supplementary Assessment Requirements (**SARs**) issued by the Commonwealth to address the matters within the *Environment Protection and Biodiversity Conservation Act 1999* (**EPBC Act**).

The assessment has been undertaken in accordance with the *Biodiversity Conservation Act 2016* (**BC Act**) and the Biodiversity Assessment Method (**BAM**). The BDAR has been prepared in accordance with the BAM to document impacts to biodiversity and has been prepared by an Accredited Assessor in accordance with the BC Act and *Biodiversity Conservation Regulation 2017* (**BC Reg**). It includes:

- Stage 1 – Biodiversity assessment: description of the existing environment including landscape features, native vegetation and threatened species.
- Stage 2 – Impact assessment: identification of measures to avoid and minimise impacts, assessment of residual impacts to biodiversity, mitigation measures, offset requirements and credit calculations.

Native vegetation was identified and mapped across 9.99 hectares of the 39.47 hectare site, including two Plant Community Types (**PCTs**):

- PCT 849 - Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion
- PCT 835 - Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion

Each of these PCTs comprise Threatened Ecological Communities under the BC Act. Cumberland Plain Woodland is listed as a Critically Endangered Ecological Community (**CEEC**) under the BC Act and the EPBC Act. River-flat Eucalypt Forest is listed as an Endangered Ecological Community under the BC Act.

Targeted surveys were undertaken for candidate threatened flora species including identification of potential habitat and physical surveys. One of the candidate threatened flora species, *Pimelea curviflora* var. *curviflora* was recorded adjacent to, but outside of, the subject land. A species polygon was determined which included a 30 metre buffer around the individual species. The species polygon does not intersect with the subject land and no further assessment of this species is required. No other candidate threatened flora species were recorded within the subject land.

Targeted surveys were also undertaken for candidate threatened fauna species, including the Green and Golden Bell Frog, Southern Myotis, Durnal birds – raptors, Cumberland Plain Land Snail, Grey-headed Flying Fox and Bush Stone-curlew. Several calls were likely to be the Southern Myotis and a precautionary approach was adopted, which assumed it was recorded on the subject land. This threatened species is listed as Vulnerable under the BC Act. A species polygon has been determined for this species which includes all areas of native vegetation within 200 metres of Eastern Creek. This equates to a total of 2.63 hectares of habitat for the Southern Myotis. No other species were identified on the site through the targeted surveys.

Cumberland Plain Woodland is a candidate community at risk for Serious And Irreversible Impacts (**SAII**) as defined under the BC Reg. The proposed development could result in a 0.95% decrease in area of this community within the 1,000 hectares surrounding the site and a 0.22% decrease within 10,000 hectares. Neither the River-flat Eucalypt Forest or Southern Myotis are identified as candidate SAII entities.

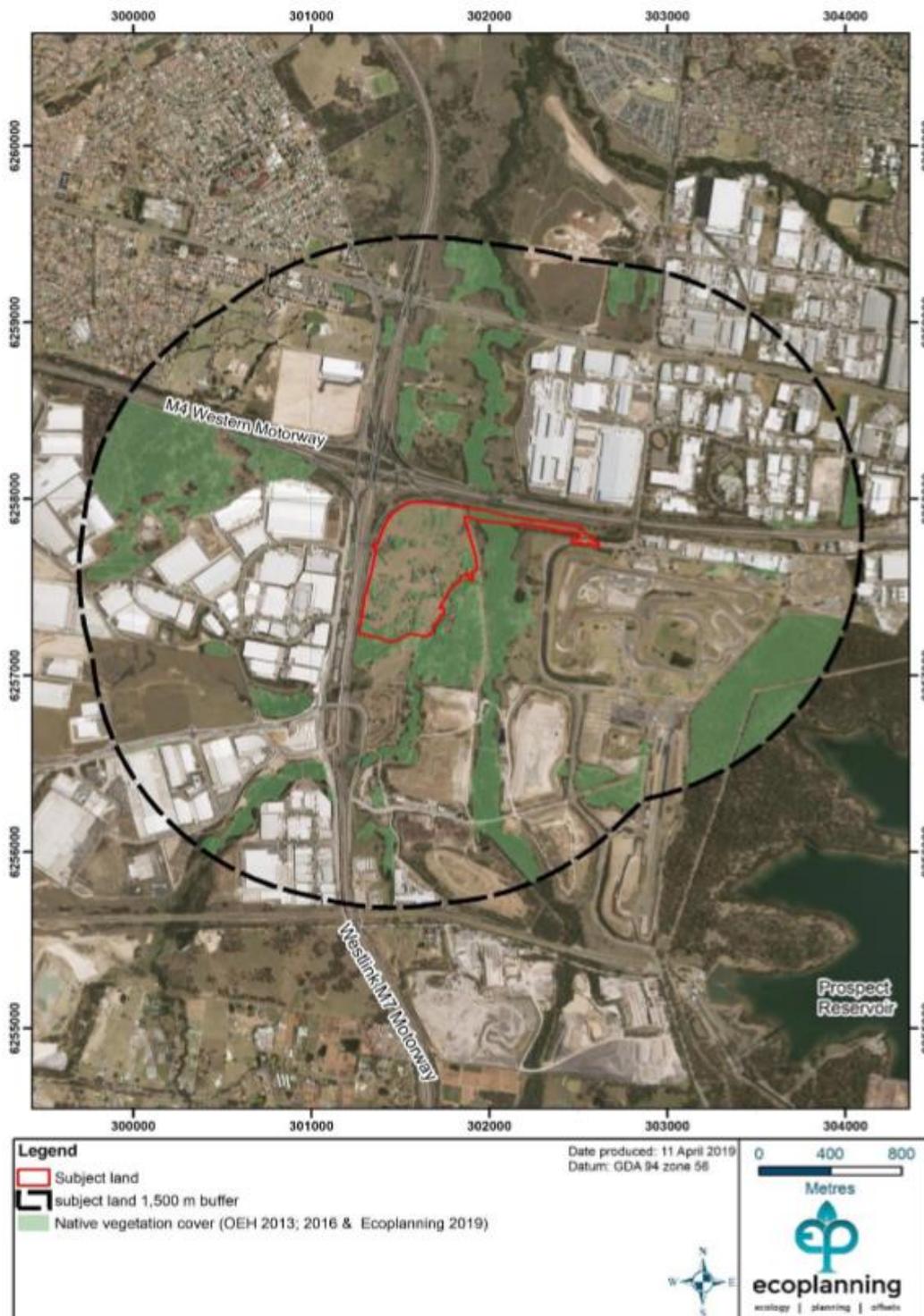
The potential impacts to species and ecological communities listed under the EPBC Act, including the Greyheaded Flying-fox and Cumberland Plain Woodland, have also been assessed. It was determined that the proposed action is a controlled action and the project will be assessed by the NSW Government as an accredited assessment in accordance with the SSD provisions and the Commonwealth SARs.

The BDAR outlines actions to avoid and minimise impacts on native vegetation and habitat and biodiversity. This includes:

- Locating the proposed industrial business hub within the precinct nominated within the WSPT POM 2030 as being suitable for the proposed development.

- Revising the original masterplan to avoid areas of the site which contain significant areas of vegetation and avoid fragmentation and disconnection of bushland to retain connectivity.
- Locating the proposed development within areas of the site that are predominantly cleared and contain vegetation with low Vegetation Integrity Scores interspersed with exotic vegetation.
- Investigating alternative access opportunities to ensure that the proposed subdivision provides an effective and well-considered solution.
- Acknowledging the role of the proposed business hub in generating revenue to facilitate the delivery of additional bushland corridors within the Parklands.

Figure 18 – Native Vegetation Cover (Source: EcoPlanning, 2019)



Actions have been taken to avoid and minimise biodiversity impacts through the selection of the Light Horse Interchange site based upon its relatively low ecological values. The site has been subject to historic vegetation clearing and ongoing disturbance associated with grazing as outlined within **Section 1.3** of this report.

Several revisions to the subdivision layout were also made to avoid or minimise impacts, including reducing the project footprint to avoid approximately 2.2 ha of Alluvial Woodland and moderately dense mid-storey of *Melaleuca decora*. The subdivision boundary was also revised, reducing the overall development footprint to retain large patches of bushland and ensure connectivity between these patches. A range of options were explored for the site access and including consideration of alternatives to minimise impacts to native vegetation. The proposed access from Ferrers Road was considered the optimal location. The access was located immediately adjacent to the M4 Motorway to avoid additional fragmentation of the vegetation along the Eastern Creek corridor and avoid larger changes to the flooding regimes of Eastern Creek Floodplain

The potential impacts associated with clearing the land and the realignment of Eskdale Creek are proposed to be mitigated or minimised through a variety of measures, including:

- Adopting pre-clearance protocols at the time of land clearing and demolition works to avoid potential harm or injury to fauna species, including soft-felling techniques and clearing supervision.
- Implementing the Stormwater Management Plan to manage water quality and quantity and improve the visual aesthetics of the site.
- Salvaging hollow-bearing trees and utilising in the Eskdale Creek realignment works to create hollow-bearing stags or within other woodland area to increase fallen woody debris.
- Protecting and enhancing riparian vegetation through appropriate Vegetated Riparian Zones along Eastern Creek, Reedy Creek and Eskdale Creek.
- Including appropriate erosion and sedimentation control measures within a site-specific CEMP.

The proposed development has been identified as having 'prescribed biodiversity impacts' under clause 6.1 of the BC Reg, including impacts to water quality, water bodies and hydrological processes that sustain threatened species and threatened ecological communities. This includes impacts to Eskdale Creek and its hydrological processes that support the 'River-flat Eucalypt Forest' Threatened Ecological Community (TEC).

The proposed impacts to Eskdale Creek have been designed to avoid impacts to Reedy Creek or Eastern Creek. The realignment of Eskdale Creek has been designed to include a swampy meadow/chain-of-ponds system to recreate the geomorphology and hydrology of the drainage system likely to have existed prior to the historical disturbances to the drainage system. The proposed design will improve both the quality and quantity of water flowing to Reedy Creek and increase local biodiversity by integrating deep wetland, shallow marshland and riparian ecosystems along a continuum of waterway.

