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

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Statement No.

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. cstimation 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.

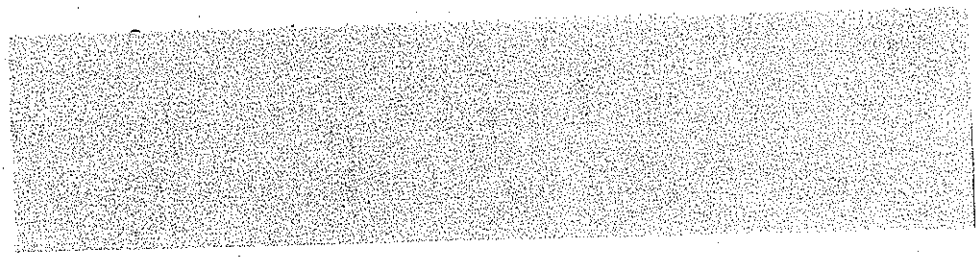
8-3 The proponent shall make the Noise Management Plan required by condition 8-1 publicly available in a manner approved by the Department of Environment and Conservation.

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

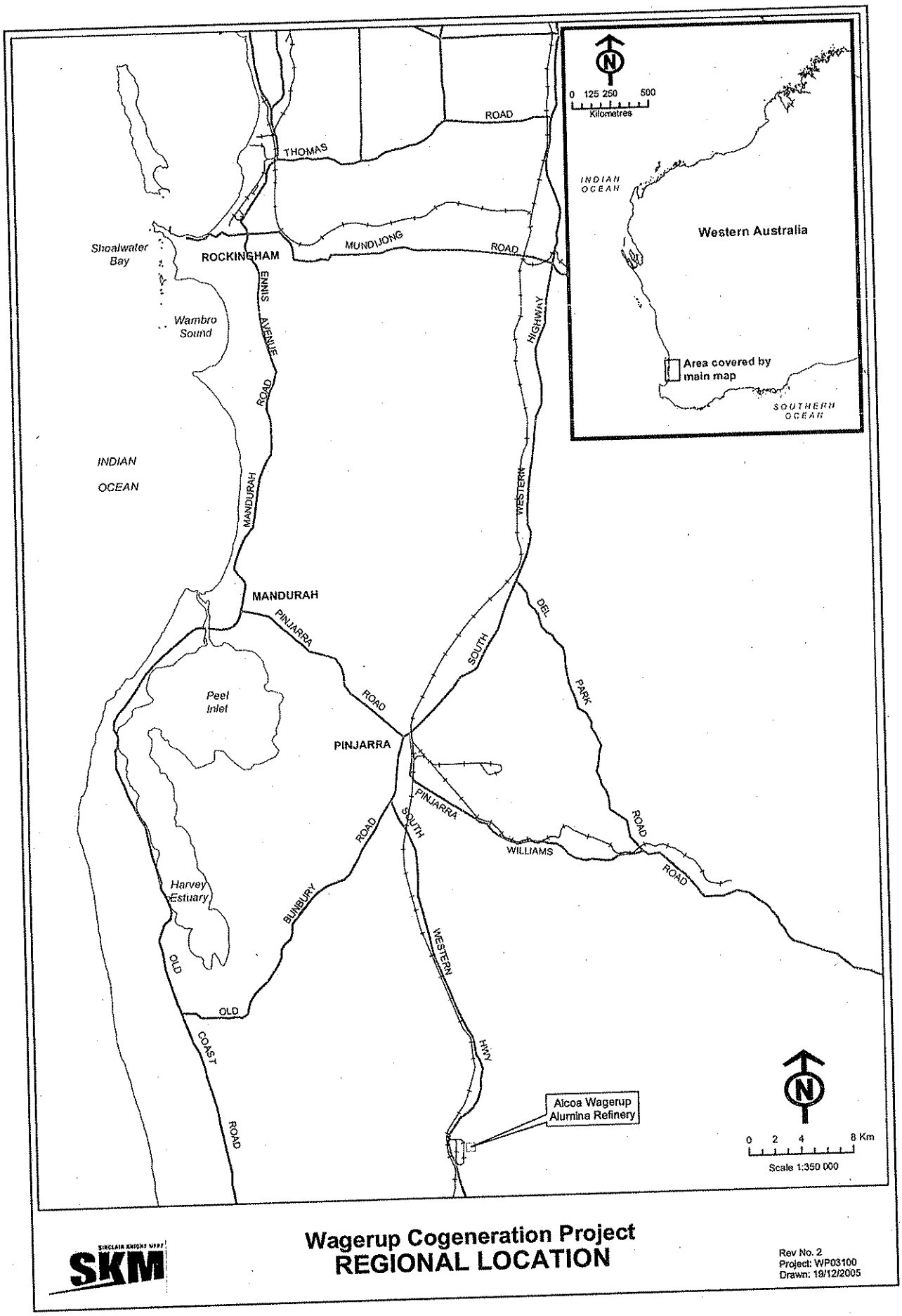


Figure 1 – Regional location

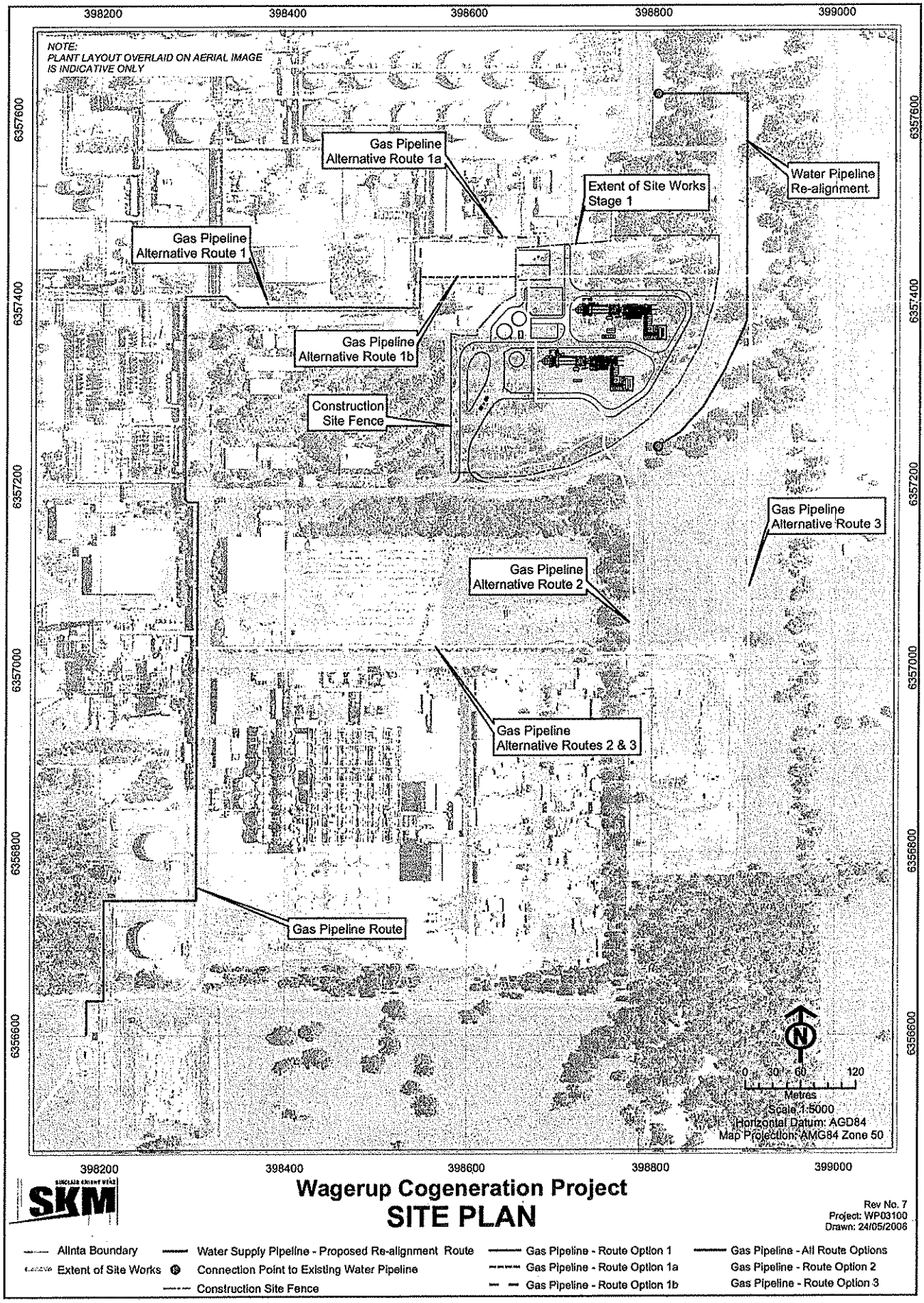


Figure 2 – Site layout

Attachment 1

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	• Up to 100 hours per year.

