

## **Advice**

### **General**

#### ***Plan of development***

The development should be carried out generally in accordance with the following approved plans contained in Enclosure 1:

- Plan titled 'Sun Metals Constraints' (S-100 revision A), prepared by RCR-O'Donnell Griffin Pty Ltd, dated 05/01/2017
- Plan titled 'SMESS Concept Layout of the BESS (Issue 3), prepared by Ark Energy, dated 09/12/2025
- Plan titled: 'SMESS Concept Layout the BESS (Site Location) (Issue 3), prepared by Ark Energy, dated 09/12/2025

#### ***Currency period***

This SDA approval is valid until the end of the currency period, four years after the date of approval, unless the approval states a different period. For the SDA approval to remain valid the proponent must have, before the end of the currency period:

- substantially started the development; or
- made an application to the Coordinator-General to extend the currency period.

#### ***Other approvals***

This SDA approval relates solely to the material change of use for a renewable energy facility within the Townsville State Development Area. All other approvals and/or permits required under local, state and/or commonwealth legislation must be obtained prior to the commencement of the use.

#### ***Cultural heritage – duty of care***

Where items of archaeological importance are identified during construction of the project, the proponent must comply with its duty of care under the *Aboriginal Cultural Heritage Act 2003* and the Department of Environment and Heritage Protection 2014 guideline: archaeological investigations. All work must cease and the relevant State agency must be notified. Work can resume only after State agency clearance is obtained.

#### ***Management plans and assessment reports***

The proponent is requested to submit to the Coordinator-General the following plans and reports as soon as practicable:

- Ecological assessment
- Cultural Heritage Duty of Care assessment
- Construction environmental management plan
- Any other relevant plans or reports related to the development

### **Townsville City Council**

#### ***Erosion management***

To limit the risk of erosion, the proponent should establish and maintain a good ground cover for the life of the development as recommended in the planning report.

Assessment may be required to assess the potential impact on natural vegetation due to erosion beyond the extent of the development and to protect natural vegetation against potential erosion.

### ***Risk assessment and emergency management planning***

The location of the battery energy storage system (BESS) is within the Bushfire hazard overlay – Medium potential bushfire intensity and Potential impact buffer. It is important to ensure the BESS will not exasperate fire conditions and increase risk to people and property from the hazard. Accordingly:

- A risk assessment of any failure modes which may result in release of contaminants into the environment should be considered.
- An Emergency Management Plan (EMP), detailing incident response protocols to ensure potential offsite impacts are appropriately minimised should also be implemented.
- Consideration should be given to:
  - Identification of likelihood of risks such as thermal runaway, fire and explosion, electrical faults, chemical leaks or spills, affecting a significant portion of the BESS;
  - the frequency of mega-pack battery thermal failures recorded globally;
  - firefighting and fire suppressing techniques typically used to manage small or large scale fires at battery facilities, starting at detection and isolation in modules and ending at emergency service intervention;
  - the mass of each chemical species to be stored on site, including inside battery packs. The applicant is advised to compare the chemical composition of the proposed battery technology and the quantities against Schedule 15, Table 15.1 & 15.2 of Work health and Safety Regulation 2011 and the Planning Regulation 2016 to determine if the BESS would be considered a Hazardous Chemical Facility;
  - the mass of each chemical species that would be transported aerielly in the event of BESS combustion, venting, or malfunction;
  - air quality modelling indicating the travel distance likely for soot and ash during combustion, including consideration of a range of typical wind directions and speeds; and
  - development of a probabilistic deposition map illustrating the potential mass of each contaminant which could reach nearby sensitive receptors.

### ***Social impact considerations***

Council considered the BESS to be ancillary to the established solar farm and not a standalone battery storage facility as defined in the *Planning Act 2016*.

A new State code 27: Battery storage facility development has been introduced into the SDAP, and an associated planning guideline created. These documents contain assessment benchmarks for battery storage facilities and ensure the key impacts of the development are appropriately considered. Accordingly, the applicant is

encouraged to consider these provisions as advice to inform best-practice design, risk management and mitigation measures for the proposed SMESS.

In accordance with the *Planning Act 2016*, battery storage facility developments with a maximum electricity output of 50MW or more are subject to the community benefit system. This system requires proponents to undertake a social impact assessment and enter into a community benefit agreement before making a development application. The intent of this framework is to ensure that battery storage facilities deliver tangible benefits to local communities and manage social impacts effectively.

While not mandated for this development, it is recommended that the proponent consider if it is necessary to engage with the community through informal consultation and consider a Social impact assessment to provide appropriate benefits to the community.

### **Department of Transport and Main Roads**

#### ***Construction traffic***

It is recommended the intersection be assessed both with and without development traffic during the construction phase, to ensure that no mitigation measures are required during the construction phase. This should be undertaken by a certified RPEQ engineer as part of an updated Traffic impact Assessment.

