



SHIRE OF WAROONA DEVELOPMENT APPLICATION

WAGERUP POWER STATION BATTERY

Contents

1.	Introduction	4
1.1.	Purpose of application	4
1.2.	Outline of the Proposal	4
1.3.	Planning Assessment	4
1.4.	Pre-application process	4
1.5.	Report Structure and Information	5
1.6.	Summary.....	5
1.7.	Contact Details.....	6
2.	Physical Context	7
2.1.	Subject Site.....	7
2.2.	Infrastructure.....	8
2.3.	Existing Operations.....	8
2.3.1.	Operating Licence.....	8
2.3.2.	Dangerous Goods.....	8
3.	Proposal Description.....	9
3.1.	New battery energy storage system	11
3.1.1.	Control room and ancillary equipment.....	12
3.1.2.	Development footprint.....	12
3.2.	Procurement and Development Schedule	12
4.	Planning Considerations	14
4.1.	Key Legislation.....	14
4.1.1.	Planning and Development Act 2005	14
4.1.2.	Planning and Development (Development Assessment Panels) Regulations 2011	14
4.1.3.	Environmental Protection Act (WA) 1986	14
4.1.4.	Environmental Protection Regulations (WA) 1987	15
4.1.5.	Environmental Protection (Native Vegetation Clearing) Regulations (WA) 2004.....	15
4.1.6.	Aboriginal Heritage Act 1972	17
4.1.7.	Electricity Industry Act 2004	17
4.1.8.	Dangerous Goods Safety Act 2004	17
4.2.	Strategic Planning.....	18
4.2.1.	Energy Transformation Strategy.....	18
4.2.2.	State Planning Strategy 2050	18
4.2.3.	Directions 2031 and Beyond.....	18
4.2.4.	Perth and Peel @ 3.5 million	18
4.2.5.	South Metropolitan Peel Sub-regional Planning Framework.....	19

4.2.6.	Shire of Waroona Local Planning Strategy.....	19
4.3.	Statutory Planning.....	19
4.3.1.	State Planning Policy 2.1 Harvey coastal plain catchment.....	19
4.3.2.	State Planning Policy 3.7 Planning in Bushfire Prone Areas.....	21
4.3.3.	Peel Region Scheme	23
4.3.4.	Shire of Waroona Local Planning Scheme No. 7	23
5.	Project Benefits.....	25
6.	Development Impacts & Mitigation	26
6.1.	Construction Impacts & Mitigation	26
6.1.1.	Dust.....	26
6.1.2.	Noise.....	26
6.1.3.	Flora and fauna.....	26
6.1.4.	Stormwater.....	27
6.1.5.	Waste Management.....	27
6.1.6.	Heritage	27
6.1.7.	Traffic and Transport.....	29
6.2.	Operational Impacts.....	31
6.2.1.	Visual amenity.....	31
6.2.2.	Hazardous materials	33
6.2.3.	Bushfire.....	33
6.2.4.	Vehicle Movements and Parking	33
6.2.5.	Stormwater.....	33
7.	Conclusion	34
	Appendix A – General Arrangement and Elevations	
	Appendix B – Bushfire Response Plan	
	Appendix C – Certificate of Title	
	Appendix D – Ministerial Statement 729	
	Appendix E – Site Photos	

1. Introduction

1.1. Purpose of application

This Development Application Report (**Report**) provides information to support an Application for Development Approval within the context of the Shire of Waroona Local Planning Scheme No. 7 (**LPS No. 7**). The application seeks approval for the installation of a battery storage system (**BSS**) on land associated with the Wagerup Power Station (**Proposal**).

1.2. Outline of the Proposal

Development Approval is being sought from the Shire of Waroona and the Regional Joint Development Assessment Panel (**Regional JDAP**) for the Proposal. The extent of the Proposal is shown in the concept plans provided in **Appendix A**. The Proposal seeks to install a BSS at the existing Wagerup Power Station site and includes the following works:

- Minor clearing of vegetation (approximately 1 ha) at the north of the site
- Approximately 1.5 ha of additional hard stand to tie into existing hard stand at the site
- New concrete access ways around the BSS equipment
- Installation of 36 shipping containers which contain the battery modules and inverters
- Installation of coupling transformers and other supporting equipment
- Installation of two new step-up transformers
- Installation of two new sets of switchgear
- Associated cabling to connect new electrical components
- Battery control room
- Reinstatement works including fencing and landscaping.

1.3. Planning Assessment

This Report provides a comprehensive review of the works to be completed for the Proposal and an assessment against the relevant requirements of the LPS No. 7.

The Proposal will not result in any changes to the existing land use and will continue to align with *Industry – General* in terms of the Use Classes specified in the LPS No. 7.

1.4. Pre-application process

On 21 October 2020 Alinta Energy representative Sam Withers spoke with the Shire of Murray's Senior Planning Officer (who are providing planning services to the Shire of Waroona) regarding the content of this Report. Items of interest to those assessing the application include:

- Environmental impacts during construction and operation
- Transport route for key components of the Proposal
- The extent of native vegetation clearance
- The responsible authority for Willowdale Road maintenance

- Bushfire risk
- Stormwater management.

Prior to formal submission Alinta Energy provided a draft copy of this Report to the Shire of Murray (acting on behalf of the Shire of Waroona for planning matters) on Friday 4 December 2020. No formal feedback had been received at the time of submitting this application. Alinta Energy expect that any feedback received will form part of the overall assessment process.

1.5. Report Structure and Information

This Report provides:

- Details of the site locality and site features – **Section 2**
- A description of the Proposal – **Section 3**
- An assessment of the planning policies and controls relevant to the Proposal – **Section 4**
- A summary of the Proposal benefits – **Section 5**
- The potential construction and operational impacts of the Proposal and associated mitigation measures – **Section 6**
- Concept General Arrangement and Elevation drawings – **Appendix A**
- Bushfire Emergency Response Plan – **Appendix B**
- A Certificate of Title of the subject site – **Appendix C**
- Ministerial Statement 729 – **Appendix D**
- Site Photos – **Appendix E**

1.6. Summary

The Proposal appropriately addresses all relevant requirements contained within the Shire of Waroona Local Planning Scheme No.7.

The installation of a BSS at this scale creates the opportunity for more renewable and intermittent electricity generation to be connected to the South West Interconnected System (**SWIS**) while maintaining power quality and system security. The ability of large batteries to respond instantly to fluctuations on the grid is critical to the development and operation of increased renewable energy in the state of Western Australia.

Overall, the Proposal is entirely compatible with the State's strategies and objectives for energy security and reliability and make use of existing industrial land which is a key land use objective for the Shire of Waroona and the Peel region. On this basis the Proposal merits the issue of Development Approval by the Shire of Waroona and the Regional JDAP.

1.7. Contact Details

The key contact for all discussions in relation to this Application for Development Approval is:

Russell Slaughter

Project Development Manager – Environmental

Alinta Energy

Level 18 Raine Square, 300 Murray Street

Perth WA 6000

Direct: (08) 9486 3111 - Mob: 0417 979 892

Email: Russell.slaughter@alintaenergy.com.au

2. Physical Context

2.1. Subject Site

The site is located on Lot 701 on Deposited Plan 59305 accessed off Willowdale Road, Wagerup in the Peel region of Western Australia. It is located approximately 1.5km east from the South Western Highway. The Wagerup Power Station (**WPS**) sits within the Special Industry zone and is immediately east of Alcoa's Wagerup Alumina Refinery. The land surrounding the Special Industry zone is comprised of farmland and vegetated country up to the Dwellingup State Forest to the east. The site is approximately 8 km south of the Waroona town centre and approximately 4 km north of Yarloop.

Currently the site contains:

- Two open cycle gas turbines each of 175 MW nominal generating capacity
- Electrical infrastructure including transformers and switchroom
- Water treatment plant and water tanks
- Office
- Car parking
- Workshop
- Warehouse
- Diesel storage tanks



Figure 2-1 - Subject site

The site has a relatively even grade that rises from approximately 50m AHD at the west of the lot to 56m AHD at the east and occupies an area of 7.3 ha.

Site access is via a two-way, sealed driveway off Willowdale Road. There is car parking for 20 vehicles at the site entrance adjacent the site office available to permanent staff and visitors/contractors. Overflow carparking for up to 500 vehicles is available opposite the power station site across Willowdale Road in the contractor's carpark (shared with Alcoa).

The land surrounding the subject site is all located in the Special Industry zone and is associated with either the power station or the refinery. Rural activities are permitted within buffer area associated with the Special Industry zone.

The site is bounded by Alcoa's Alumina Refinery to the west, vegetation to the north and Willowdale Road to east and south.

The nearest land with a sensitive zoning is an area of land zoned Special Residential on the corner of Kaus Road and the South Western Highway, Yarloop, which is approximately 2.5 km south-west of the subject site.

2.2. Infrastructure

A Dial Before You Dig (**DBYD**) inquiry has been undertaken which suggested that Dampier to Bunbury Natural Gas Pipeline (**DBNGP**) and Western Power assets are in the area. Upon receiving layouts from both DBNGP (WA) Nominees Pty Limited and Western Power, Alinta Energy was able to confirm that neither of these assets cross or interact with the subject site.

2.3. Existing Operations

Through its wholly owned subsidiary, Alinta Cogeneration (Wagerup) Pty Limited, Alinta Energy owns and operates the WPS which is licenced to generate 380MW of electricity. The WPS can run on both natural gas and distillate (diesel) and is considered a 'peaking' power station which typically operates when there is high electricity demand in the SWIS. Up to six regular staff are onsite generally during business hours.

2.3.1. Operating Licence

The existing operations are regulated by the Department of Water and Environmental Regulation (**DWER**) under a site operating licence, L8174/2007/5.

2.3.2. Dangerous Goods

The WPS holds a Dangerous Goods Site Licence (DGS020775) authorising the storage and handling of bulk quantities of diesel fuel and smaller volumes hydrochloric acid and sodium hydroxide.

3. Proposal Description

Alinta Energy proposes to install new plant and equipment entirely within the boundary of Lot 701 DP59305.

The major components being proposed under this Application for Development Approval include:

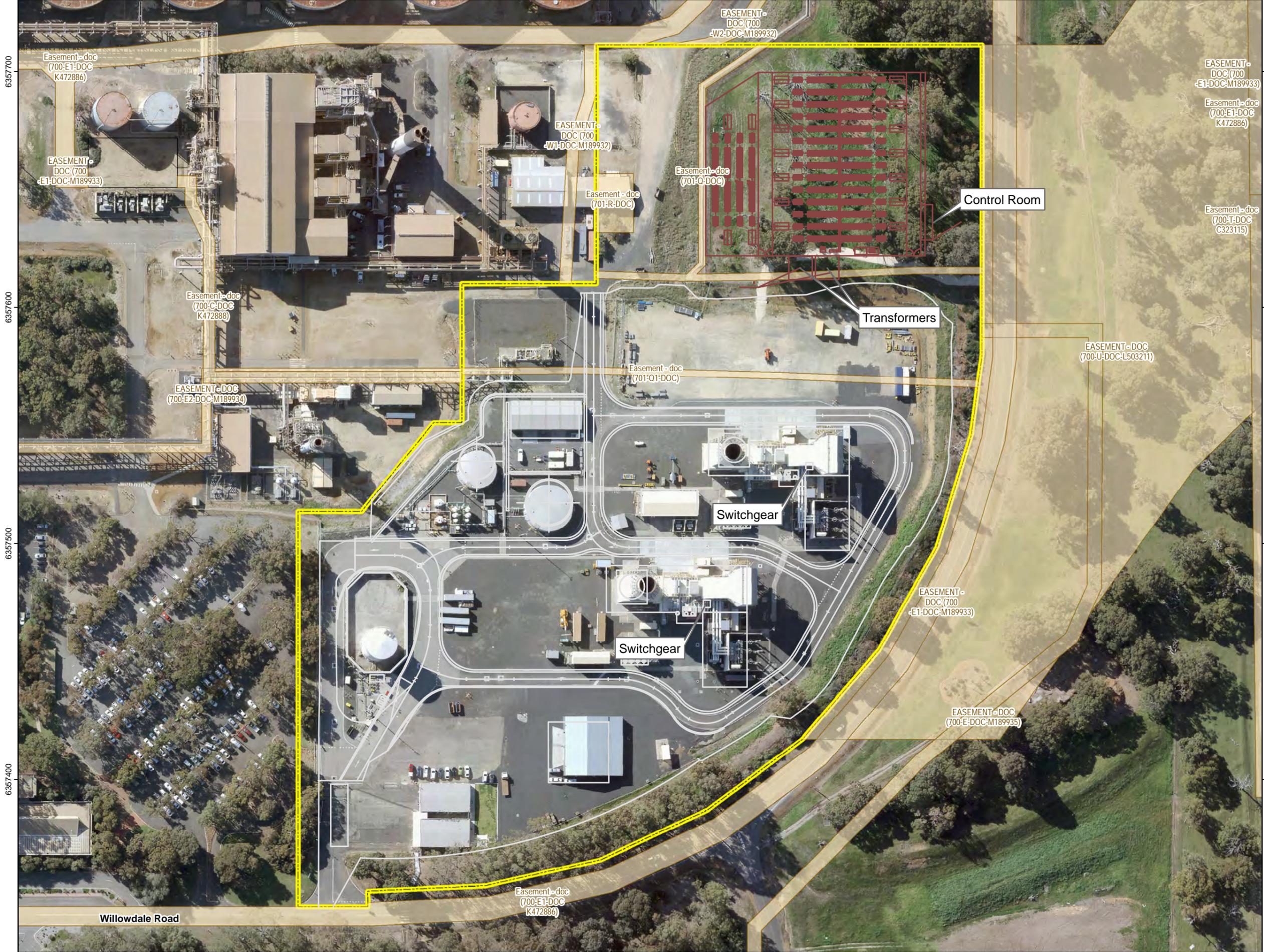
- Battery modules – Lithium-ion
- Inverters which convert the direct current (DC) voltage produced by the batteries into alternating current (AC) electricity
- Coupling transformers which provide an intermediate step up in voltage before the step up to transmission voltage
- Step-up transformers which increase the voltage to 330kV which is required for transmission in Western Power's network
- Control systems and ancillary equipment including a new control room and associated switchgear

Figure 3-1 (overleaf) shows the concept locations of the major proposed infrastructure which make part of this Application for Development Approval.

