



Edmondson Park South Part 3A – Stage 1

Ecological Assessment

Ed Park Part 3A - Ecological – Stage 1 - 260810 - RevB

Prepared for
Landcom

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Abbreviations

ABBREVIATION	DESCRIPTION
CPW	Cumberland Plain Woodland
DECCW	NSW Department of Environment Climate Change and Water
DEWHA	Commonwealth Department of Environment, Water, Heritage and the Arts
ENV	Existing Native Vegetation as defined in the Biodiversity Certification Order
EP&A Act	NSW Environmental Planning and Assessment Act, 1979
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act, 1999
GC SEPP	Environmental Planning Policy (Sydney Region Growth Centres) 2006
LGA	Local Government Area
RTA	NSW Roads and Traffic Authority
TSC Act	NSW Threatened Species Conservation Act, 1995
WCM	Water Cycle Management

Executive Summary

Landcom is proposing to deliver a new diverse and sustainable urban community at Edmondson Park South. Once complete, Edmondson Park South will accommodate a mix of land uses, a diversity of housing (approximately 3,200 dwellings), a new town centre incorporating 35,000 – 45,000m² retail, business and commercial floor space with employment opportunities for 1,000 people, multi-purpose community and education facilities, a new 150 hectare Regional Park, a number of other local parks and environmental conservation areas.

This ecological assessment report relates to Stage 1 of this development that will see the creation of approximately 206 residential lots, 8 super lots for future subdivision 15 Environmental Living lots and 3 lots for dedication to Campbelltown City Council as Public Reserve in 5 stages.

Stage 1 is entirely located within lands that have been 'biodiversity certified' under *State Environmental Planning Policy (Sydney Region Growth Centres)*. This means that impact assessment under the *NSW Threatened Species Conservation Act, 1995* is not required.

Stage 1 is also within the area subject to the Edmondson Park Conservation Agreement established under the *Commonwealth Environment Protection and Biodiversity Conservation Act, 1999*. As there are no specific requirements for protection or management of lands within Stage 1, the site is effectively exempt from further assessment under this act.

Construction of a sewer line through the Regional Park is included with the Stage 1 application. This will cause a temporary disturbance to native vegetation within the Regional Park. This area will be completely rehabilitated post-construction and the alignment will enable a gravity main to be constructed, reducing ongoing environmental impacts and risks associated with the operation of a pump station.

A series of recommendations have been made to manage works undertaken on the site to minimise potential impacts to proximal areas of native vegetation that may occur through un-restricted access, runoff and weed invasion.

Implementation of Stage 1 will be the first stage of Edmondson Park South and will initiate the establishment of the Regional Park and implementation of management works.

1 Introduction

This ecological assessment report has been prepared by Eco Logical Australia to accompany a Project Application under Part 3A of the *Environmental Planning & Assessment Act, 1979* (EP&A Act) for Stage 1 of Edmondson Park South.

Landcom is proposing to deliver a new diverse and sustainable urban community at Edmondson Park South. Once complete, Edmondson Park will accommodate a mix of land uses, a diversity of housing (approximately 3,200 dwellings), a new town centre incorporating 35,000 – 45,000m² retail, business and commercial floor space with employment opportunities for 1,000 people, multi-purpose community and education facilities, a new 150 hectare Regional Park, a number of other local parks and environmental conservation areas.

The new urban community at Edmondson Park South will meet the State Government's objectives to increase housing supply, provide community benefits and create jobs.

The Edmondson Park South project is the subject of a Part 3A Concept Plan and proposal to list Edmondson Park South as a State significant site under SEPP Major Development 2005. The purpose of the Concept Plan is to secure statutory approval for the overall planning framework for the site and to further resolve a number of remaining site-wide infrastructure delivery and land use planning issues. The Stage 1 Project Application (submitted concurrently with the Concept Plan) relates to early works, infrastructure and subdivision for the initial phases of the development and will enable site works to begin in 2010.

The Site

The Stage 1 Project Application site comprises an area of approximately 40 hectares and forms part of the larger Edmondson Park Release Area within the South West Growth Centre. It is located within the southernmost portion of the larger development site to the north of the M5 Motorway and to the east of Zouch Road and is approximately 40 km to the south west of Sydney CBD. The site is wholly located within the Campbelltown LGA (refer to Location Plan at Figure 1).

1.1 CONCEPT PLAN

The Concept Plan establishes the overall planning framework for the site, including:

- land use type and distribution;
- a mix of housing types and densities (approximately 3,200 dwellings);
- concept location of and approximately 35,000 – 45,000 m² of retail / business / commercial floor space within the new Edmondson Park Town Centre;
- identification and location of open space and drainage corridors, environmental conservation lands (to form the new Regional Park), and local active and passive recreation facilities, including levels of embellishment;

- expanded Ingleburn North Primary School and new combined Primary/High School to the north of the site;
- road network layout;
- pedestrian and cycleway network layout;
- pedestrian bridge over the south western railway;
- Campbelltown Road corridor including the establishment of key intersection locations and configuration;
- utilities (including power, telecommunications and gas), infrastructure strategy, potable water strategy, sewer concept plan and water cycle management plan;
- location and dimensions of Bushfire Asset Protection Zones;
- appropriate interpretation of European and Aboriginal heritage located on the site;
- erection of signage and billboards;
- remediation works; and
- demolition.