Pre-lodgement consultation with the Natural Resource Access Regulator (**NRAR**) indicated in-principle support for relocating parts of Eskdale Creek. Further consultation following the detailed surveys confirmed in-principle acceptance of the relocation of Eskdale Creek by NRAR.

The impacts to the 'River-flat Eucalypt Forest' along Eskdale Creek has been quantified by calculating a Vegetation Integrity Score (**VIS**) for the area of TEC along Eskdale Creek and assigning a future VIS of 0. Credit calculations to offset this impact area have been conducted in accordance with the BAM and accordingly, the impacts are not considered to be in addition to vegetation clearing.

The biodiversity offset requirement for the residual impacts have been calculated in accordance with section 11.2 and Section 11.3 of the BAM to achieve the 'no net loss standard'. A total of 261 ecosystem credits are required to offset the impacts of the proposed development as outlined in the table below. A total of 100 Southern Myotis species credits are also required to offset the impacts of the proposal.

Table 9 – Ecosystem Offset Requirements (Source: Ecoplanning, 2019)

Vegetation zone	Vegetation integrity loss	Area	Credit requirement
PCT 849 – Re-vegetation	31	1.1	22
PCT 849 – Under-scrubbed	23.7	1.3	20

Vegetation zone	Vegetation integrity loss	Area	Credit requirement
PCT 835 – Under-scrubbed	48.7	5	122
PCT 835 – Intact	85.5	2.1	91
PCT 835 – Plantings	29.5	0.4	6

The measures to address the offset obligations will need to be resolved prior to the commencement of the Stage 1 works. It is intended that WSPT will meet their offset requirements by retiring existing biodiversity credits generated under the BioBanking Scheme and the generation of suitable biodiversity credits by entering into a Biodiversity Stewardship Agreement.

The impacts to species and ecological communities listed under the EPBC Act (Greyheaded Flying-fox [*Pteropus poliocephalus*] and 'Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest' ecological community) have been assessed in accordance with the Commonwealth SARs. The assessment concludes the proposal is unlikely to significantly impact Matters of National Environmental Significance (MNES). Off-set requirements calculated under the BAM and like-for-like rules in the BC Reg would contribute to the ongoing viability of the MNES as required under the EPBC Act. No additional offsets (beyond those calculated under the BAM) would be required under the EPBC Act.

Based on the above, it is considered that the biodiversity impacts have been satisfactorily assessed and appropriate conditions of consent can be imposed on the Concept DA and State 1 approval to facilitate the implementation of the required mitigation measures.

6.8. INFRASTRUCTURE REQUIREMENTS

Henry & Hymas was engaged to prepare a Civil Engineering Report which also addresses infrastructure requirements for the proposal (refer **Appendix J**). The report assesses the potential utility service infrastructure requirements associated with the future industrial development as outlined below:

- **Water:** potable water supply can be provided from the Sydney Water mains via a new connection to the existing 250mm diameter main located in Wallgrove Road or a 299mm diameter main in Ferrers Road.
- **Sewer:** a gravity sewer connection can be provided to the Sydney Water mains via a 600mm diameter sewer main that drains from south to north through the site or a 375mm diameter sewer main that drains around the north western corner of the site to the east and connects to the 600mm diameter sewer main at the northern end of the site. The internal road layout has been designed to facilitate the location of the sewer main within the front building setbacks. The Sewer Maintenance Holes will be adjusted to accommodate any change in surface levels.
- **Gas:** the proposed subdivision and internal road layout has been designed to accommodate the requirements of the 500mm diameter Jemena high pressure gas main and associated 20 metre wide easement. The proposed access road will cross the main in one location and restrictions may be imposed to avoid impacts on structural loads over the gas main.
- **Power:** an existing overhead high voltage feeder is located on the western side of Wallgrove Road. Endeavour Energy will require a Level 3 Service Provider to further assess the capacity of the existing system and the requirements for the infrastructure to service the proposed development. Preliminary advice from Connect Infrastructure indicated a new underground feeder from Northern Eastern Creek Zone Substation could facilitate supply. Spare conduits could be available along parts of the route.
- **Street lighting:** street and pedestrian lighting will be provided in accordance with any relevant Council requirements, Endeavour Energy requirements and Australian Standard AS1158. Any street lighting along the access road and shared path outside of the estate will incorporate the principles of the WSPT Design Manual and Australian Standard AS1158.3.
- **Telecommunications:** the National Broadband Network (NBN) is not yet available to the site, however, it is available to the east of the site and is currently under construction to the west. Telecommunications will be serviced by local copper or fibre optic supply until the NBN is available.

The report also assesses the transportation requirements associated with the future development, including vehicle access and internal road layout. The key infrastructure requirements are summarised below:

- **Ferrers Road:** the primary vehicle access will be via a new roundabout intersection at Ferrers Road. The access road will cross Eastern Creek via a 61.5 metre long bridge constructed using an RMS type plank system with a concrete topping slab on six rows of piles/columns ranging from 10-15 metres. The roundabout, bridge and access road will be designed to accommodate B-double vehicles and relevant engineering guidelines. The bridge has also been designed to address the flood modelling for the development, including access during a 100 year ARI flood event.
- **Wallgrove Road:** emergency vehicle access will be available via the existing access from Wallgrove Road via the underpass below the Westlink M7 Motorway.
- **Estate Road:** the new access road has been designed in accordance with Council requirements, including road widths, cross falls and grades. The access road and bridge have been designed with an overall road reserve width of 23 metres to meet Council's requirements for two travel lanes and two parking lanes. The road pavement has been designed as a flexible pavement with asphaltic concrete wearing course in accordance with Council's requirements.
- **Cycle and Pedestrian Access:** Ferrers Road provides pedestrian and cycle access with a continuous shared path link providing safe amenity for pedestrians and cyclists. The emergency vehicle access road provides shared access to the cycleway adjacent to the Westlink M7 Motorway. Pedestrian and cycle facilities connecting to the WSP will incorporate the design principles of the WSP Design Manual.

The infrastructure requirements have been thoroughly assessed and the potential impacts can be satisfactorily mitigated, minimised or managed through the measures identified within the Civil Engineering Report. A condition (or conditions) of consent can be imposed to facilitate the implementation of these matters prior to the construction of the Stage 1 works and in the future detailed DAs.

6.9. URBAN DESIGN AND VISUAL

Nettleton Tribe Architects was engaged by WSPT to prepare Urban Design Guidelines (refer to **Appendix G**) for the staged redevelopment of the site. The key objectives of the Urban Design Guidelines are listed within the report as follows:

- *to provide an urban design framework that guides the development of the land for the purpose of employment generating development*
- *to provide environmentally attractive and sustainable industrial business hub*
- *to ensure high quality built form in a parkland setting*

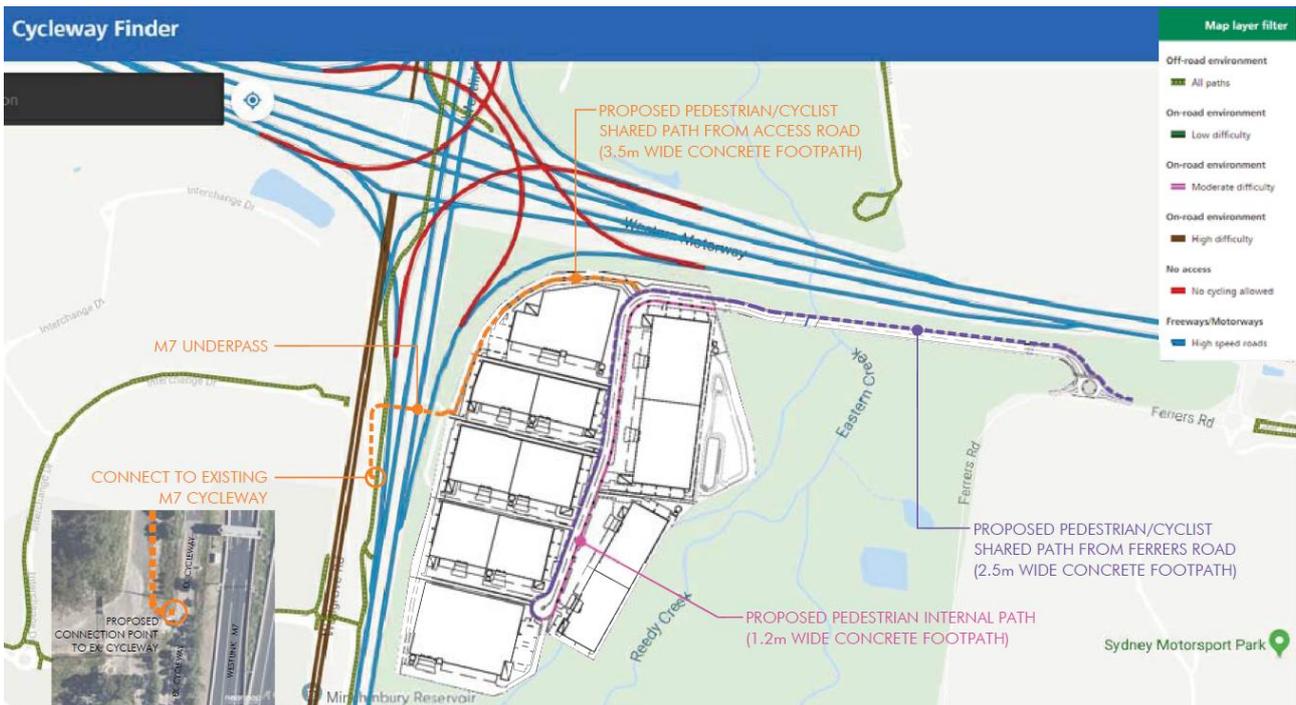
The key design principles underpinning the proposed industrial subdivision and concept layout included:

- **Land Use:** the developable area of the site is proposed to accommodate industrial and light industrial uses, including warehouse and distribution centres. Accordingly, the industrial lots have been sited, graded and designed to accommodate large-scale buildings.
- **Vehicle Access and Circulation:** two vehicle connection points have been provided to facilitate access to the future industrial lots as shown in the plan extract held as **Figure 14**. Ferrers Road provides the primary vehicle access, including B-doubles and smaller vehicles. A secondary vehicle access point is available via the existing connection to Wallgrove Road and underpass beneath the Westlink M7 Motorway. The secondary access is to be used only by emergency vehicles (excluding pedestrians and cyclists – refer below).
- **Pedestrian and Bicycle Access and Circulation:** pedestrian and cycle connectivity is provided through a shared access path from the new roundabout at Ferrers Road and west to the cycleway adjacent to the Westlink M7 Motorway. The shared path will be 2.5 metres wide from Ferrers Road to the end of the new access road. The western link to the M7 cycleway will have a width of 3.5 metres. A separate 1.2 metre wide pedestrian path will be provided along the eastern side of the new access road.
- **Environment and Conservation:** the DAs for the future industrial developments will be required to incorporate environmentally sensitive design principles, including landscaped setbacks, water sensitive urban design (**WSUD**) to manage stormwater and compliance with WSP Design Manual measures.