FEATURES OF MODIFIED PROPOSAL:

Element	Quantities/Description
Operating hours– distillate use	• 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 2

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	• up to 100 hours per year.

FEATURES OF MODIFIED PROPOSAL:

Element	Quantities/Description
Operating hours– distillate use	• 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 Gas turbine specifications Number of stacks Height of stacks	Figure 1 & Figure 2	2 x gas turbines of 175 megawatts nominal generating capacity fitted with dry low NO_x burners Two 35 metres	2 x gas turbines 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)	Figure 1 & Figure 2	Approximately 30%	Approximately 30%
Operating hours Total per unit (gas and distillate) Distillate	Figure 1 & Figure 2	Up to 1,000 hours per year Up to 100 hours per year	**Up to 4,000 hours per year** Up to 100 hours per year
Inputs Natural Gas Distillate	Figure 1 & Figure 2	Approximately 3.4 petajoules per annum Approximately 0.4 petajoules per annum	**Approximately 14.1 petajoules per annum** Approximately 0.4 petajoules per annum

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: _____

Figure 1 – Regional location

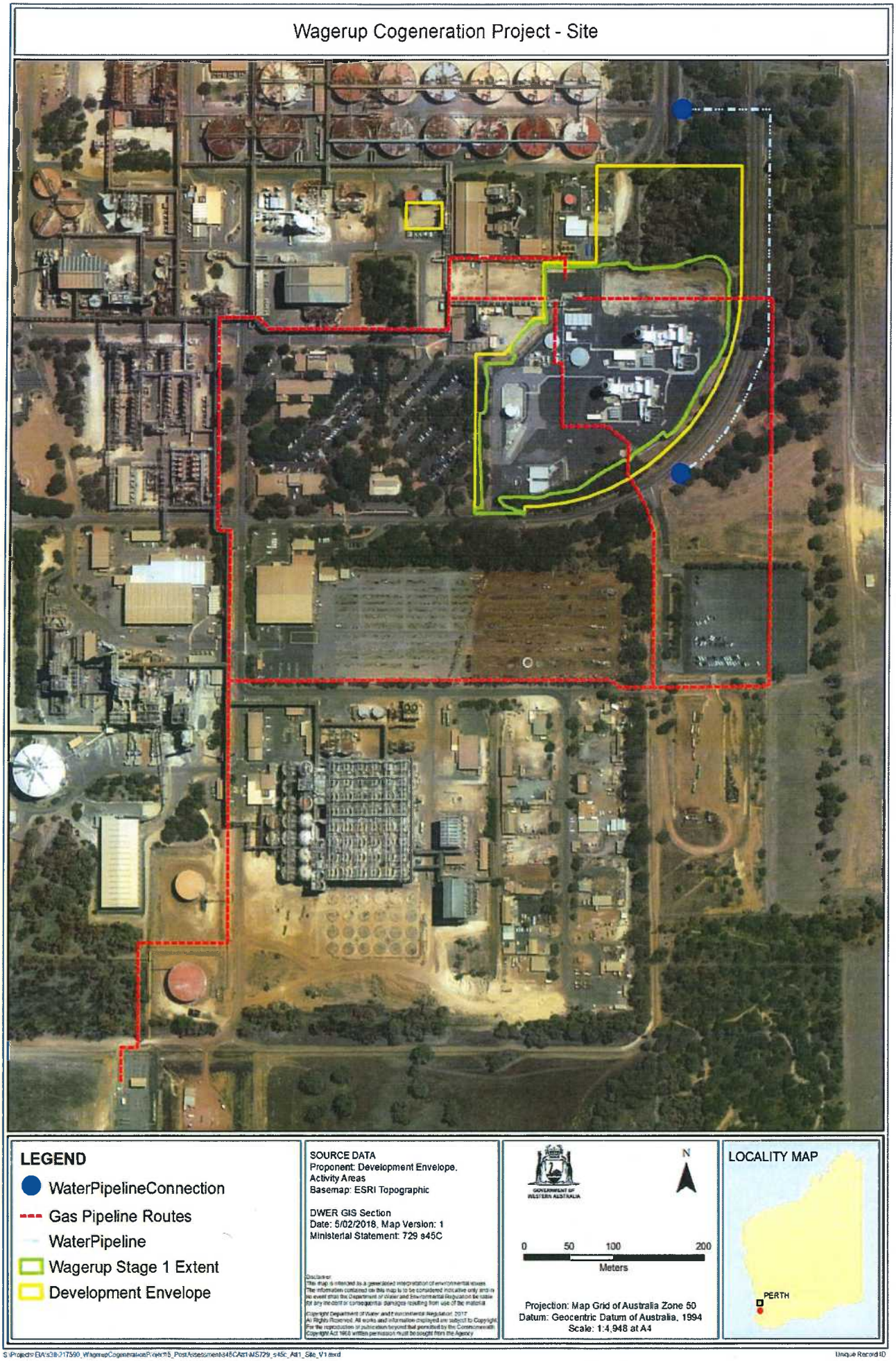


Figure 2 – Site layout

Attachment 4 to Ministerial Statement 729

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

This Attachment replaces Schedule 1 and Attachment 3 of Ministerial Statement 729

Proposal: Wagerup Cogeneration Project

Proponent: Alinta Cogeneration (Wagerup) Pty Ltd

Changes:

- Installation of a battery energy storage system (BESS), with a battery power output of 100 megawatts.

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, **and a battery energy storage system**, 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	Figure1 & Figure 2	350 megawatts (nominal)	**450** megawatts (nominal)
Plant Facilities Gas turbine specifications	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
