# Permit

Environmental Protection Act 1994

## Environmental authority EPPR00707213

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

## Environmental authority number: EPPR00707213

**Environmental authority takes effect on 11 September 2018**

## Environmental authority holder(s)

| Name(s) | Registered address |
|---|---|
| CALLIDE POWER MANAGEMENT PTY. LIMITED | Level 26 400 George St BRISBANE CITY QLD 4000 Australia |

## Environmentally relevant activity and location details

| Environmentally relevant activity/activities | Location(s) |
|---|---|
| Prescribed ERA, ERA 14 - Electricity Generation, 2: Generating electricity by using a fuel, other than gas, at a rated capacity of, (b) more than 150MW electrical | Lot 1/RP615528 |
| Prescribed ERA, ERA 14 - Electricity Generation, 2: Generating electricity by using a fuel, other than gas, at a rated capacity of, (b) more than 150MW electrical | Lot 4/SP103557 |
| Prescribed ERA, ERA 56 - Regulated Waste Storage, Receiving and storing regulated waste | Lot 1/RP615528 |
| Prescribed ERA, ERA 56 - Regulated Waste Storage, Receiving and storing regulated waste | Lot 4/SP103557 |

**Additional information for applicants**

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.

An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the Environmental Protection Act 1994 (EP Act).

Contaminated land

It is a requirement of the EP Act that an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:



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- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days);

that is causing, or is reasonably likely to cause, serious or material environmental harm.

For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect

Please note that, in accordance with section 200 of the EP Act, an EA has effect:

a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority-on the nominated day; or
b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or
c) otherwise-on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the Planning Act 2016 or an SDA Approval under the State Development and Public Works Organisation Act 1971), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.

Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

**Date issued: 11 September 2018**

**Enquiries:**
Waste and Contaminated Land Assessment
Department of Environment and Science
Phone: 1300 130 372
Email: palm@des.qld.gov.au

**Obligations under the Environmental Protection Act 1994**

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)


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# Legislative Requirements and Conditions of Environmental Authority

## Schedule 2A – General conditions

**Access to Copy of Environmental Authority**

2(A1) A copy of this Environmental Authority must be kept in a location readily accessible to personnel carrying out the activity.

**Records**

2(A2) Any record or document required to be kept by a condition of this Environmental Authority must be kept at the licensed place for a period of at least five years and be available for examination by an authorised person. For daily and weekly records, the record retention requirement of this condition will be satisfied if any daily and weekly records are kept for a period of at least three (3) years and these records are then kept in the form of annual summaries after that period. The records are to be kept either electronically or on paper.

**Monitoring and Measurements**

2(A3) All determinations of the quality of contaminants released to the environment and all measurement and reporting required by this Environmental Authority must be undertaken by a person or body possessing appropriate experience and qualifications to perform the required determinations and the required measurements.

**Integrated Environmental Management System (IEMS)**

2(A4) The holder of this Environmental Authority must:

(a) By the date of First Commercial Load, implement an Integrated Environmental Management System which provides for the following functions:

(i) the monitoring of releases of contaminants into the environment and an environmental assessment of the releases; and

(ii) staff training and awareness of environmental issues; and

(iii) the conduct of environmental and energy audits; and

(iv) waste prevention, treatment and disposal.

2(A5) A copy of the Integrated Environmental Management System must be kept in a location readily accessible to personnel carrying out the activity.

**Emergency Release of Air Emissions — Exceedance of Release Limits**

2(A6) The holder of the Environmental Authority must notify the administering authority, of a direction made by the Australian Energy Market Operator (AEMO) under section 116 of the National Electricity (Queensland) Law or clause 4.8.9 of the National Electricity Rules, when the limits prescribed in condition 2(B3) are exceeded.

The notification is to be provided no later than 72 hours after the direction is given and must include:

(a) The date and time that the direction was given by AEMO; and

(b) The duration that the relevant direction remained in force.