Figure 19 – Vehicle Access and Circulation (Source: Nettleton Tribe Architects, 2019)



Figure 20 – Pedestrian and Cycle Access (Source: Nettleton Tribe Architects, 2019)



Design guidelines have also been prepared to provide the key objectives and requirements to be addressed in the future DAs for the development of the individual industrial lots, including:

- Built Form and Architecture:** the proposed design guidelines aim to deliver a built form that is consistent with the surrounding employment-generating development with appropriate architectural design and building materials to deliver attractive facades and complement the parkland setting.

- **Setbacks:** landscape and building setbacks are proposed along the M7/M4 Motorways and the internal access road to deliver a built form that is consistent with the surrounding locality, including:
 - 20 metre building setbacks along the motorways
 - 10 metres landscape setbacks along the motorways
 - 7.5 metre building setbacks along the internal access road
- **Sustainable Building Design:** ESD provisions have been incorporated into the design guidelines to reduce reliance on potable water for non-drinking purposes and minimise energy consumption through selection of appropriate materials, building siting and design and landscaping.
- **Landscaping:** site landscaping will be used to provide a sense of place, amenity and environmental outcomes. Street tree planting will be undertaken in accordance with Council requirements, with tree species selection aligned with the WSP Design Manual. The WSUD measures will incorporate water quality and water quantity control measures, as well as an aesthetic and amenity benefit for the site.

Figure 21 – Artist Expression (Source: Nettleton Tribe Architects, 2019)



- **Parking and WSUD:** the future industrial developments will be provided with car parking in accordance with the relevant rates established within the Traffic Impact Assessment. The car park design will incorporate measures to manage stormwater, site amenity and environmental outcomes.
- **Signage:** the future industrial developments will provide business identification signage that provides appropriate levels of wayfinding while avoiding unacceptable visual and other environmental impacts.
- **Street Lighting:** street lighting will be provided in accordance with Council's Street Lighting Policy, Endeavour Energy requirements and relevant sections of Australian Standard AS1158. Street lighting along the access road and shared path external to the business hub shall incorporate the principles of WSP Design Manual and in consultation with the WSPT.
- **Fencing and Safety and Security:** different fencing types are proposed to respond to their locational context and visibility from the public domain. Front boundary fencing will be required to be of a higher design standard that complements the site landscaping and building design, while side boundary fencing is primarily designed to meet safety and security requirements.

Nettleton Tribe was also engaged to prepare a Visual Impact Analysis which assesses the potential impacts of the future industrial buildings from a visual impact perspective (refer to **Appendix S**)

Three key vantage points were selected which were considered to represent the major sightlines to the future buildings from the surrounding regional road network (refer Figure 22). Consideration was given to the potential impacts arising from the development immediately after construction and again within 10 years after the proposed landscaping has matured, providing increased screening of the proposed buildings.

Each of the three viewpoints and associated visual impacts are discussed in further detail in the table below. Extracts from the report showing the baseline, Year 0 and Year 10 images are provided on the following pages.

Figure 22 – View Points (Source: Nettleton Tribe Architects, 2019)

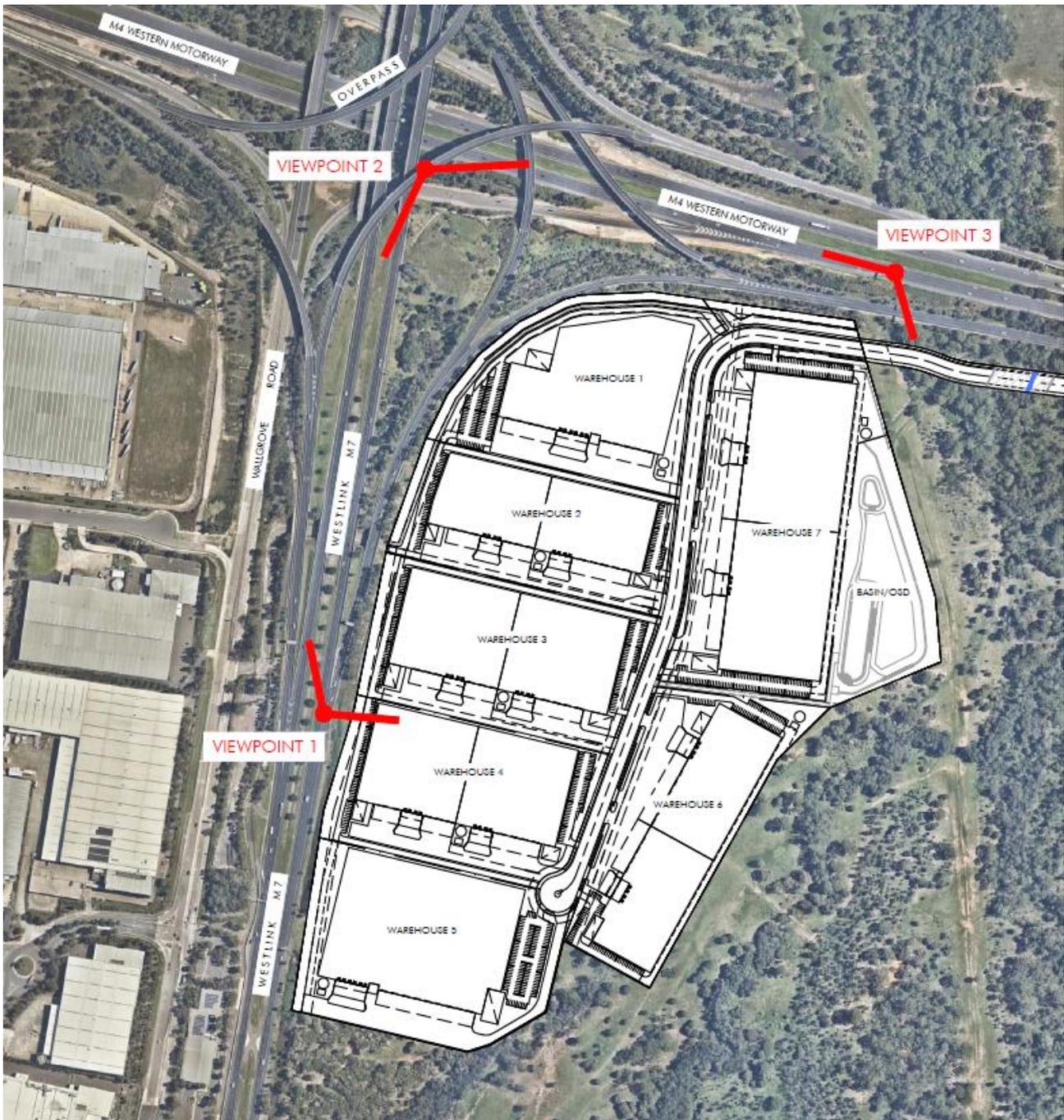


Table 10 – Visual Impact Assessment (Source: nettletontribe, 2019)

Viewpoint	Visual Sensitivity	Magnitude of Change	Significance of Visual Impact
Viewpoint 1 View from M7 Motorway looking east	Low – transient views from motor vehicles travelling up to 100km/hr	Buildings will initially be visible, however, muted building materials and site landscaping will blend into landscape	Low – view from motorway and transient in nature. Landscaped setback requirements will minimise view impacts
Viewpoint 2 View from overbridge on Lighhorse Interchange looking south-east	Low to medium – the elevated view provides greater visibility of the site compared to the ground level viewpoints	The elevated view means other similar large-scale industrial developments are visible within the visual catchment	Low – the proposal is consistent with the scale and character of other developments within the visual catchment
Viewpoint 3 View from M4 Motorway looking south-west	Low – existing landscape screening and transient views from vehicles on motorway	The existing landscape will screen the proposed buildings with further screening as the new landscaping matures	Low – view from motorway and transient in nature with existing landscaping providing visual screening

Overall, it is considered that the visual impacts of the proposed development are acceptable. The location, scale and character of the future buildings are consistent and compatible with other similar development within the immediate locality and along the M4 Motorway. The proposed landscaped setbacks and urban design guidelines will minimise the potential impacts and provide a satisfactory outcome.