398700 398800 398900 399000 399100



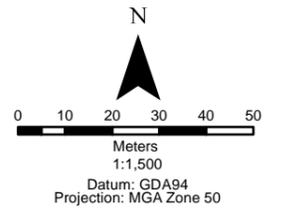
Wagerup Battery Development Application General Arrangement



6357700
6357600
6357500
6357400

6357700
6357600
6357500
6357400

- Legend**
- Project Area
 - Easements
- General Arrangement**
- Existing Infrastructure
 - Proposed Infrastructure



Date: 07/12/2020
 Status: Draft
 Figure: 3-1
 Sheet Size: A3
 Internal Reference: AEWG 007_00
 Drawn by: GSM
 Requested by: RS

398700 398800 398900 399000 399100

Willowdale Road

3.1. New battery storage system

Alinta Energy plans to install a utility scale battery storage system (**BSS**) at its existing Wagerup Power Station. The BSS proposed is largely containerised with no moving parts, no air or odour emission and no significant noise emitting components. Battery systems are typically modular, and Alinta Energy proposes to install 100MW of battery capacity.

Each module of battery capacity is typically comprised of:

- 1 x 40ft container of battery units
- 1 x 40ft container of inverters and power electronics
- 1 x coupling transformer
- 1 x HVAC system

The final layout and configuration of the proposed BSS will depend on the selection a supplier following a competitive tendering process and detailed design which will optimise integration with the existing assets. It is likely that the proposed BSS will resemble the battery system that operates at the Hornsdale Wind Farm in South Australia which is of a similar magnitude and is shown in Figure 3-2 below.



Figure 3-2: 100MW BSS – Hornsdale, SA

Alinta Energy installed and commissioned a 35MW BSS at its Newman Power Station in 2017. While the BSS proposed for the WPS site will be larger, the primary components will be similar. The Newman BSS is made up of five modules (ten containers) and is shown in Figure 3-3 below. For the Proposal, the capacity from the BSS will connect into two new step up transformers which will be connected to the existing cables (via switchgear) running under Willowdale Road with connection to the Western Power network occurring at the existing Alinta Energy switchyard.



Figure 3-3: BSS commissioned at Newman Power Station in 2017

3.1.1. Control room and ancillary equipment

The construction of any new generating equipment requires a control room to collect, direct, condition and monitor the operating performance of primary plant and equipment and associated auxiliary systems. A control room is typically a single building which contains control and communication systems and electrical panels.

In the case of this Proposal a small, dedicated control room is planned to be located adjacent to the BSS and will communicate and integrate with the existing WPS control system.

Two new sets of switchgear would also be installed at the point of connection between the battery cabling and cabling connected to the switchyard. This provides control, protection and isolation based on certain parameters to ensure the overall stability of electrical system onsite.

3.1.2. Development footprint

Lot 701 has a total land area of approximately 7 hectares. The development footprint for the Proposal is approximately 1 ha which is vacant land within Lot 701. A portion of this vacant land is native vegetation while the remainder is hardstand used primarily for laydown and storage of spare materials and during major outage works.

3.2. Procurement and Development Schedule

Alinta Energy intends to commence the procurement activities associated with the proposed WPS BSS in Q3 2021. A thorough and competitive procurement process for a project of this kind will require approximately 6 months after which an Engineer Procure Construct (EPC) contract would be entered into with the successful

tenderer. The granting of Development Approval will be a prerequisite for execution of the EPC contract. Alinta Energy's project development framework requires the granting of Development Approval, along with any other key consents and/or approvals for a project of this kind, to be in place prior to making a final investment decision. Alinta Energy is currently planning to begin construction activities for the project in Q1 2022. The construction and commissioning of the project are expected to be complete within 12 months of a final investment decision.

4. Planning Considerations

The addition of a BSS at the WPS will be designed to satisfy applicable Western Australian legislative and policy requirements. The following section identifies the key strategic and statutory planning instruments applicable to the development and how the Proposal aligns with their purpose and objectives.

4.1. Key Legislation

The following sections highlight the key legislation that has been considered in developing this Proposal.

4.1.1. Planning and Development Act 2005

This Act is the primary piece of legislation governing development and subdivision in Western Australia, and its stated purposes are to provide for an efficient and effective land-use planning system and to promote the sustainable use and development of land. The key function that the Planning and Development Act 2005 does in relation to this Proposal is giving power to local government to make local planning schemes and the establishment of Development Assessment Panels.

4.1.2. Planning and Development (Development Assessment Panels) Regulations 2011

Subsidiary to the Planning and Development Act 2005 are the Planning and Development (Development Assessment Panels) Regulations 2011. Section 5 of the Regulations describe those cases in which an application for development must be delegated up to a Development Assessment Panel (**DAP**). The trigger for automatic delegation to a DAP for a development outside of the City of Perth is a development with an anticipated value of \$10 million or more. The value of the Proposal will be in excess of this threshold and will therefore be assessed by the Regional Joint DAP (**Regional JDAP**).

4.1.3. Environmental Protection Act (WA) 1986

The State government may apply environmental controls and conditions to a development under Part IV and/or Part V of the Environmental Protection Act (1986) (**EP Act**). Proposals which have potential impacts that cannot be managed under Part V, and typically are of a much larger scale or in sensitive areas, are assessed by the Environmental Protection Authority (**EPA**) under Part IV.

The initial WPS proposal was assessed in 2006 under Part IV of the EP Act as it was considered a significant proposal of a prescribed class (refer to Section 4.1.4). This involved the preparation of an Environmental Impact Assessment (**EIA**) which was assessed by the EPA and subsequently approved on 27 September 2006 under Ministerial Statement 729 issued under s45(5) of the EPA Act **Appendix D**.

The history of Ministerial Statement 729 is as follows:

- Construction, operation and maintenance of a co-gen facility of 350 MW electrical output and 460 t/hr of steam – Approved 27 September 2006
- Increase in the allowable ‘operating hours’ – distillate use- for the 2008 year (200 hours) – Approved 10 April 2008
- Increase in the allowable ‘operating hours’ – distillate use – for the 2008 year (unlimited) – Approved 18 June 2008
- Increase the operating hours of the Stage 1 configuration of the Wagerup Cogeneration Facility from 1,000 hours per year to 4,000 hours per year – Approved 9 March 2018.

Alinta Energy have received advice from the Department of Water and Environmental Regulation (**DWER**) that the Proposal would trigger a requirement to complete a Section 45C application for an amendment to the

Ministerial Statement and that formal planning consent would only be forthcoming once this amendment had been approved. Alinta Energy are currently completing this documentation in preparation for submission to DWER.

4.1.4. **Environmental Protection Regulations (WA) 1987**

WPS is licenced to operate under Part V of the EP Act. The power station is a prescribed premises of category 52 (Electric Power Generation in excess of 20 MW using natural gas) under Schedule 1 of the Environmental Protection Regulations (**EP Regulations**). The WPS licence number is L8174/2007/5 and is currently valid until November 2034. The development of the Proposal at the subject site would not impact on this licence.

4.1.5. **Environmental Protection (Native Vegetation Clearing) Regulations (WA) 2004**

The EP Act contains a specific regulation to manage the impacts from clearing of native vegetation. The Proposal site does interact with an extent of native vegetation. Approximately 1ha of native vegetation would be cleared in order to facilitate the Proposal as shown in Figure 4-1 (overleaf).

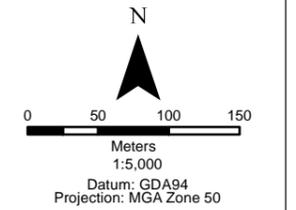


Wagerup Battery
Development Application

Native Vegetation extent

Legend

- Project Area
- Easements
- General Arrangement**
- Existing Infrastructure
- Proposed Infrastructure
- Native Vegetation Extent
DPIRD**
- Remnant Vegetation



Date:	07/12/2020
Status:	Draft
Figure:	4-1
Sheet Size:	A3
Internal Reference:	AEWG 001_00
Drawn by:	GSM
Requested by:	RS

Given that the amount of clearing proposed is less than 5 ha, is not related to riparian vegetation, and no other clearing has taken place or is planned to take place on the site this financial year (FY21) this work would be considered *Prescribed Clearing* under Regulation 5 Item 1 of the Native Vegetation Clearing Regulations. This regulations states:

Clearing of a site for the lawful construction of a building or other structure on a property, being clearing which does not, together with all other limited clearing on the property in the financial year in which the clearing takes place, exceed five hectares, if –

(a) the clearing is to the extent necessary; and

(b) the vegetation is not riparian vegetation.

4.1.6. **Aboriginal Heritage Act 1972**

The Aboriginal Heritage Act 1972 provides for the recognition, protection and preservation of Aboriginal sites in Western Australia. It is an offence under s. 17 of the Act to excavate, destroy, damage, conceal, or in any way alter an Aboriginal site. Consent under s. 18 can be obtained from the Minister for Indigenous Affairs to allow an activity to damage or destroy an Aboriginal Heritage site. Further information on heritage specific to the subject site is discussed in Section 6.1.6.

It is worth noting that the Aboriginal Cultural Heritage Bill 2020 was recently out for public consultation (submissions closed 9 October 2020) and is expected to be introduced into State Parliament before the end of 2020. There are several important changes proposed in this Bill when compared to the current Act – the key issue related to the Proposal includes changes to how land is developed which include:

- A new tiered assessment system for land use proposals would be established
- Decisions would be published
- Minister for Aboriginal Affairs would retain overall responsibility for the Aboriginal heritage system
- A defined role in DPLH in providing early advice to all stakeholders regarding compliance and the approvals pathway

Alinta Energy will comply with any new legislation once passed by State Parliament.

4.1.7. **Electricity Industry Act 2004**

The WPS is licenced by the Economic Regulation Authority (**ERA**) under Electricity Integrated Regional Licence EIRL 7. Alinta Energy has many licences from the ERA and has a well-established working relationship with the ERA. Alinta Energy will require either an amendment to EIRL 7 or to obtain a new licence from the ERA for the new generating capacity introduced by the proposed project. This licence can only be granted following further design and once a financing structure for the proposed project has been developed.

Alinta Energy will engage with the ERA at the appropriate point during development of the project to ensure an amendment to EIRL 7 is obtained.

4.1.8. **Dangerous Goods Safety Act 2004**

The scope of the project includes the installation of a lithium battery that will add a new substance to the list of controlled substances at the site which are captured by the Dangerous Goods Safety Act. The project will introduce a small increase in the storage of some substances already identified on the Dangerous Goods Site Licence such as lubricating oil (below the manifest quantity) and small quantities of other hazardous substances. These substances will continue to be subject to the suite of controlled storage and handling procedures which are standard practice by Alinta Energy at the site.

4.2. Strategic Planning

The following sections provides an overview of the key strategic planning documents relevant to the Proposal.

4.2.1. Energy Transformation Strategy

In March 2019, the WA Government announced the [Energy Transformation Strategy \(ETS\)](#) – a reform program aimed at meeting the challenges presented by increasing intermittent generation; lowering barriers to entry in the WEM; and the supporting participation of energy storage technologies in WA's Wholesale Electricity Market.

The Proposal is clearly aligned with the ETS, as the [Whole of System Plan \(WOSP\)](#) released under the ETS shows that battery energy storage systems will play a key role in ensuring WA's energy systems achieves least-cost outcomes over the next 20 years. The WOSP forecasts that battery energy storage systems will provide the [new essential system services](#) being developed by the ETS to ensure WA's South West Interconnected System remains secure as intermittent generation increasingly meets WA's electricity demand.

4.2.2. State Planning Strategy 2050

The State Planning Strategy 2050 identifies a number of issues of key strategic importance to Western Australia's sustained growth and prosperity including:

- Economic development
- Physical infrastructure
- Social infrastructure
- Environment
- Security.

Within the physical infrastructure issue the sub-issue of energy is highlighted, with the objective being to *enable secure, reliable, competitive and clean energy that meets the State's growing demand.*

Given the rapidly increasing penetration of renewable energy into the SWIS, and the issues with grid stability that this can present, it is clear that the Proposal provides *adaptable and resilient energy infrastructure that accommodates alternative energy sources* that can be instantly deployed in periods of grid instability while thermal generation comes online.

4.2.3. Directions 2031 and Beyond

Directions 2031 is a high-level spatial framework and strategic plan that establishes a vision for future growth of the metropolitan Perth and Peel region. A key focus of the plan is the effective utilisation of land and suitable planning for urban growth as the population of the region increases. The Proposal is consistent with this effective use of land goal in that it utilises existing industrial land that currently has no productive use.

4.2.4. Perth and Peel @ 3.5 million

The Perth and Peel @ 3.5 million strategy document builds on the principles detailed in Directions 2031 and Beyond and elaborates on the importance of ensuring that essential services can cope with the forecast increase in population in the region. Specifically, it comments that *the supply of electricity to growth areas within the sub-regions will require the development of suitable electricity infrastructure. This may be in the form of traditional network augmentations, new terminals and sub-stations, and/or more innovative electricity supply models such as microgrids, embedded renewable energy generation and energy storage systems.*

The Proposal is an energy storage system that would improve the security and reliability of the SWIS and ensure that the provision of clean energy into the network can be balanced with the growth in electricity demand and the changing patterns of electricity generation and use.

4.2.5. South Metropolitan Peel Sub-regional Planning Framework

Service infrastructure is a key priority in the South Metropolitan Peel Sub-regional Planning Framework, in particular encouraging the use of shared infrastructure corridors by the various service providers.

The Proposal not only complements the traditional electricity infrastructure in the region it also makes use of existing land associated with power generation and does not require any upgrades to the existing transmission and distribution networks within the SWIS.

4.2.6. Shire of Waroona Local Planning Strategy

Objective 3 of the Shire of Waroona Local Planning Strategy is to *protect and conserve agricultural lands and rural land uses*. The Proposal site is located in one of the five industrial precincts in the Shire and would not have an adverse impact on surrounding agricultural lands or rural land uses.

4.3. Statutory Planning

The following sections outline the key statutory planning documents applicable to the Proposal.

4.3.1. State Planning Policy 2.1 Harvey coastal plain catchment

The Proposal is located within the Harvey coastal plain catchment (Figure 4-2), therefore the State Planning Policy 2.1 applies.

The objectives of this policy are to:

- improve the social, economic, ecological, aesthetic, and recreational potential of the Peel-Harvey coastal plain catchment
- ensure that changes to land use within the catchment to the Peel-Harvey estuarine system are controlled so as to avoid and minimise environmental damage
- balance environmental protection with the economic viability of the primary sector
- increase high water-using vegetation cover within the Peel-Harvey coastal plain catchment
- reflect the environmental objectives in the draft Environmental Protection Policy (Peel-Harvey Estuarine System) 1992
- prevent land uses likely to result in excessive nutrient export into the drainage system.