Battery Energy Storage System			**A modular 100 megawatt battery storage system**

Number of stacks Height of stacks		Two 35 metres	Two 35 metres
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 Total per unit (gas and distillate) Distillate	Figure 1 & Figure 2	Up to 4,000 hours per year Up to 100 hours per year	Up to 4,000 hours per year Up to 100 hours per year
Inputs Natural Gas Distillate	Figure 1 & Figure 2	Approximately 14.1 petajoules per annum Approximately 0.4 petajoules per annum	Approximately 14.1 petajoules per annum Approximately 0.4 petajoules per annum
Air Emissions Carbon dioxide equivalents (CO_2-e) Oxides of nitrogen (NO_X)	Figure 1 & Figure 2	825,000 tonnes per annum 790 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 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.	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 (gas turbines) **Battery output** Steam output	Figure 1 & Figure 2	350 megawatts (nominal) 460 tonnes per hour (typical)	350 megawatts (nominal) **100 megawatts (nominal)** 460 tonnes per hour (typical)
Plant Facilities Gas turbine specifications Heat recovery steam generator (HRSG) Number of stacks Height of HRSG stacks **Battery Energy Storage System**	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) **A modular 100 megawatt battery storage system**
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)	Figure 1 & Figure 2	1,781,000 tonnes per annum	1,781,000 tonnes per annum

Oxides of nitrogen (NO_X)		1,331 tonnes per annum	1,331 tonnes per annum

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

Table 3: Abbreviations

Abbreviation	Term
BESS	Battery Energy Storage System
CEO	Chief Executive Officer
GL	gigalitre
ha	hectare
km	kilometre

Figures (attached)

Figure 1 Regional Location
Figure 2 Site Layout

Professor Matthew Tonts
CHAIR
Environmental Protection Authority
under delegated authority