Figure 23 – Viewpoint 1: Westlink M7 Motorway (Source: Nettleton Tribe Architects)



Figure 24 – Viewpoint 2: Lighthorse Interchange Overbridge (Source: Nettleton Tribe Architects, 2019)

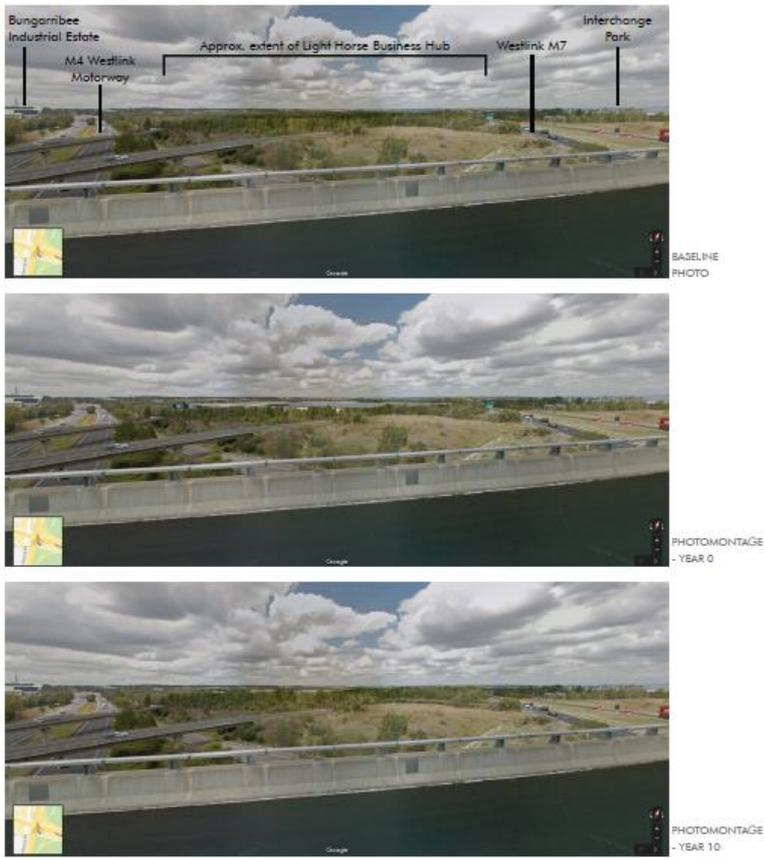


Figure 25 – Viewpoint 3: M4 Western Motorway (Source: Nettleton Tribe Architects. 2019)



6.10. HERITAGE

Extent Heritage Pty Ltd (**Extent**) were engaged to prepare an Aboriginal Cultural Heritage Assessment Report (**Appendix T**) and a Preliminary Non-Aboriginal (European) Heritage Assessment (**Appendix U**). Each of the reports has been prepared to respond to the matters listed within the SEARs for the SSDA and recognising both the Concept Proposal and Detailed Proposal for the Stage 1 works.

The Aboriginal Cultural Heritage Assessment Report (**ACHAR**) has been prepared in consultation with the Aboriginal community. Feedback reported within the report included:

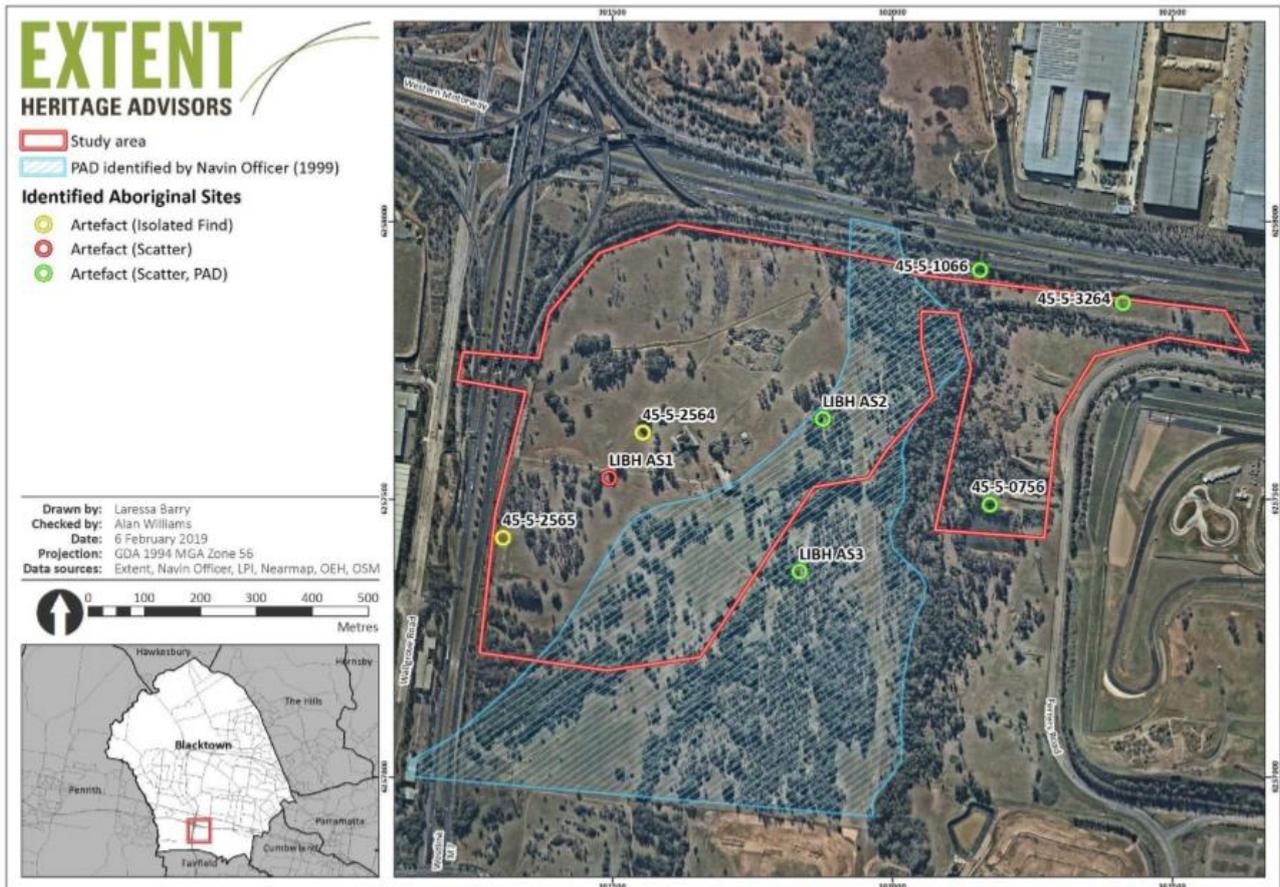
- *Muragadi Heritage Indigenous Corporation, Darug Tribal Aboriginal Corporation, Barraby Cultural Services, Kamilaroi Yankuntjatjara Working Group, Yurrandaali Cultural Services, Yulay Cultural Services and Didge Ngunawal Clan provided brief email responses in support of the report recommendations.*
- *Darug Land Observations provided a letter response in support of the ACHAR and its recommendations. With respect to the long-term storage of any Aboriginal cultural material, they recommended that any artefacts impacted by the proposed development be reburied on country (within the Light Horse Business Hub site).*
- *Darug Custodian Aboriginal Corporation provided a letter outlining their organisation's connection to country, as well as raising concerns about the involvement of organisations potentially from other parts of the region. They supported the findings and recommendations of the report.*
- *Several of the RAPs have various levels of experience in archaeology, and cultural heritage management more broadly, and see this as part of their involvement in cultural maintenance and protection, and in caring for Country.*
- *The project was identified as an opportunity for Aboriginal community members to learn more about their heritage and about heritage management.*
- *In general, a preference was expressed for involvement in fieldwork, and that WSPT continue to consult with RAPs as the project progresses.*
- *No further comments or feedback was received during the report review period.*

Surface investigations identified eight archaeological sites within or adjacent to the study area, six of which would be affected by the proposal. These include three artefact scatters with associated Potential Archaeological Deposit, one surface artefact scatter and two isolated finds as shown in the map on the following page.

The proposal also has the potential to impact areas of moderate, high and very high archaeological potential, associated with slightly elevated creek flat and terrace landforms adjacent to major watercourses. Comparable environments along other parts of Eastern Creek have recovered highly significant cultural deposits and it is considered there is also potential for this to occur on the development site. Given the uncertainty around the archaeological potential, the following recommendation are provided to be incorporated into the Minister's conditions of approval for the project:

- *Prior to ground disturbance, an Aboriginal heritage management plan (AHMP) must be developed by a heritage specialist in consultation with the RAPs and consent authority to provide the post-approval framework for managing Aboriginal and historical heritage within the study area. The AHMP should include the following information:*
 - *processes, timing, and methods for maintaining Aboriginal community consultation through the remainder of the project.*
 - *descriptions and methods of archaeological excavation that is required to define, characterise and assess all areas of very high, high and moderate archaeological potential within the impact footprint. All excavations should be undertaken in broad accordance with methodologies defined in OEH guidelines.*

Figure 26 – Previously registered and newly identified sites within the study area (Source: Extent, 2019)



- description and methods of post-excavation analysis of chronological, soil, and environmental samples that will be recovered as part of the test excavations outlined above. These would assist in the characterisation and significance of cultural deposits identified, and to inform the interpretation strategy.
- any additional mitigative measures that may be required following the characterisation of areas of archaeological potential, which may include archaeological salvage, project re-design, and/or other measures.
- procedures for managing the unexpected discovery of Aboriginal objects and/or human remains during the project
- procedures for the curation of Aboriginal objects and other cultural materials recovered as part of the ACHAR process and at any subsequent stages of excavation required as part of the AHMP
- processes for reviewing, monitoring, and updating the AHMP as the project progresses.
- A Heritage Interpretation Strategy (HIS) must be developed by a heritage specialist to identify the interpretive values of the study area, and specifically Aboriginal heritage values across the study area, and to provide direction for potential interpretive installations and devices. This strategy should be made available for consultation and feedback with relevant stakeholders and RAPs. Following consultation and feedback on the strategy, a Heritage Interpretation Plan (HIP) will refine the strategy with content (visual and textual) and design details in order to allow the implementation stage. The outcomes of these reports must be undertaken prior to the issue of the occupation certificate (or equivalent). The interpretation strategy and interpretation plan must include consideration of three main components identified through the ACHAR process:
 - input and feedback from the RAPs.
 - the historical record of the study and its immediate environs.

