



Badgerys Creek Industry Park Land Use Conflict and Biosecurity Risk Assessment



Badgerys Creek Industry Park
Land Use Conflict and
Biosecurity Risk
Assessment

Prepared for ESR Australia and New Zealand
by



Rural and Environmental
Planning Consultants

P.O. Box 70
Mona Vale, NSW, 1660
www.ruralplanning.com.au

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Draft for Client Comment

Chapter 1: Introduction

1.1 Introduction

ESR Australia and New Zealand are preparing a State Significant Development Application for a site in Martin Rd, Badgerys Creek. Edge Land Planning has been engaged to prepare a Land Use Conflict and Biodiversity Risk Assessment for the proposed DA.

The Badgerys Creek Industry Park project seeks to deliver a warehouse and distribution estate at 85 Martin Road, Badgerys Creek, situated within the Western Sydney Aerotropolis. The project seeks detailed staged approval for the construction of employment GLA across four warehouse and distribution buildings and supporting ancillary office GLA. The project provides critical employment floorspace to generate economic activity to support the growth of the Aerotropolis.

The project encompasses the demolition and site preparation works and the construction of infrastructure including an internal private road and temporary stormwater basins. The project is supported by landscaping in the form of perimeter planting surrounding the estate, vegetated communal areas and streetscape planting.

The project involves the staged delivery of the estate to across two stages to enable the provision of temporary stormwater basins prior to the delivery of ultimate stormwater infrastructure by Sydney Water. The staged delivery of the estate comprises three warehouses in Stage 1 and one warehouse in Stage 2.

This Land Use Conflict and Biodiversity Risk Assessment has been prepared to support and inform an EIS and SSDA for the proposed development. The EIS has been exhibited and comments received from Government Agencies. The Department of Primary Industries and Regional Development Agriculture and Biosecurity has requested that the following be considered:

1. Impact of construction dust and other impact on the market garden to the south east of the subject land on Martin Rd.
2. Identification of the Intensive Plant use at 150 Lawson Rd to the south of the subject land.
3. Consultation with the Pepe's Duck Farm at 255 Lawson Rd to consider the impact on the deliveries to and from the farm.

These are discussed in sections 2.4 (Land Use), 2.7 (Consultation), 2.8 (Potential Land Use Conflicts) and 3.2 (Land Use Conflict Risk Assessment).

The Department of Planning, Housing and Infrastructure has issued the Secretary's Environmental Assessment Requirement which has required the following:

- A Land Use Conflict Risk Assessment prepared in accordance with the Department of Primary Industry (DPI) Land Use Conflict Risk Assessment Guide 2011.

- An assessment of biosecurity risks that outlines the likely risks to plants, animals, and the community and details of any proposed mitigation measures in accordance with the DIP's Managing Biosecurity Risks in Land Use Planning and Development Guider (2020).

The preparation of a LUCRA is defined in the *Land Use Conflict Risk Assessment Guide* and relates to the interaction between agricultural and non-agricultural land uses and is as follows:

Land Use Conflict Risk Assessment (LUCRA) is a system to identify and assess the potential for land use conflict to occur between neighbouring land uses. It helps land managers and consent authorities assess the possibility for and potential level of future land use conflict. (NSW Department of Primary Industries, 2011).

Biosecurity is important because of the need to protect the economy, environment and community from the following:

- pests' animals and weeds,
- diseases and things that may spread diseases
- risks arising from inappropriate stock foods or fertilisers
- contaminants that may cause animals or plants to become chemically affected
- risks caused by bees and non-indigenous animals.

The NSW Department of Primary Industries have produced a document titled *Managing Biosecurity Risks in Land Use Planning and Development Guide* (NSW Department of Primary Industries, 2020). This document will aid with the assessment of the biosecurity risks of the proposed development.

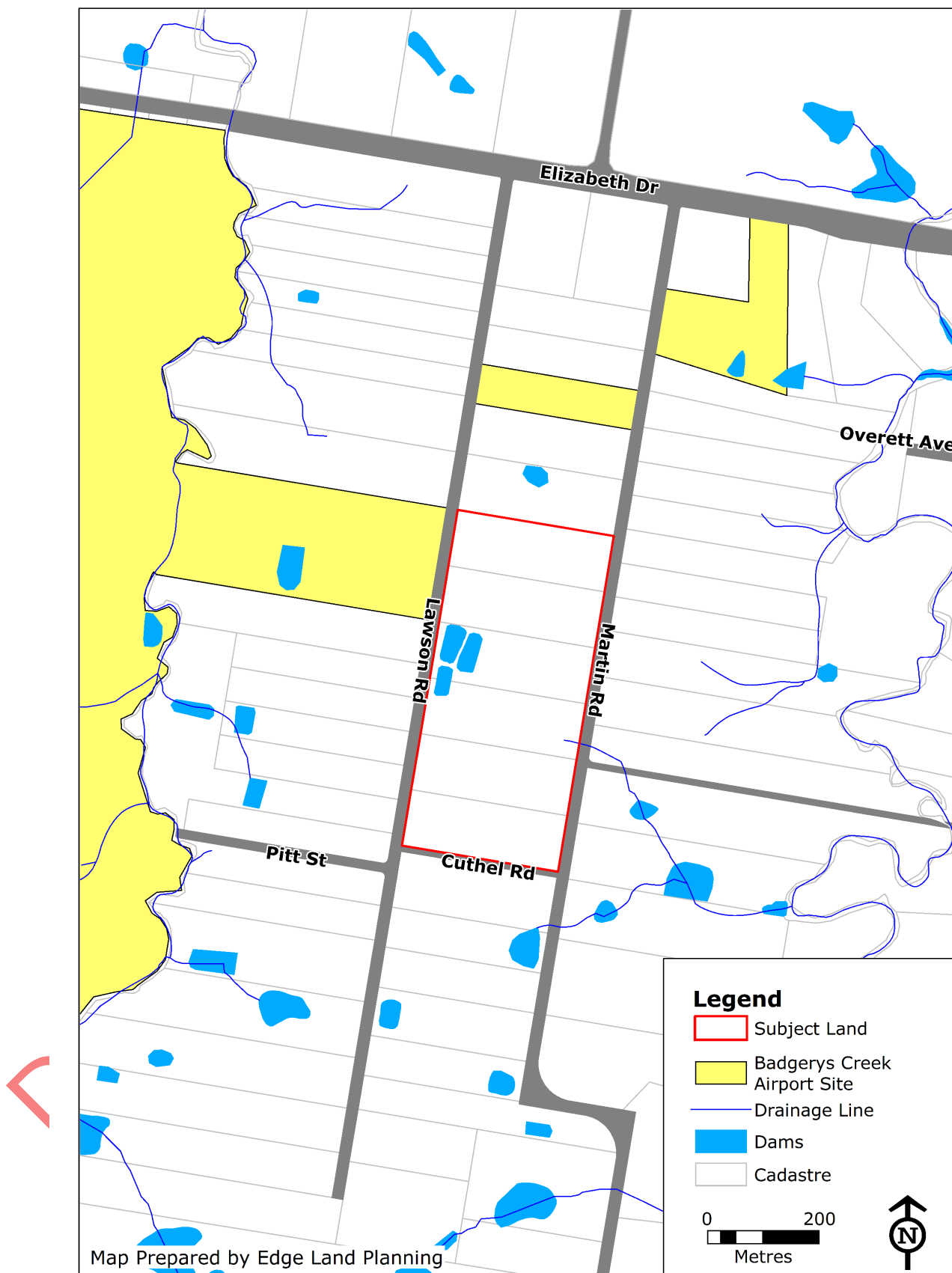
The aim of this report is to:

1. Document the physical constraints of the land.
2. Identify the surrounding land uses.
3. Assess the impact of the proposed Badgerys Creek Industry Park on the surrounding land uses.
4. Identify and assess the potential land use conflicts and biosecurity risks associated with the proposed Badgerys Creek Industry Park.