Approval date: 1 April 2021

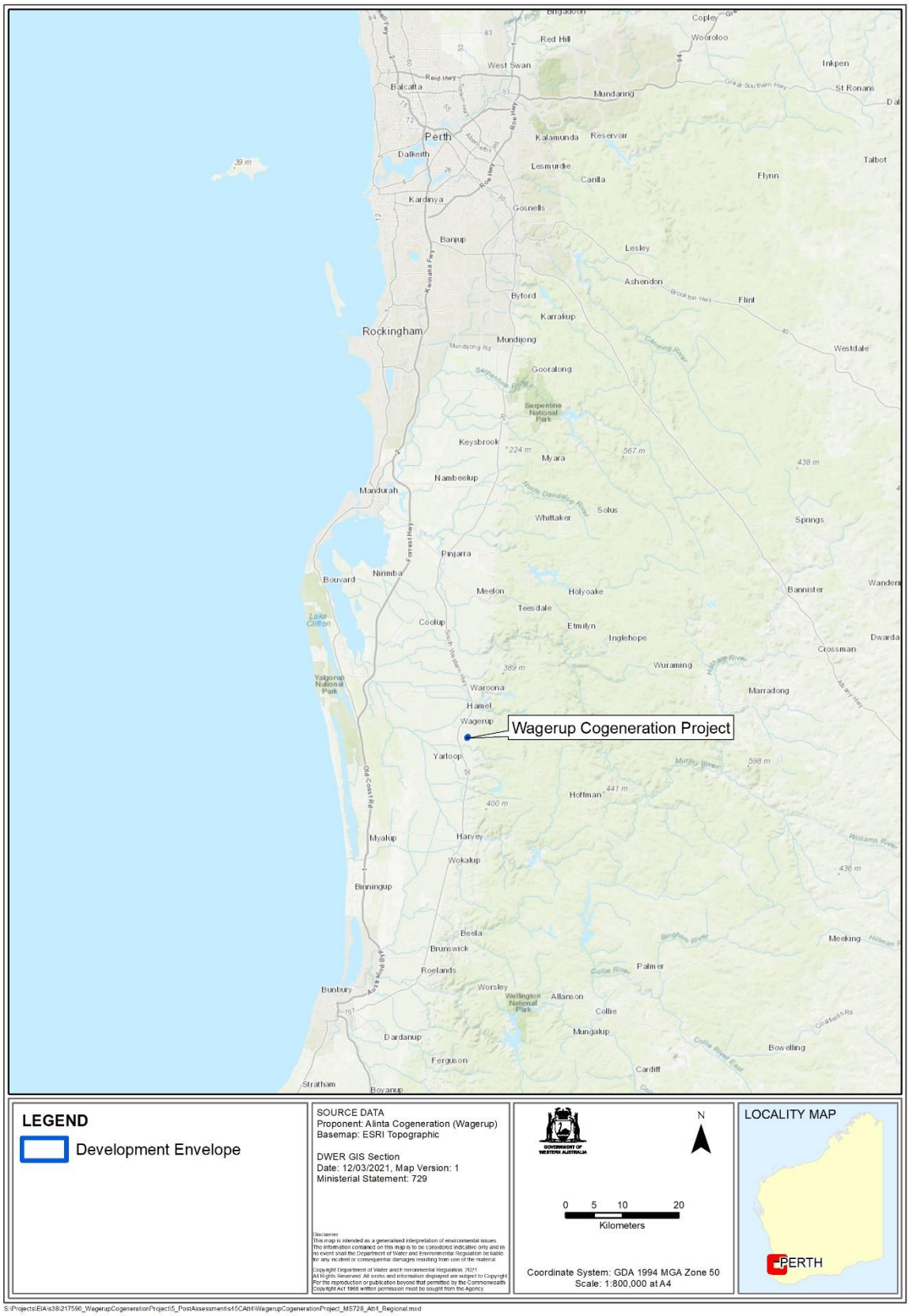


Figure 1. Regional Location

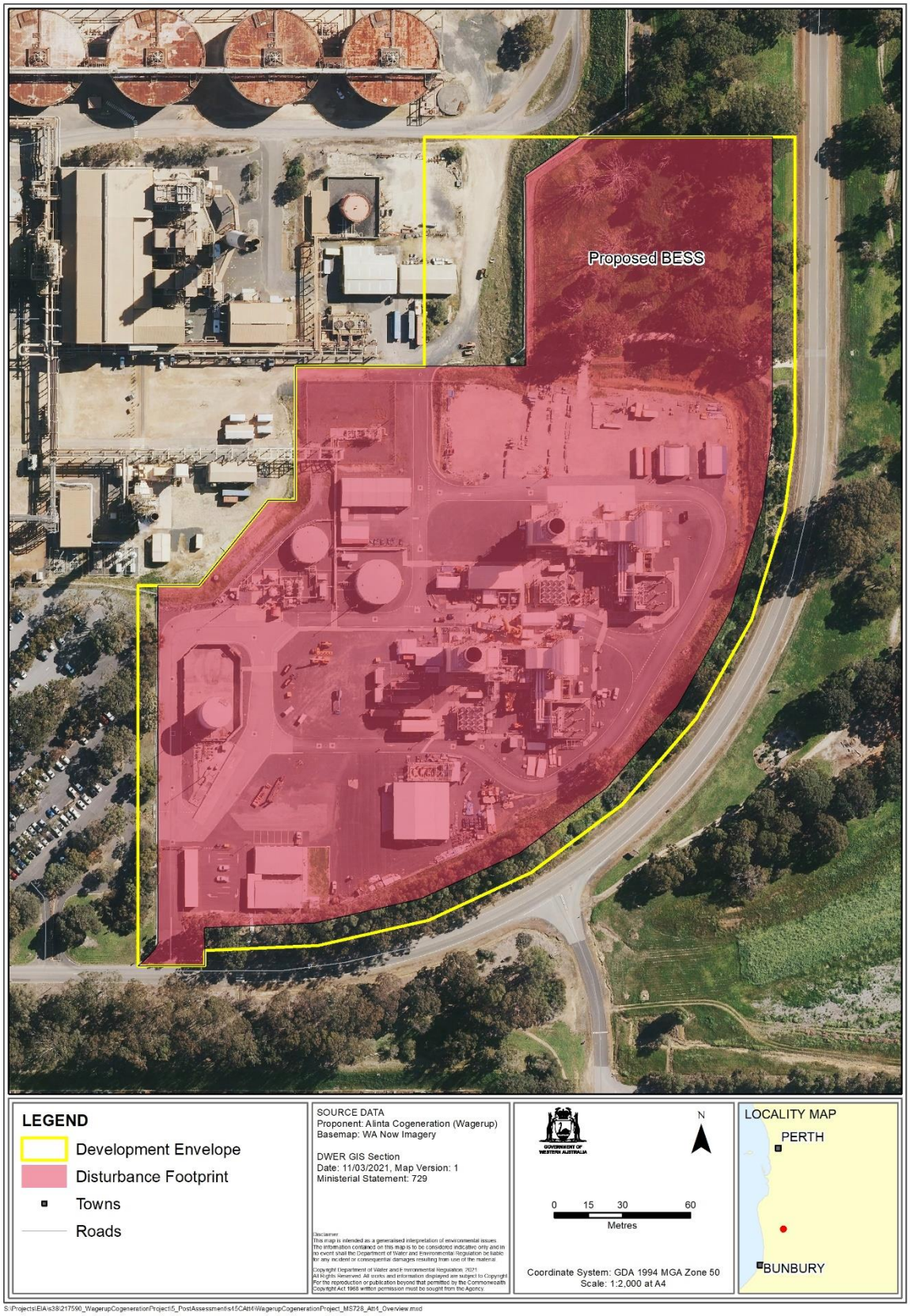


Figure 2. Site Layout

Co-ordinates defining the regional location and development envelope are held by the Department of Water and Environmental Regulation, Document Reference Number DWERDT430623

Attachment 5 to Ministerial Statement 729

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

This Attachment replaces Schedule 1 and Attachment 4 of Ministerial Statement 729

Proposal: Wagerup Cogeneration Project

Proponent: Alinta Cogeneration (Wagerup) Pty Ltd

Changes:

- Increase to operating hours until 30 September 2025.

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, and a battery energy storage system, 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	Figure1 & Figure 2	450 megawatts (nominal)	450 megawatts (nominal)
Plant Facilities Gas turbine specifications	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
Battery Energy Storage System		A modular 100 megawatt battery storage system	A modular 100 megawatt battery storage system

Number of stacks Height of stacks		Two 35 metres	Two 35 metres
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 Total per unit (gas and distillate) Distillate	Figure 1 & Figure 2	Up to 4,000 hours per year Up to 100 hours per year	**13,140** hours per year **in total (nominally 6,570 hours per year per unit) until 30 September 2025 and up to 4,000 hours per year per unit from 1 October 2025 onwards.** Up to 100 hours per year
Inputs Natural Gas Distillate	Figure 1 & Figure 2	Approximately 14.1 petajoules per annum Approximately 0.4 petajoules per annum	Approximately 14.1 petajoules per annum Approximately 0.4 petajoules per annum
Air Emissions Carbon dioxide equivalents (CO_2-e) Oxides of nitrogen (NO_X)	Figure 1 & Figure 2	825,000 tonnes per annum 790 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 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.	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 (gas turbines)	Figure 1 & Figure 2	350 megawatts (nominal)	350 megawatts (nominal)
Battery output		100 megawatts (nominal)	100 megawatts (nominal)
Steam output		460 tonnes per hour (typical)	460 tonnes per hour (typical)