- *the past cultural and environmental landscape, once informed by further works recommended to be undertaken as part of the AHMP.*
- *Consultation should be maintained with the RAPs during the finalisation of the development proposal. This should focus on the development and implementation of the AHMP, long-term curation and management of the Aboriginal objects recovered through the archaeological excavation program, any mitigation measures that were implemented prior to, and during, the works, and the development of the interpretation strategy and plan.*
- *A copy of the ACHAR should be lodged with AHIMS and provided to each of the RAPs.*
- *Site Recording Forms and Site Impact Recording Forms should be developed for identified Aboriginal objects/sites/deposits within the study area and submitted to the AHIMS database.*
- *If any element of the development is relocated outside the area assessed in this study, or if any alteration to the development plan is proposed that could result in additional impact to the potential cultural deposit, further assessment of the additional area(s) should be undertaken to identify and appropriately manage Aboriginal objects/sites/places that may be in the additional area(s).*
- *The proponent should advise all relevant personnel and contractors involved in the design, construction, and operation of the development proposal of the relevant heritage considerations, legislative requirements, and recommendations identified in this report.*

The Preliminary Non-Aboriginal (European) Heritage Assessment recognises that the site is not listed as an item of State or local heritage significance. The site was formerly occupied by the Wallgrove Army Camp and Wallgrove Migrant Hostel, however, none of the remaining buildings and structures are considered to have any heritage significance. The sewage treatment plant is a typical example from army camps in the 1940s and better examples of similar camps and hostels exist elsewhere in NSW. However, the buildings, treatment plant and foundations have the potential for interpretation of the history and development of the study area and locality.

The assessment for historical archaeological potential also indicates there is little to no potential for evidence across the study area. Most of the original complex has been removed and the concrete foundations have been archivally recorded. The likelihood of artefacts is low and research potential would be limited. Based on the low level of historical evidence for occupation during the 19th and early 20th century and low level of research value of remaining archaeological deposits, the study area's historical resource is assessed as having little or no archaeological significance.

The management recommendations are listed in the report as follows

- *If archaeological deposits are encountered, they would be managed in accordance with the Unexpected Find Procedure, (Appendix 1), which details the actions to be taken when a previously unidentified relics are found during site works.*
- *Any unexpected archaeological relics that are present in the study area remain protected by the Heritage Act. If the exposed remains are assessed to be archaeological relics, the Heritage Division should be notified under Section 146 of the Heritage Act. It is possible that further works would require a further assessment and/or an application for an Excavation Permit under Section 141 of the Heritage Act to allow works to proceed, should the remains be assessed to be of local or state significance.*
- *Where demolition activities require excavation into the ground surface, including building slab and asphalt removal, vegetation removal, and general clearing/levelling works, these activities have the potential to impact relics. These activities may proceed with caution, but should be inspected by a qualified historical archaeologist, to ensure that any relics are appropriately identified and managed.*
- *It is recommended that an archival recording be undertaken for the buildings, foundations and sewage plant elements prior to any demolition in accordance with 'How to prepare archival records of heritage items' (Heritage Office, 1998).*
- *An Interpretation Plan be prepared, which showcases the history of the study area as part of the former Wallgrove Army Camp and migrants' hostel. The Interpretation Plan will seek to explore the historic and social values associated with the study area, will identify target audiences, site issues, and the potential for interpretation, and will propose interpretation devices at appropriate locations on the site.*

- *It is also recommended that the Interpretation Plan for the study area consider and, if possible, tie in with an existing interpretative work and memorial in the vicinity of the study area, The Australian Light Horse Sculpture Parade, which is to the north of the study area. Also known as the Light Horse Interchange, the interpretive art installation is a memorial to the soldiers and their horses who served as part of the Australian Light Horse troops in the Second Boer War and World War I. While the study area has associations with World War II owing to the Wallgrove Army camp, the presence of the Australian Light Horse Sculpture Parade in the vicinity should also be acknowledged and incorporated into any future interpretations for the study area.*

Each of the above provisions can be implemented as conditions of consent for the Stage 1 works and future detailed DAs. Accordingly, the potential heritage impacts arising from the proposed development are considered acceptable and can be appropriately managed.

6.11. NOISE AND VIBRATION

SLR Consulting was engaged to prepare a Noise and Vibration Impact Assessment for the proposed development (refer to **Appendix V**). The assessment report addresses both the Concept Proposal and the Detailed Proposal, primarily focussing on the construction and operational phases.

The report establishes the locality context for the proposed development, including the surrounding land uses and proximity to the closest residential receivers to the north and north-west of the development site.

The report identifies the potential sources of noise could include:

- Mechanical plant
- Internal warehouse operations
- Operation of the loading docks (hardstands)
- Truck and light vehicle movements on hardstands and in parking areas

The indicative concept drawings have been reviewed to understand the potential layout of the future buildings and the primary vehicle access point from Ferrers Road and the secondary emergency access point from Wallgrove Road.

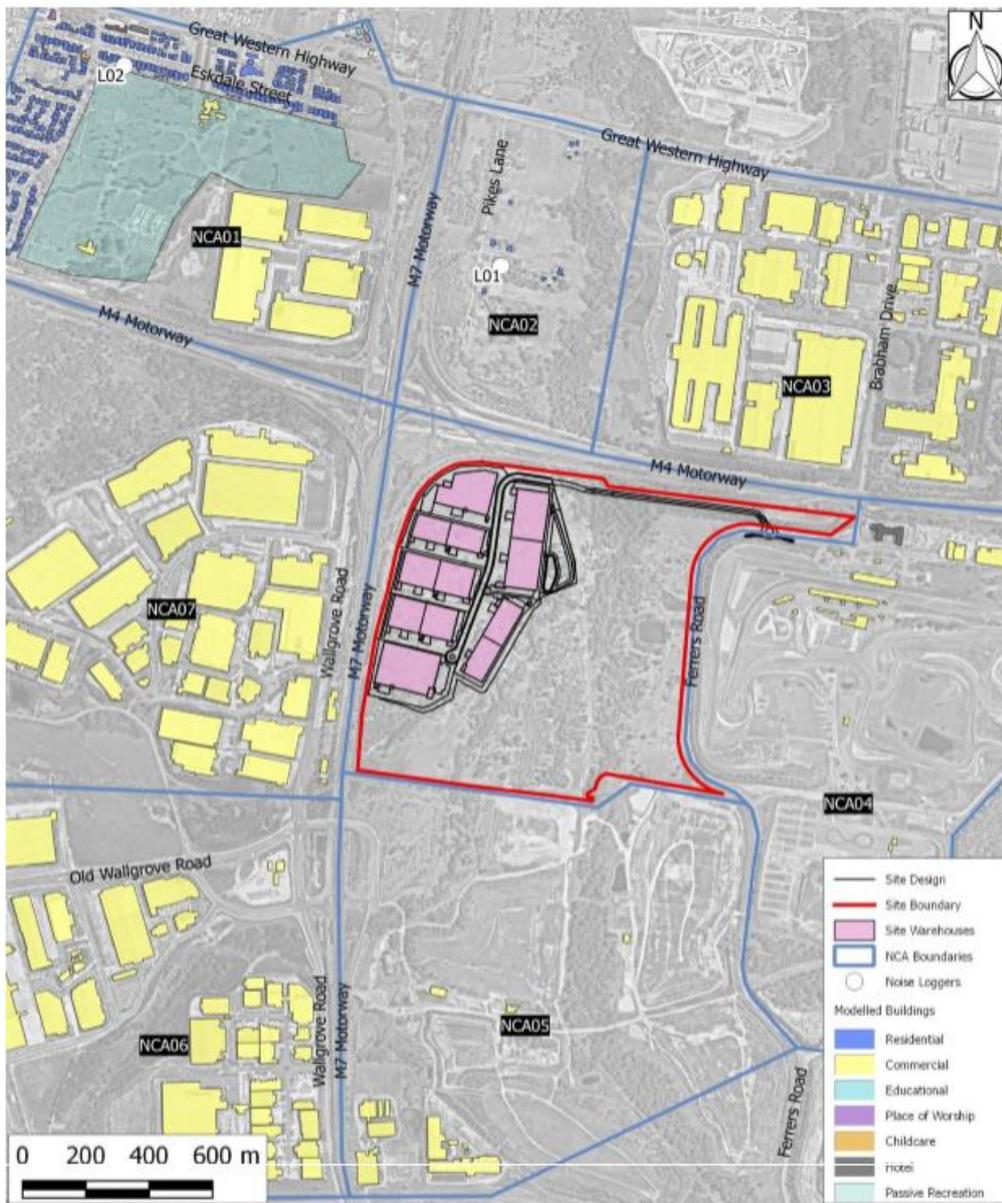
The area surrounding the development was divided into seven Noise Catchment Areas to represent the different sensitive receiver types within the locality. Unattended noise monitoring was completed at the nearest residential receivers to measure the existing ambient noise environment. The measured data was assessed in accordance with EPA guidelines and considering extraneous noise events and adverse weather conditions. Short-term attended noise monitoring was also completed to determine the contributors to the acoustic environment, being primarily noise from road traffic. Existing industrial noise sources in the vicinity of the measurement locations were not audible during the attended noise monitoring.

The potential noise impacts were assessed in accordance with the SEARs for the SSDA, relevant construction noise guidelines, construction road traffic noise guidelines, construction ground-borne noise guidelines, construction vibration guidelines and operational noise guidelines. The assessment was prepared based on assumptions regarding the type and location of equipment and construction activities, including operating hours.

The assessment identifies the following construction airborne noise impacts:

- *Site clearing, demolition and earthworks.*
- *Construction of roadways.*
- *Paving works including concrete pours.*
- *Construction of warehouse and office buildings.*
- *Landscaping and finishing works.*

Figure 27 – Development Location, Sensitive Receiver Areas and Modelled Buildings (Source: SLR Consulting, 2019)



The noise modelling indicates that there will be no exceedances of the noise levels during daytime standard hours. Minor exceedances of up to 9 dBA are predicted at the nearest residential receivers and 8 DBA at the hotel for out of hours work during the site clearing and earthworks, road construction and paving works, including concrete pours. The report provides general construction noise and vibration mitigation measures to minimise these impacts, including:

- Management measures
- Source controls
- Path controls
- Receptor control

The proposed development is not expected to result in any ground-borne noise impacts or vibration impacts at the nearest sensitive receivers during the construction works. Further, the construction road traffic is predicted to result in only a minimal increase in the overall traffic noise levels along the construction vehicle routes to the development.