#### ***Impacts on state-controlled road***

DTMR note that while there is no mention of road trains in the Traffic Impact Assessment, road trains may be necessary to transport the construction materials efficiently. Should the proposed construction transport vehicle change, individual operators will likely require a permit to operate type 1 or 2 road trains in the Bruce Highway. There might be conflicts when mixing with other traffic on the Bruce Highway.

#### ***Stormwater management***

Stormwater management should ensure there is no worsening or actionable nuisance to the state controlled road by peak discharges, flood levels, frequency/duration of flooding, flow velocities, water quality, sedimentation and scour effects.

### **Powerlink Queensland (Powerlink)**

#### ***Powerlink infrastructure***

The development is required to comply with the generic requirements in respect to proposed works in the vicinity of Powerlink Queensland infrastructure as detailed in the Enclosure 2.

No operational works are to be undertaken within Easement F on SP113159 unless prior written consent for the Operational Work has been provided by Powerlink Queensland.

#### ***Network connection***

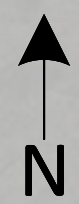
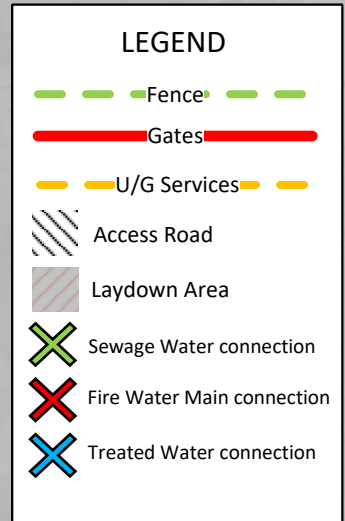
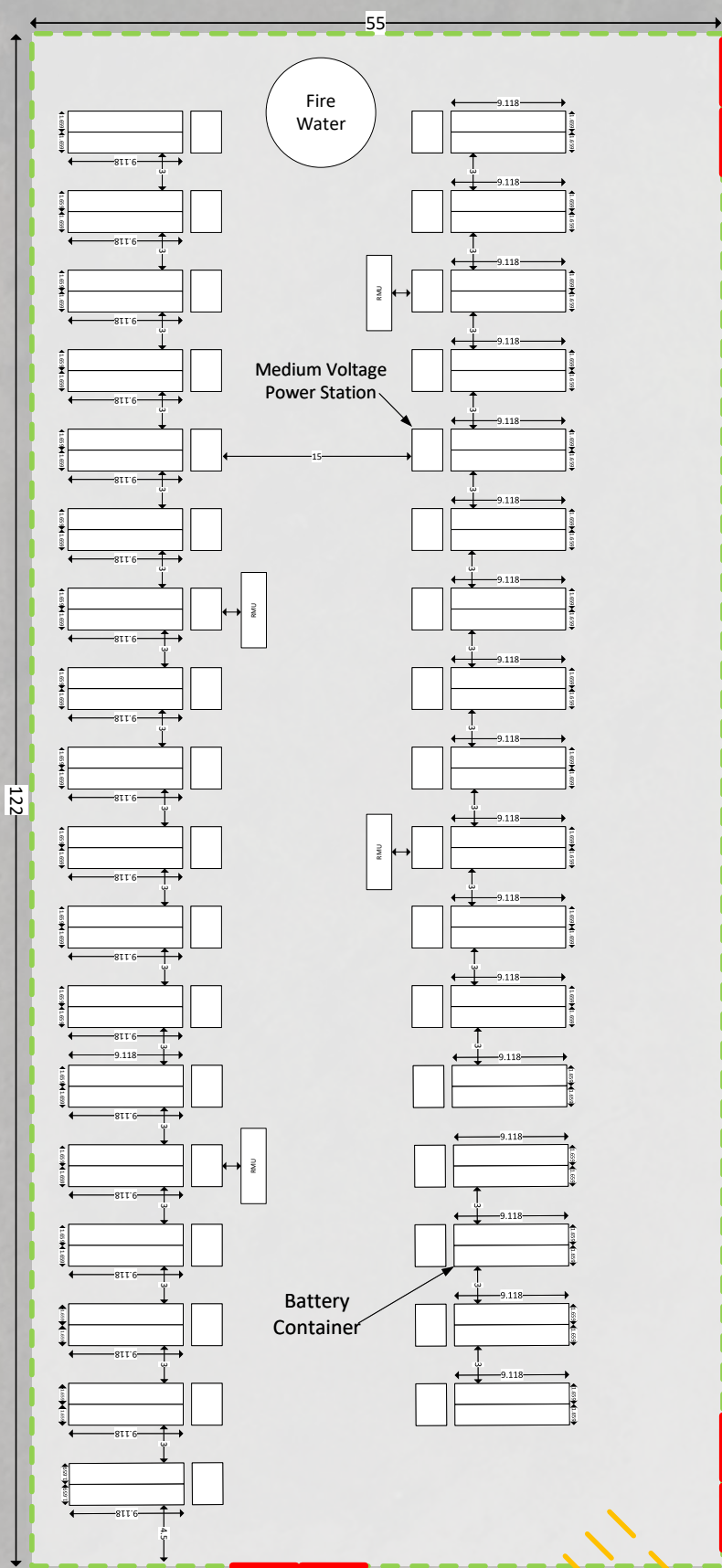
It is strongly advised the proposed works be discussed with the Powerlink Business Development team to ensure that any changes to the current connection to the transmission network required for the proposed solar farm can be accommodated.