The Concept Plan also sets out an approval framework that will enable the carrying out of the works necessary to remediate the site in accordance with a Remediation Strategy without the need for undertaking further environmental assessment.

A variety of housing types is proposed to be delivered. This will provide for a range of housing price points and will include moderate income housing and housing for seniors.

It is proposed to develop the Edmondson Park site progressively in stages over a 15-20 year period. The Concept Plan will address the staging and delivery of the overall development having regard to the progressive delivery of necessary infrastructure, services and facilities; and market demand.

The Concept Plan is accompanied by a proposal with respect to the future developer contributions framework for the provision of local facilities and services within the Liverpool and Campbelltown LGAs as well as State Infrastructure.

1.2 STAGE 1 PROJECT APPLICATION

The residential subdivision Project Application comprises:

- the creation of 206 residential lots, 8 super lots for future subdivision 15 Environmental Living lots and 3 lots for dedication to Campbelltown City Council as Public Reserve in 5 stages¹;
- the dedication of roads to Campbelltown City Council;
- On-site works comprising:
 - tree removal;
 - earthworks including excavation, cut and fill;
 - design and construction of physical infrastructure, including roads, stormwater drainage and utility reticulation, traffic management works, establishment of open space areas;
 - retaining walls as determined during detailed design;
 - design and construction of staged stormwater water quantity and quality infrastructure to achieve objectives required by the Water Cycle Management (WCM) strategy for the greater site;
 - demolition of all existing structures;
 - erosion and sediment control to areas of roadworks and bulk earthworks including provision of temporary sedimentation ponds and diversion drains;
 - Design and construction of an ornamental pond;
 - Landscaping of road reservations;
 - erection of signage and billboards; and;
 - Embellishment of open space.
- Off-site works comprising:
 - construction of the sewer lead in from the Sydney Water carrier main at Ash Road;
 - upgrade of overhead mains and construction of electrical lead-in feeders from the existing zone substation at Prestons;

¹ A number of residue lots will be created in undertaking the Project Application, the number of lots identified in the above description relate to the ultimate number of lots that will be created in the Project Application.

- connection to utility services, potable and recycled water, electricity, gas and telecommunications in Campbelltown and MacDonald Roads;
- Connection to existing stormwater drainage;
- tree removal;
- earthworks including excavation, cut and fill;
- design and construction of physical infrastructure, including roads, stormwater drainage and utility reticulation, traffic management works, including the connection to the existing MacDonald Road;
- design and construction of staged stormwater water quantity and quality infrastructure to achieve objectives required by the Water Cycle Management (WCM) strategy for the greater site;
- erection of an acoustic wall;
- erection of signage and billboards;
- extension or relocation of existing services including potable and recycled water, gas, telecommunication, power;
- demolition of all existing structures; and;
- Proposed new intersection to existing Macdonald Road.

It is intended to seek staged Construction Certificates as necessary to facilitate the efficient delivery of each phase of the development works.

The first stage residential Project Application will include the proposed construction of a gravity sewer line through the future Regional Park.