1.2 Location and Study Area

The subject land is located between Martin, Lawson and Cuthel Roads in Badgerys Creek. It is approximately 1km east of the Badgerys Creek Airport Site.

Map 1 shows the study area.



Map 1: Study Area

1.3 Methodology

This report has been prepared in accordance with the two following documents prepared by the NSW Department of Primary Industries.:

1. Land Use Risk Assessment Guide
2. Managing Biosecurity Risks in Land Use Planning and Development Guide

It has used a combination of primary and secondary data gathering.

The steps in the preparation of the LUCRA, as provided in the Guide are set out below.

Step 1: Gather Information

1. Describe the nature of the land use change and development proposed on the subject land.
2. Describe the land use of the surrounding landscape to the subject land.
3. Appraise the topography, climate and natural features of the subject land and broader locality.
4. Conduct a site inspection.
5. Describe and record the main activities of the proposed agricultural land use and their regularity, including periodic and seasonal activities that have the potential to be a source of complaint or conflict.
6. Compare and contrast the proposed and adjoining / surrounding land uses and activities for incompatibility and conflict issues.

Step 2: Evaluate the Risk Level of each Activity

1. Prepare a risk assessment matrix.
2. Assess the environmental, public health and amenity impacts according to the probability of occurrence, and the consequence of the impact.

Step 3: Identify Risk Reduction Management Strategies

1. Identify management strategies and responses for each activity.
2. Prioritise Strategies.
3. Prepare performance targets for each activity.

Step 4: Record the Results of the LUCRA

Summarise:

- (a) The key issues.
- (b) Their risk level.
- (c) Recommended Management Strategies.

The Biosecurity Management Guide is not as prescriptive as the LUCRA and is based on the proposal and its impact on the surrounding land uses. Step 1 for the LUCRA will be used for both parts and then a separate Biosecurity Assessment will be made.

Chapter 2: Gather Information

2.1 Introduction

This chapter deals with the information gathering component of the assessment.

It discusses the following:

1. Nature of the land use change
2. Land use of the surrounding area
3. Topography
4. Natural features
5. Climate

2.2 Nature of the Land Use Change

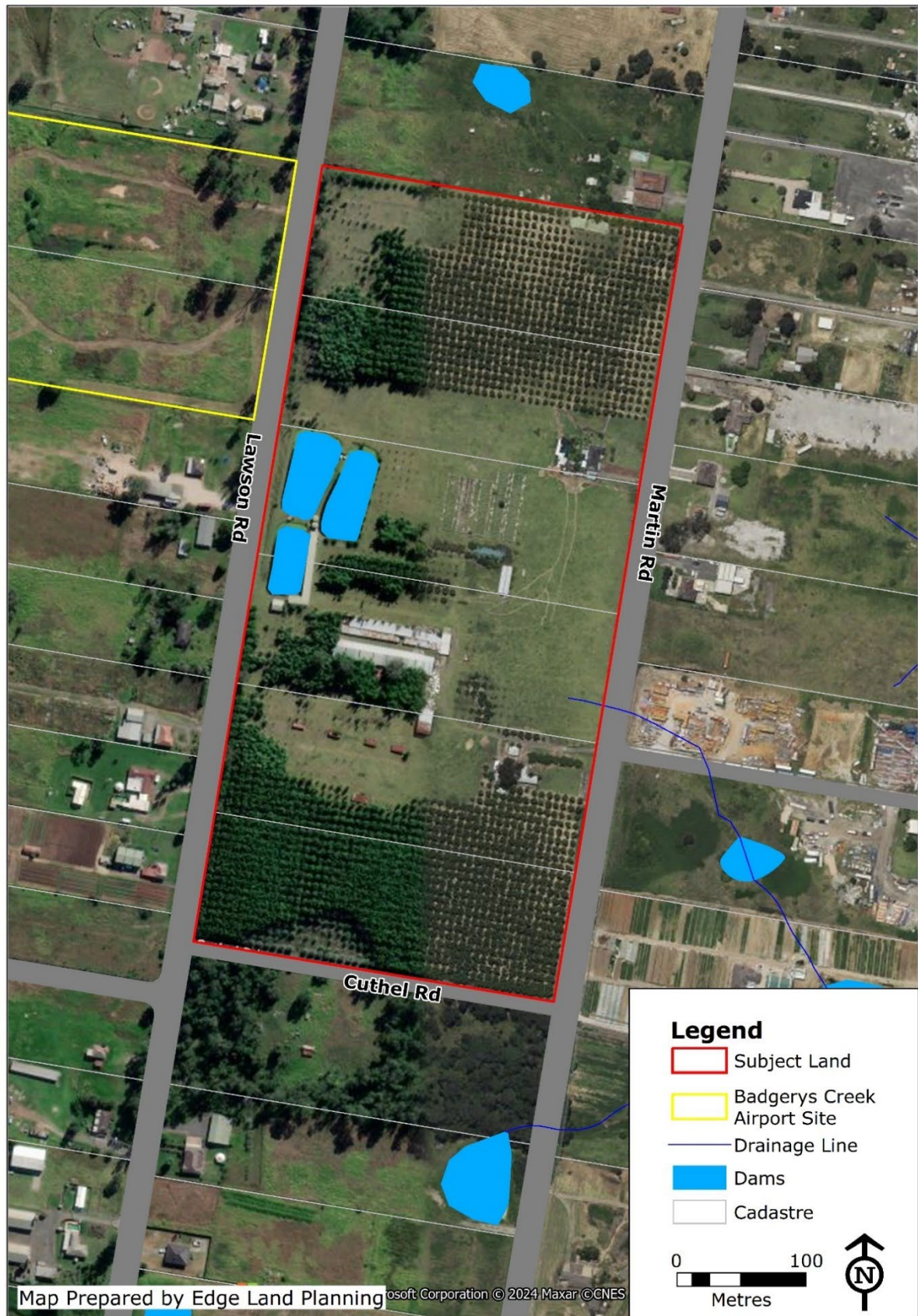
It is proposed to develop the land for an industrial park.