Operational noise emissions have also been assessed, considering the likely future land use activities. No exceedance of the project trigger levels is predicted at any of the identified sensitive receivers and accordingly, not specific measures (such as noise walls) are required to be implemented. The future DAs would assess the final details of operations and mechanical within each of the future warehouses. Best management practices should be detailed in a site specific Operational Environmental Management Plan to minimise noise emissions where feasible and reasonable.

Each of the above measures can be implemented in Stage 1 and DAs for future stages. Accordingly, the potential noise and vibration impacts arising from the proposed development are considered acceptable and can be appropriately managed.

6.12. BUSHFIRE

Peterson Bushfire was engaged by the WSPT to prepare a Bushfire Assessment that assesses the potential bushfire hazards associated with the site and proposed development. A copy of their report is attached as **Appendix W**.

The report identifies the site location and key features, including the riparian vegetation along the eastern and southern boundaries of the site, including Eastern Creek, Reedy Creek and Eskdale Creek. The site is included within Vegetation Category 3 and accordingly, a bushfire assessment is required in accordance with the aims and objectives of *Planning for Bushfire Protection 2006* (PBP). The assessment recognises that the SSDA comprises both a Concept Proposal and a Detailed Proposal for the Stage 1 works.

The bushfire hazard has been assessed considering both the slope and vegetation on the site, including a physical inspection of the site and a review of the detailed specialist documentation lodged with the SSDA, including the concept drawings and biodiversity assessment. The PBP bushfire protection measures are assessed in detail, including:

- Defendable space
- Construction standards
- Access
- Water supply and other utilities

The report concludes that the future industrial development and associated uses can be accommodated with compliance bushfire protection measures, including defendable space around buildings and adequate access and water supply for fire-fighters. The proposed development can comply with the relevant PBP requirements subject to adopting the following recommendations:

1. *The business hub is to have a defendable space between future buildings and the hazard to the east and south. The defendable space is to consist of a minimum 6 m wide fire access road located between building envelopes and the boundary in the following manner:*
 - a. *Provides continuous thoroughfare for fire pumpers between the lots and site boundary.*
 - b. *The fire access roads are to be linked back to the internal access road. The fire access road along the eastern boundary is to link back to the internal spine road at the northern end, southern end, and mid-way between proposed Lots 6 and 7. The fire access road along the southern boundary is to be linked to the southern end of the internal spine road and the southern end of the western boundary emergency access road.*
2. *The defendable space is to be clear of vegetation.*
3. *Vegetation and landscaping across the Business Hub is to comply with the performance objectives of an Inner Protection Area (IPA) standard as described by PBP.*
4. *The primary access road is to satisfy the PBP design requirements for 'public roads'.*
5. *The development will require fire hydrants to be installed to comply with AS 2419.1 – 2005 Fire Hydrant Installations - System Design, Installation and Commissioning (AS 2419) so that all sides of a building envelope are within 70 m of a hydrant by lay of the hose (or 90 m with a tanker parked in-line maximum 20 m from the hydrant).*

6. Where overhead electrical transmission lines are installed, the vegetation clearance distances are to comply with ISSC 3 Guideline for Managing Vegetation Near Power Lines (Industry Safety Steering Committee 2005).
7. Any gas services are to be installed and maintained in accordance with AS/NZS 15962008 The storage and handling of LP gas

Each of the above measures can be implemented in Stage 1 and future stages of construction works. Accordingly, the potential bushfire risk can be appropriately mitigated, minimised and managed to avoid unacceptable impacts and facilitate compliance with the relevant requirements.

Figure 28 – Bushfire Prone Land (Source: Peterson Bushfire, 2019)



6.13. WASTE

Pitt & Sherry were engaged to prepare a Waste Management Plan (**WMP**) to assess the quantities and classification of waste that would be generated as a result of the proposed development, considering both the Concept Proposal and Detailed Proposal for Stage 1.

The WMP details the way in which the waste would be stored, handled and disposed and the measures to be implemented to ensure the development is consistent with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021. A copy of the WMP is held as **Appendix X**.

The WMP has been prepared based on:

- SEARs issued by the DPE
- Blacktown Development Control Plan (**DCP**)
- Consultation with the Waste Officer at Blacktown City Council (**BCC**)
- Sydney DCP 2012
- City of Sydney Policy for Waste Minimisation in New Developments 2005
- NSW Waste Avoidance and Resource Recovery Strategy 2014-2021
- NSW Environment Protection Authority (**EPA**) Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012
- Design documentation for the development, including specialist technical reports for hazardous materials and site contamination

The WMP identifies the buildings which are currently located on the site, including the former Wallgrove Army Base buildings, which are proposed to be demolished as part of the Stage 1 Detailed Proposal. The WMP recognises that the waste stream will include the removal of materials in accordance with the Hazardous Materials Survey Report and the Contamination Reports. Most of the other waste materials will be either re-used or recycled, minimising the amount of waste that will be disposed of off-site as outlined in the following table.

Table 11 – Estimated Demolition Waste (Source: Pitt&Sherry, 2019)

Type of Waste Generated	Reuse	Recycling	Disposal	Specify method of onsite reuse, contractor and recycling outlet and/or waste depot to be used
	Estimated Volume (m ³)			
Excavation material – bitumen	400	2,000		Reuse portion as required as on-site fill. Stockpile soil and reuse for landscaping if deemed suitable. Send to recycling or reprocessing as road base/aggregate. Facility at Genesis Eastern Creek, Bingo or Concrete Recyclers (Group).
Excavation material – soil	23,000	20,000		
Timber		500		Separated on site. Treated timber sent to landfill at Genesis. Untreated timber to be mulched for landscaping or sent to second hand timber suppliers. Recyclable timber sent to D&R Henderson.

Type of Waste Generated	Reuse	Recycling	Disposal	Specify method of onsite reuse, contractor and recycling outlet and/or waste depot to be used
	Estimated Volume (m ³)			
Concrete		6,300		Sent to concrete recycling or reprocessing as other materials such as road base aggregate. Sent to facility at Genesis Eastern Creek, Bingo or Concrete Recyclers Group.
Bricks		2,040		Sent to concrete recycling Facility for reprocessing as road base / aggregate (Genesis, Sydney Transwaste Industries).
Tiles		150		Crushed and used for drainage, landscaping and driveways, for reuse on-site or off- site. Sent to Genesis or Sydney Transwaste Industries for processing
Metal (incl structure steel)		500		Sent to SITA Wetherill Park or SIMS Metal for metal recycling
Glass		500		Glass can be disposed by Sydney Transwaste Industries or sent for reprocessing into various appropriate products
Fixtures, fittings and plasterboard		500		Disposal to a building material recycling / reprocessing facility such as Wetherill Park or Sydney Transwaste Industries
Floor coverings			500	Depending on the type of floor covering either disposal to Genesis or Kurnell landfills
Packaging (used pallets, pallet wrap)		1,200		Sent to Wetherill Park, Macleans Waste Management or Bingo
Garden organics		3,000		Sent to Wetherill Park for green waste processing
Residual waste			400	Disposal via Wetherill Park or to Genesis landfill
Asbestos			196,500	Waste type managed as per the Contamination Reports and recommendations from any further testing. Estimated volume (which includes 'suspected asbestos' may reduce with further testing. Sent to landfill

Type of Waste Generated	Reuse	Recycling	Disposal	Specify method of onsite reuse, contractor and recycling outlet and/or waste depot to be used
	Estimated Volume (m ³)			
Hazardous Waste (liquids, contaminated soils, chemicals etc)			200	Waste type managed as per the Contamination Reports and recommendations from any further testing. Sent to Toxfree for further processing.

The proposed redevelopment of the site will be staged, with future DAs being required for the construction and operation of the warehouse buildings. However, preliminary estimates of the likely construction and operational waste generated by the site are provided within the WMP. Similarly, most waste will be re-used or recycled to reduce off-site waste disposal.

Table 12 – Estimated Construction Waste (Source: Pitt&Sherry, 2019)

Type of Waste Generated	Reuse	Recycling	Disposal	Specify method of onsite reuse, contractor and recycling outlet and/or waste depot to be used
	Estimated Volume (m ³)			
Excavation material	50,000	5,000	5,640	Reuse portion as required as on-site fill. Stockpile soil and reuse for landscaping if deemed suitable. Send to recycling or reprocessing as road base/aggregate. Bingo or Macleans Waste Management facilities. Disposal option considered in light of potential contamination.
Timber (off-cuts, studs, etc)		120	65	Separated on site and provided to timber recyclers such as D&R Henderson. Non-recyclable treated timber sent to Genesis Landfill
Concrete		235		Sent to recycling or reprocessing as relevant. Genesis Eastern Creek / Bingo, Macleans Waste Management or Concrete Recyclers (Group)
Bricks		50		Sent to concrete recycling or reprocessing as other materials such as road base aggregate. Facility at Genesis Eastern Creek / Bingo, Macleans or Concrete Recyclers (Group).
Tiles		40		Sent to concrete recycling facility for reprocessing as road base / aggregate (Genesis, Sydney Transwaste Industries). Reverse Garbage may accept certain volumes.

Type of Waste Generated	Reuse	Recycling	Disposal	Specify method of onsite reuse, contractor and recycling outlet and/or waste depot to be used
	Estimated Volume (m ³)			
Metal (incl structure steel)		80		Crushed and used for drainage, landscaping and driveways, for reuse on-site or off-site. Sent to metal waste processing centres such as SITA Wetherill Park or SIMS metal
Glass		25		Glass can be recycled by Sydney Transwaste Industries or sent for reprocessing into various appropriate products
Plasterboard (offcuts)		30	10	Sent to Genesis or Sydney Transwaste Industries or disposal to Kurnell landfill.
Fixtures and fitting		5		Disposal to a building material recycling / reprocessing facility such as Sydney Transwaste Industries.
Floor coverings			40	Depending on the type of floor covering either disposal to Genesis Alexandria or Kurnell landfill
Packaging (used pallets, pallet wrap)		20		Sent to Randwick Recycling Centre, Reverse Garbage (accepts pallets) or Remondis Taren Point.
Containers (cans, plastic, glass)		5		Sent to SITA Wetherill Park for recycling
Paper/cardboard		20	5	Sent to Kurnell Landfill or Randwick Recycling Centre for recycling.
Residual waste			10	Disposal at Genesis Landfill
Liquid waste (sewage)			5kL	Waste type managed as per the Contamination Reports and recommendations from any further testing. Sent to Toxfree for further processing.