2(A7) The limits prescribed in condition 2(B3) are not applicable to a unit of the power station if the unit is operating in accordance with a direction made by AEMO as stated in condition 2(A6). During a direction as stated in condition 2(A6), the holder of the Environmental Authority must comply with the limits defined in Schedule 2B Table 3 – Temporary release limits during a direction by AEMO.

2(A8) Notwithstanding this condition 2(A7), no environmental harm will be caused by any releases in excess of limits specified.

END OF CONDITIONS FOR SCHEDULE 2A



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## Schedule 2B – Air

**Release of Contaminants to the Atmosphere**

2(B1) Except as otherwise provided by conditions 2(B8) and 2(B9), contaminants resulting from the operation of the sources described in Table 1 of the air schedule must only be released to the atmosphere from those release points specified in Table 1 of the air schedule.

2(B2) Contaminants released from each release point specified in Table 1 of the air schedule must be directed vertically upwards without any impedance or hindrance.

2(B3) Contaminants must be released to the atmosphere from a release point at a height not less than the corresponding height stated for that release point in Table 1 Schedule 2B. During normal unit operating conditions the contaminant concentrations must not exceed those stated in Table 2, Schedule 2B for the contaminants identified in Table 2.

2(B4) Contaminants must be released to the atmosphere from a release point at a velocity not less than the corresponding velocity stated for that release point in Table 1 of the air schedule.

**Dust Control**

2(B5) The holder of this Environmental Authority must take reasonable and practicable measures to minimise the release of dust and particulate matter to the atmosphere.

**Fuel Burning**

2(B6) The fuels that may be burned in the boiler are coal, natural gas, liquid petroleum gas and distillate. Recycled fuel oils and fuel oil may also be used at start up.

2(B7) The sulphur content of any coal fuel burned in the boiler is not to exceed 0.35 percent by weight (on an As Received basis), and 0.5 percent by weight for fuel oil, on a monthly average.

**Fugitive Emissions**

2(B8) The ducting and extraction systems that transfer combustion products from one location to another must be constructed, operated and maintained so as to minimise any leakage of combustion products and vapours to the atmosphere occurring from these sources.

2(B9) In the event of emissions of contaminants occurring from industrial plant or ducting and extraction systems that transfer combustion products from one location to another, the fault or omission that resulted in that emission must be corrected as soon as practicable.



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**Schedule 2B – Table 1**

| Release point number | Source description | Minimum release height (metres) | Minimum efflux velocity (metres/second) @maximum continuous rating |
|---|---|---|---|
| SC1(1) | Callide Power Plant Unit 3 Flue | 230 | 23(3) |
| SC2(2) | Callide Power Plant Unit 4 Flue | 230 | 23 |

Note 1. SC1 means the flue attached to unit 3.

Note 2. SC2 means the flue attached to unit 4.

Note 3. Efflux velocity is a calculated value exiting the stack.

The Callide Power Plant stack includes two flues within a single structure.

**Schedule 2B – Table 2**

| Contaminant | Release point number | Release limit @ maximum continuous rating | Limit type | Release limit units |
|---|---|---|---|---|
| NOx(4) | SC1, SC2 | 0.8 | Absolute maximum | $g/m^3$ |
| Particulates | SC1, SC2 | 0.08 | Absolute maximum | $g/m^3$ |

Note 4. The above measurements are based on Nitrogen Oxides Calculated as $NO_2$ at a 7% Oxygen reference level and particulates at a 12% $CO_2$ reference level.

**Schedule 2B Table 3 – Temporary release limits during a direction by AEMO**

| Emission or release | Release limit(5) | Release point(s) | Duration of release limit |
|---|---|---|---|
| Particulate emissions | $0.16g/m^3$ (4-hour moving average) | SC1, SC2 | For the duration of a direction by AEMO plus the 5-hour period immediately following the end of a direction. |
| Nitrogen Oxides | $1.6g/m^3$ | SC1, SC2 | For the duration of a direction by AEMO |

Note 5. Limits are based on particulates calculated as a 4-hour moving average at a 12% $CO_2$ reference level; and Nitrogen Oxides calculated as $NO_2$ as a 1-hour moving average at a 7% $O_2$ reference level.