The current use of the property is vacant, but it has been used in the past for a horticulture use growing bamboo for the restaurant sector. The features of the site can be seen from Map 2 which is an aerial image and shows the remnants of the prior horticulture use.

The proposed development of the Badgerys Creek Industry Park will deliver a warehouse and distribution centre comprising of four warehouses, supported by ancillary offices, communal areas and associated landscaping. The project is situated within the Badgerys Creek Precinct of the Western Sydney Aerotropolis and is consistent with the Western Sydney Aerotropolis Precinct Plan.

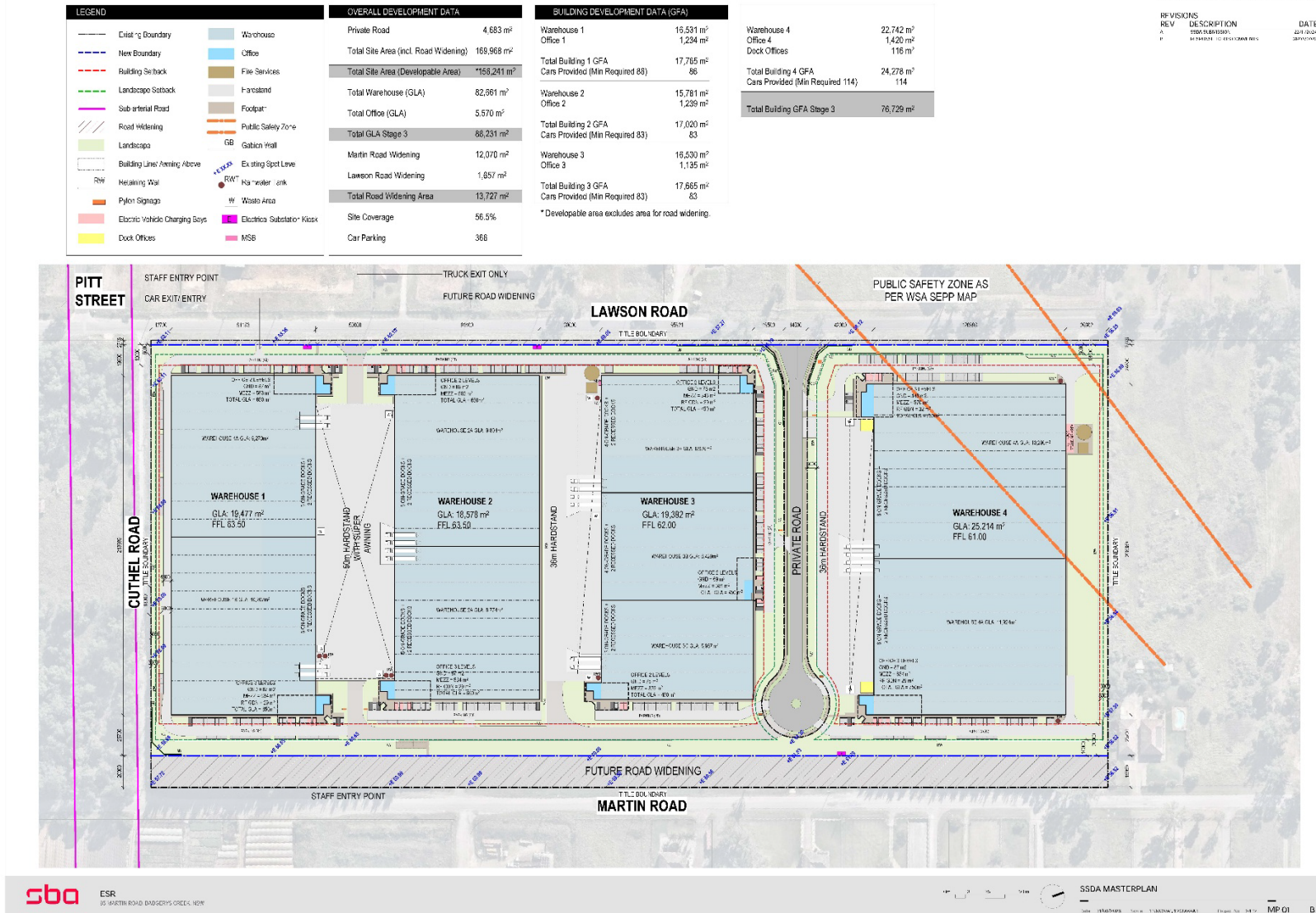
The project seeks detailed staged approval consent for the following development works is broken down into the following components, which can be seen from the Master Plan shown as Map 3:

- Site preparation works including demolition of existing structures and clearing of vegetation
- Staged construction and operation of four warehouse and distribution buildings comprising a total of 90,895 of warehouse and ancillary office GFA, broken down as follows:
 - Warehouse 1 has a total GLA of 20,784m²
 - Warehouse: 19,484m²
 - Office: 1,300m²
 - Warehouse 2 has a total GLA of 19,878m²
 - Warehouse 18,578m²
 - Office: 1,300m²
 - Warehouse 3 has a total GLA of 20,742m²
 - Warehouse 19,392m²
 - Office 1,350m²



Map 2: Aerial Image of Site

Land Use Conflict and Biodiversity Risk Assessment



Map 3: Site Master Plan

- Warehouse 4 has a total GLA of 29,491m²
- - Warehouse 27,871m²
- - Office 1,620
- Maximum building height of 24 metres.
- Construction of a 14.5m internal road and cul-de-sac to provide internal access from Lawson Road.
- On-site parking will be provided for 294 cars in Stage 1, and a total of 134 cars for Stage 2.
- Provision of landscaping comprising of perimeter planting, vegetated communal areas and tree planting.
- Estate signage across the four warehouses.
- Temporary stormwater infrastructure comprising of on-lot OSD basins and wetlands as part of the interim stormwater solution.
- A staging and sequencing plan across two stages, including:
 - Stage 1 comprises the development of three warehouses and the private road. It proposes a designated landscape area to remain undeveloped.
 - Stage 2 comprises the development of one warehouse building within the designated landscape area.

2.3 Zoning

The zoning of the subject land is ENT Enterprise Zone under the provisions of State Environmental Planning Policy (Precincts—Western Parkland City) 2021.

The objectives of the zone are as follows:

- To encourage employment and businesses related to professional services, high technology, aviation, logistics, food production and processing, health, education and creative industries.
- To provide a range of employment uses (including aerospace and defence industries) that are compatible with future technology and work arrangements.
- To encourage development that promotes the efficient use of resources, through waste minimisation, recycling and re-use.
- To ensure an appropriate transition from non-urban land uses and environmental conservation areas in surrounding areas to employment uses in the zone.
- To prevent development that is not compatible with or that may detract from the future commercial uses of the land.
- To provide facilities and services to meet the needs of businesses and workers.

The zone is known as an 'open' zone which lists a limited number of prohibited land uses and permits all others with development consent. This provides for the most flexibility in future land uses.