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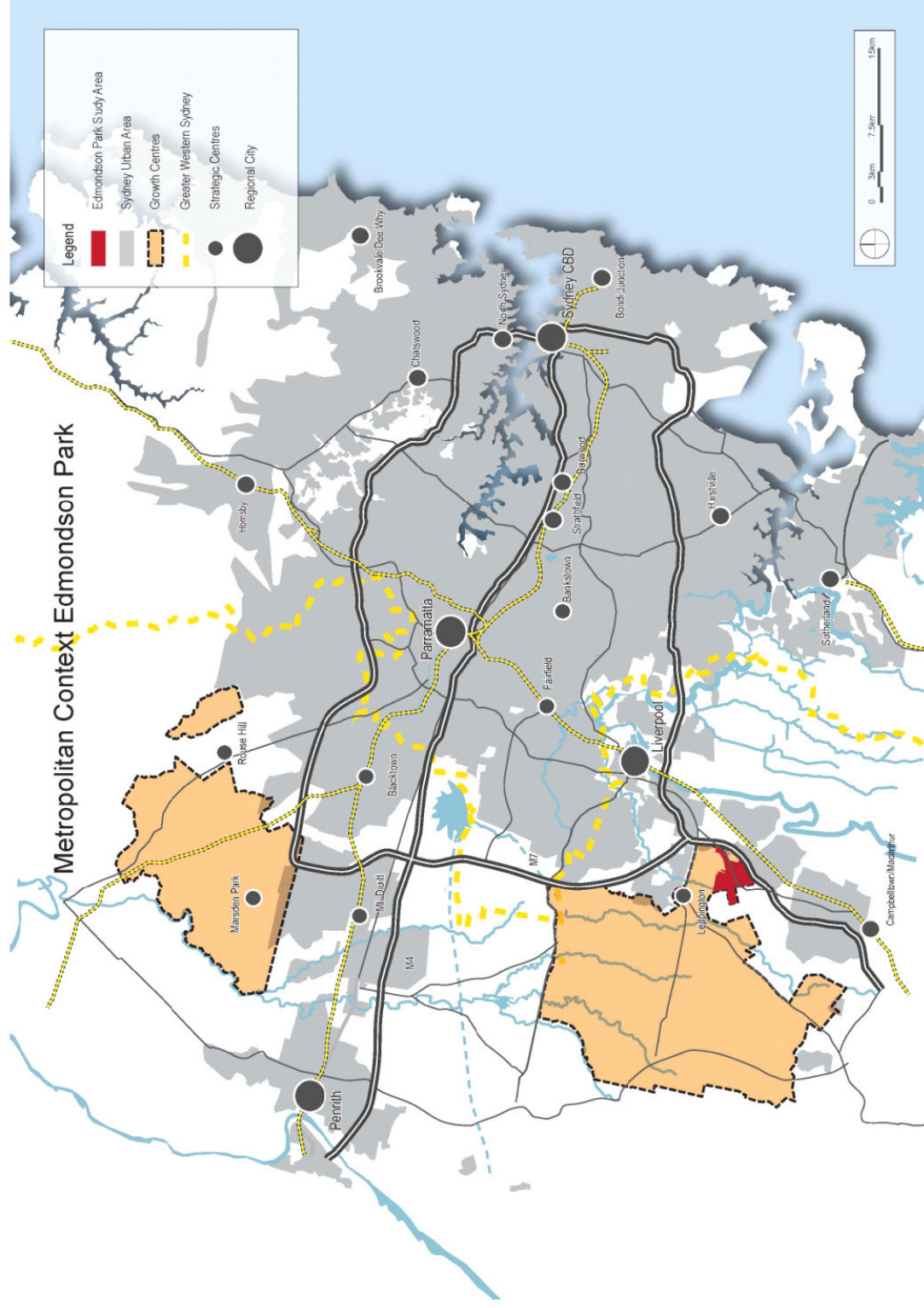