Specific requirements around industrial development are also contemplated including:

- Proposals to develop land for industry, where the industrial process would create liquid effluent, must include provision for connection to a reticulated sewerage system.
- Works approvals and licences will be required from the EPA where the proposal has a wastewater discharge or falls within the list of scheduled premises under Part V of the Environmental Protection Act. Some types of industrial development may require an impact assessment under Part IV of the Environmental Protection Act.

The Proposal will have no material impact on the Harvey coastal plain catchment given the site is an existing industrial site with a reticulated sewerage system already in place and would not result in stormwater run-off in quantities or quality that would impact the estuarine systems.

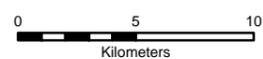
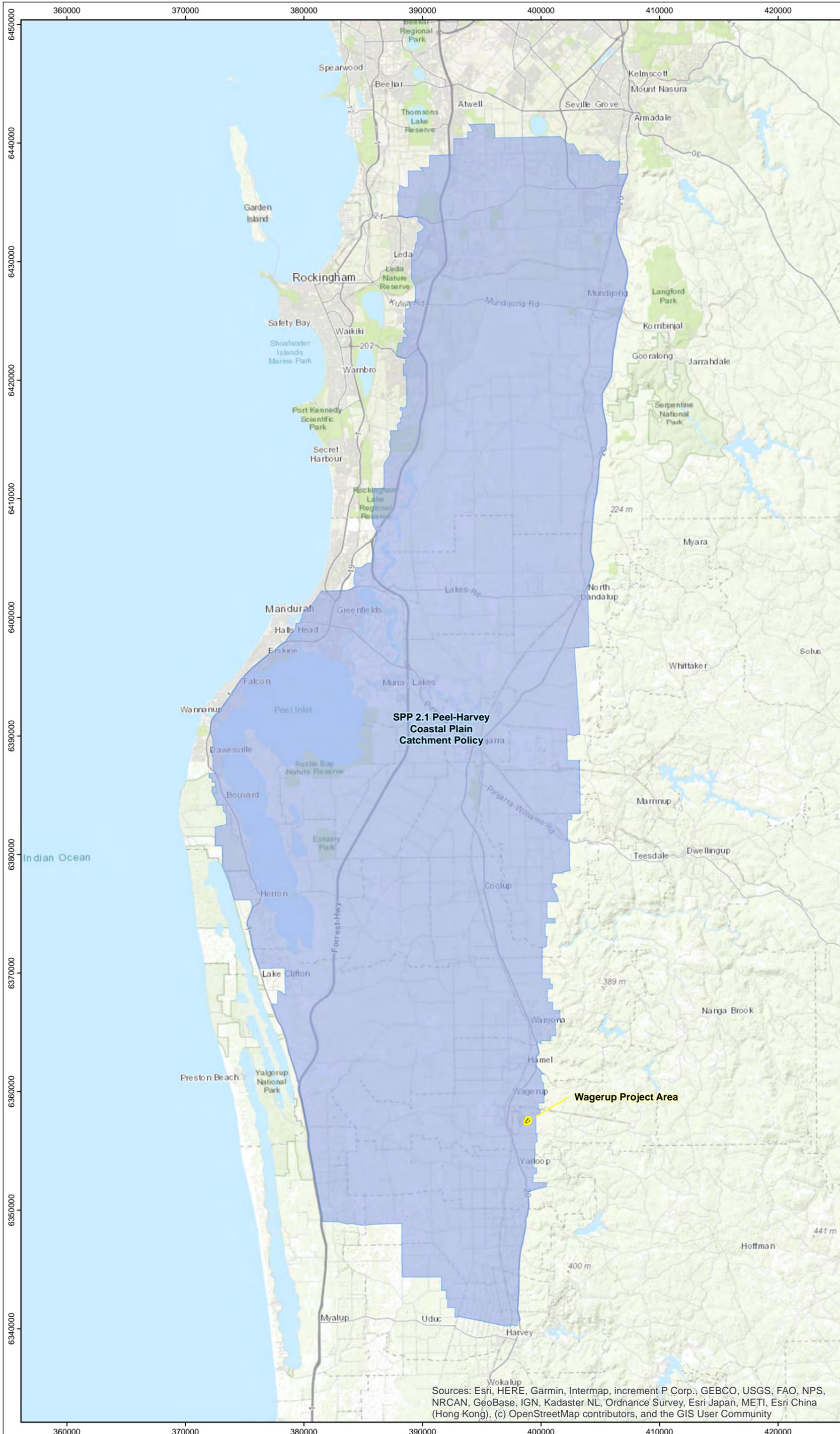


Wagerup Battery Development Application

Site context Harvey coastal plain catchment

Legend

-  Project Area
-  Area of Harvey Coastal Plain (as defined in State Planning Policy 2.1)



Datum: GDA94
Projection: MGA Zone 50

Date: 07/12/2020
 Status: Draft
 Figure: 4-2
 Sheet Size: A3
 Internal Reference: AEWG 005_00
 Drawn by: GSM
 Requested by: SW

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

4.3.2. State Planning Policy 3.7 Planning in Bushfire Prone Areas

The Proposal is located in what is considered a Bushfire Prone Area as such this policy applies. The key policy objectives are to avoid any increase in threat of bushfire through sound decision making during the planning and development process.

Alinta Energy has an existing Emergency Response Plan for the WPS that includes response guidelines in the event of a bushfire – this is provided in Appendix B.

Wagerup Battery Development Application

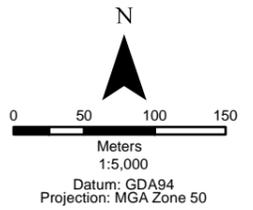
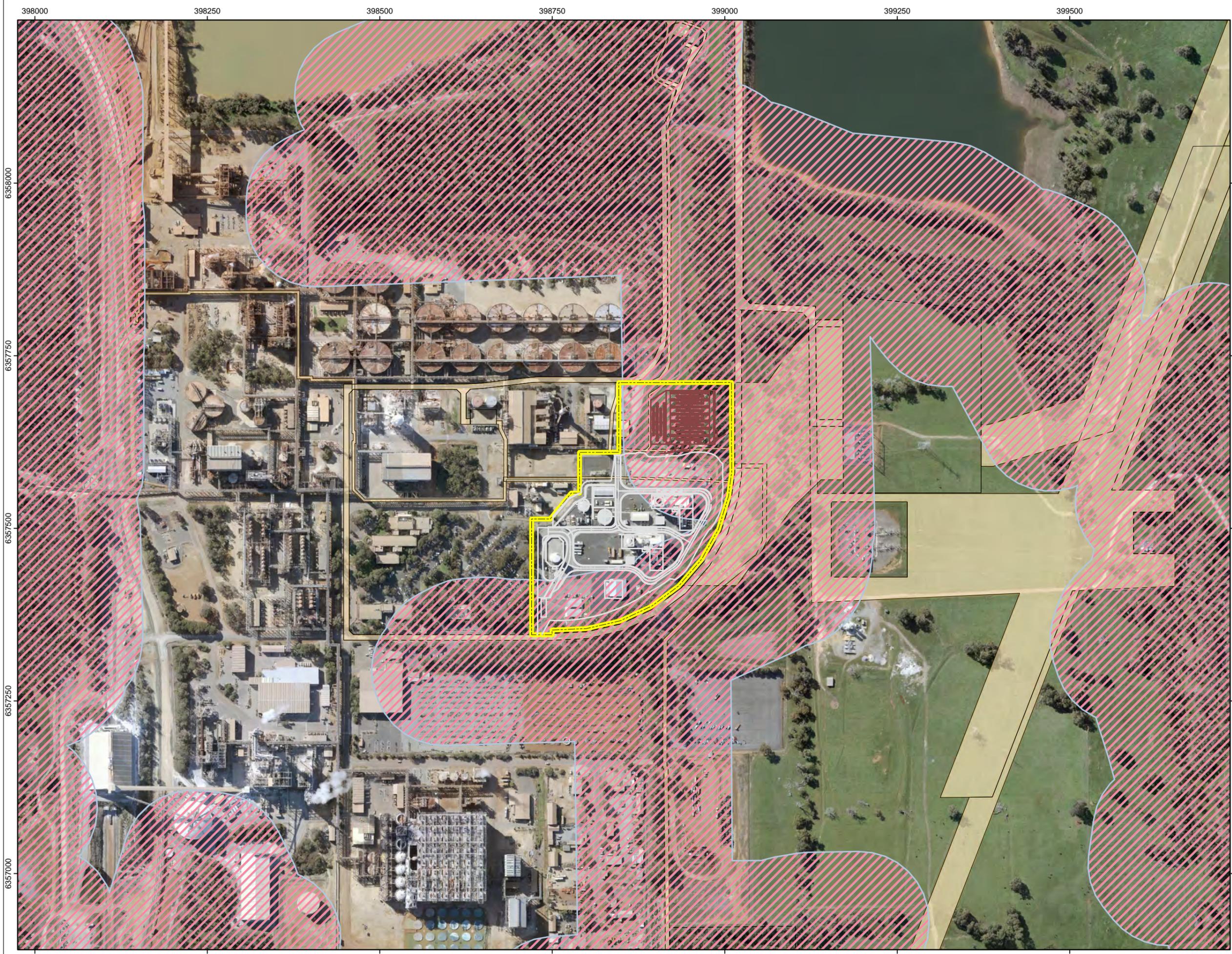
Bushfire Prone areas in relation to the subject site

Legend

- Project Area
- Easements

General Arrangement

- Existing Infrastructure
- Proposed Infrastructure
- Bushfire Prone areas



Date:	07/12/2020
Status:	Draft
Figure:	4-3
Sheet Size:	A3
Internal Reference:	AEWG 002_00
Drawn by:	GSM
Requested by:	RS

4.3.3. Peel Region Scheme

The Peel Region Scheme provides a statutory mechanism to assist strategic planning, by setting out broad land-use zones, setting aside areas for regional open space and other regional infrastructure purposes, and assisting in coordinating the provision of major infrastructure. Given there is both a Region Scheme and LPS associated with the subject site, theoretically there would be a legal requirement to obtain planning approvals from both the Western Australian Planning Commission (**WAPC**) and the local government, as one scheme does not override the other.

Alinta Energy has confirmed with the Department Land, Planning and Heritage (**DPLH**), however, that only one approval is needed.

The Peel Region Scheme aims to achieve the following that are relevant to the Proposal:

- *Promote the sustainable development of land taking into account relevant environmental, social and economic factors*
- *Provide for industrial development in planned estates where land use conflicts and environmental impacts will be minimised and efficient production facilitated.*

The Proposal aligns with these aims in that it is development taking place on existing industrial land and the nature of the development means that environmental impacts are minimised.

The Peel Region Scheme also sets out the accompanying material required to support Development Applications including:

- Plans to a scale not less than 1:500 referencing the details outlined in Section 29 of the Scheme
- Elevations and sections
- Specialist studies as required
- Management plans as required.

It is noted that the subject site is not within the Special Control Areas (1 or 2) specified with the Scheme.

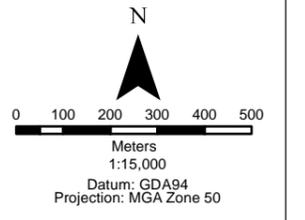
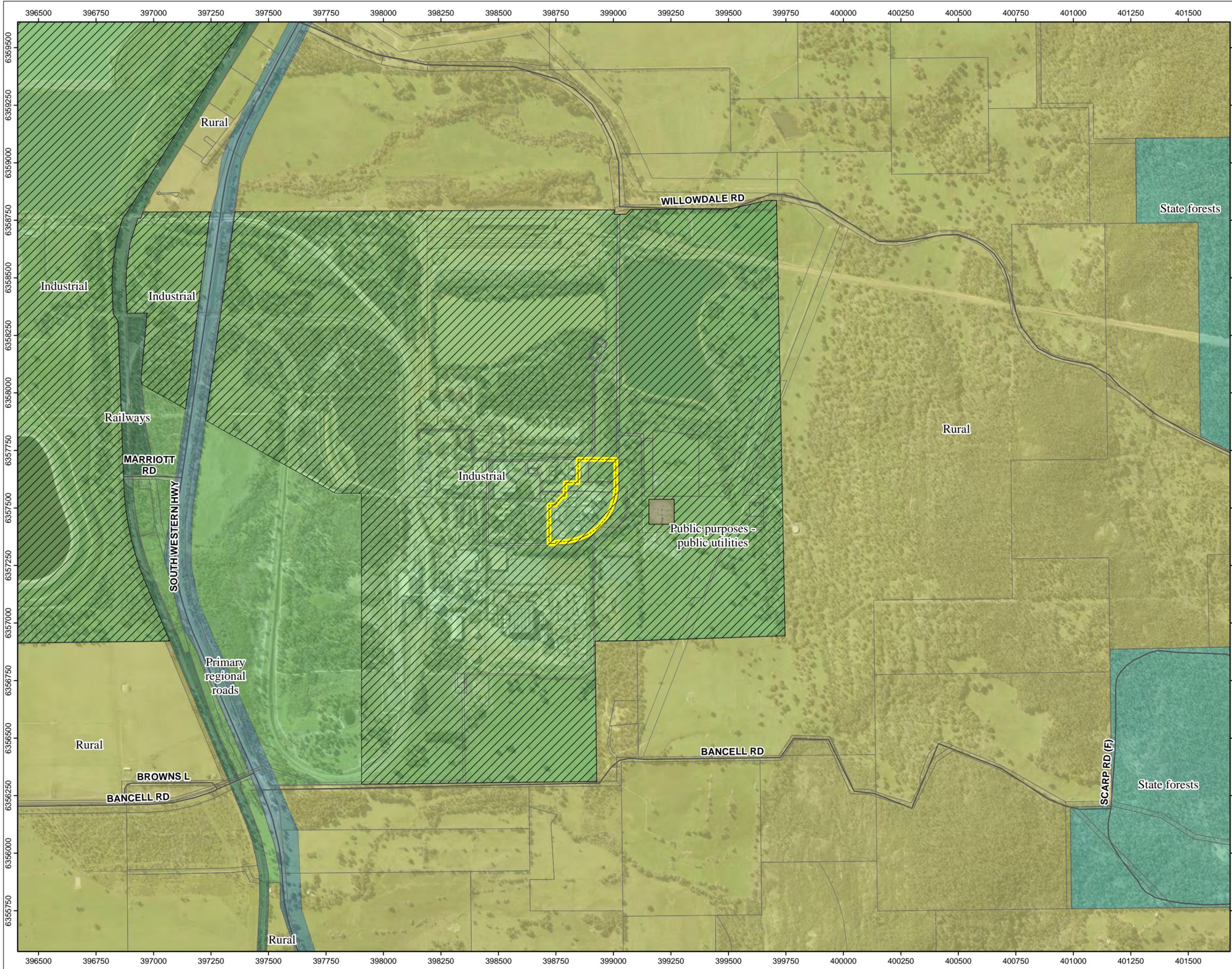
4.3.4. Shire of Waroona Local Planning Scheme No. 7

The Shire of Waroona Local Planning Scheme No. 7 (LPS No. 7) is the local planning legislation that applies to the proposed development. While the value of the proposed development will cause it to be elevated to the Regional JDAP, the Shire of Waroona will still be the administrative authority to receive the application for development.