**Enclosure 1**

Plan of development

**Enclosure 2**

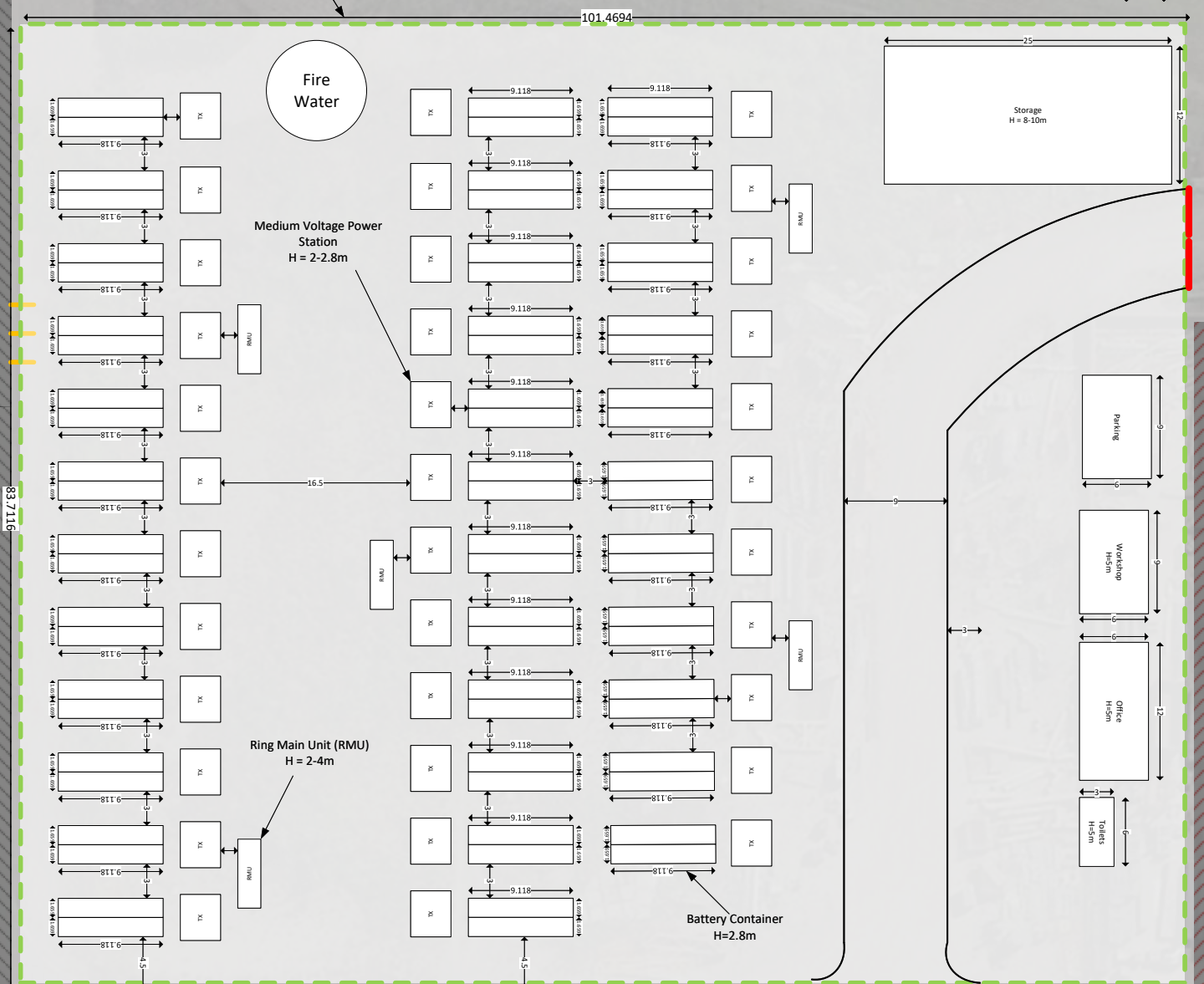
Powerlink Queensland - Annexure A – Generic Requirements