Plant Facilities Gas turbine specifications	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
Heat recovery steam generator (HRSG)		2 x HRSGs with a capacity of 430 tonnes per hour	2 x HRSGs with a capacity of 430 tonnes per hour
Number of stacks		4 (including the two disconnected open-cycle stacks)	4 (including the two disconnected open-cycle stacks)
Height of HRSG stacks		2 x 50 metres (cogeneration), 2 x 35 metres (disconnected)	2 x 50 metres (cogeneration), 2 x 35 metres (disconnected)
Battery Energy Storage System		A modular 100 megawatt battery storage system	A modular 100 megawatt battery storage system
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)	Figure 1 & Figure 2	1,781,000 tonnes per annum	1,781,000 tonnes per annum
Oxides of nitrogen (NO_X)		1,331 tonnes per annum	1,331 tonnes per annum

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

Table 3: Abbreviations

Abbreviation	Term
BESS	Battery Energy Storage System
CEO	Chief Executive Officer

GL	gigalitre
ha	hectare
km	kilometre

Figures (attached)

Figure 1 Regional Location
Figure 2 Site Layout

[Signed 27 June 2024]

Lee McIntosh
DEPUTY CHAIR
Environmental Protection Authority
under delegated authority

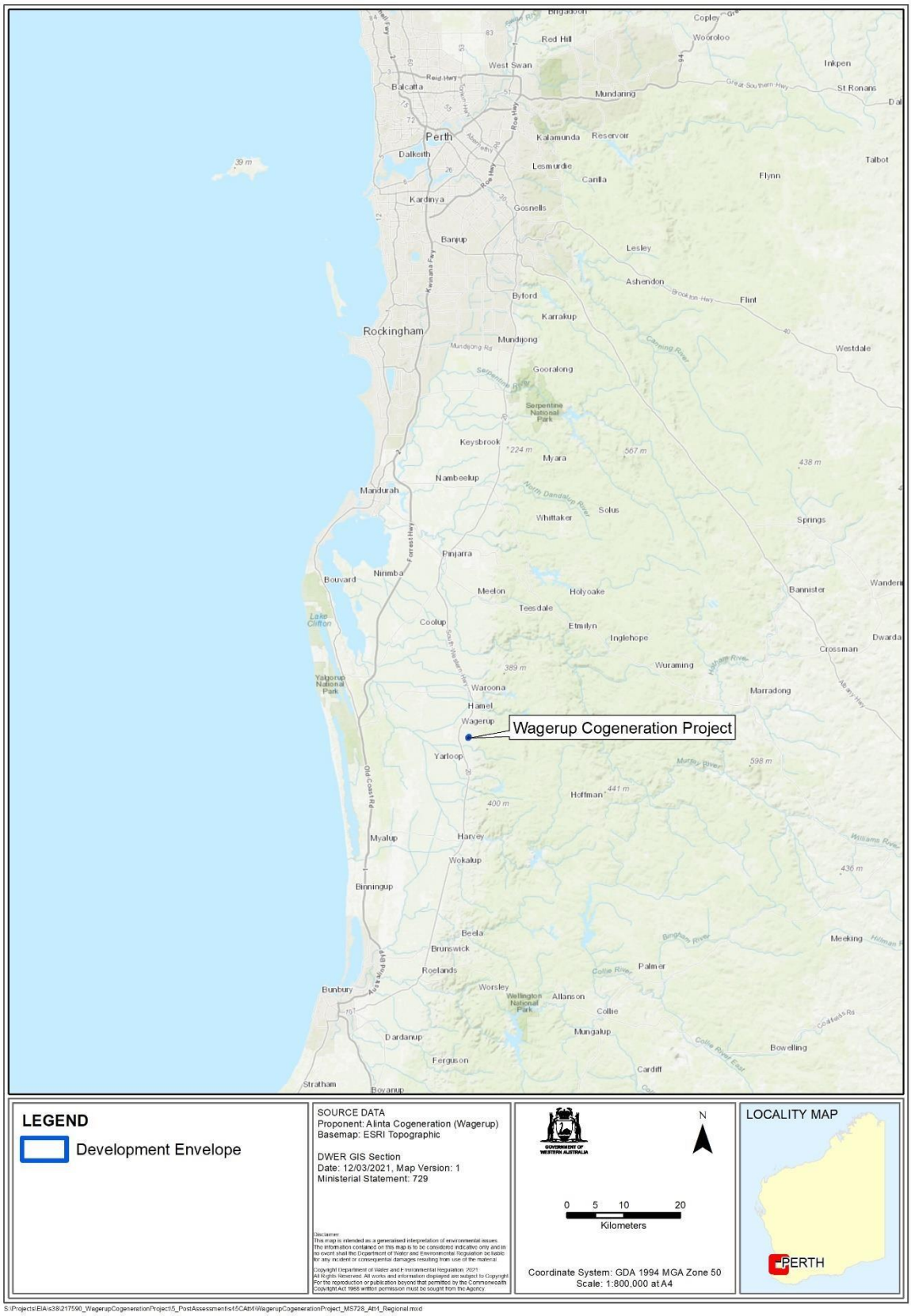


Figure 1. Regional Location

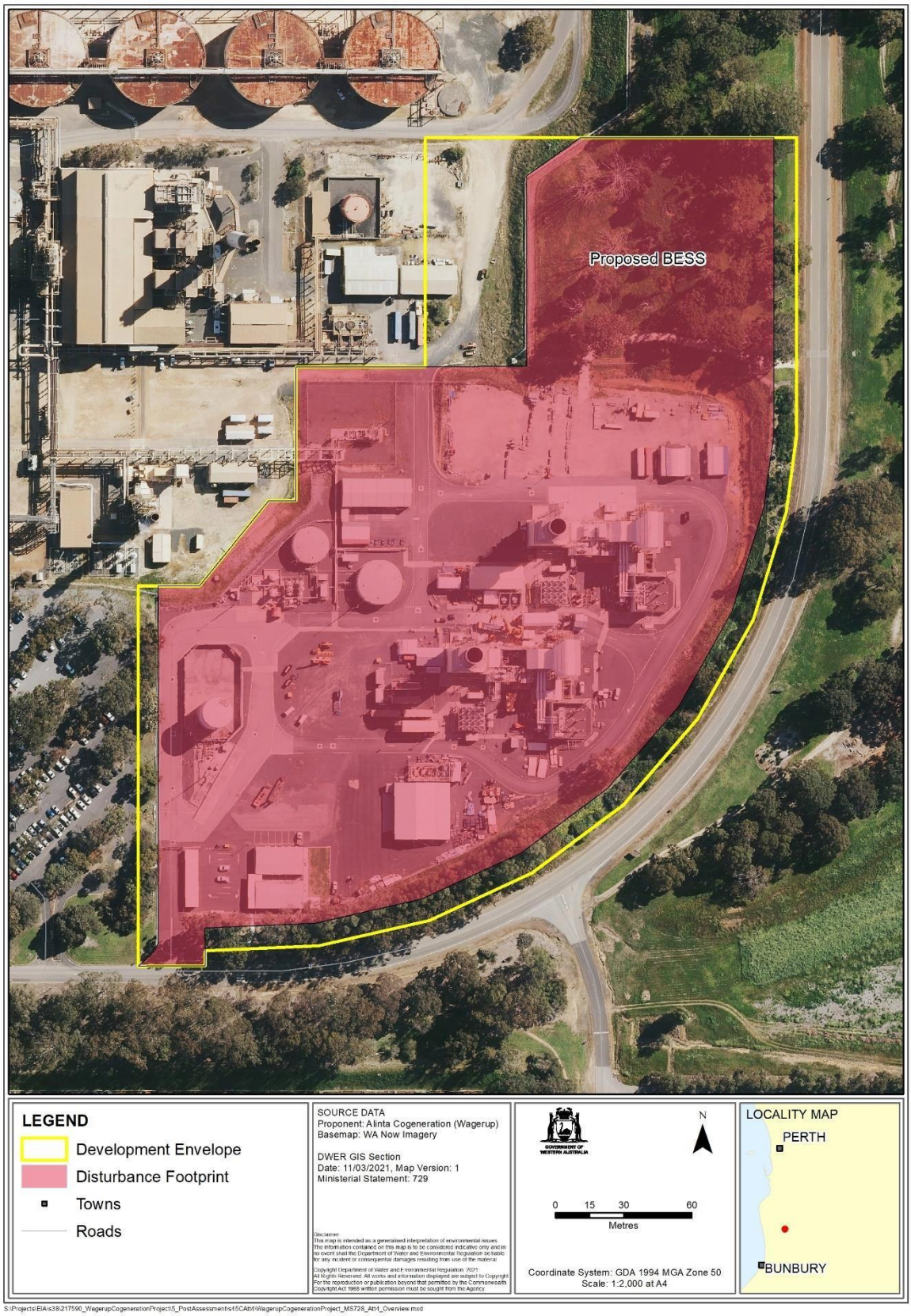


Figure 2. Site Layout

Co-ordinates defining the regional location and development envelope are held by the Department of Water and Environmental Regulation, Document Reference Number DWERDT430623