2.4 Land Use

The land use of the subject land is vacant because it is in the transition between its previous use for intensive plants growing Bamboo and has currently lying idle, awaiting development. It has not been actively farmed for a number of years. Photo 1 shows the subject land.

The land use of the land surrounding the study area can be seen from Map 4. The land use survey methodology and definitions can be seen from Appendix 1. The land surrounding the subject land has a mixture of vacant land undergoing redevelopment, rural residential use, irrigated plants and commercial uses. The Western Sydney Airport site is to the west of the subject land.

The zoning of the land and the wide range of permitted uses anticipates a range of employment generating uses which will be very different from the current uses, and as can be seen from Map 4, is currently in the process of redevelopment. It is anticipated that the future land use will be similar to the current application and will not resemble the current land use at all.

There are three intensive plant uses on the south eastern side of Martin Rd. Two are market gardens (4ha and 10ha) and one has many low technology crop protection structures know as igloos growing vegetables which his 4ha in size. This land has recently been acquired by a development company who intend to redevelop it for a use compatible with the enterprise zone. Photo 2 shows the intensive plant use as well as the redevelopment site to its north. There are also two other sites currently being used as market gardens and one medium technology crop protection structure to the south of the subject land. To the south of the and on Lawson Road is a duck farm that is owned by Pepe's Ducks.

The presence of agriculture near rural residential and urban development can lead to a loss of amenity by these residents because of pollution from the agriculture. They will often complain about this, thus causing rural land use conflict (Sinclair & Bunker, 2012). Industrial development can also have an impact on nearby agricultural land uses via pollution and potential spread of pathogens. However, the changing nature of the surrounding land use as well as the zoning and proximity of the subject land to Western Sydney Airport, suggests that there is not likely to be any land use conflict between the agricultural land use to the south east and the use of the subject land as an industrial park, mainly because it is anticipated that the agricultural land use will be replaced by industrial uses in the near future.

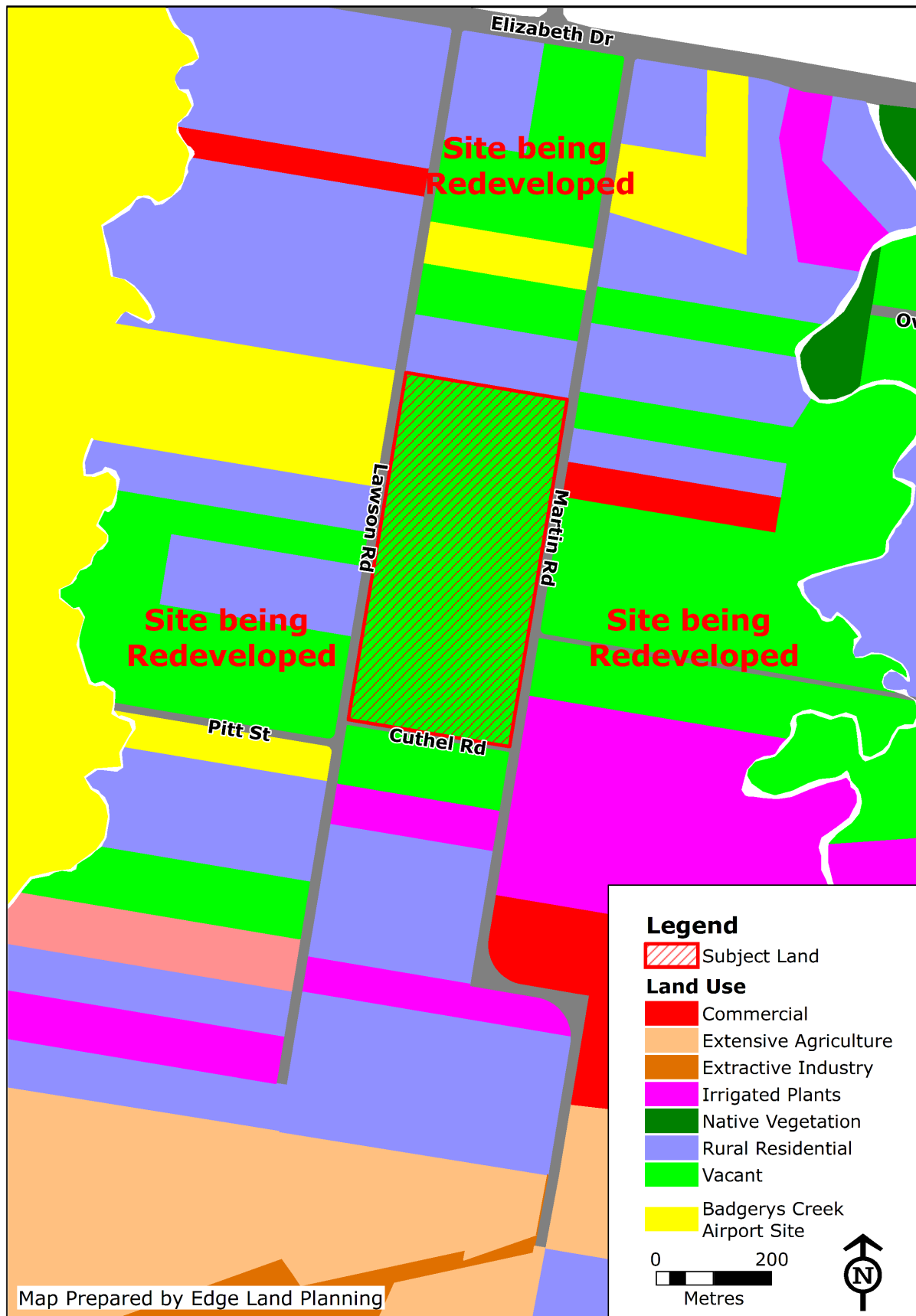
It should be noted that both Land Use Conflict and Biosecurity Risk Assessments are prepared when there are agricultural and non-agricultural uses in close proximity to each other. The level of risk to be assessed depends on the type of agricultural land use and its proximity to the land that is to be assessed.



Photo 1: Subject Land showing abandoned Agriculture



Photo 2: Intensive Plant Growing use to the south east



Map 4: Land Use

2.5 Topography, Natural Features and Climate

The topography and natural features of the site can be seen from Map 5.