The land associated with the WPS is zoned Special Industry. As per Clause 3.18.1 of LPS No.7 *Land use and development of any Special Industry Zone shall be restricted to the operations of the industry identified on Scheme Map*. In the case of this zone that would include Alinta Energy's power generation operations which the Proposal directly relates to. A decision on approval of Alinta Energy's proposal will rest with the Shire of Waroona and subsequent delegation to the Regional JDAP.

Legend

- Project Area
- Region Scheme Zoning**
 - Industrial
 - Primary regional roads
 - Public purposes - public utilities
 - Railways
 - Rural
 - State forests
 - Special Industry Zone - LPS No.7



Date: 07/12/2020
Status: Draft
Figure: 4-4
Sheet Size: A3
Internal Reference: AEWG 006_00
Drawn by: GSM
Requested by: RS

5. Project Benefits

The Proposal aligns with Alinta Energy's approach to sustainability which is about delivering lower emissions energy that's also reliable and affordable. With the continued introduction of intermittent energy sources into the SWIS, such as domestic and utility scale solar, the need for fast-start, balancing capacity becomes more important. The Proposal will directly support the introduction of more solar and other intermittent renewable energy sources into the existing network.

In early 2020 the WA State government released a new Greenhouse Gas Policy specifically for Major Projects. This policy requires major projects to demonstrate their contribution towards a target of net-zero GHG emissions by 2050. The installation of a battery at this scale creates the opportunity for much more renewable and intermittent electricity generation to be connected to the SWIS while maintaining power quality and continuity of supply. The ability of large batteries to respond instantly to fluctuations on the grid is critical to the development and operation of increased renewable energy in the state.

Construction of the project will require up to 100 full time workers over approximately a 12-month construction period. Workers engaged on the project would likely be either locals or would be accommodated in the surrounding townships.

During operations it is likely that there will be a requirement for additional Operations and Maintenance Technicians to join the current WPS workforce of six. The number of permanent, full-time jobs is not yet known and would be determined after the maintenance requirements of the proposed assets are well understood and integrated into Alinta Energy's asset management system.

6. Development Impacts & Mitigation

6.1. Construction Impacts & Mitigation

Alinta Energy would contract out the construction of the proposal via Engineering, Procurement, Construction (EPC) contract. Alinta Energy's standard EPC contract terms include a schedule of documentation which is required to be provided by the contractor. Prior to mobilisation and commencement of site works, the contractor must prepare and obtain Alinta Energy's approval of a Construction Environmental Management Plan (CEMP).

The CEMP must address all potential environmental impacts that may occur during the contractor's construction activities. These may include, but are not limited to, the following:

- Removal of native vegetation and impacts on fauna
- Dust emissions
- Noise emissions
- Waste management
- Erosion and sedimentation
- Hydrocarbon and hazardous materials storage and handling

The contractor's CEMP will address these potential impacts and any others which become apparent as the design evolves and the construction methodologies for the project are developed.

6.1.1. Dust

During construction there is the possibility of dust emissions from minor clearing and excavation works. The Proposal would require the installation of underground cabling as well as a series of footings and foundations to support the coupling transformers and battery containers. The size and extent of excavations will reflect the development footprint in the general arrangement (**Appendix A**). The CEMP prepared by the contractor would be expected to include mitigation measures to minimise the impact of any dust emissions including active dust suppression on high risk days.

6.1.2. Noise

As outlined above the construction period is anticipated to be approximately 12 months and will involve preparing hard-stand areas for the BSS equipment, the placement and installation of the equipment followed by electrical tie in works and commissioning. The main noise sources would be machinery undertaking civil works in the early stages of the project during site establishment and preparation. Given the location of the site and proximity to sensitive land uses, noise emissions are not expected to be a significant issue. The contractor would only be permitted to work within the time windows specified in the Environmental Protection (Noise) Regulations 1997, unless an exemption is sought and granted by the regulator.

6.1.3. Flora and fauna

While the clearing required as part of the Proposal is considered exempt and does not require a Native Vegetation Clearing Permit, the contractor will still be required by Alinta Energy to undertake the clearing works according to good industry practice and must adhere to legislation and policy related to the impact and interaction with fauna during the works. Alinta Energy would require that the contractor's CEMP include provisions for managing fauna interactions onsite including checklists for pre-clearing to ensure fauna are not present or can be safely moved on before clearing begins.

6.1.4. Stormwater

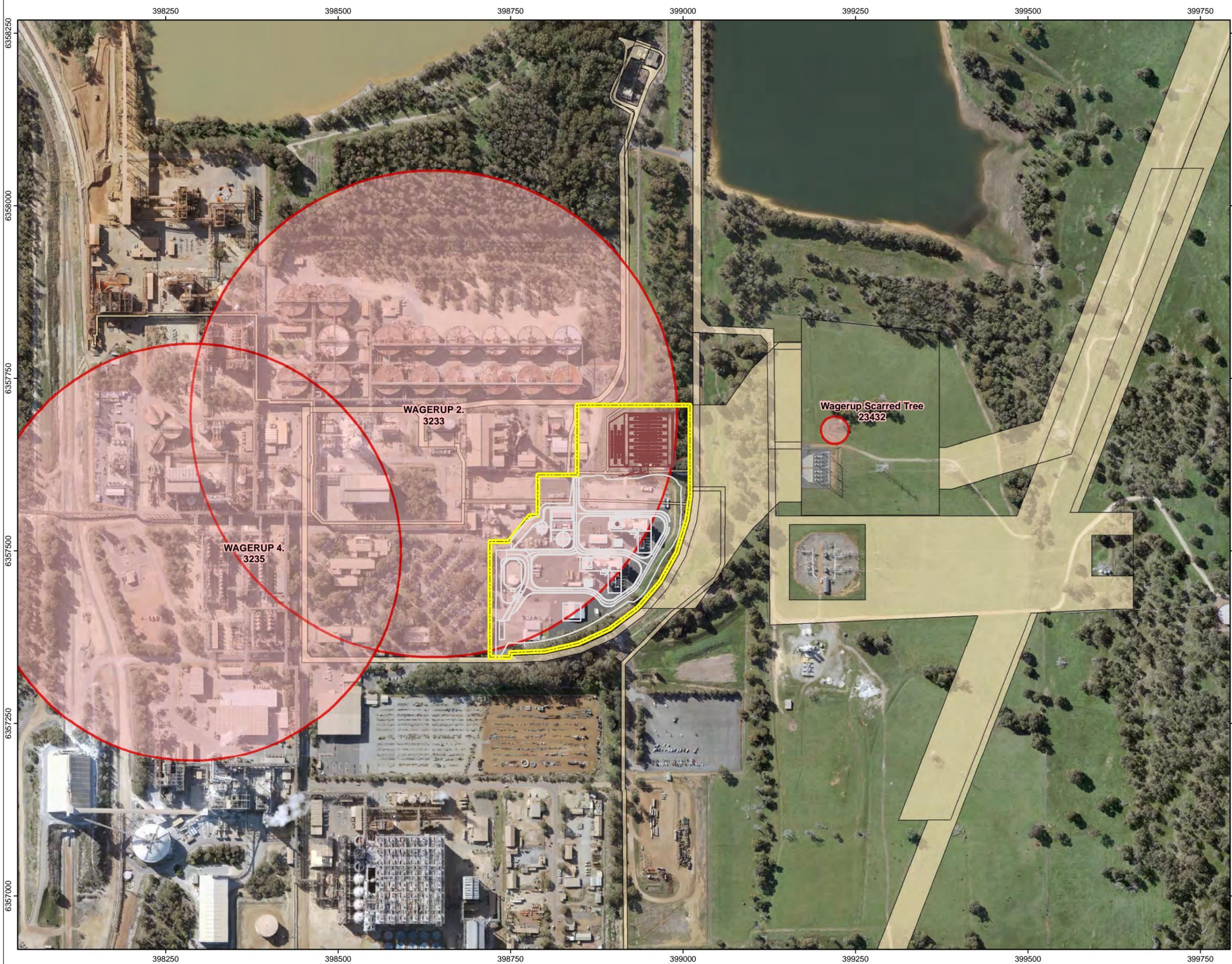
Construction of the Proposal will result in minor clearing of land and excavation works that would increase the risk associated with sediment laden run-off entering drains, and subsequently local watercourses. It is expected that the contractors CEMP would specifically address this risk through mitigation measures such as an erosion and sediment control plan.

6.1.5. Waste Management

During construction the EPC contractor will be required to sort construction waste into bins determined by the categories of recyclable materials. Waste Management will necessarily be addressed in the CEMP. Alinta Energy will closely monitor the performance of the EPC contractor during the construction phase to ensure compliance with the approved CEMP.

6.1.6. Heritage

The Aboriginal Heritage Inquiry System (DPLH, 2019) shows that the subject site is within the boundary of a polygon identified as *Other Heritage Place 3233*. This typically indicates a location which was ascribed some heritage value upon the initial survey, in this case before construction of Alcoa's refinery, but was not identified as a Site under the Aboriginal Heritage Act. The location of this Other Heritage Place indicates that the heritage value that was identified has since been removed or destroyed by construction of the refinery and no longer exists.

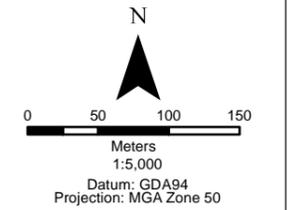
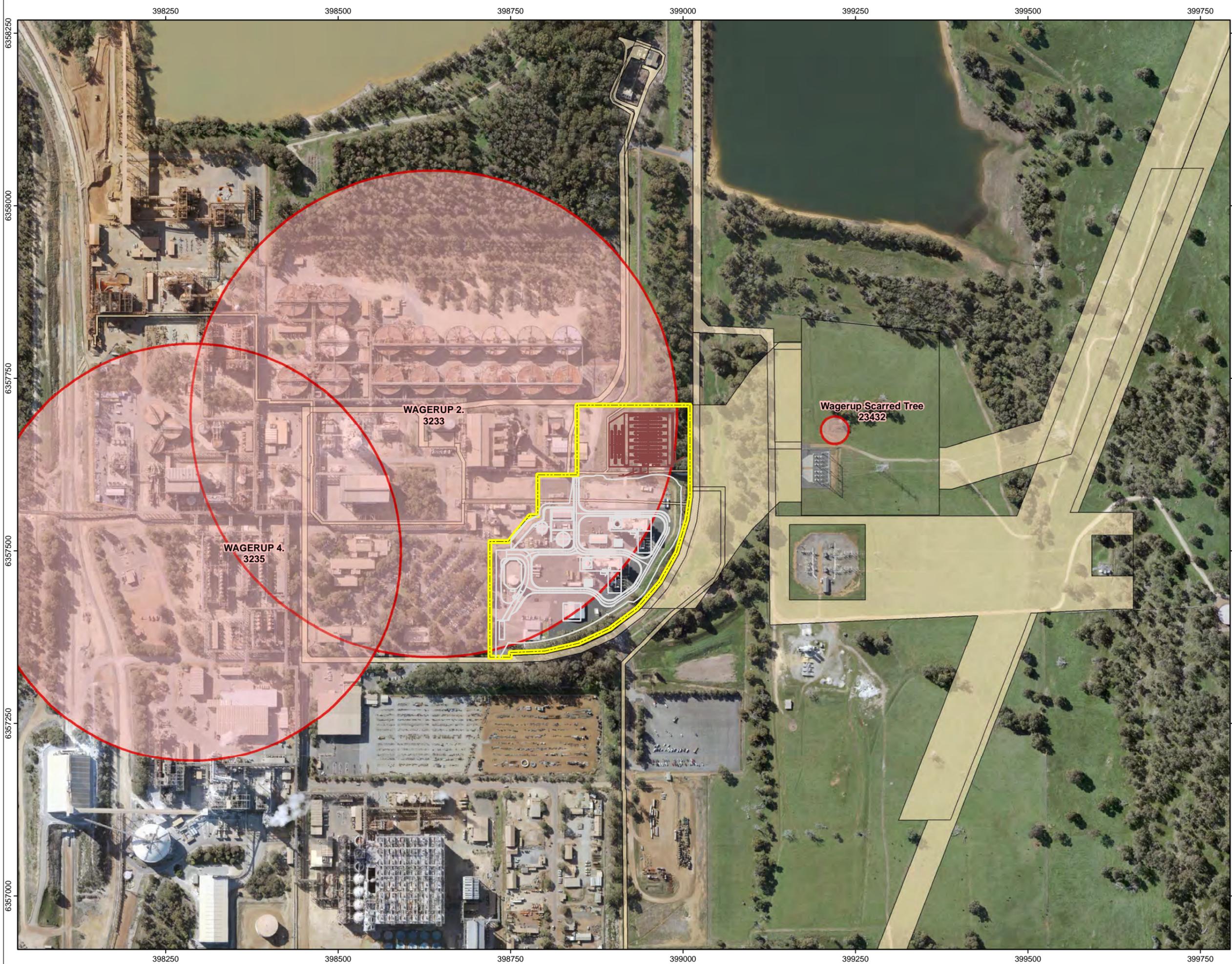


Wagerup Battery
Development Application

Other Heritage Place

Legend

- Project Area
- Easements
- General Arrangement**
- Existing Infrastructure
- Proposed Infrastructure
- Aboriginal Heritage Site



Date:	07/12/2020
Status:	Draft
Figure:	6-1
Sheet Size:	A3
Internal Reference:	AEWG 003_00
Drawn by:	GSM
Requested by:	RS

Notwithstanding, Alinta Energy would engage with a qualified Heritage consultant to understand any specific values and/or constraints which might exist within the subject site and progress any design and site development accordingly.

Additionally, Alinta Energy will require the contractor to include in their CEMP management measures addressing heritage material which may be found during construction. This may include the presence of a qualified heritage consultant during excavation or procedures around stopping work if unexpected heritage finds are made.