END OF CONDITIONS FOR SCHEDULE 2B



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## Schedule 2C - Water

No conditions prescribed for this schedule.

END OF CONDITIONS FOR SCHEDULE 2C

## Schedule 2D – Stormwater Management

2(D1) A Stormwater Management Plan must be implemented from the date of First Commercial Load through to and including decommissioning phases.

2(D2) The Stormwater Management Plan has to adequately address at least the following issues:

(i) Prevention of stormwater and stormwater run-off contacting contaminated areas.

(ii) Diversion of upstream run-off away from contaminated areas.

(iii) Minimising the size of contaminated areas.

(iv) Cleaning of contaminated areas so that there is no contaminated run-off produced.

(v) Installation and maintenance of systems that minimise contamination of stormwater run-off.

(vi) Reuse and recycling of stormwater.

2(D3) Any changes to the Stormwater Management Plan will be advised to the administering authority in the subsequent Annual Returns.

2(D4) Any contaminant treatment or containment facility must be maintained in accordance with procedures referenced in the Integrated Environmental Management System.

2(D5) A written or electronic record of inspections and / or maintenance of contaminant treatment equipment or facilities must be maintained and kept for a minimum period of three (3) years.

2(D6) Inspections and maintenance must be carried out by suitably qualified and / or trained personnel.

**General Conditions**

2(D7) The maintenance and cleaning of vehicles and any other plant or equipment must be carried out in designated areas. Effluent from such wash-down areas must be directed to the Waste Containment Facility.

2(D8) The level of contaminants in stormwater caught in bunding must be minimised prior to discharge from the site to the Waste Containment Facility.

2(D9) There must be no release of stormwater runoff that has been in contact with any contaminants from this activity at the site to any waters beyond the boundary of Part of Lot 1, RP615528 and Lot 4, SP103557. This does not include releases to the Waste Containment Facility.

END OF CONDITIONS FOR SCHEDULE 2D



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## Schedule 2E – Land Application

**Release of Ash and Other Coal Material**

2(E1) Ash from the combustion process, other coal material, boiler blowdown and chemical cleaning waters and treated sewage effluent in a solid, slurry or liquid form must be placed in the Waste Containment Facility unless prior written approval is obtained from the administering authority for a specified alternate use. This does not include ash removed for use in other products eg cement manufacture.

2(E2) A record is to be kept of volumes of ash removed off site other than to the Waste Containment Facility. These records must be made available to authorised persons on request.

**Release of Oils / Chemcials**

2(E3) Oils including petroleum products, solvents and laboratory chemicals must not be released to the Waste Containment Facility except in minor quantities. The quantities released must not cause environmental nuisance or environmental harm.

END OF CONDITIONS FOR SCHEDULE 2E



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## Schedule 2F – Noise

No conditions prescribed for this schedule.

END OF CONDITIONS FOR SCHEDULE 2F

## Schedule 2G – Waste Management

**Waste Management Plan**

2(G1) A Waste Management Plan (WMP) must be implemented from the date of First Commercial Load through to, and including decommissioning phases.

2(G2) The WMP must detail and address at least the following:

(i) The quantity and nature of wastes produced, and

(ii) Methods of disposal.

2(G3) The WMP must be reviewed annually and any changes that have the potential to increase the risk of environmental harm will be advised to the administering authority in the next Annual Return.

2(G4) Waste audits must be undertaken every five (5) years. The results are to be available to the administering authority upon request.

**General**

2(G5) The holder of this Environmental Authority must not:

(i) Allow waste to burn or be burned in the open at or on the licensed place; nor

(ii) Remove waste from the licensed place and burn such waste elsewhere, unless conducted at an approved facility.