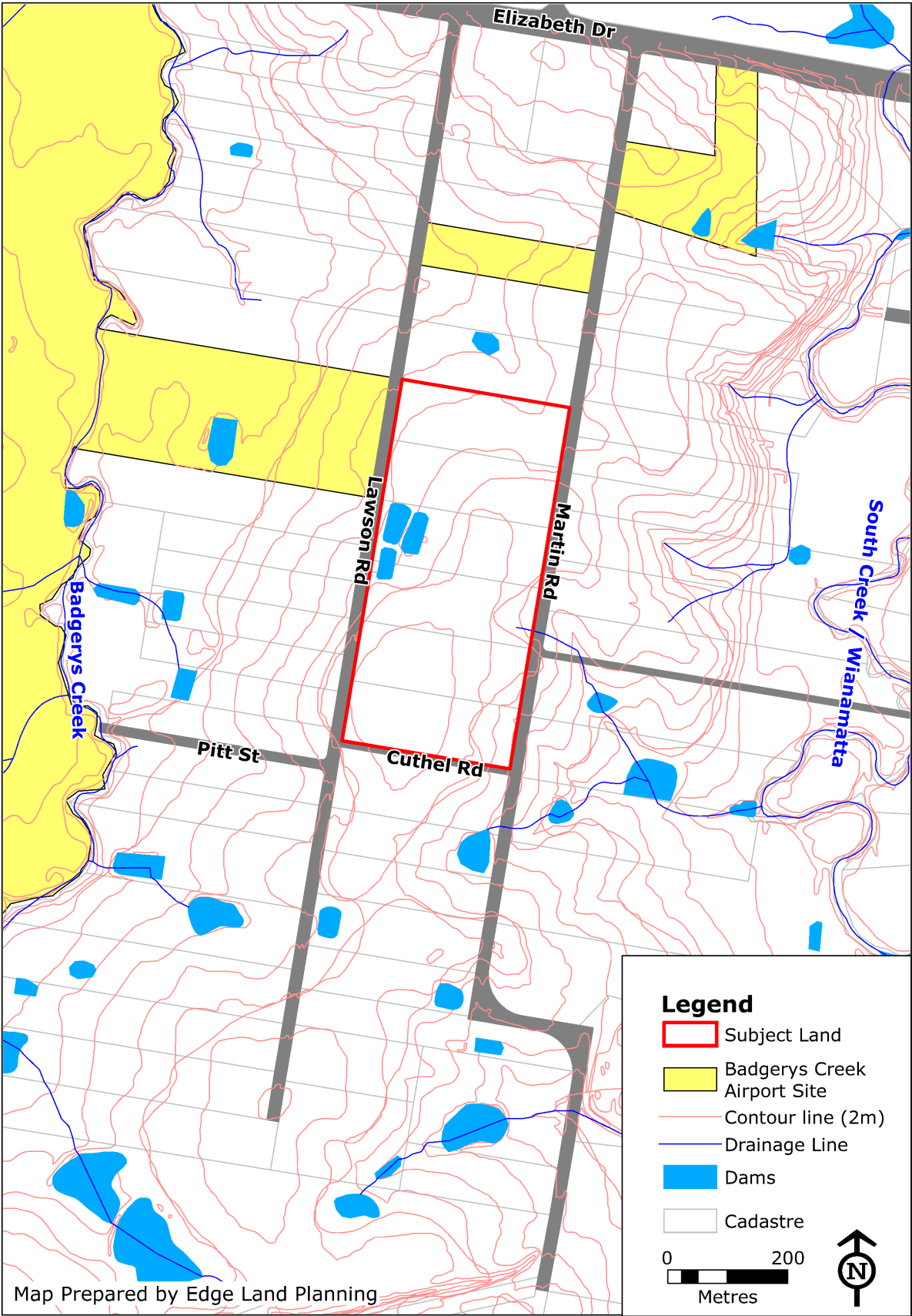
The land can generally be described as being flat and ranges in height from 56m AHD in the north west corner to 64m in the south west corner. There is a low ridge running in a north-south direction between Lawson and Martin Roads.

There are two major creeks that flow in north-south directions to the east (South Creek / Wianamatta) and west (Badgerys Creek) of the subject land.

The land is cleared of native vegetation with some exotic vegetation around the buildings in the centre of the site.

The site is located in the north west of Sydney's Peri-Urban area. This area has as climate which is described by the Bureau of Meteorology (BoM) as being warm temperate which has been defined as having warm summers and cool winters with four distinct seasons. Rainfall is mostly in the spring and summer. (Australian Government Bureau of Meteorology, 2024).

The climate averages for the Badgerys Creek Automatic Weather Station (which is the closest to the subject land) is presented as Figure 1.



Map 5: Topography and Drainage

Climate statistics for Australian locations

Monthly climate statistics

All years of record

About Climate statistics | Data file of statistics for this site (csv) | Site selection menu

Summary statistics BADGERYS CREEK AWS

A summary of the major climate statistics recorded at this site is provided below. There is also an extended table with more statistics available. More detailed data for individual sites is available.

Site information

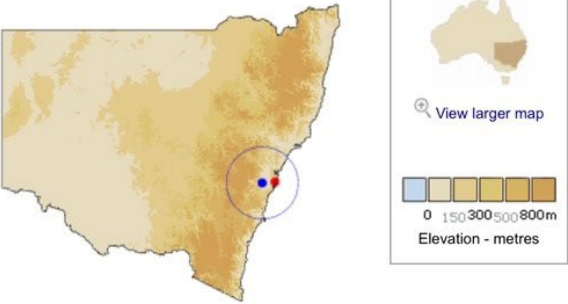
Site name: BADGERYS CREEK AWS
Site number: 067108
Latitude: 33.90 °S **Longitude:** 150.73 °E
Elevation: 81 m
Commenced: 1995 **Status:** Open
Latest available data: 14 Nov 2024

Additional information

Additional site information

Nearest alternative sites

- 067068 BADGERYS CREEK MCMASTERS F.STN (3.2km)
- 067084 ORCHARD HILLS TREATMENT WORKS (10.7km)
- 067119 HORSLEY PARK EQUESTRIAN CENTRE AWS (12.8km)



Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Years	Plot	Map
Temperature																
Mean maximum temperature (°C)	30.0	28.8	26.8	24.1	20.7	17.8	17.6	19.4	22.7	24.9	26.5	28.5	24.0	29	1995-2024	
Mean minimum temperature (°C)	17.2	17.1	15.4	11.5	7.7	5.5	4.3	4.9	7.8	10.7	13.6	15.4	10.9	29	1995-2024	
Rainfall																
Mean rainfall (mm)	78.5	107.9	106.3	51.6	39.2	56.5	33.1	36.3	34.8	57.2	68.9	56.3	726.8	29	1995-2024	
Decile 5 (median) rainfall (mm)	61.0	93.0	58.2	30.1	32.4	41.8	20.2	21.0	31.3	43.0	50.7	46.8		29	n/a	
Mean number of days of rain ≥ 1 mm	7.3	7.6	8.0	5.5	4.1	5.4	4.2	3.4	4.8	5.9	6.8	6.3	69.3	27	1995-2024	
Other daily elements																
Mean daily sunshine (hours)																
Mean number of clear days																
Mean number of cloudy days																
9 am conditions																
Mean 9am temperature (°C)	21.8	21.2	19.0	17.3	13.7	10.5	9.8	11.7	15.5	18.1	19.1	20.9	16.6	15	1995-2010	
Mean 9am relative humidity (%)	73	80	83	76	80	84	81	72	66	62	69	69	75	15	1995-2010	
Mean 9am wind speed (km/h)	9.4	8.7	8.4	9.8	9.6	9.1	9.6	10.6	11.7	11.8	11.0	9.8	10.0	14	1995-2010	
9am wind speed vs direction plot																
3 pm conditions																
Mean 3pm temperature (°C)	28.1	26.9	25.3	22.4	19.4	16.7	16.1	17.9	21.0	22.8	24.3	26.5	22.3	15	1995-2010	
Mean 3pm relative humidity (%)	49	55	55	52	53	56	50	44	44	45	50	48	50	15	1995-2010	
Mean 3pm wind speed (km/h)	17.9	15.9	14.5	14.4	13.9	13.7	15.4	17.8	19.2	19.9	18.9	18.5	16.7	14	1995-2010	
3pm wind speed vs direction plot																

red = highest value blue = lowest value

Product IDCJCM0028 Prepared at Thu 14 Nov 2024 02:48:35 AM AEDT

Figure 1: Climate Data for Badgerys Creek Weather Station

Source: (Australian Government Bureau of Meterology, 2024)