Figure 1. Regional Context

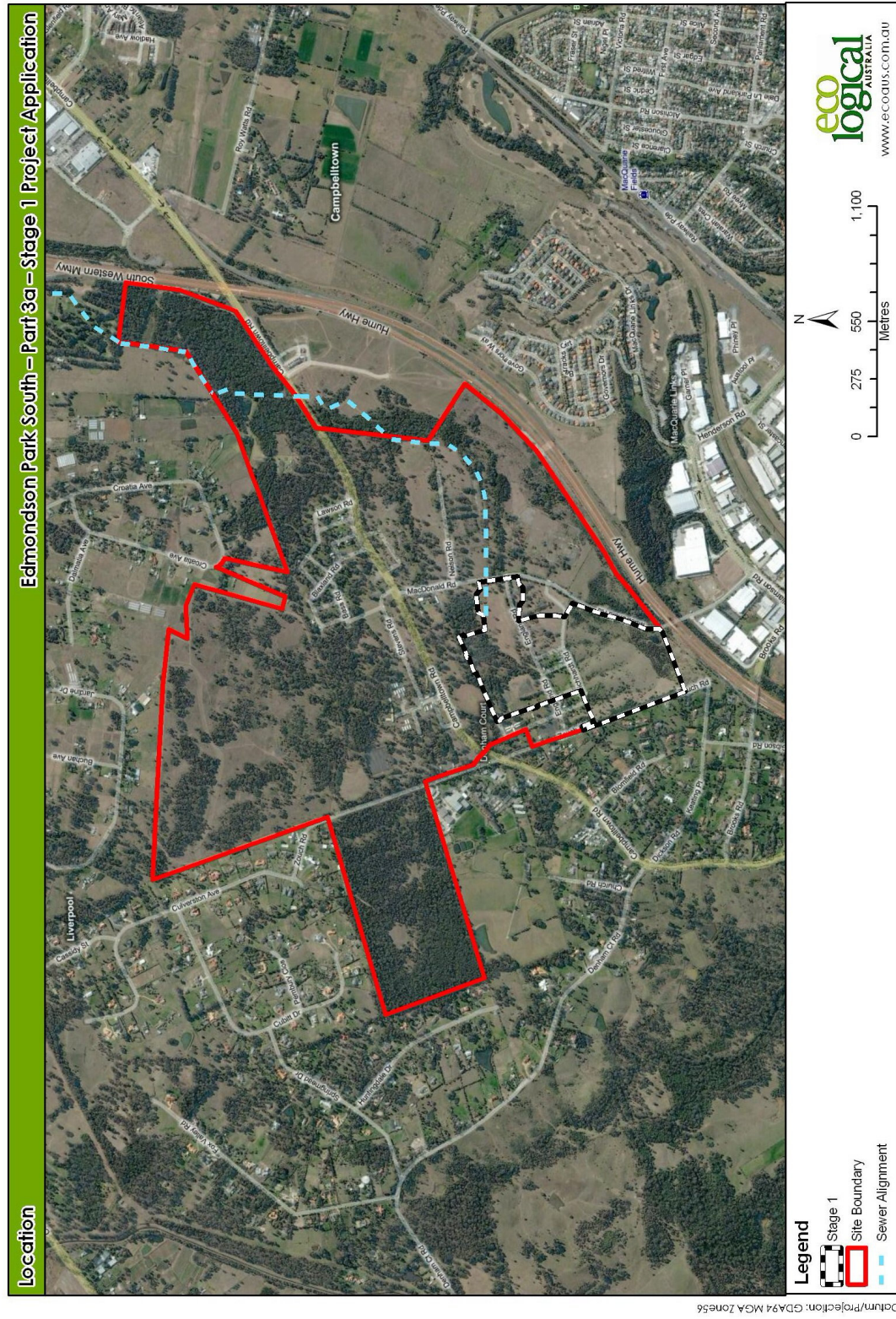


Figure 2. Location

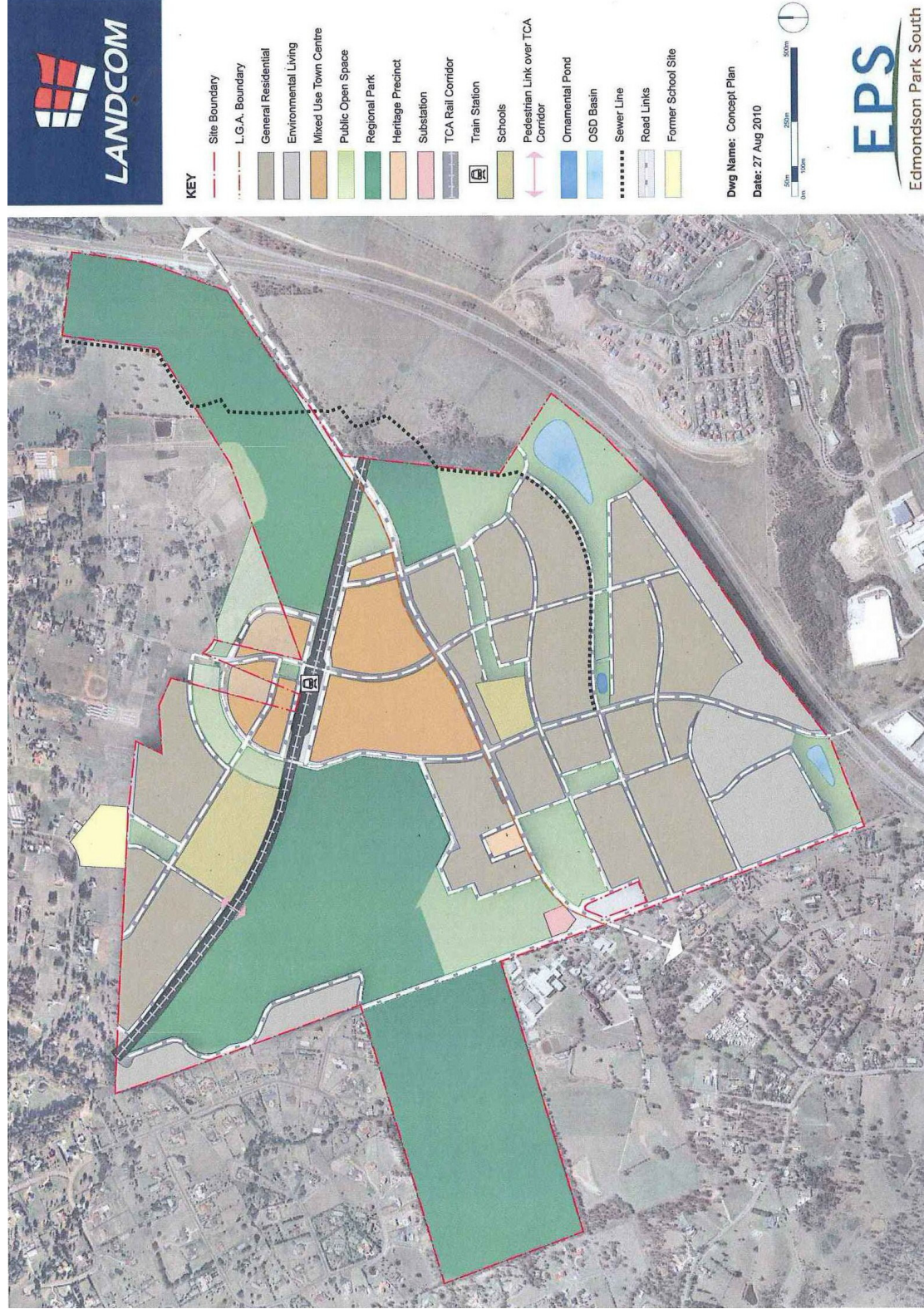


Figure 3. Concept Plan

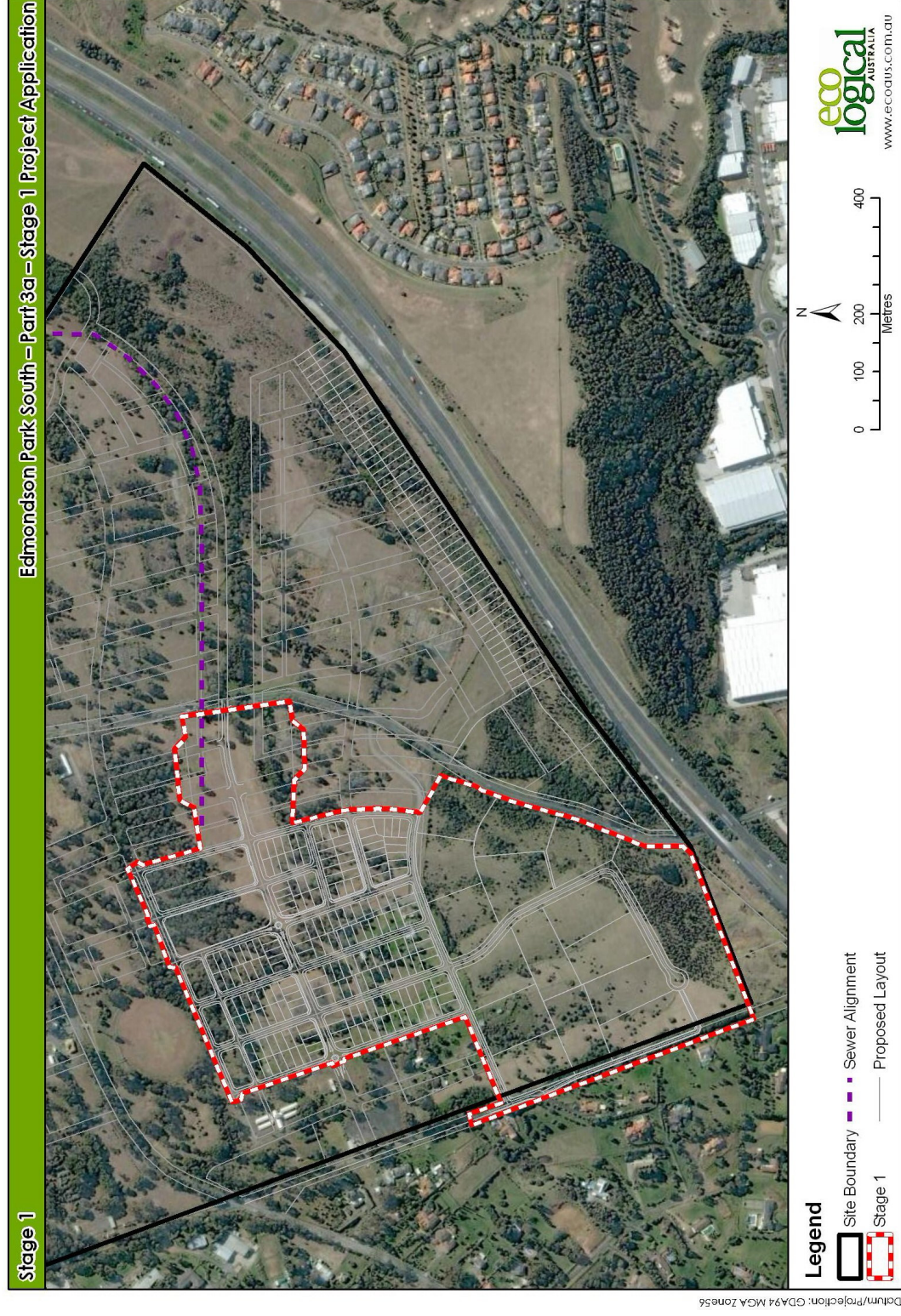


Figure 4. Stage 1 Project Application

1.3 PLANNING BACKGROUND

The Edmondson Park Release Area, including the site, has been the subject of broad strategic planning investigation and environmental assessment over a number of years by Liverpool and Campbelltown City Councils, the Department of Planning, the Department of Defence (the current landowner of the Ingleburn Army Base) and Landcom (owner of certain lands).