2(G6) Areas must be set aside for storage and segregation of waste that can be practically recycled.

2(G7) Drums of wastes or processed materials must be stored to prevent water entering the containers or allowing contents to escape.

2(G8) All loading and unloading of bulk materials must occur in designated loading / unloading areas.

2(G9) All bunded areas are to be maintained to ensure that no materials contained therein can escape the bunds confines without human intervention.

2(G10) All bunding must be impervious to the material stored within its confines.

2(G11) All permanent drum storage (less than or equal to 250L in individual capacity stored either individually or in a group storage) must be roofed where practicable, and bunded to 110% capacity of the total volume stored within. Drums located in temporary storage must be placed on portable bunds.

2(G12) All tanks larger than 250L in size are to be bunded to 110% capacity.

2(G13) All materials that are potentially environmentally hazardous that are stored on site must be clearly labelled including waste materials.

END OF CONDITIONS FOR SCHEDULE 2G

## Schedule 2H – Self-monitoring and Reporting

**Complaint Recording**

2(H1) All complaints received by the holder of this Environmental Authority relating to releases of contaminants from operations at the licensed place must be recorded and kept with the following details:

(a) time, date and nature of complaint;

(b) type of communication (telephone, letter, personal etc.);

(c) name, contact address and contact telephone number of complainant (Note: if the complainant does not wish to be identified then "Not identified" is to be recorded);

(d) response and investigation undertaken as a result of the complaint;

(e) name of person responsible for investigating complaint; and

(f) action taken as a result of the complaint investigation and signature of responsible person.

**Monitoring of Contaminant Releases to the Atmosphere**

2(H2) The holder of this Environmental Authority must conduct and keep records of a monitoring program of contaminant releases to the atmosphere at the release points, frequency, and for the parameters specified in Schedule H Table 1 and which complies with the following:

(a) Monitoring provisions for the release points listed in Schedule H Table 1 must comply with the Australian Standard AS 4323.1 - 1995 "Stationary source emissions Method 1: Selection of sampling provisions" or The Department of Environment's Air Quality Sampling Manual 1997 and any subsequent versions.

(b) The following tests must be performed for each required determination specified in Schedule H Table 1:

Particulates; and

Nitrogen Oxides.

(c) where practicable, samples taken must be representative of the contaminants discharged when emissions are expected to be normal.

**Schedule 2H Table 1 – Required Release point Determinations**

| Determination required | Release point numbers | Frequency |
|---|---|---|
| Particulates | SC1 and SC2 | Continuous as a 4 hour moving average |
| Nitrogen Oxides | SC1 and SC2 | Continuous as a 1 hour moving average |

Note 1. Above measurements to be based on Nitrogen Oxides Calculated as $NO_2$ at a 7% Oxygen reference level and particulates at a 12% $CO_2$ reference level.

Note 2. Monitoring does not include unit start-up or shut-down or operation of the plant when fuel oil is used for combustion support.

2(H3) The holder of this Environmental Authority must ensure that the results of all monitoring performed in accordance with this Environmental Authority are summarised annually and provided to the administering authority upon request.

END OF CONDITIONS FOR SCHEDULE 2H



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## Schedule 2I – Definitions

For the purposes of this Environmental Authority the following definitions apply:

2(I1) "Cubic metre" ("$m^3$") means the volume of dry gas which occupies 1 cubic metre at a temperature of zero degrees Celsius and at an absolute pressure of 101.3 kilopascals.

2(I2) "Ash" means combustion residues after burning of coal.

2(I3) “4-hour moving average” means a calculation based upon continuous monitoring data collected over the previous 4 hours. It is updated at an interval of not more than 10 minutes.

2(I4) “Continuous” means the use of automatic monitoring and recording instrumentation where data is logged at regular intervals no longer than 1 minute, with a minimum data capture rate of 80%.

2(I5) "First Commercial Load" means the latest date when both units of the plant are accepted by the owner for commercial operation on a fee or reward basis.