2.6 Site Inspection

A site inspection was carried out of the subject land on 1 November 2024. This involved walking around the site and observing the proximity to the neighbouring properties. The neighbouring properties were also driven by to assess the land use of each of them.

2.7 Consultation with Neighbouring Residents

The land use survey and site inspection has shown that there are three intensive plant uses to the south east of the subject land in Martin Rd. One is opposite the southern part of the land and the other two are up to 240m to the south east. There is one other intensive plant use approximately 100m to the south of the subject land and to others more than 400m to the south. There is also one intensive animal use (duck farm) approximately 400m to the south of the subject land.

It is noted that as part of preparing the EIS Urbis distributed a community newsletter to all properties in Lawson and Martin roads which details the development staging and potential impacts relating to traffic, access and construction. No issues were raised by surrounding landowners.

Contact was not able to be made with the intensive plant uses surrounding the subject land.

Contact has been made with Pepe's Ducks who own the land at 225 Lawson Rd and answers were provided to the questions in Table 1. This consultation was carried out at the request of DPIRDAB because of the potential impact of the development on the feed deliveries and bird pickups. This was not considered with the original Report. It is noted that Pepe's Ducks has its processing plant in South Windsor and the ducks are transported there via truck.

Table 1: Summary of Neighbour Interviews

Question	Answer
Farm Purchased	About 1998.
Number of Duck Sheds	Eight in total. Six hold 4,800 birds each and the other two sheds hold 4,300 birds.
Delivery and Hatching	The ducks are delivered as day old ducklings from the hatchery in Mulgrave in a custom-built climate controlled rigid heavy vehicle.
Aware of Development on Surrounding Land	Yes
Feed Delivery	The feed is delivered to the farm via a contractor from the Weston Animal Nutrition in Enfield in vehicles carrying up to 40tonnes of feed. Generally, there will be two to three deliveries per week.
Age of Ducks when processed	Age varies between 40 and 44 days depending on the production planning for different markets.

Frequency of delivery to processor	The ducks are sent to the processor when they are matured and depending on placement cycles, there could be between one to three pickups per week.
Number of ducks sent to the processor.	Between 14,400 and 18,700, or as little as 3,000 if they were for further processing.
Mode of transport	B-double with specially designed trailers specifically for poultry.
Route taken.	Lawson Rd and turn left onto Elizabeth Drive, however, if it is part of a multi-farm pickup, it may turn right on Elizabeth Drive
Complaints about odour emanating from the farm	No complaints from the Council or neighbours.
Number of ducks processed each week	Process up to 100,000 ducks per week
Impact on your processing facility if farm closes	If the farm closed it would not allow Pepe's to meet its sales demands without bringing another farm on line to replace the output from this farm.

2.8 Potential Land Use Conflicts

Rural land use conflict occurs when there are incompatible land uses which either adjoin each other or are in the vicinity of each other.

Most rural land use conflict occurs from the pollution associated with an agricultural land use causing a loss of amenity to an adjoining or nearby residential or rural residential use. This is particularly evident with intensive agriculture such as market gardening (vegetables), turf farming, orchards (fruit) and poultry as well as non-agricultural uses like extractive industries. Agriculture and other uses can affect adjoining non-rural uses, such as rural residential uses via pollution from the agriculture activities. The main cause of land use conflict is the pollution from the use, but it is also caused by lack of understanding and lack of communication between both the resident and the polluting use. Not only this, but there is also a lack of awareness of the zone in which the land is situated and its objectives when the new dweller moves in with no knowledge or regard for rural land. They are expecting a lifestyle amongst the productive agricultural land and land uses.

Rural land use conflict can also occur between a new non-agricultural use such as an industrial or commercial use and existing agricultural uses. This can occur because of both the construction activity as well as the operational phases of the development. During construction dust can settle on vegetables being grown in the open and increased traffic can also interfere with the delivery of produce and supplies that are required for the growing of the plants or animals. During the operational phases, impact can be via traffic generation and potential complaints from the employees working in the buildings about noise, odour or spray drift emanating from the intensive agriculture operations.

The proposed development is to have its vehicular access from a cul-de-sac on Lawson Rd, which is approximately 500m to the north west of the closest intensive plant use on the eastern side of Martin Rd. There is proposed to be approximately 20m road widening of Martin Rd and a further 7m landscape strip on the eastern boundary of the

site. There is proposed to be a perimeter road with car parking around the entire site which will be a combined distance of 20m. This means that there will be a distance of approximately 50m between the intensive agriculture use and any vehicle movement areas associated with the buildings and a further 20m to the buildings themselves. It can therefore be concluded that the proposed development of the subject land for an industry park will not have any impact on the existing intensive plant use to the south east of Martin Rd.

There is potential for some impact from dust during construction of the development. There is the potential for this dust to have an impact on the intensive plant uses to the south east of the site. An Air Quality Impact Assessment has been undertaken by SLR Consultants (SLR Consulting Australia Pty Ltd, 2026). This outlined that the winds from the north west were the least prevalent in all seasons, and these are the winds that would direct any dust onto the land to the south east. The report concluded that dust impacts due to the construction works can be adequately managed with the implementation of site-specific mitigation measures, as well as an appropriate monitoring regime and Trigger Action Response Plan. The Air Quality Impact Assessment has also identified that the dust deposition will have varying particulate sizes and that the heavier ones will fall to the ground quicker and closer to the source than the lighter ones. However, the report has found that any residual dust effects would be negligible. It is noted that the assessment was based on meeting criteria for human amenity and are within the acceptable levels. The intensive plant use closest to the subject land has mostly low technology crop protection structures for the land within approximately 150m and with open field crops grown from approximately 150m to 400m from the subject land. These crop protection structures will prevent dust from landing on the vegetables. The next property to the south has open field crops at the frontage to approximately 90m to the south and 400m to the east with the third property having its open field crops approximately 150m to 600m to the south and east of the subject land. The dust will settle depending on wind direction and strength as well as distance from the subject land. Therefore, the risk of dust being deposited is low. Therefore, the risk of dust being deposited at levels that would adversely affect plant health is low. Scientific literature indicates that dust deposition generally only impacts the most sensitive plant species at high loads, typically above 30 g/m²/month, which is considerably higher than levels expected at the boundaries of this construction site. The current NSW EPA dust deposition criteria for the protection of human amenity is 4 g/m²/month (NSW Environment Protection Authority, 2022) which is expected to be achieved through the implementation of appropriate mitigation and monitoring of the site. Any crops growing in the open and under cover are constantly irrigated, which further mitigates this risk as it is estimated that any dust that is deposited on the vegetables will be of such a size that it will be washed off by the irrigation or rainfall.