6.1.7. Traffic and Transport

It is likely that the equipment and materials required for the Proposal would be transported via road from the port at either Fremantle or Henderson to the site. While the port that will receive components for the Proposal still needs to be confirmed for the purposes of this Application for Development Approval it is assumed equipment will arrive at Fremantle before transport to Wagerup.

As highlighted in Figure 6-2 this route utilises key parts of the network including Kwinana Freeway and the South Western Highway.

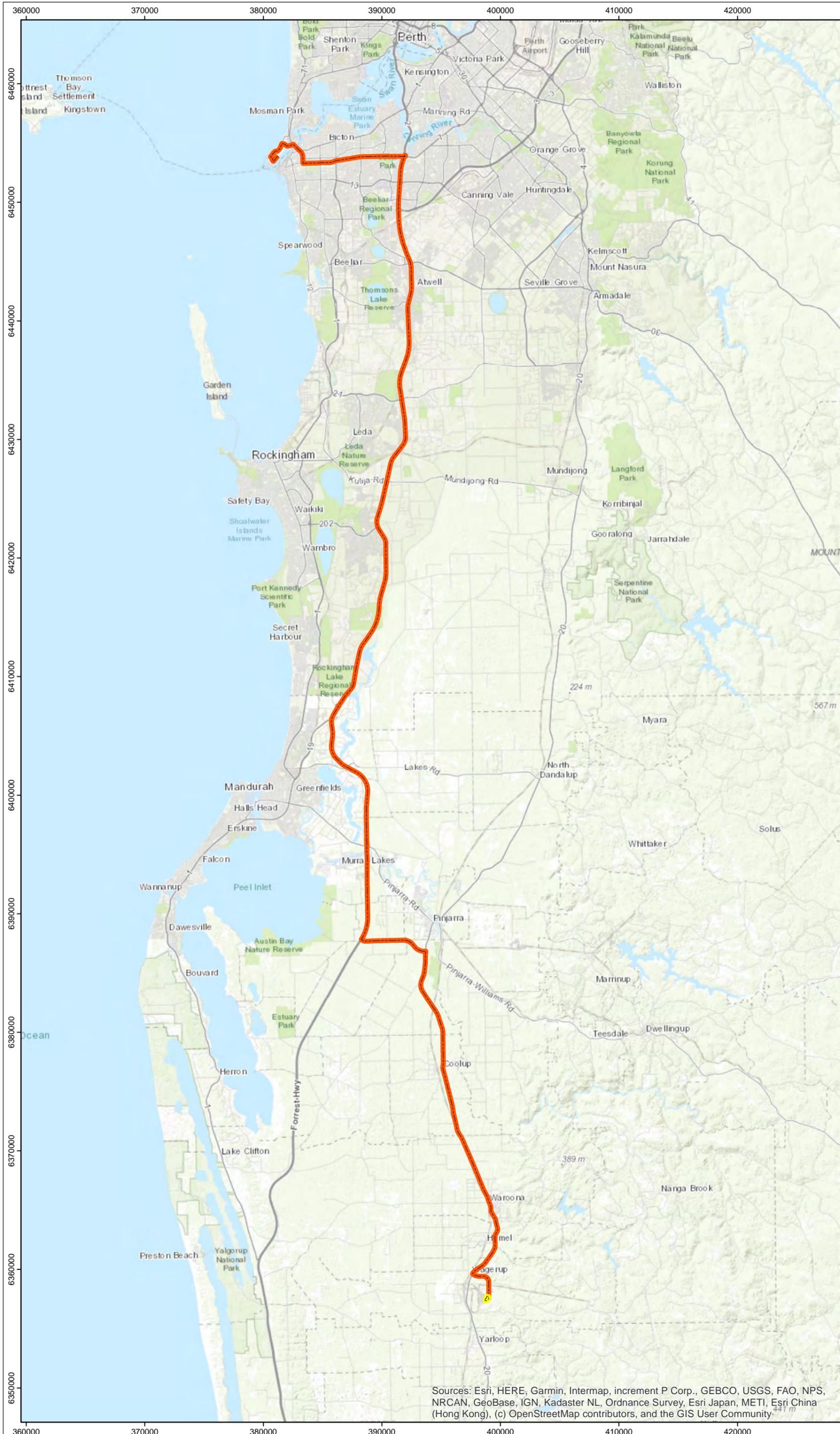
Wagerup Battery Development Application

Proposed Transport Route

(Fremantle to Wagerup Power Station)

Legend

- Project Area
- Proposed transport route



N

0 5 10
Kilometers
1:300,000
Datum: GDA94
Projection: MGA Zone 50

Date: 07/12/2020
 Status: Draft
 Figure: 6-2
 Sheet Size: A3
 Internal Reference: AEWG 004_00
 Drawn by: GSM
 Requested by: SW

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

The size and aspect of the equipment will not be materially different from the loads and deliveries commonly transported to the WPS and the adjacent refinery. The majority of the deliveries will be made in shipping containers. For any high, wide or heavy loads the EPC contractor will be required to obtain the appropriate transport approvals from Main Roads WA.

Given the site is accessible from places such as Perth, Mandurah and Bunbury no onsite accommodation would be required for the workforce. It is anticipated that there would be a maximum of 100 people onsite during construction. Car-parking is available opposite the subject site in the contractor carpark shared with Alcoa.

For traffic management during the construction phase, the selected contractor will be required to produce a Traffic Management Plan which complies with all laws and conditions contained in any approvals including the Development Approval. The contractor would require approval from Alinta Energy on the adequacy and safety of any such Traffic Management Plan.

It is noted that Willowdale Road is a two-lane Regional Distributor and is managed by the Shire of Waroona. It is considered capable of handling the expected traffic associated with construction without the need for upgrades or improvements.

6.2. Operational Impacts

As outlined in Section 3.3 the WPS and the Proposal will operate independently of each other. The following section addresses the potential operational impacts associated with the Proposal only. As noted in Section 3.1 the Proposal has no moving parts, no air or odour emission and no significant noise emitting components. Therefore, the potential operational impacts are not as extensive as those likely during construction.

6.2.1. Visual amenity

As highlighted in the Figure 3-1, Figure 3-2 and Figure 3-3 the equipment associated with the Proposal is consistent with that expected in an industrial area and generally consists of shipping containers and associated transformers. The Proposal would not be visible from the South Western Highway and would not materially alter the existing views from Willowdale Road which are dominated by the existing WPS and Alcoa infrastructure.

Figure 6-3 and Figure 6-4 highlight the existing views from two locations on Willowdale Road.



Figure 6-3 VP3 Willowdale Road



Figure 6-4 VP5 Willowdale Road

By way of comparison the shipping containers housing the batteries are 3.4m high compared to the stack height on the WPS turbines which is 35m.

Additional site photos are included in **Appendix E**.

6.2.2. Hazardous materials

Alinta Energy has a mature and comprehensive system for the storage and handling of hazardous materials which is detailed in a Standard Operating Procedure for Hazardous and Dangerous Goods Management for the site.

The Proposal will introduce a new category of material which is regulated by the Dangerous Goods Safety Act, that being compounds of lithium. Alinta Energy has the recent experience of amending the site licence (Dangerous Goods) at Newman Power Station for the same purpose. With the exception of the lithium compounds in the battery modules, no other new materials will be brought to the site that are not already present or that cannot be adequately managed within the scope of current policies, procedures and licences.

6.2.3. Bushfire

As highlighted in Section 4.3.2 the subject site is considered to be Bushfire Prone. As part of the procurement process Alinta Energy would specify performance standards required of a power generating facility in relation to bushfire risk so these could be developed in the design phase.

A copy of the WPS's existing Bushfire Response Plan can be found in **Appendix B**.

6.2.4. Vehicle Movements and Parking

There are up to six Alinta Energy personnel attending the WPS on a daily basis with car parking spaces for up to twenty personal vehicles. The regular number of vehicles on site during a typical day is six. Car parking is located immediately west of the office (Figure 2-1). One additional operations personnel will be employed to support the increased asset base at the subject site. There is ample space to serve the needs for parking of an increased operational workforce.

6.2.5. Stormwater

The Proposal will result in a minor increase in the quantity of stormwater landing on hardstand and developed areas and will be directed into the existing drainage system servicing the WPS and refinery. It should be noted that the development area of approximately 1 ha is a very small portion of the 100 ha of development associated with the power station and the refinery. All the batteries are fully encapsulated and the risk of spills from the battery modules is considered to be negligible.

7. Conclusion

Based on the provisions of the relevant planning strategies, frameworks and schemes, including the Shire of Waroona Local Planning Scheme No.7, the subject site is an appropriate location for the Proposal. The existing zoning and infrastructure at the subject site complement the Proposal and make use of existing industrial land.

Alinta Energy's Proposal will improve the efficiency, reliability and overall performance of the power system. The Proposal will be fully contained within the existing site boundary and will not change the current purpose, amenity, land use or impact on neighbouring landowners.

The Proposal results in no adverse outcomes in terms of environmental, community or socio-economic impact during construction or operation.

Overall, the Proposal is entirely compatible with the State's strategies and objectives for energy security and reliability and makes use of existing industrial land which is a key land use objective for the Shire of Waroona and the Peel region. On this basis the Proposal merits the issue of Development Approval by the Shire of Waroona and the Regional JDAP.

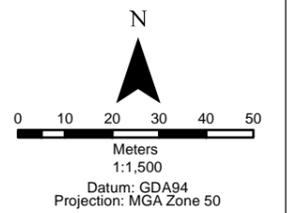
APPENDIX A – GENERAL ARRANGEMENT AND ELEVATIONS

Wagerup Battery
Development Application
General Arrangement

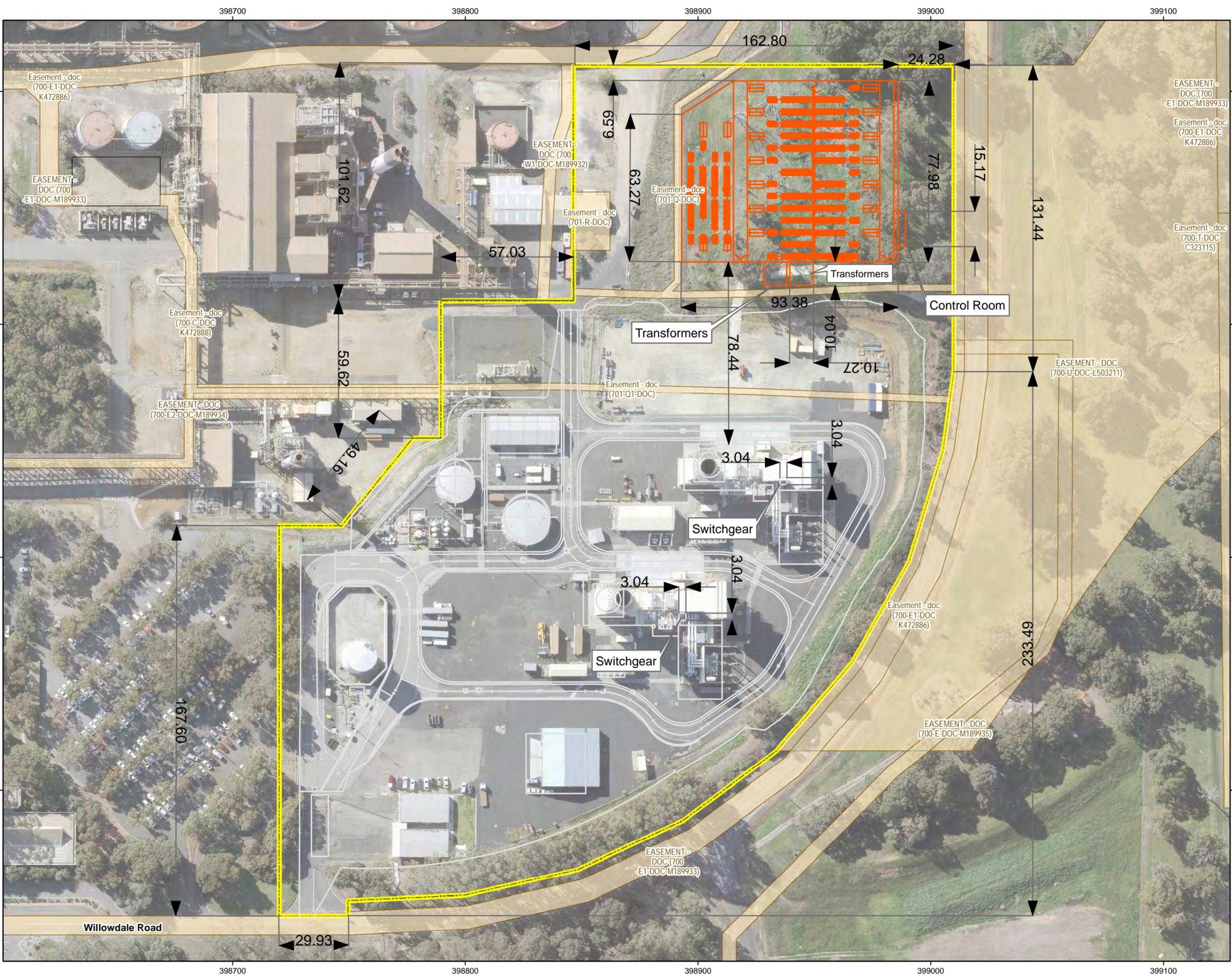
Legend

- Project Area (Lot 701 DP 59305)
- Easements
- General**
- Existing Infrastructure
- Proposed Infrastructure