The whole of the Edmondson Park Release Area has been released for urban development by the Minister for Planning. Part of the site; the Ingleburn Army Camp, is currently the subject of a 'delayed' rezoning for urban purposes under Liverpool Local Environmental Plan 2008 and Campbelltown (Urban Area) Local Environmental Plan 2002.

In June 2010 the Minister for Planning considered a Preliminary Assessment Report for the Edmondson Park South Project that provided justification for the planning, assessment and delivery of the project to occur under Part 3A of the EP&A Act, having regard to the demonstrated contribution that the project will have to achieving State and regional planning objectives.

Subsequently, on the 5th July 2010, pursuant to Clause 6 of SEPP Major Development, the Minister for Planning formed the opinion that the Edmondson Park South Project constitutes a Major Project to be assessed and determined under Part 3A of the EP&A Act, and also authorised the submission of a Concept Plan for the site. In doing so, the Minister also formed the opinion that a State significant site (SSS) study be undertaken to determine whether to list the site as a State Significant site in Schedule 3 of SEPP Major Development.

The Part 3A process under the EP&A Act allows for the Edmondson Park South Project to be planned, assessed and delivered in a holistic manner, with a uniform set of planning provisions and determination by a single consent authority.

This report has been prepared to fulfil the Environmental Assessment Requirements issued by the Director General for the preparation of a separate Environmental Assessment to accompany the first stage residential Project Application.

Specifically, this report addresses the following requirements:

General Requirements

(5) a consideration of all relevant statutory and non-statutory provisions and identification of any non-compliance with such provisions (especially the SEPP (Major Development) 2005, SEPP 44, SEPP 55, SEPP (Infrastructure) 2007, SEPP (Sydney Region Growth Centres) 2006, Liverpool Local Environmental Plan 2008, Campbelltown (Urban Area) Local Environmental Plan 2002, Metropolitan Strategy, and draft South West Subregional Strategy.

Biodiversity

(1) Assess the consistency of the proposal with the Biodiversity Certification Order (dated 11 December 2007) conferred on the State Environmental Planning Policy (Sydney Region Growth Centres) 2006. Any clearing of existing native vegetation within the non-certified areas should be offset in accordance with the relevant biodiversity measures of the Biodiversity Certification.

(2) Provide an assessment of biodiversity impacts of the proposed development in accordance with draft Guidelines for Threatened Species Assessment (DEC July 2005). For certified areas under the Biodiversity Certification, the assessment undertaken in the draft Growth Centres Conservation Plan (GCC February 2007) and the offsets established in the Biodiversity Certification can be referenced for the proposal.

(3) Assess the consistency of the proposal with the Edmondson Park Conservation Agreement (dated 20 August 2009), in particular with the requirements of the Biodiversity Conservation Plan (Schedule 4). Any proposed variation to the Conservation Agreement would need to be justified (including consideration of alternative options) on ecological grounds.

Surface water, groundwater quality and riparian corridors

(2) Identify any potential impacts on groundwater and groundwater dependant ecosystems, and how impacts will be avoided mitigated or managed.

(4) Assess any proposed variation to riparian corridors and associated buffers in accordance with the Riparian Corridor Management Study approach applied to the Growth Centres, and provide justification for any changes. Details of any rehabilitation works for corridors should be provided.

Ecologically Sustainable Development (ESD)

(1) The EA should demonstrate that all aspects of the concept plan satisfy the principles of ESD including compliance with BASIX.

(2) The EA should outline commitments to sustainability including water reuse, waste minimisation, the minimisation of energy use and car dependency.

Regional Park

(1) Identify measures to mitigate interface impacts (both construction and operational) on the ecological values of the Regional Park from adjoining urban areas.

(2) Assess the consistency of the proposal with the Statement of Interim Management Intent for the Regional Park. Outline and justify any variations and provide an appropriate assessment of any potential impacts.

Additional Assessment Requirements (Project App)

Construction Requirements

(2) Identify strategies to minimise impacts on the ecological values of the regional park and open space areas, as well as to minimise the extent of vegetation clearing within the development area.

Consultation

In accordance with the Director General's Requirements this ecological assessment report has been prepared following consultation with the following agencies:

- NSW Department of Environment, Climate Change and Water
- Commonwealth Department of Environment, Water, Heritage and the Arts

2 Assessment Background

2.1 BIODIVERSITY CERTIFICATION

In NSW threatened species and endangered ecological communities are protected by the *NSW Threatened Species Conservation Act, 1995* (TSC Act). Under the TSC Act, developments or activities that have the potential to impact threatened species require detailed impact assessment, known as the 7-part test.

In addition to undertaking 7-part tests, detailed assessment of threatened species also takes place during the rezoning of land. To avoid duplication of effort and to streamline the approvals process for recently rezoned land, legislation enabling 'Biodiversity Certification' was introduced.