The DPIRDAB stated in its letter that the SEPP Exempt and Development Codes 2008 recommend a separation distance of approximately 250m for outdoor horticulture and protected cropping. However, the SEPP only applies to dwelling houses land on in RU1, RU2, RU3, RU4, RU6 and R5. It is noted that the subject land is zoned as ENT Enterprise

Zone and so the SEPP does not apply. However, the DPI Primefact titled Buffer Zones to Reduce Land Use Conflict with Agriculture (NSW Department of Primary Industries, 2018) also recommends 250m for outdoor horticulture and protected cropping. However, as discussed above, it is not considered that the industrial estate will have an impact on the intensive plant agriculture uses and that any impact of the construction on the uses can be ameliorated by site-specific mitigation measures.

The future for the land surrounding Martin and Lawson Roads is outlined in the Western Sydney Aerotropolis Precinct Plan (NSW Department of Planning Housing and Infrastructure, 2024) as follows:

- Martin Road will become a future arterial road known as the Eastern Ring Road and will be realigned to the south of the subject land where it takes a dog leg turn.
- Pitt Street will become a Sub-Arterial Road linking to the Airport and will form the southern boundary to the subject land (with no access).
- Lawson Road will become a collector road and will provide access to the subject land and other land to the south of the subject land.
- A new north south collector road will be constructed from the southern part of Martin Road and extend north through the lots including the three market gardens to the south east of the subject land.
- Local streets will be constructed through the market gardens and duck farm to the south of the land.

The Eastern Ring Road will not be constructed until 2040, and so Martin and Lawson Roads will be used for local traffic. It is not known when the other roads will be constructed but some may occur prior to 2040 and others after that. There is the potential for the deliveries to and from the intensive plant uses and the duck farm to be impacted by the construction of the development on the subject land as well as the operational use of the development. However, this is unlikely to be a significant impact for the following reasons:

1. The duck farm has feed deliveries two to three times per week and between one and three pickups of the ducks to take them to the processor.
2. The market gardens usually make trips to the markets daily during the growing season, but this may not be every day depending on the amount of each crop they grow. A conservative estimate would be an average of 3 trips per week, and they normally leave early in the morning to get to the markets and then return later in the day.

It is therefore, not anticipated that this will have a detrimental impact on the deliveries to and from the farms. It is further noted that these farms are likely to ultimately close due to the impact of the local roads and collector roads in addition to being redeveloped for industrial uses over the next five years as the airport opens and becomes operational.

2.9 Potential Biosecurity Risks

The Planning System plays an important role in protecting land and people in NSW from biosecurity risks that can be caused by proposed developments. These developments can include the following:

- new intensive livestock agriculture developments
- new intensive plant agriculture developments
- new aquaculture agricultural developments
- state significant developments
- other proposed developments near existing agricultural businesses, transport corridors, pipelines or other industries.

The NSW Biosecurity Act (section 22) includes a general biosecurity duty which is as follows:

"Any person who deals with biosecurity matter or a carrier and who knows, or ought reasonably to know, the biosecurity risk posed or likely to be posed by the biosecurity matter, carrier or dealing has a biosecurity duty to ensure that, so far as is reasonably practicable, the biosecurity risk is prevented, eliminated or minimised." (NSW Department of Primary Industries, 2020, p. 5)

The Guidelines prepared by the DPI define the key terms as follows:

Biosecurity risk is the risk that a biosecurity impact will occur (section 14 of the Act).

Biosecurity impact is an adverse effect on the economy, the environment or the community that arises, or has the potential to arise from a biosecurity matter or a carrier and that relates to:

- the introduction, presence, spread or increase of a pest or disease of plants.
- the introduction, presence, spread or increase of a pest animal.
- the introduction, presence, spread or increase of a weed.
- the introduction, presence, spread or increase of a pest or disease of animals.
- plants, animals or animal products becoming chemically affected.
- risk to public safety caused by bees or non-indigenous animals.
- stock food, fertilisers, liming materials and trace element products.

Biosecurity matter is any living thing or part or product of a living thing (other than a human), any part of a plant or animal, a disease, a prion, a contaminant, or a disease agent.

Biosecurity carrier is anything (including a human) that has or is capable of having biosecurity matter on it.

The Guideline goes on to state that although the general biosecurity duty applies broadly there are a number of elements that must be satisfied which are as follows:

- **Deals with** – the general biosecurity duty only applies to a person who 'deals with' biosecurity matter or a carrier of biosecurity matter. 'Deal with' includes a wide range of activities, which are listed in section 12 of the Act. Some examples

of dealing with biosecurity matter are to keep, possess, grow, breed, move, supply or manufacture biosecurity matter.

- **Knowledge** – a person must know, or ought reasonably to know, that there is or is likely to be a biosecurity risk arising from their dealing with biosecurity matter or a carrier. This will be a question of fact and will depend on the circumstances of each situation.

People who know or ought reasonably to know will generally include people who deal with biosecurity matter or carriers on a regular basis as part of a commercial or recreational activity, and people who work professionally (i.e. 'deal') with a particular type of biosecurity matter or carrier. For these people their general knowledge and expertise would in most cases be sufficient to indicate they should know the risks.

- **'Reasonably practicable'** – what is reasonably practicable for the prevention, elimination or minimisation of a biosecurity risk will depend on what was reasonably able to be done at a particular time, taking into account the nature and potential impact of the biosecurity risk, the person's level of knowledge of the risk and actions that could be taken to prevent, eliminate or minimise the risk, and the cost, availability and suitability of these actions. It is not likely to be reasonably practicable if the cost is greatly disproportionate to the risk.
- **Preventing, eliminating or minimising the biosecurity risk** – the risk must be prevented or eliminated if reasonably practicable, otherwise it must be minimised so far as is reasonably practicable.

There are not many agricultural land uses surrounding the subject land and the intensive plant use on the opposite side of Martin Rd to the south east of the site is perhaps the most significant from a biosecurity point of view.

The land use being proposed is an industry park with four warehouses. The Guideline prepared by the DPI notes that non-agricultural land uses can have a biosecurity impact due to pests, diseases and weeds which can be spread through the movement of machinery and vehicles.

Biosecurity risks can occur during the operation of a non-agricultural land use as well as during the construction phase.