Note: All dimensions are in Metres

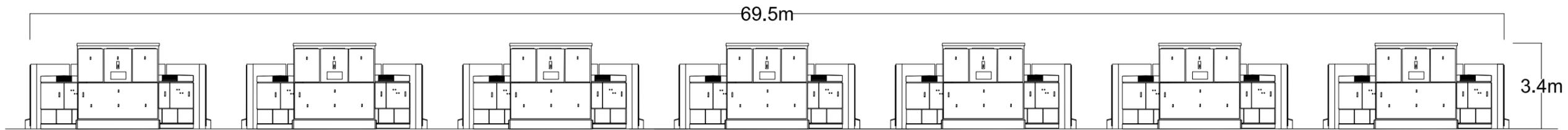
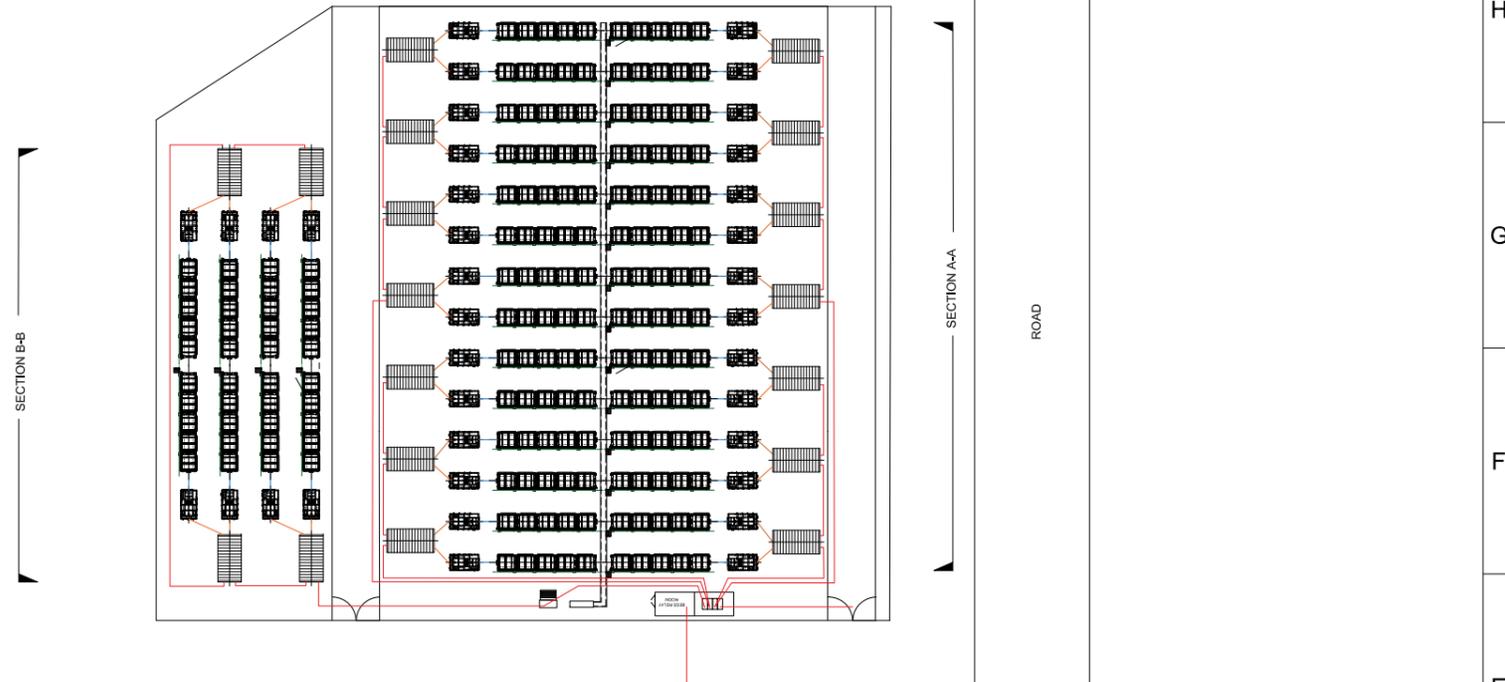


Date: 07/12/2020
Status: Draft
Figure: 3-1
Sheet Size: A3
Internal Reference: AEWG 007_00
Drawn by: GSM
Requested by: RS

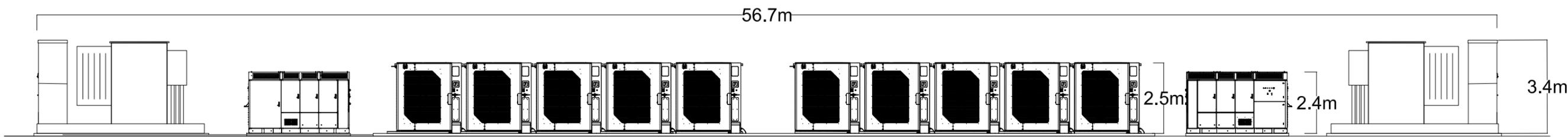


12 11 10 9 8 7 6 5 4 3 2 1

H
G
F
E
D
C
B
A



SECTION A-A TRANSFORMERS, INVERTERS & BATTERY CUBES



SECTION B-B TRANSFORMERS, INVERTERS & BATTERY CUBES

ZONE	REV	DESCRIPTION	DATE	CHK BY	APV BY
REVISIONS					
12					
11					
10					
9					

FLUENCE CONFIDENTIAL & PROPRIETARY INFORMATION



STATUS FOR TENDER	PROJECT WAGERUP BESS		
TITLE WAGERUP BESS ELEVATION VIEWS			
DRAWN GW	DATE 11/11/20	DRAWING NO. WUP_100_100_XXX	REV 0
APPROVED	DATE	SHEET 1 OF 1	

12 11 10 9 8 7 6 5 4 3 2 1



APPENDIX B – BUSHFIRE RESPONSE PLAN

Response Guidelines

In all bushfire situations,

- Direct all persons to move or remain indoors and close all windows and doors.
- Turn air-conditioning off or put on re-circulated air cycle to stop smoke from being drawn inside.
- Contact Chief Warden
- Contact emergency services on 000.
- Render any first aid if necessary.
- Monitor persons for symptoms of smoke exposure and duress.
- Chief Warden to inform staff and visitors of situation and any specific instructions.
- Wardens should patrol the site for ember ignitions extinguishing them where it is safe to do so.
- Advise attending fire personnel of areas where attention is needed.
- Chief Warden to contact the relevant bush fire agency to ascertain the extent of the threat and determine an appropriate course of action. Phone 000, if appropriate.
- Brief Emergency Control Organisation on the extent of the threat and place them on standby.
- Chief Warden to consider arranging transport to relocate persons off site if needed.
- Maintain contact with emergency services and act on any instructions given.
- Consider activation of Critical Incident Plan and/or Business Continuity Plan should the bush fire cause extended time away from the building.

If an evacuation is required:

Follow evacuation procedures, ensure all buildings are clear.

If you are caught in the open during a bushfire:

This section is relevant for persons that may be located in more remote areas away from their usual building.

Anticipate the fire behaviour and plan your course of action:

- Move to a low fuel area.
- Don't try to outrun the fire – move across the front of the fire to the flanks (sides).
- Move downhill - the most intense fire will be at the top of hills. Don't try to run through the flames unless you can clearly see behind them. This means flames less than 1m high and less than 3m deep. Move towards the flanks or back of the fire, and look for lulls in the fire to find flames of less intensity.
- If there is no possibility of escape STOP, LIE DOWN & COVER UP as far as possible. If your clothes catch fire ROLL on the ground to extinguish the flames.
- If possible COVER your mouth and nose with a wet cloth.
- REMAIN CALM and avoid exhaustion – plan your actions.

Find an area that won't burn - the bigger the better.

- Avoid direct flame contact by getting to an area devoid of bushfire fuel.
- Look for large water bodies such as lakes, dams or creeks.

- Avoid areas of swampy vegetation, which can burn intensely.
- Avoid swimming pools, water tanks etc. During a fire, water heats up very quickly and the oxygen is sapped out of the atmosphere, a state of collapse is reached in about three minutes

APPENDIX C – CERTIFICATE OF TITLE

WESTERN



AUSTRALIA

REGISTER NUMBER 701/DP59305	
DUPLICATE EDITION 7	DATE DUPLICATE ISSUED 26/7/2018

RECORD OF CERTIFICATE OF TITLE
UNDER THE TRANSFER OF LAND ACT 1893

VOLUME **2708** FOLIO **956**

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts
REGISTRAR OF TITLES



LAND DESCRIPTION:

LOT 701 ON DEPOSITED PLAN 59305

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

ALINTA COGENERATION (WAGERUP) PTY LTD OF LEVEL 13, THE QUADRANT, 1 WILLIAM STREET, PERTH
(T K793160) REGISTERED 5/12/2008

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. *K718971 MEMORIAL. CONTAMINATED SITES ACT 2003 (CONTAMINATED SITE - REMEDIATION REQUIRED) REGISTERED 19/9/2008.
2. K793157 EASEMENT BURDEN ABOVE GROUND ELECTRICTY PURPOSES - SEE SKETCH ON DEPOSITED PLAN 59305. REGISTERED 5/12/2008.
3. K793158 EASEMENT BURDEN UNDERGROUND ELECTRICTY PURPOSES - SEE SKETCH ON DEPOSITED PLAN 59305. REGISTERED 5/12/2008.
4. K793159 EASEMENT BURDEN RIGHT OF ACCESS PURPOSES - SEE SKETCH ON DEPOSITED PLAN 59305. REGISTERED 5/12/2008.
5. M189932 EASEMENT BENEFIT FOR PIPELINE PURPOSES. SEE SKETCH ON DEPOSITED PLAN 76132. REGISTERED 19/2/2013.
6. M189933 EASEMENT BENEFIT FOR PIPELINE PURPOSES. SEE SKETCH ON DEPOSITED PLAN 76134. REGISTERED 19/2/2013.
7. M189934 EASEMENT BENEFIT FOR PIPELINE PURPOSES. SEE SKETCH ON DEPOSITED PLAN 76136. REGISTERED 19/2/2013.
8. M189935 EASEMENT BENEFIT FOR PIPELINE PURPOSES. SEE SKETCH ON DEPOSITED PLAN 76133. REGISTERED 19/2/2013.
9. N692013 EASEMENT BENEFIT FOR TRANSMISSION LINE PURPOSES - SEE DEPOSITED PLAN 53879 REGISTERED 9/8/2017.
10. N692020 EASEMENT BENEFIT FOR ELECTRICITY WORKS PURPOSES - SEE DEPOSITED PLAN 53880 REGISTERED 9/8/2017.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

-----END OF CERTIFICATE OF TITLE-----

END OF PAGE 1 - CONTINUED OVER

RECORD OF CERTIFICATE OF TITLE

REGISTER NUMBER: 701/DP59305

VOLUME/FOLIO: 2708-956

PAGE 2

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: DP59305
PREVIOUS TITLE: 1856-410
PROPERTY STREET ADDRESS: NO STREET ADDRESS INFORMATION AVAILABLE.
LOCAL GOVERNMENT AUTHORITY: SHIRE OF WAROONA



APPENDIX D – MINISTERIAL STATEMENT 729



Hon Mark McGowan MLA
Minister for the Environment;
Racing and Gaming

Statement No.

197 St Georges Terrace, Perth WESTERN AUSTRALIA 6000
Telephone: (+61 8) 9222 9111 Facsimile: (+61 8) 9222 9410
Email: mark-mcgowan@dpc.wa.gov.au • Website: www.ministers.wa.gov.au/mcgowan/

000729

**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(PURSUANT TO THE PROVISIONS OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

WAGERUP COGENERATION PROJECT

Proposal: The construction, operation and maintenance of a co-generation facility of 350 Megawatts electrical output and 460 tonnes per hour of steam output at Wagerup, as documented in schedule 1 of this statement.

Proponent: Alinta Cogeneration (Wagerup) Pty Ltd

Proponent Address: GPO Box W2030
PERTH WA 6846

Assessment Number: 1643

Report of the Environmental Protection Authority: Bulletin 1223

The proposal referred to above may be implemented by the proponent subject to the following conditions:

1 Proposal Description

1-1 The proponent shall implement the proposal as documented and described in schedule 1 of this statement subject to the conditions of this statement.

2 Proponent Nomination and Contact Details

2-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) of the *Environmental Protection Act 1986* is responsible for the implementation of the proposal.

2-2 The proponent shall notify the Chief Executive Officer of the Department of Environment and Conservation (CEO) of any change of the name and address for the serving of notices or other correspondence within 30 days of such change.

Published on
27 SEP 2006

3 Time Limit of Authorisation

3-1 The authorisation to implement the proposal provided for in this statement shall lapse and be void within five years after the date of this statement if the proposal to which this statement refers is not substantially commenced.

3-2 The proponent shall provide the CEO with written evidence which demonstrates that the proposal has substantially commenced on or before the expiration of five years from the date of this statement.

4 Compliance Reporting

4-1 The proponent shall submit annually an audit compliance report, for the previous twelve-month period.

The audit compliance report shall:

1. be endorsed by the proponent's General Manager or a person, approved in writing by the Department of Environment and Conservation, delegated to sign on the proponent's General Manager's behalf;
2. include a statement as to whether the proponent has complied with the conditions, procedures, commitments and actions within the Environmental Management Plans;
3. identify all non-compliances and describe the related corrective and preventative actions taken;
4. review the effectiveness of all corrective and preventative actions taken;
5. provide verifiable evidence of compliance with the conditions, procedures and commitments;
6. describe the state of implementation of the proposal; and
7. be prepared in accordance with an audit program and in a format acceptable to the Department of Environment and Conservation.

4-2 The proponent shall make the audit compliance report publicly available in a manner approved by the Department of Environment and Conservation.

5 Performance Review

5-1 The proponent shall submit a Performance Review report every two years after the start of production to the CEO, which addresses:

1. the major environmental issues associated with implementing the project; the environmental objectives for those issues; the methodologies used to achieve these; and the key indicators of environmental performance measured against those objectives;

2. the level of progress in the achievement of sound environmental performance, including industry benchmarking, and the use of best available technology where practicable;
3. significant improvements gained in environmental management, including the use of external peer reviews;
4. stakeholder and community consultation about environmental performance and the outcomes of that consultation, including a report of any on-going concerns being expressed; and
5. the proposed environmental objectives over the next two years, including improvements in technology and management processes.

6 Greenhouse Gas Abatement

6-1 Prior to commencement of construction, the proponent shall develop a Greenhouse Gas Abatement Program to:

- ensure that the plant is designed and operated in a manner which achieves reductions in “greenhouse gas” emissions as far as practicable;
- provide for ongoing “greenhouse gas” emissions reductions over time;
- ensure that through the use of best practice, the total net “greenhouse gas” emissions and/or “greenhouse gas” emissions per unit of product from the project are minimised; and
- manage “greenhouse gas” emissions in accordance with the *Framework Convention on Climate Change 1992*, and consistent with the National Greenhouse Strategy;

to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

This Program shall include:

1. calculation of the “greenhouse gas” emissions associated with the proposal, as advised by the Environmental Protection Authority;

Note: The current requirements of the Environmental Protection Authority are set out in: *Minimising Greenhouse Gas Emissions, Guidance for the Assessment of Environmental Factors, No. 12* published by the Environmental Protection Authority (October 2002). This document may be updated or replaced from time to time.