Biodiversity Certification allows the Minister for the Environment to exempt sites, developments, species etc from further impact assessment work (i.e. 7-part tests), providing that it has been demonstrated that Biodiversity Certification;

'will lead to the overall improvement or maintenance of biodiversity values.'

The NSW Department of Planning undertook a comprehensive assessment of the Western Sydney Growth Centres that included quantifying the area of Cumberland Plain Woodland that would be impacted and the area that would be protected. It was identified that approximately 2000 hectares of Existing Native Vegetation (ENV) would be protected across the Growth Centres. In addition, a levy placed on development in the Growth Centres is to raise approximately \$530 million to undertake additional conservation works including buying and/or protecting high conservation value land.

On the 11th December, 2007 the Minister conferred Biodiversity Certification on the 'Growth Centres SEPP'. This is known as the 'Biodiversity Certification Order'. Effectively, areas of lower conservation value were 'certified', allowing clearing to occur without the need for further impact assessment. Areas of higher conservation value have been identified as 'non-certified'. The non-certified lands continue to be protected by the *Threatened Species Conservation Act, 1995* and under the Biodiversity Certification Order additional assessment requirements have been identified that further limit clearing. Edmondson Park includes a mix of certified and non-certified lands, with the majority of non-certified lands located within the Regional Park.

2.2 COMMONWEALTH CONSERVATION AGREEMENT

The Commonwealth *Environment Protection and Biodiversity Conservation Act, 1999* (EPBC Act) provides for the protection of Matters of National Environmental Significance (MNES). Cumberland Plain Woodland and the Swift Parrot are MNES that are known or likely to occur at Edmondson Park. Impact on MNES requires assessment and if the impacts are of a certain magnitude approval from the Commonwealth Department of Environment, Water, Heritage and the Arts is required.

One of the approvals mechanisms under the EPBC Act is a 'Conservation Agreement'. The state of NSW and the Commonwealth of Australia have entered into a Conservation Agreement for Edmondson Park. This legally binding agreement requires the establishment of a 150 hectare regional park, sympathetic management of public open space that contains Cumberland Plain Woodland and the protection of 72 hectares of Cumberland Plain Woodland outside of Edmondson Park. Subject to these requirements being met the site is exempt from further assessment under the EPBC Act.

2.3 SEPP 44 – KOALA HABITAT PROTECTION

State Environmental Planning Policy No. 44 provides for the protection of koala habitat. As there are no koalas on site and no potential koala habitat; SEPP 44 does not apply to this site.

3 Methods

Edmondson Park has a long history of detailed survey and assessment of ecological values that was used in assessing the rezoning of the land and the preparation of a Conservation Agreement under the EPBC Act. This information was also used to assist in the preparation of the Western Sydney Growth Centres Conservation Plan, and subsequent Biodiversity Certification of the Growth Centres SEPP.

The methodology used in this assessment has been based on the Draft Guidelines for Threatened Species Assessment (DEC, 2005).

3.1 PRELIMINARY ASSESSMENT

Geology and landform

The study area is underlain by Bringelly Shale of the Wianamatta Group. Areas of Quaternary alluvial sediments occur along the floodplains of creeks which flow through the site. The land is gently undulating.

Soil landscapes

Three soil landscapes occur across the study area. The most widespread of these is the Blacktown Soil Landscape, which occurs on gently undulating slopes. The South Creek soil landscape is associated with Quaternary alluvial deposits along creeks. The Luddenham Soil Landscape is found in the south of the study area along Campbelltown Road and Macdonald Road.

Vegetation

The majority of the native vegetation on the site is Shale Plains Woodland, a sub-community of Cumberland Plain Woodland (CPW). CPW is listed as a critically endangered ecological community under the TSC and EPBC Acts. This community is dominated by Grey Box (*Eucalyptus moluccana*) with Native Blackthorn (*Bursaria Spinosa*) being the dominant shrub species. The greatest diversity of this community occurs in the ground layer where a vast array of grasses, forbs and herbaceous species are present, most notably Kangaroo Grass (*Themeda australis*), Windmill Grass (*Chloris ventricosa*) and Saltbush (*Enardia spp.*).

A large area of Alluvial Woodland, part of the TSC Act listed community *River-Flat Eucalypt Forest on Coastal Floodplains* occurs in the north-eastern part of the site. This community is dominated by a thick canopy of *Casuarina glauca* with a low diversity of understorey species present, the cover primarily comprising of *Microlaena stipoides*. As this community occurs in riparian environments it is typically subject to higher nutrient and water flows providing an environment that is favourable to a number of

weed species. Wandering Jew (*Tradescantia fluminensis*) and Madeira Vine (*Anredera cordifolia*) were notable weed species occurring in this environment.

Areas of derived native grassland are also present across the study site. These areas typically comprised a mix of native and exotic species with African Lovegrass (*Eragrostis curvula*) being a common weed species in these environments.