Indicative operations requirements are provided which can be used in the preparation of waste management guidelines for the site and to manage future operations of the development once completed. This includes waste storage areas, waste collection contractors and likely generation rates for both waste and recycling.

The provisions within the current WMP are considered adequate to manage waste during the demolition and construction phases associated with Stage 1. Preparation of waste management guidelines for the future warehouse and distribution activities could form part of a condition of consent for the future DAs.

6.14. AIR QUALITY

SLR Consulting was engaged to prepare an Air Quality Impact Assessment (**AQIA**) for the proposed development (see **Appendix Y**). The assessment report addresses both the Concept Proposal and the Detailed Proposal, primarily focussing on the first stage of development works.

The report establishes the locality context for the proposed development, including the surrounding land uses and proximity to the closest residential receptor (approximately 480 metres). The report identifies the potential air quality impacts associated with the proposed demolition, earthworks, site infrastructure and subdivision works. It is assumed that works would take place over approximately 12-18 months during standard construction hours. The assessment also identifies other local environmental factors which may affect the generation and dispersion of dust emissions, including wind direction, wind speed, surface materials, surface material moisture and rainfall or dew.

The potential air pollutants of interest for the proposed development are identified as:

- Suspended particulate matter
- Deposited dust
- Products of fuel combustion (including particulates)

The key potential air pollution and amenity issues associated with demolition and construction works in Stage 1 are identified as:

- Annoyance due to dust deposition (soiling of surfaces) and visible dust plumes
- Elevated suspended particulate concentrations (PM10) due to dust-generating activities

The potential impacts are assessed considering available meteorological data for the nearest station at Horsley Park to provide an estimate of the prevailing wind environment in the locality. The review indicated:

- *Winds that would blow fugitive dust emissions from the demolition/construction works towards the nearest sensitive receptors located to the north and northwest of the proposed construction activities occur rarely during autumn and winter, and are more likely to occur during summer and spring.*
- *The long term wind and rainfall patterns suggest that the construction at the Development Site have the greatest potential to impact on surrounding sensitive receptors during the months of May (autumn), and July (winter) to October (spring). Additional controls may be required (higher levels of watering for example) if construction occurs at these times.*

The AQIA concludes that the off-site impacts associated with dust deposition and suspended particulates during the construction phase are anticipated to be low. However, mitigation measures are recommended for consideration as part of the Construction Management Plan (**CMP**) to reduce the risks to negligible level. These measures include specific requirements relating to:

- Communication
- Site management
- Monitoring
- Preparing and maintaining the site
- Operating vehicle/machinery and sustainable travel
- Operations
- Waste management
- Trackout

Each of the above measures can be adopted in the CMP for Stage 1 and future stages of construction works. Accordingly, the potential air quality impacts arising from the proposed development are considered minimal and can be appropriately managed.

6.15. CONSTRUCTION IMPACTS

The WSPT has prepared a Preliminary Construction Management Plan (**CMP**) for the proposed development, considered both the Concept Proposal and Detailed Proposal for the Stage 1 works. A copy of the Preliminary CMP is provided in **Appendix K**.

The Preliminary CMP has been prepared considering each of the specialist technical reports that have been submitted with the SSDA and in accordance with the SEARs. It is proposed to serve as a reference document for the selected contractor of the infrastructure upgrade works and a final CMP will be prepared prior to commencing site works.

The Preliminary CMP also includes a preliminary Construction Traffic Management Plan (**CTMP**) which will also be finalised by the contractor selected for the construction works when further detail is progressed. The CTMP will consider temporary interruptions to vehicular and pedestrian traffic during the works and amplification of services. It will ensure public safety is maintained and any interruption to the use of public space is minimised.

The Final CMP is proposed to address the following issues:

- Ingress and egress of vehicles to the subject site
- Loading and unloading, including construction zones
- Construction traffic and construction car parking arrangements
- Pedestrian management methods
- Site Security
- Site Inductions
- Construction Zones
- Erosion and Sediment Controls
- Emergency Management.

It is anticipated that the final CMP will be required as a condition of consent for the Concept Proposal and prior to the commencement of the Stage 1 works as outlined in the Detailed Proposal. The implementation of the agreed measures will ensure the potential impacts of the proposed development will be mitigated, minimised and/or managed to avoid unacceptable impacts on the site or the locality, including traffic, health, safety, amenity and the environment.

7. SECTION 4.15 ASSESSMENT

The proposed development has been assessed in accordance with the matters of consideration listed in Section 4.15 of the *Environmental Planning and Assessment Act 1979* as outlined in the table below.

Table 13 – Section 4.15 Table

s4.15(1)(a)(i) Any environmental planning instrument
<p>The proposed development is permitted with consent in accordance with <i>State Environmental Planning Policy (Western Sydney Parklands) 2009</i> and complies with each of the relevant aims and matters for consideration as outlined within Section 4.1 of this EIS.</p> <p>The proposal also satisfactorily addresses each of the other relevant environmental planning instruments applicable to the site and the proposed development as outlined within Section 4.2.</p>
s4.15(1)(a)(ii) Any proposed instrument that is or has been placed on exhibition
<p>There are no proposed or publicly exhibited environmental planning instruments applicable to the site or the proposed development.</p>
s4.15(1)(a)(iii) Any development control plan
<p>Pursuant to clause 11 of <i>State Environmental Planning Policy (State and Regional Development 2011)</i> a development control plan does not apply to State significant development.</p> <p>However, detailed consideration has been given to Council's engineering standards and guidelines in the siting and layout of the proposed industrial subdivision, including compliance with relevant road widths and stormwater management requirements.</p>
s4.15(1)(a)(iia) Any planning agreement
<p>There are no planning agreements applicable to the subject site or to this development application.</p>
s4.15(1)(a)(iv) The regulations (to the extent that they prescribe matters for the purpose of this paragraph)
<p>There are no applicable regulations to this development application.</p>
s4.15(1)(a)(v) Any coastal zone management plan (within the meaning of the Coastal Zone Management Act 1979 that apply to the land to which the development application relates
<p>No coastal zone management plans apply to the subject land.</p>
s4.15(1)(b) The likely impacts of the development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality
<p><i>Context and setting</i></p> <p>The site of the proposed development is in a semi-rural setting on the urban fringe, adjoining the M4 and M7 Motorways. The site is also located close to industrial/warehouse precincts similar to the development proposed and other existing less-sensitive land use activities including a motorsport park, quarry and waste facility. The site forms part of the Western Sydney Parklands, however, it has been identified as suitable for an industrial business hub due to its relative isolation and low environmental or recreation value.</p>

Access, transport and traffic

Vehicular access to the site will be provided via a new access road and roundabout intersection from Ferrers Road. The access road has been designed to accommodate full access and manoeuvrability of B Double heavy vehicles. The existing road access via the M7 underpass will provide for a secondary emergency access only. The new access road will also include shared cycle/pedestrian and pedestrian pathways, connecting the site to the existing M7 cycleway network via the existing underpass.

Public domain

The proposal includes the provision of a new public road and roundabout for access. The public road will be landscaped and provided with relevant servicing infrastructure and lighting to ensure a quality public domain.

Utilities

Provision for essential utility services to the development is included in the design and will be provided as part of the Stage 1 works for the subdivision.

Heritage

The site contains no listed heritage items. Investigations for Aboriginal and non-Aboriginal heritage been undertaken as part of this EIS which identify the site as having a high likelihood of containing archaeological items of Aboriginal significance due to its location adjacent to Eastern Creek. The archaeological recommendations and precautions will be implemented as part of construction works. The non-Aboriginal heritage has also been assessed and while considered non-significant, recommendations are provided for the archiving and interpretation of the historical elements associated with its former military use

Water

Adequate provision is made in the design to accommodate the existing and altered hydrology of the site. Flooding and stormwater management has been assessed and considered in the technical reports submitted in support of the proposal with no significant adverse impact expected.

Soils

The proposed development is not expected to result in negative impacts on soils. Adequate sediment and erosion controls will be implemented as part of any demolition and construction activities.

Air and microclimate

Minor dust disturbances are expected during demolition and construction activities, however, are considered unlikely to affect the amenity of the surrounding locality. These aspects of the proposal have been addressed in the technical assessments undertaken with appropriate recommendations in place to mitigate the impacts.

Flora and fauna

The ecological and biodiversity values of the site have been assessed and adequate measures for compensation and mitigation of impacts will be implemented as identified in the Biodiversity Assessment submitted in support of the proposal. Parts of the site have high biodiversity value with the identified impacts to be offset through biodiversity credits on other sites within the Western Sydney region.

Waste

Construction and demolition waste will be generated as part of Stage 1 works. Provision for the management and mitigation of impacts is addressed in the Waste Management Plan submitted with the SSDA. Specific waste management arrangements for subsequent stages will be addressed in separate development applications.

Noise and vibration

Some noise and vibration impacts are expected during demolition and construction activities. These impacts will be minimised and mitigated in accordance with the recommendations in the Noise and Vibration Impact Assessment submitted in support of the proposal.

Natural hazards

The site's natural hazards, including bushfire risk and flood hazard, have been considered in the design of the proposal and are addressed in the relevant technical reports submitted in support of the proposal.

Technological hazards

The site is constrained by existing infrastructure, including a high-pressure trunk natural gas main. This has been considered in the design of the proposal and is further addressed in the Hazards and Risk Assessment report submitted in support of the proposal.

Safety, security and crime prevention

General consideration has been given to safety, security and crime prevention. The proposed concept building layout makes allowance for safe and clear access to each lot from the public domain with adequate space within each lot and around each identified building footprint for the provision of clear sight lines. Safety, security and crime prevention will be a specific consideration in the future design of the built form elements of the proposal in subsequent development applications.