2(I6) "Waste Containment Facility" means the defined contaminant release area being Ash Dam B, Ash Dams 3 and 4, Drains Reclaim Dams and evaporation areas on the Callide A/B Power Station site.

2(I7) "PM10" means airborne particulate matter less than 10 micrometers in size.

2(I8) "Maximum Continuous Rating" (MCR) means the continuous efficient energy output from a boiler that causes no detrimental effects over long term operation.

2(I9) "Unit three" means the eastern most IHI boiler, Toshiba turbo - generator and associated unit auxiliary plant on the licensed premises.

2(I10) "Unit four" means the western most IHI boiler, Toshiba turbo - generator and associated unit auxiliary plant on the licensed premises.

2(I11) "Station Plant" means auxiliary plant on the licensed premises required to run the Callide Power Plant that does not form part of either Unit three or Unit four.

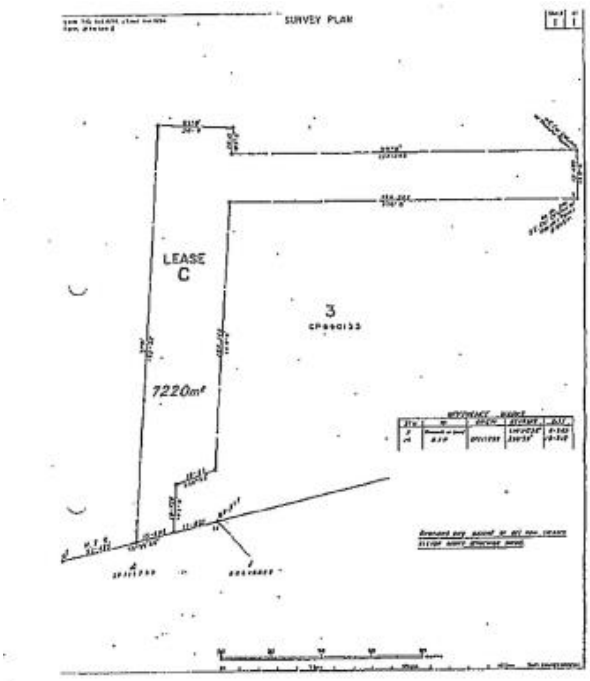
END OF CONDITIONS FOR SCHEDULE 2I

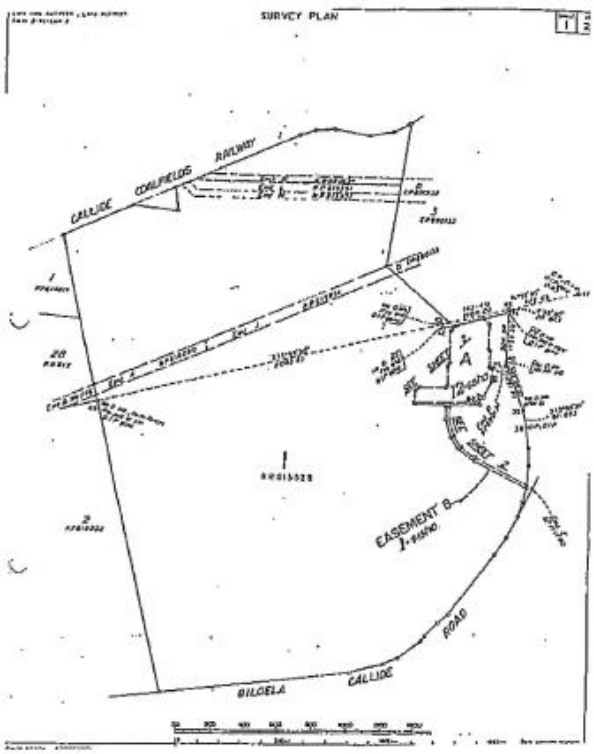


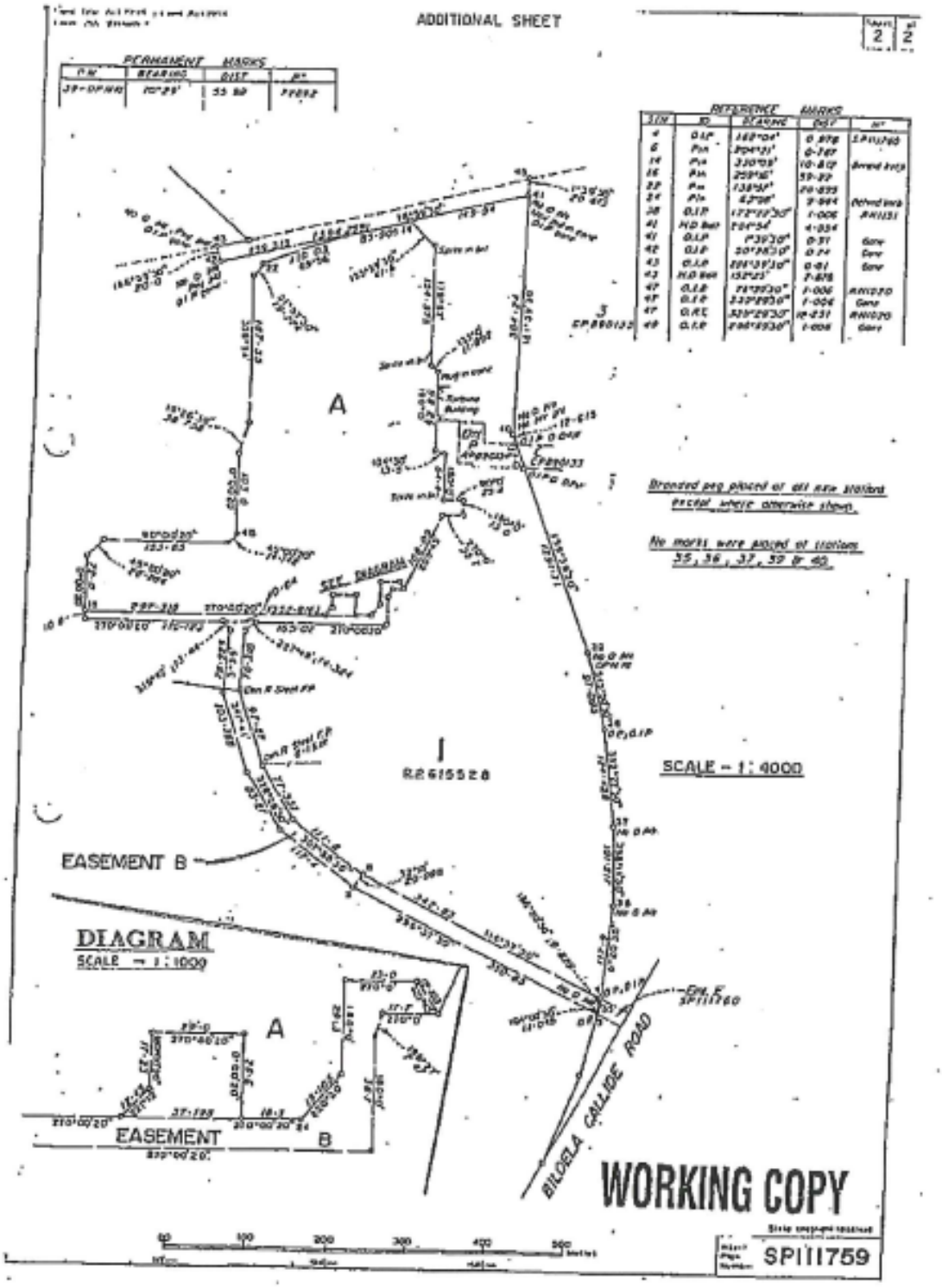
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## Schedule 2J – Site Plans






END OF CONDITIONS FOR SCHEDULE 2J