2. specific measures to minimise the total net “greenhouse gas” emissions and/or the “greenhouse gas” emissions per unit of product associated with the proposal using a combination of “no regrets” and “beyond no regrets” measures;

Note: The following definitions apply above:

1. "no regrets" measures are those which can be implemented by a proponent and which are effectively cost-neutral.
2. "beyond no regrets" measures are those which can be implemented by a proponent and which involve additional costs which are not expected to be recovered.
3. the implementation and ongoing review of "greenhouse gas" offset strategies with such offsets to remain in place for the life of the proposal;
4. estimation of the "greenhouse gas" efficiency of the project (per unit of product and/or other agreed performance indicators) and comparison with the efficiencies of other comparable projects producing a similar product, both within Australia and overseas;
5. implementation of thermal efficiency design and operating goals consistent with the Australian Greenhouse Office Technical Efficiency guidelines in design and operational management;
6. actions for the monitoring, regular auditing and annual reporting of "greenhouse gas" emissions and emission reduction strategies;
7. target set by the proponent for the progressive reduction or abatement of total net "greenhouse gas" emissions or "greenhouse gas" emissions per unit of product, through the implementation of on-site or off-site offsets and/or the use of renewable energy sources such as solar, wind or hydro power and annual reporting of progress made in achieving this target;
8. a program to achieve a reduction or abatement in "greenhouse gas" emissions, consistent with the target referred to in (7) above;
9. entry, whether on a project-specific basis, company-wide arrangement or within an industrial grouping, as appropriate, into the Commonwealth Government's "Greenhouse Challenge" voluntary cooperative agreement program.

Components of the agreement program include:

1. an inventory of emissions;
 2. opportunities for abating "greenhouse gas" emissions in the organisation;
 3. a "greenhouse gas" mitigation action plan;
 4. regular monitoring and reporting of performance; and
 5. independent performance verification.
10. Review of practices and available technology; and
 11. "Continuous improvement approach" so that advances in technology and potential operational improvements of plant performance are adopted.
- 6-2 The proponent shall implement the Greenhouse Gas Abatement Program required by condition 6-1.

- 6-3 Prior to commencement of construction, the proponent shall make the Greenhouse Gas Abatement Program required by condition 6-1 publicly available in a manner approved by the Department of Environment and Conservation.

7 Stack Emissions

- 7-1 Prior to construction of the co-generation facility, the proponent shall prepare a Stack Emissions Management Plan, to:

- ensure that best available practicable and efficient technologies are used to minimise total air emissions from the co-generation facility;

to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

This Plan shall address:

1. specific measures to minimise total air emissions from the co-generation facility to meet emission limits consistent with best practicable technology and current industry standards;
 2. stack testing during commissioning of both Stage 1 and Stage 2 to fully characterise all constituents listed in the plan, including minor emissions such as formaldehyde, acetaldehyde, toluene and benzene;
 3. on going monitoring of key air emissions identified in the stack testing required by point 2; and
 4. public reporting of air emissions and any complaints about air emissions.
- 7-2 The proponent shall implement the Stack Emissions Management Plan required by condition 7-1.
- 7-3 The proponent shall make the Stack Emissions Management Plan, required by condition 7-1 publicly available in a manner approved by the Department of Environment and Conservation.

8 Noise

- 8-1 Prior to construction of Stage 2, the proponent shall prepare a Noise Management Plan, to ensure that the proposal will not increase noise impact, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

This Plan shall address:

- 1 revised noise modelling using detailed design noise source data;
- 2 ground truthing of noise predictions from Stage 1; and

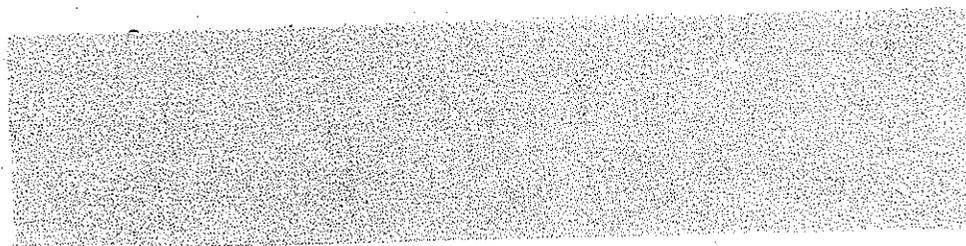
3 land use changes.

8-2 The proponent shall implement the Noise Management Plan required by condition 8-1.

8-3 The proponent shall make the Noise Management Plan required by condition 8-1 publicly available in a manner approved by the Department of Environment and Conservation.

Notes

1. The CEO may seek the advice of the Environmental Protection Authority, government agencies and relevant parties, as necessary, for the preparation of written notice to the proponent.
2. The proponent shall relinquish the nomination following the procedure under section 38(6a) of the *Environmental Protection Act 1986*.
3. The proponent is required to apply for a Works Approval and Licence for this project under the provisions of Part V of the *Environmental Protection Act 1986*.



**HON MARK McGOWAN MLA
MINISTER FOR THE ENVIRONMENT;
RACING AND GAMING**

27 SEP 2006

Schedule 1

The Proposal (Assessment No. 1643)

The proposal is to construct a natural gas-fired power station with a nominal generation capacity of 350 megawatts electrical output and 460 tonnes per hour of steam output on a site located at Alcoa's Wagerup alumina refinery (location shown in Figures 1 and 2). The proposal is to be implemented in two stages, with a transition phase between Stage 1 and Stage 2.

Stage 1: Open-cycle peak load power station

Purpose: To supply electricity to the South West Interconnected System (SWIS)

Life of project: Approximately 25 years

Table 1 – Key Proposal Characteristics (Stage 1)

Element	Description
Power Generation Output	350 megawatts (nominal)
Plant Facilities Gas turbine specifications Number of stacks Height of stacks	2 × gas turbine of 175 megawatts nominal generating capacity fitted with dry low NO _x burners two 35 metres
Thermal Efficiency (based on net higher heating value at 41 degrees Celsius and 40% relative humidity)	approximately 30%
Operating Hours Total per unit (gas and distillate) Distillate	up to 1000 hours a year up to 100 hours a year
Inputs Natural Gas Distillate	approximately 3.4 petajoules per annum approximately 0.4 petajoules per annum
Air Emissions Carbon dioxide equivalent (CO _{2e}) Oxides of nitrogen (NO _x)	225 000 tonnes per annum 1331 tonnes per annum

Transition phase: Open-cycle with increased operating hours

Once the proponent has advised the Environmental Protection Authority of its decision to develop Stage 2, the gas turbines may be operated in open-cycle mode for a total of 15 500 hours per unit in addition to those hours allowed in Table 1. The transition phase is expected to last around three years and the proponent may apportion the 15 500 additional operating hours over these years as they see fit.

Stage 2: Co-generation base-load power station

Purpose: To supply power to the SWIS and steam to the Wagerup alumina refinery.

Table 2 – Key Proposal Characteristics (Stage 2)

Element	Description
Generation Power output Steam output	350 megawatts (nominal) 460 tonnes per hour (typical)
Plant Facilities Gas turbine specifications Heat recovery steam generator (HRSG) Number of stacks Height of HRSG stacks	2 × gas turbine of 175 megawatts nominal generating capacity fitted with dry low NO _x burners 2 × HRSGs with a capacity of 430 tonnes per hour 4 (including the two disconnected open-cycle stacks) 2 x 50 metres (co-generation), 2 x 35 metres (disconnected)
Thermal Efficiency (based on net higher heating value at 18 degrees Celsius and 20% relative humidity)	approximately 74% (based on one gas turbine and one HRSG fully fired)
Operating Hours Per unit	up to 8760 hours per annum
Inputs Natural Gas	approximately 31.8 petajoules per annum
Air Emissions Carbon dioxide equivalent (CO _{2e}) Oxides of nitrogen (NO _x)	1 783 000 tonnes per annum 1331 tonnes per annum

Figures (attached)

Figure 1 – Regional location

Figure 2 – Site layout

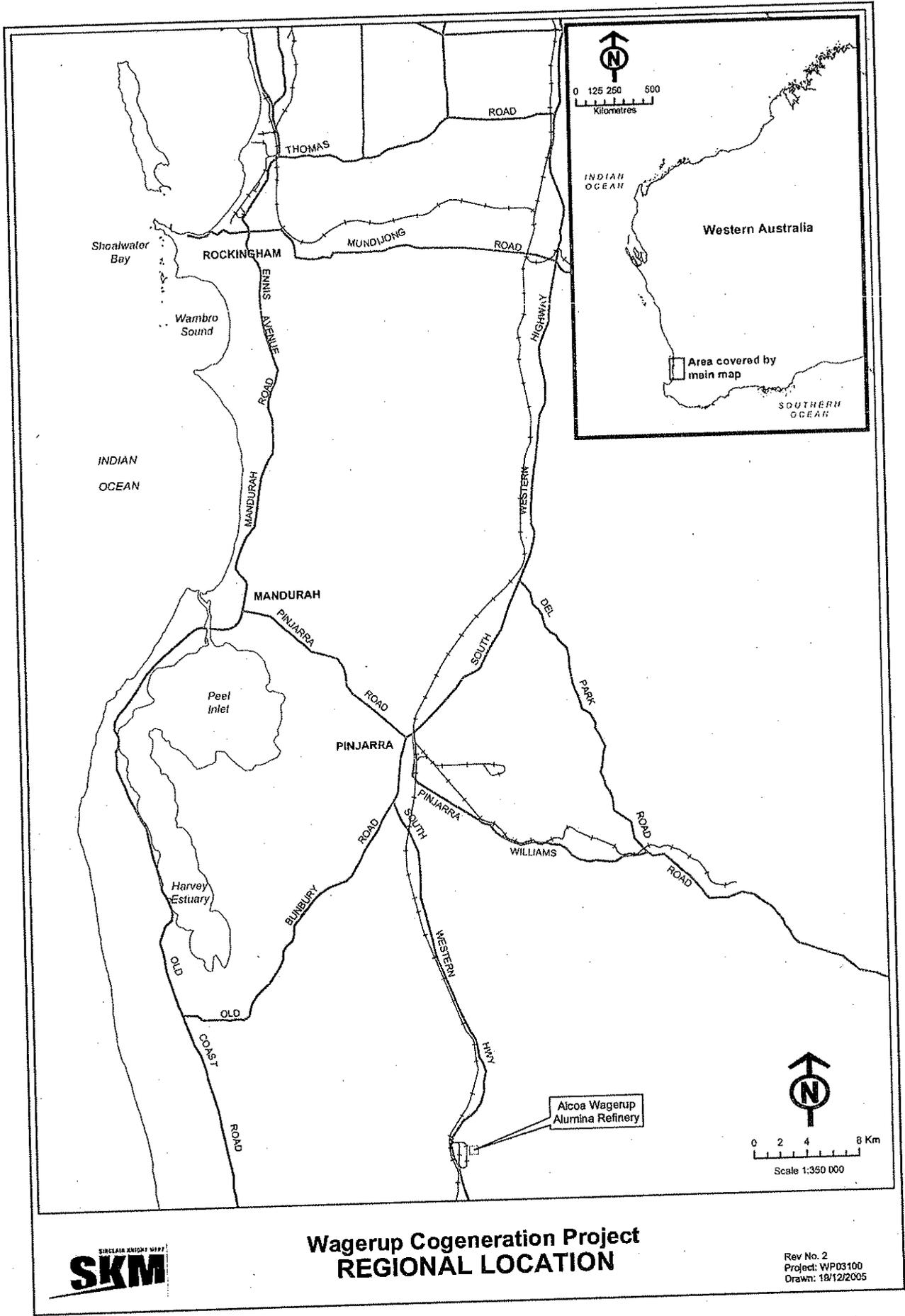


Figure 1 – Regional location

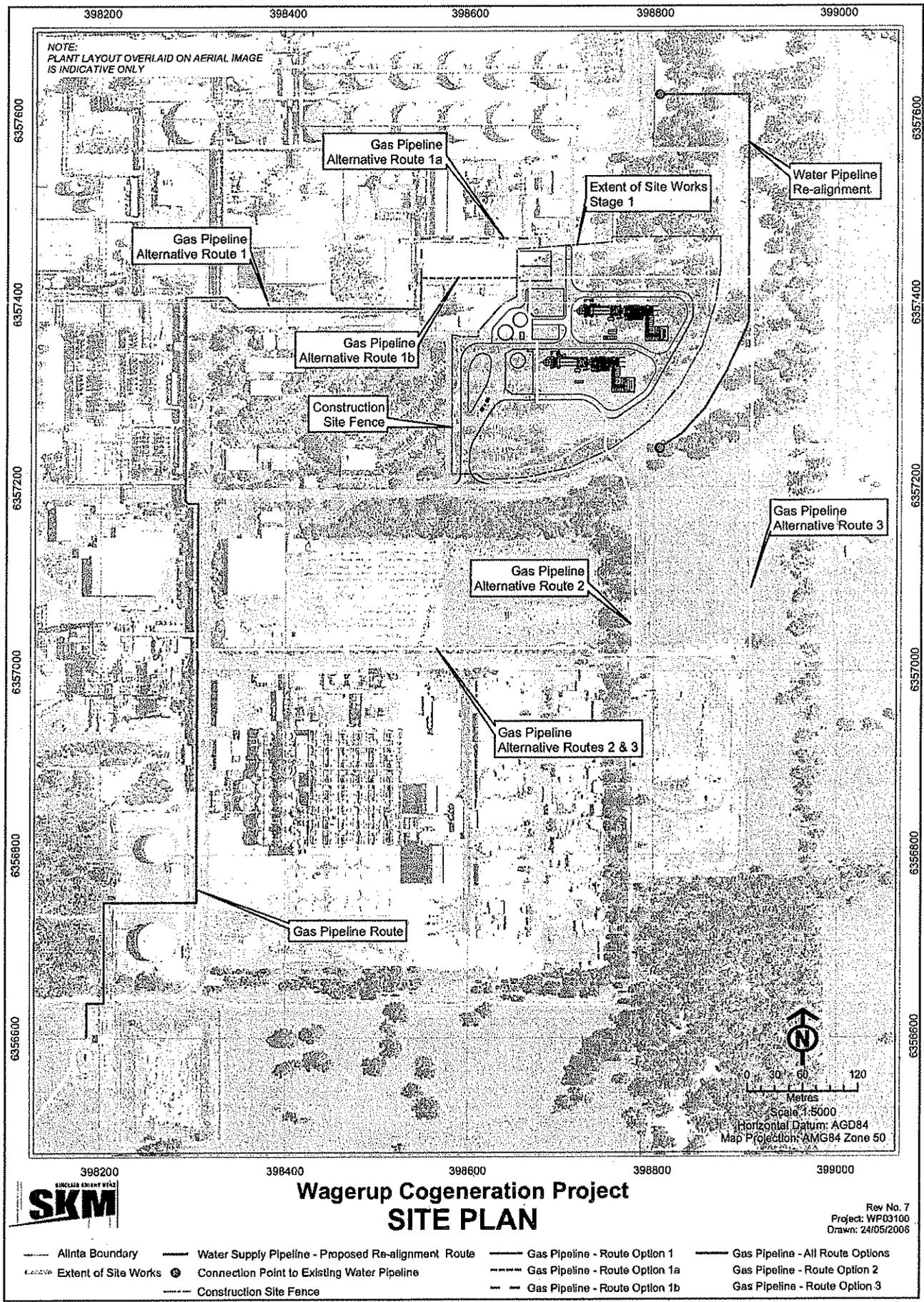


Figure 2 – Site layout

Attachment to Statement 729

Change to Description of Proposal

PROPOSAL: WAGERUP COGENERATION PROJECT - the construction, operation and maintenance of a cogeneration facility of 350 Megawatts electrical output and 460 tonnes per hour of steam output at Wagerup, as documented in Schedule 1 of statement 729.