Social impacts in the locality

The proposal is expected to result in positive social impacts in the locality and the wider Western Sydney area through the provision of additional industrial/warehousing infrastructure. The proposal is also an integral part of the long-term planning and management of the Western Sydney Parklands and will provide a financial return to the WSPT that will contribute to the ongoing management and operation of the Parklands and the essential social benefits it provides to Western Sydney.

Economic impact in the locality

Positive economic impacts and contributions to the economic health of Western Sydney and NSW is expected through the provision of jobs and industrial/warehouse floor space in an area of high growth and demand for this infrastructure.

Site design and internal design

The proposal has been designed having regard for the site's constraints and to minimise the environmental impact of the proposal. The built form is generally aligned with the M7 axis and along the proposed access road. Adequate space is allocated in the design for building clearance, landscaping and infrastructure provision. The proposed access road has been designed with sufficient width to enable the parking, movement and manoeuvring of B Double heavy vehicles (being the largest vehicle expected to use the site).

Construction

Minor environmental impacts are expected during demolition and construction activities as addressed in this EIS and in the technical reports submitted in support of the proposal. Based on the recommendations of these reports, the construction impacts can be adequately mitigated to avoid negative environmental impacts.

Cumulative impacts

The proposal is not expected to result in any negative cumulative impacts.

s4.15(1)(c) *The suitability of the site for the development*

The site is considered suitable for the proposed development for the reasons outlined in this EIS. The site is within a part of the Western Sydney Parklands that is considered unsuitable for recreation use due to its isolation and low environmental and recreation value. site is close to existing transport corridors and established industrial areas and has been identified in the POM for the Western Sydney Parklands as one of several sites suitable for business hub uses as part of the long-term financial sustainability strategy of the WSPT.

s4.15(1)(d) *Any submissions made in accordance with the Act or Regulations*

The proposal will be publicly exhibited as part of the assessment process in accordance with the requirements of the consent authority.

The applicant has undertaken consultation with surrounding landowners/occupants and relevant government agencies in accordance with the SEARs. The outcomes of the consultation have been incorporated in the subdivision layout and the associated site works. Details of the consultation undertaken as part of this EIS process is detailed in the Consultation Report submitted in support of the proposal.

s4.15(1)(e) *The public interest*

The proposed development is considered to be in the public interest given its expected positive social and economic impacts to the locality and Western Sydney.

8. MITIGATION MEASURES

The measures identified to mitigate the potential environmental impacts of the proposed development are described in detail within **Section 6** of the EIS and summarised in the table below.

Table 14 – Proposed Mitigation Measures

Impact	Potential Impact	Approach	Residual Impact
Traffic and Transport	The Great Western Highway and Brabham Drive intersection is forecast to have a slight increase in average vehicle delays	The intersection is proposed to be upgraded by providing an additional 70 metre land on the northern (Doonside Road) approach to be dedicated as a left-turn only land, providing two lanes of south-bound traffic and an improved intersection performance	No identified residual impacts
Contamination	The site is identified as containing contaminants from previous land uses and building materials that present an environmental impact during demolition and construction activities.	The site will be remediated in accordance with the recommendations in the Detailed Site Investigation submitted with the SSDA. The remediation will remove the identified contamination making the site suitable for the proposed use.	No identified residual impacts
Flooding	The report concludes there is no change to peak flows and corresponding peak flood levels downstream and accordingly, there is no requirements for additional flood mitigation measures. However, an area of increased flood level across the M4 Western Motorway may arise during an Extreme Flood Event due to a change in flow distribution across the road corridor.	The future industrial buildings will be designed to comply with the minimum habitable floor levels. A flood management plan will be prepared to incorporate flood warning and emergency response opportunities.	The TUFLOW model for existing local flow behaviour showed the M4 Western Motorway embankment impacts on flood behaviour and conveyance of flood flow downstream. This area is already untrafficable under existing flood conditions.
Hazards and Risk	The land use activities within the future industrial buildings could require additional assessment in accordance with HIPAP No 6. The Jemena high-pressure natural gas pipeline east of the proposed business hub	Future DAs should be assessed considering the specific land use activities for each lot including predicted populations and societal risk. The building should be designed to reflect the level of exposure to the	No identified residual impacts

Impact	Potential Impact	Approach	Residual Impact
	could present a risk to future populations associated with release of flammable gas and fire.	gas pipeline and risk exposure, including emergency refuge and egress arrangements.	
Soils and Water	The proposed site works including the earthworks required to achieve required flood levels and the realignment of Eskdale Creek to accommodate the proposed subdivision could impact on hydrological processes and quality of downstream receiving waters	The Vegetated Riparian Zones along Eastern Creek, Reedy Creek and the realigned Eskdale Creek will protect and enhance the existing riparian vegetation. The proposed stormwater management system and sediment and erosion control measures will avoid impacts on downstream water quality.	No identified residual impacts
Biodiversity	The potential impacts of the development on the biodiversity value of the site include the clearing of land and the realignment of Eskdale Creek to accommodate the proposed industrial subdivision	A variety of measures are proposed to mitigate or minimise potential impacts including pre-clearance protocols, the stormwater management system, salvaging hollow-bearing trees, protecting and enhancing riparian vegetation and erosion and sediment control measures.	The residual impacts will be offset by a total of 261 ecosystem credits and 100 Southern Myotis species credits. It is intended these will be met by retiring existing credits and/or generating suitable credits by entering into a Biodiversity Stewardship Agreement.
Infrastructure	Existing utility services will need to be extended to provide connections to each of the industrial lots. New transport infrastructure will provide access to the site	The industrial subdivision has been designed to accommodate the existing infrastructure within the road layout and building setbacks. All works will be undertaken in accordance with the final CMP.	No identified residual impacts
Visual Impacts	The future industrial buildings will be visible from the M4 Western Motorway and partly visible from the overbridge of the Lighthorse Interchange.	Generous landscaped setbacks have been provided to the M4 and M7 Motorways to provide visual screening of the proposed buildings.	The proposed landscaping will take time to mature and provide for optimal visual screening. However, the potential visual impact will lessen over time as the vegetation becomes dense and extends above the height of the proposed buildings.

Impact	Potential Impact	Approach	Residual Impact
Heritage	The proposed development has the potential to impact areas of moderate, high and very high archaeological potential.	An Aboriginal Heritage Management Plan will be prepared to provide the post-approval framework for managing the potential heritage impacts, including unexpected finds and consultation	No identified residual impacts
Noise and Vibration	Out-of-hours work during site clearing and earthworks, road construction and paving works, including concrete pours may result in minor exceedances to the relevant noise levels at the residential receivers.	Management measures, source control, path controls and receptor control measures will be incorporated into the CMP to minimise noise emissions and avoid unacceptable impacts.	No identified residual impacts
Bushfire	The site is located within Vegetation Category 3 and the proposed development needs to be designed to avoid bushfire risks	A fire access road is to be provided between future buildings and the vegetation to the east and south to achieve a defensible space. Fire hydrants will be installed in accordance with relevant guidelines.	No identified residual impacts
Waste	The demolition and construction phases of the development will generate waste which will need to be stored, handled and disposed in accordance with relevant guidelines.	The different types of waste have been classified and allocated to be either re-used, recycled or disposed, minimising the amount of off-site waste disposal.	No identified residual impacts
Air Quality	The demolition and construction phases may create annoyance due to dust position and visible dust plumes and/or elevated suspended particulate concentrations due to dust generating activities.	Off-site impacts are expected to be low, however, mitigation measures have been recommended to be incorporated in the CMP to reduce the risks to a negligible level.	No identified residual impacts
Construction Impacts	Some construction impacts have been identified including potential noise and vibration and air quality impacts.	The preliminary CMP will be updated to incorporate each of the recommended mitigation measures identified in the EIS.	No identified residual impacts

9. CONCLUSION AND JUSTIFICATION

This EIS has been prepared to assess the environmental, social and economic impacts of the concept design and Stage 1 works of the proposed Light Horse Interchange Business Hub. The EIS has addressed the issues identified in the SEARs and the Commonwealth SARs and has been prepared in accordance with Schedule 2 of the *Environmental Planning & Assessment Regulation 2000*.

The biophysical impacts of the proposal have been assessed and it is demonstrated that it will not result in any unjustified impacts or effects on threatened species, populations or ecological communities or their habitats resulting from the construction works proposed. The development will not result in any unreasonable impacts on or as a result of air quality, flood risk, bushfire risk, noise generation, waste generation, technological hazards or stormwater quality as demonstrated in this EIS.

The development is expected to result in positive social and economic impacts on the region as a result of employment generation and the provision of essential business infrastructure to support a robust economy and to satisfy economic demand. The proposal will provide a financial return for reinvestment in the ongoing management and development of the Parklands as a regional recreation, environmental and open space asset in accordance with the Western Sydney Parklands Plan of Management 2030.

Having regard for the biophysical, economic and social considerations, including the principles of ecologically sustainable development, the proposed development is justified for the following reasons:

- The proposed development is permissible with consent on the site under the provisions of *State Environmental Planning Policy (Western Sydney Parklands) 2009* and satisfactorily responds to the aims and matters for consideration listed within the SEPP
- The proposal is consistent and compatible with the strategic land use and transport policies and will deliver a substantial investment in Western Sydney with significant construction and ongoing employment opportunities close to the growing residential population
- The proposed industrial subdivision has been sited and designed to satisfactorily address State and local environmental planning instruments and guidelines, including compliance with relevant local engineering requirements
- The environmental impacts associated with the demolition, construction and operational phases of the development have been comprehensively assessed and can be appropriately mitigated to avoid unacceptable impacts to the site or locality
- The development will provide positive local, regional and national economic impacts through the provision of employment and essential business infrastructure
- The site is suitable for the proposed use and will provide benefits to the region through its financial contribution towards the ongoing operation and management of the Western Sydney Parklands
- The development can be adequately serviced by essential infrastructure without unreasonable demands on existing networks
- The issues identified during the stakeholder consultation have been incorporated into the final concept design and detailed works and can be implemented in the construction and operation of the proposed development

Based on the above matters, it is considered the proposed development is in the public interest and is recommended for approval.

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All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

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This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.



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