Flora and Fauna

A search of the Atlas of NSW Wildlife identified a total of 55 threatened species recorded within a 10km radius of the site since 1980 (see Appendix A). Chapter 4 identifies the threatened species that are likely to occur on the site.

3.2 FIELD SURVEY

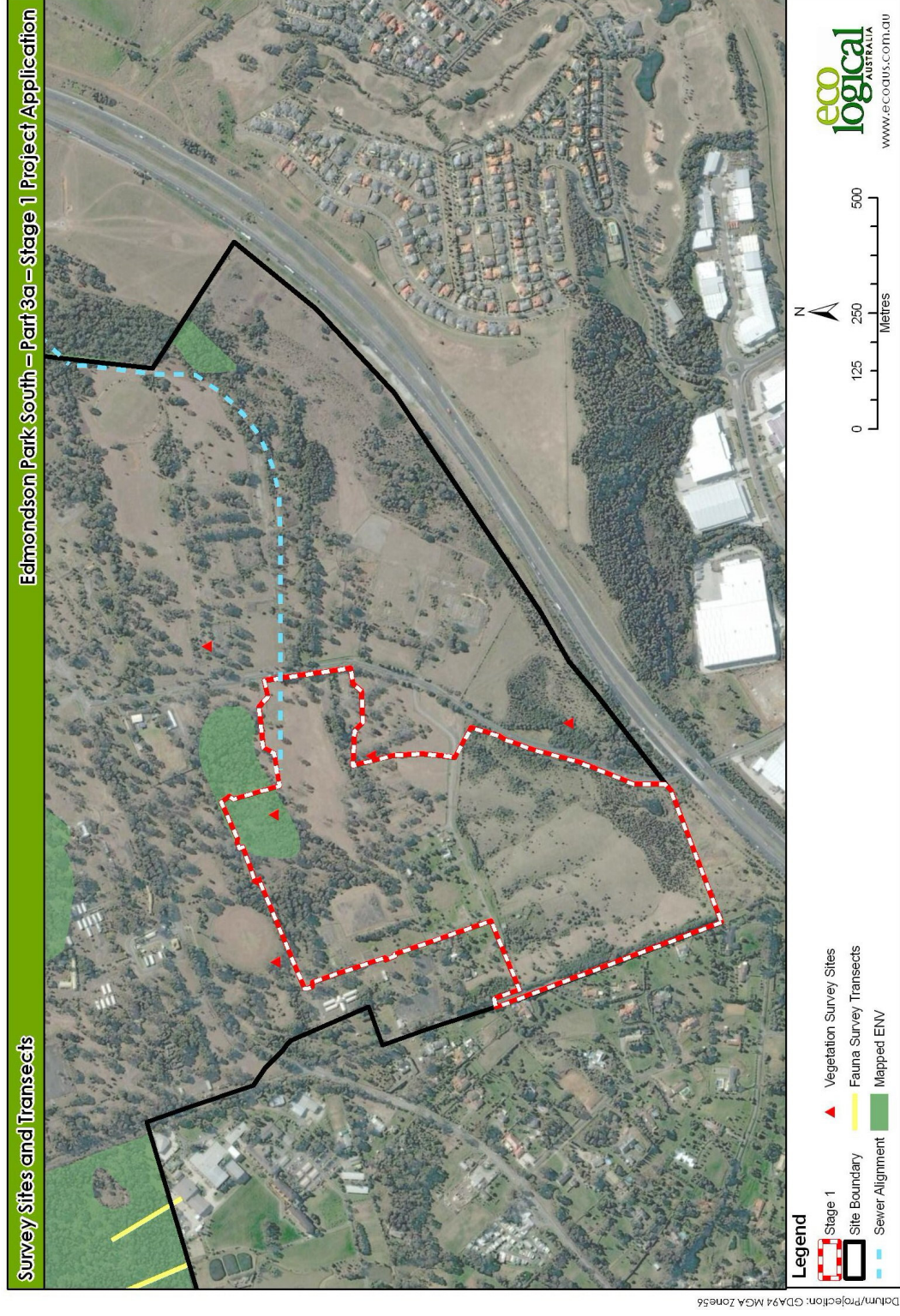
As the site has previously been extensively surveyed, subject to detailed strategic planning and is included in the biodiversity certified Growth Centres SEPP no additional field survey was undertaken for Stage 1 lands.

The proposed sewer alignment was subject to the following additional survey;

Date: 13th July 2010
 Surveyors: Ross Wellington and Steven House
 Effort: 3 person hours

Date: 28th July 2010
 Surveyors: Steven House
 Effort: 1 person hours

The location of survey work completed as part of the rezoning of Edmondson Park is indicated in Figure 5 below.



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Figure 5. Fieldwork completed during rezoning process (Eco Logical Australia, 2002)