The intensive plant use to the south west side of Martin Rd is the only surrounding use which would be anticipated to have a biosecurity impact from the proposed development on the subject land. It is unlikely that the development will have any biosecurity impact on the market gardens because the entrance to the site is on Lawson Rd and there will not be any traffic passing the site. In addition, there is not expected to be any dust impact on the farms because of the construction because of site-specific mitigation measures.

Chapter 3: Land Use Conflict and Biosecurity Risk Assessment

3.1. Introduction

The Department of Planning, Housing and Infrastructure has issued the Secretary's Environmental Assessment Requirement which has required an assessment of the Land Use Conflict Risks and Biosecurity Risks having regard to the relevant guidelines published by the DPI.

This chapter will discuss the risk of land use conflict and biodiversity from the proposed industry park on the surrounding agricultural land uses.

3.2. Land Use Conflict Risk Assessment

Rural land use conflict occurs when there are incompatible land uses which either adjoin each other or are in the vicinity of each other.

Most rural land use conflict occurs from the pollution associated with an agricultural land use causing a loss of amenity to an adjoining or nearby residential use. Whilst it is possible for a non-agricultural land use such as that being proposed to have a detrimental impact on an intensive plant use growing vegetables such as that occurring to the south east of Martin Rd, it is not considered in this case to be an outcome that would occur. This is due to the following factors:

1. The vehicular access to the proposed development is on the from Lawson Rd which is approximately 500m from the existing intensive plant use.
2. The landscape buffer on the Martin Rd boundary.
3. The distance between the intensive plant use and the vehicular movement areas and the buildings.
4. Any dust impact from the construction of the development will be ameliorated by site-specific mitigation measures.

These aspects combine to negate considerably any land use conflict. The eminent change of use of the intensive plant use adds to the lack of land use conflict.

3.3. Biosecurity Risk Assessment

Biosecurity risks are mostly associated with a new agricultural development on the surrounding landscape or a non-agricultural use on an existing agricultural use on adjoining or adjacent land.

The DPI Guidelines suggest that the following can be used to mitigate the biosecurity risks associated with a development:

- Buffer zones
- Wash down facilities

- Designated parking areas
- Dumping and burying rubbish on site

However, these are normally associated with a new agricultural development rather than an industry park opposite an intensive plant use.

The Guidelines also suggest that Biosecurity Management Plans can be used to minimise any risks.

It has already been noted in the previous section that there is not likely to be any land use conflict associated with the proposed industry park on the intensive plant use to the south east of the subject land. The same reasons outlined for land use conflict can be applied to biosecurity risks and it is concluded that there will be minimal biosecurity risks associated with the proposed development. It is also not considered necessary to recommend any Biosecurity Management Plan.

Chapter 4: Conclusion

This Land Use Conflict and Biosecurity Risk Assessment has been prepared to support and inform a State Significant Development Application for an industry park land at Martin Rd, Badgerys Creek.

This study has undertaken investigation into the property and its potential for use as an industry park. This has included the identification of the surrounding land uses as well as the topography and natural features and climate.

There is an existing intensive plant use to the south east of Martin Rd which could be impacted by the proposed development. However, the main vehicular access will not be from Martin Rd and the distance between the proposed development and the impact of surrounding road network upgrades on the agricultural land uses leads to the conclusion that there is not likely to be any land use conflict or biosecurity risks associated with the development of the subject land.

Therefore, proposed development is suitable and warrants approval.

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Appendix 1: Land Use Methodology and Definitions

Draft for Client Comment

The Land Use Survey:

A land use survey has been carried out to determine the land use of the study area and the surrounding land.

The first step is to identify the categorisation of the land uses to be surveyed. The land use has been categorised into primary and secondary land use categories. The primary land use categories are as follows:

- Commercial
- Extensive Agriculture
- Extractive industries
- Irrigated Plants
- Intensive Animals
- Native Vegetation
- Public Use
- Rural Residential
- Urban
- Vacant

Definitions of each use which were used for the purpose of identifying the land uses are as follows:

- *Commercial* uses are uses that are used for a commercial or industrial type of use and which do not have any dwellings associated with them.
- *Extensive Agriculture* means the growing of plants using natural rainfall or the rearing of animals using grazing as a feeding method. It also includes the growing of fodder crops and irrigated pasture.
- *Extractive Industry* means a use that extracts material from the land and includes mining, sand and clay mining and quarrying of sandstone and other stones.
- *Irrigated plants* means the growing of vegetables and ornamental plants for commercial gain using the application of irrigated water and includes market gardening, protected cropping structures, orchards, vineyards, and other similar uses.
- *Intensive Animals* means the rearing of animals using a feeding method other than natural grazing and includes poultry and piggeries mainly.
- *Native Vegetation* means a lot that has no dwellings or structures on it and which has the majority of the land covered in native vegetation.
- *Public Uses* mean a use that is commonly used and or operated by a public authority or associated body. It includes community facilities, golf courses and Government owned uses of the land.
- *Rural Residential* means a house on a lot that is greater than 0.4 ha generally, and is in a rural environment where the main source of income is from other sources than agricultural use of the land. Rural-residential is further divided into three categories, being:

- ⇒ *Rural Fringe*: estate style development on lots ranging from 0.4 to 2 ha;
- ⇒ *Rural Living*: lots ranging from 1 ha to 40 ha scattered throughout the landscape
- *Vacant* land is land that is mostly cleared of native vegetation, and which does not have any dwellings or other structures on it.

The sub-categories are a detailed description of the land use of each parcel. It includes the following:

- Commercial: factory
- Extensive agriculture: grazing,
- Extractive Industry: coal Mine
- Intensive Animals: poultry
- Irrigated Plants: protected cropping
- Native Vegetation: native vegetation
- Public Use: church
- Rural Residential: dwellings,

Methodology:

There are 3 components to the carrying out of the land use survey as follows:

- Preliminary identification of land use.
- Study area inspection.
- Data entry and mapping.

Preliminary identification of land use occurred in the office prior to the field inspection. Aerial photography was used to identify the land use. The major things to be picked out are extensive agriculture, intensive animals, irrigated plants dwellings on small lots, vacant land, lots which are totally covered with native vegetation, and extractive industries. Only one major land use was identified for each site. An assumption was made that lots less than 40 ha which did not have an intensive agricultural, commercial, industry or public use and were in a separate ownership to the surrounding land, were rural residential. Where there is just a dwelling, it was coded in the second use as dwelling, if there was a horse, horse and if there was a truck use it was coded as a truck use. If the land is cleared and has a dwelling house located on it and is either greater than 40 ha or was owned in association with the surrounding land and was greater than 40 ha, it was coded as extensive agriculture.

This information was entered into the database using the coding that has been identified for the primary and secondary land uses.

The study area inspection was carried out by windscreen survey of all of the roads. This was done to check the primary land use categories and also to enter secondary ones that could not be identified from the aerial photos. As each road is driven on the land use is clarified against the preliminary identification. Signage, which gives an indication that the property may be used for a secondary use such as a home business or a

commercial use, was also noted. Many photos were taken of the land use and general landscape of the rural lands.

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