PROPONENT: ALINTA COGENERATION (WAGERUP) PTY LTD.

ASSESSMENT NO: 1643

CHANGE: IN STATEMENT 729, SCHEDULE 1, TABLE 1 - KEY PROPOSAL CHARACTERISTICS (STAGE 1) - an increase in the allowable 'operating hours - distillate use' for the 2008 year.

FEATURES OF CURRENT PROPOSAL:

Element	Quantities/Description
Operating hours – distillate use	<ul style="list-style-type: none"> • Up to 100 hours per year.

FEATURES OF MODIFIED PROPOSAL:

Element	Quantities/Description
Operating hours– distillate use	<ul style="list-style-type: none"> • Up to 200 hours for the 2008 year. • Up to 100 hours per year for the 2009 year onward.

Approved under delegation
from Minister for the Environment:

Approval Date: 10.4.08

Attachment to Statement 729

Change to Description of Proposal

PROPOSAL: WAGERUP COGENERATION PROJECT - the construction, operation and maintenance of a cogeneration facility of 350 Megawatts electrical output and 460 tonnes per hour of steam output at Wagerup, as documented in Schedule 1 of statement 729.

PROPONENT: ALINTA COGENERATION (WAGERUP) PTY LTD.

ASSESSMENT NO: 1643

CHANGE: IN STATEMENT 729, SCHEDULE 1, TABLE 1 - KEY PROPOSAL CHARACTERISTICS (STAGE 1) - an increase in the allowable 'operating hours - distillate use' for the 2008 year.

FEATURES OF CURRENT PROPOSAL:

Element	Quantities/Description
Operating hours – distillate use	<ul style="list-style-type: none"> up to 100 hours per year.

FEATURES OF MODIFIED PROPOSAL:

Element	Quantities/Description
Operating hours– distillate use	<ul style="list-style-type: none"> unlimited hours for the 2008 year. up to 100 hours per year for the 2009 year onward.

Approved under delegation
from Minister for the Environment:

Approval Date:

18.6.08

Attachment 3 to Ministerial Statement 729

Change to proposal approved under section 45C of the *Environmental Protection Act 1986*

This Attachment replaces Schedule 1 and Attachment 2 of Ministerial Statement 729

Proposal: Wagerup Cogeneration Project

Proponent: Alinta Cogeneration (Wagerup) Pty Ltd

Changes:

- Increase the operating hours of the Stage 1 configuration of the Wagerup Cogeneration Facility from 1,000 hours per year to 4,000 hours per year.

Table 1: Summary of the Proposal

Proposal Title	Wagerup Cogeneration Project
Short Description	The proposal is for the construction, operation and maintenance of a natural gas-fired power station with a nominal generation capacity of 350 megawatts electrical output and 460 tonnes per hour of steam output on a site located at Alcoa's Wagerup alumina refinery (location shown in Figures 1 and 2). The proposal is to be implemented in two stages, with a transition phase between Stage 1 and Stage 2.

Table 2: Location and authorised extent of physical and operational elements

Element	Location	Previously Authorised Extent	Authorised Extent
Stage 1: Open-cycle peak load power station – To supply electricity to the South West Interconnected System (SWIS) over a project life of approximately 25 years			
Power Generation Output	Figure 1 & Figure 2	350 megawatts (nominal)	350 megawatts (nominal)
Plant Facilities	Figure 1 & Figure 2	2 x gas turbines of 175 megawatts nominal generating capacity fitted with dry low NO _x burners	2 x gas turbines of 175 megawatts nominal generating capacity fitted with dry low NO _x burners
Gas turbine specifications		Two	Two
Number of stacks		35 metres	35 metres
Height of stacks			
Thermal Efficiency (Based on net higher heating value at 41 degrees Celsius and 40% relative humidity)	Figure 1 & Figure 2	Approximately 30%	Approximately 30%
Operating hours	Figure 1 & Figure 2	Up to 1,000 hours per year	Up to 4,000 hours per year
Total per unit (gas and distillate)		Up to 100 hours per year	Up to 100 hours per year
Distillate			
Inputs	Figure 1 & Figure 2	Approximately 3.4 petajoules per annum	Approximately 14.1 petajoules per annum
Natural Gas		Approximately 0.4 petajoules per annum	Approximately 0.4 petajoules per annum
Distillate			

Element	Location	Previously Authorised Extent	Authorised Extent
Air Emissions Carbon dioxide equivalents (CO ₂ -e) Oxides of nitrogen (NO _x)	Figure 1 & Figure 2	225,000 per annum (Note – correct figure should have been 219,140 tonnes per annum) 1,331 tonnes (Note – correct figure should have been 200.3 tonnes per annum)	825,000 tonnes per annum 790 tonnes per annum
Transition phase: Open-cycle with increased operating hours			
Operating hours	Figure 1 & Figure 2	Once the proponent has advised the Environmental Protection Authority of its decision to develop Stage 2, the gas turbines may be operated in a transition phase in open-cycle mode for a total of 15,500 hours per unit in addition to those hours allowed in Table 1. The transition phase is expected to last around three years and the proponent may apportion the 15,500 additional operating hours over the three years as they see fit.	Once the proponent has advised the Environmental Protection Authority of its decision to develop Stage 2, the gas turbines may be operated in a transition phase in open-cycle mode for a total of 15,500 hours per unit in addition to those hours allowed in Table 2 . The transition phase is expected to last around three years and the proponent may apportion the 15,500 additional operating hours over the three years as they see fit.
Stage 2: Cogeneration base-load power station – To supply power to the SWIS and steam to the Wagerup alumina refinery			
Generation Power output Steam output	Figure 1 & Figure 2	350 megawatts (nominal) 460 tonnes per hour (typical)	350 megawatts (nominal) 460 tonnes per hour (typical)
Plant Facilities Gas turbine specifications Heat recovery steam generator (HRSG) Number of stacks Height of HRSG stacks	Figure 1 & Figure 2	2 x gas turbines of 175 megawatts nominal generating capacity fitted with dry low NO _x burners 2 x HRSGs with a capacity of 430 tonnes per hour 4 (including the two disconnected open-cycle stacks) 2 x 50 metres (cogeneration), 2 x 35 metres (disconnected)	2 x gas turbines of 175 megawatts nominal generating capacity fitted with dry low NO _x burners 2 x HRSGs with a capacity of 430 tonnes per hour 4 (including the two disconnected open-cycle stacks) 2 x 50 metres (cogeneration), 2 x 35 metres (disconnected)
Thermal Efficiency (Based on net higher heating value at 18 degrees Celsius and 20% relative humidity)	Figure 1 & Figure 2	Approximately 74% (based on one gas turbine and one HRSG fully fired)	Approximately 74% (based on one gas turbine and one HRSG fully fired)
Operating hours Per unit	Figure 1 & Figure 2	Up to 8,760 hours per annum	Up to 8,760 hours per annum
Inputs Natural Gas	Figure 1 & Figure 2	Approximately 31.8 petajoules per annum	Approximately 31.8 petajoules per annum
Air Emissions Carbon dioxide equivalents (CO ₂ -e) Oxides of nitrogen (NO _x)	Figure 1 & Figure 2	1,783,000 tonnes per annum (Note – correct figure should have been 1,781,000 tonnes per annum) 1,331 tonnes per annum	1,781,000 tonnes per annum 1,331 tonnes per annum

Note: Text in **bold** in Table 2 indicates a change to the proposal.

Figures (attached)

Figure 1 Regional location; and

Figure 2 Site layout.

Tom Hatton

CHAIRMAN

Environmental Protection Authority
under delegated authority

Approval date: _____

Wagerup Cogeneration Project - Location



LEGEND

 Wagerup Cogeneration Project

SOURCE DATA

Proponent: Development Envelope,
Basemap: ESRI Topographic

DWER GIS Section
Date: 5/02/2018, Map Version: 1
Ministerial Statement: 729 s45C

Disclaimer:
The map is intended as a generalised interpretation of environmental issues.
The information contained on this map is to be considered indicative only and in
no event shall the Department of Water and Environmental Regulation be liable
for any incident or consequential damages resulting from use of the material.

© 2017 Department of Water and Environmental Regulation. 2017
All Rights Reserved. All works and information contained are subject to Copyright.
For any reproduction or publication beyond that permitted by the Copyright
Act 1969 written permission must be sought from the Agency.



0 5 10 20
Kilometres

Projection: Map Grid of Australia Zone 50
Datum: Geocentric Datum of Australia, 1994
Scale: 1:500,000 at A4

LOCALITY MAP



Figure 1 – Regional location

Wagerup Cogeneration Project - Site



LEGEND

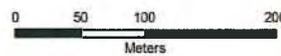
- WaterPipelineConnection
- Gas Pipeline Routes
- WaterPipeline
- Wagerup Stage 1 Extent
- Development Envelope

SOURCE DATA

Proponent: Development Envelope,
Activity Areas
Basemap: ESRI Topographic

DWER GIS Section
Date: 5/02/2018, Map Version: 1
Ministerial Statement: 729 s45C

Disclaimer:
This map is intended as a generalised interpretation of environmental issues.
The information contained in this map is to be considered as advisory only and is
no event shall the Department of Water and Environmental Regulation be liable
for any direct or consequential damages resulting from use of the material.
Copyright Department of Water and Environmental Regulation, 2017
All Rights Reserved. All works and information displayed are subject to Copyright
for the reproduction of publication beyond that permitted by the Commonwealth
Copyright Act, 1969, written permission must be sought from the Agency.



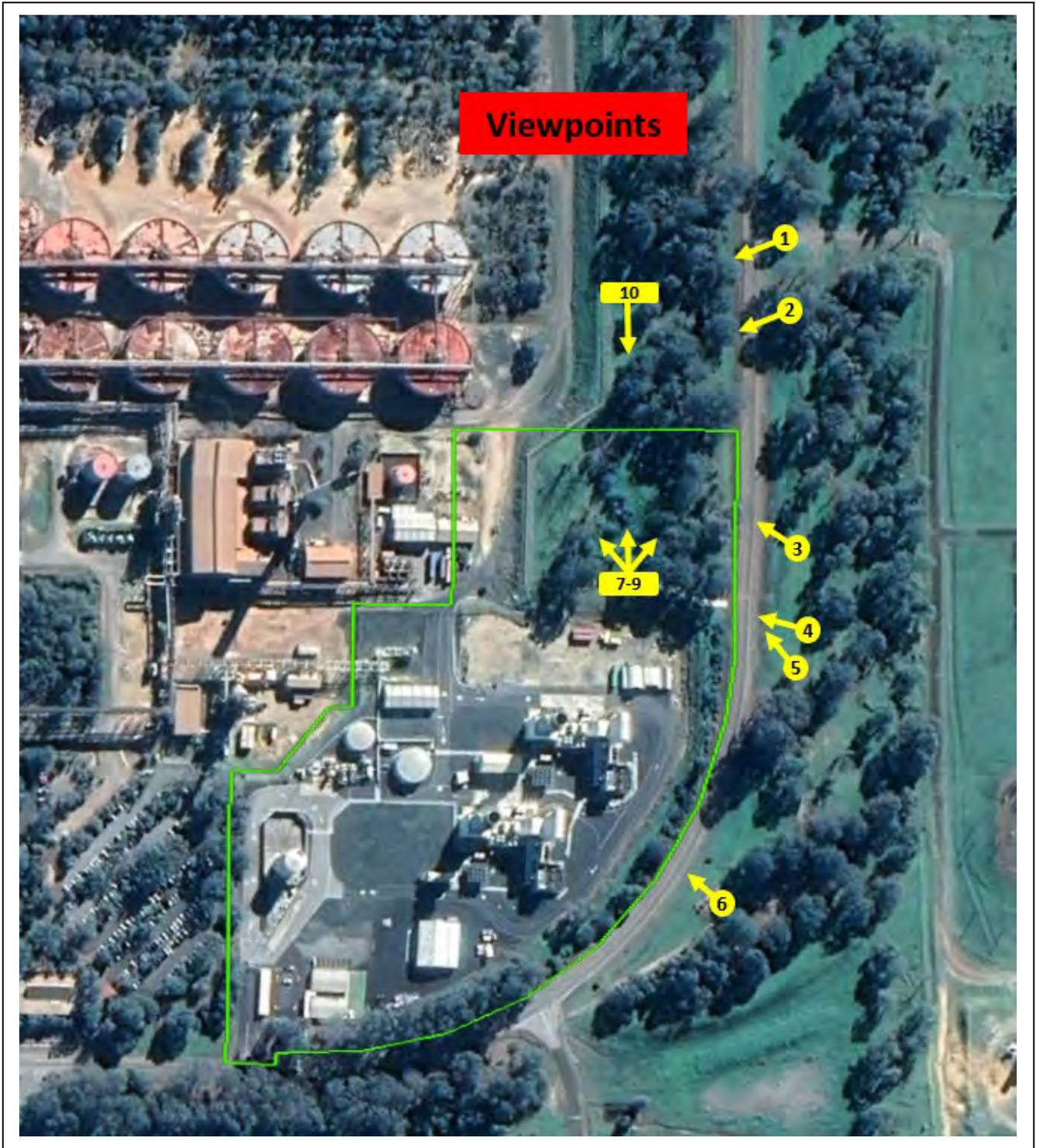
Projection: Map Grid of Australia Zone 50
Datum: Geocentric Datum of Australia, 1994
Scale: 1:4,948 at A4

LOCALITY MAP



Figure 2 – Site layout

APPENDIX E – SITE PHOTOS





VP1



VP2



VP3



VP4



VP5



VP6



VP7



VP8



VP9



VP10