Sun Metals Zinc Refinery (Sun Metals)

Sun Metals Solar Farm

Fence H=2.8m



**PLANS AND DOCUMENTS**  
referred to in the  
**SDA APPROVAL**

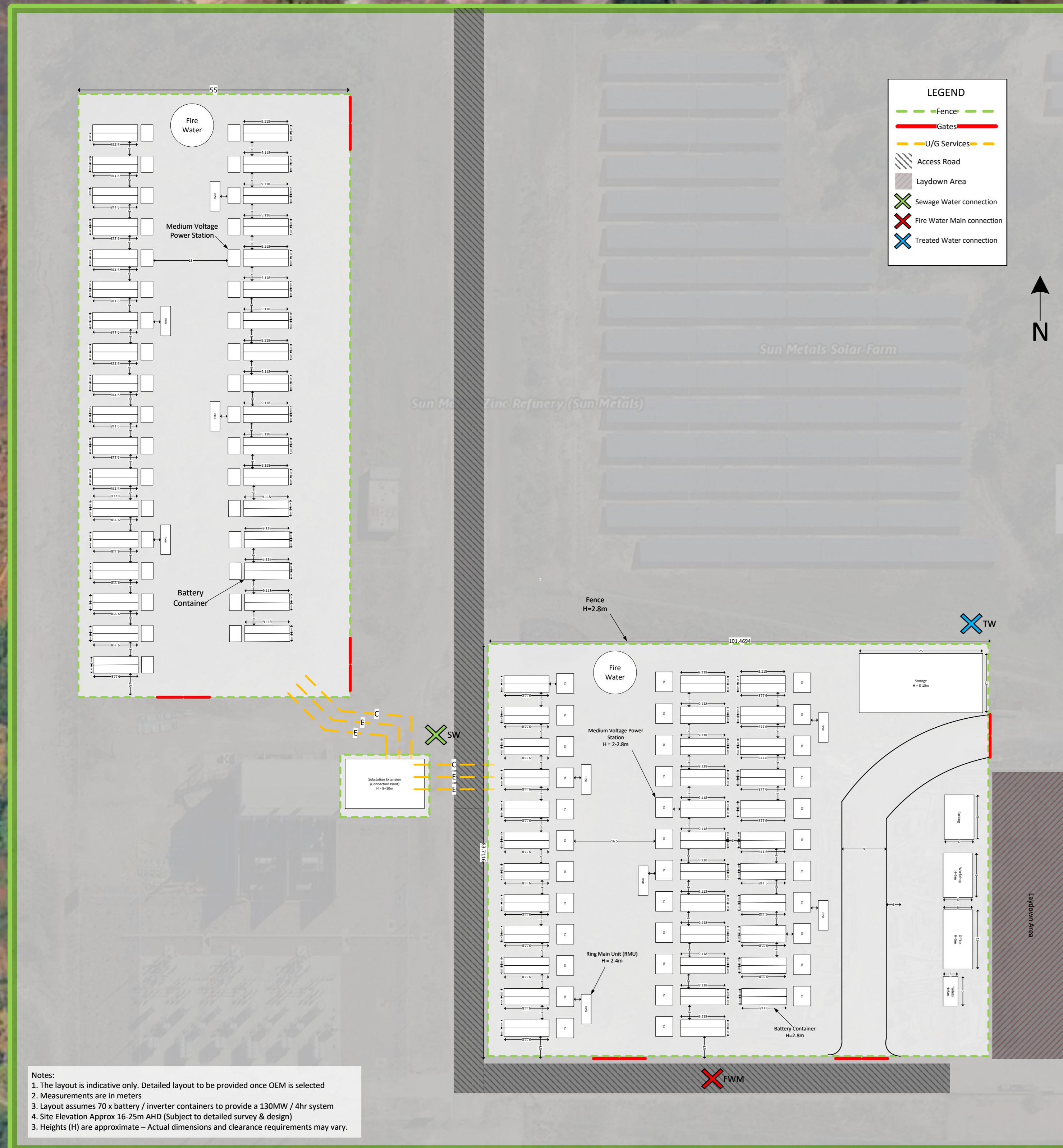
SDA approval: AP2016/011-1



**Title: SMESS Concept Layout of the BESS (Issue 3)**  
Prepared by: Ark Energy  
Dated: 09/12/2025

**Notes:**

1. The layout is indicative only. Detailed layout to be provided once OEM is selected
2. Measurements are in meters
3. Layout assumes 70 x battery / inverter containers to provide a 130MW / 4hr system
4. Site Elevation Approx 16-25m AHD (Subject to detailed survey & design)
3. Heights (H) are approximate – Actual dimensions and clearance requirements may vary.



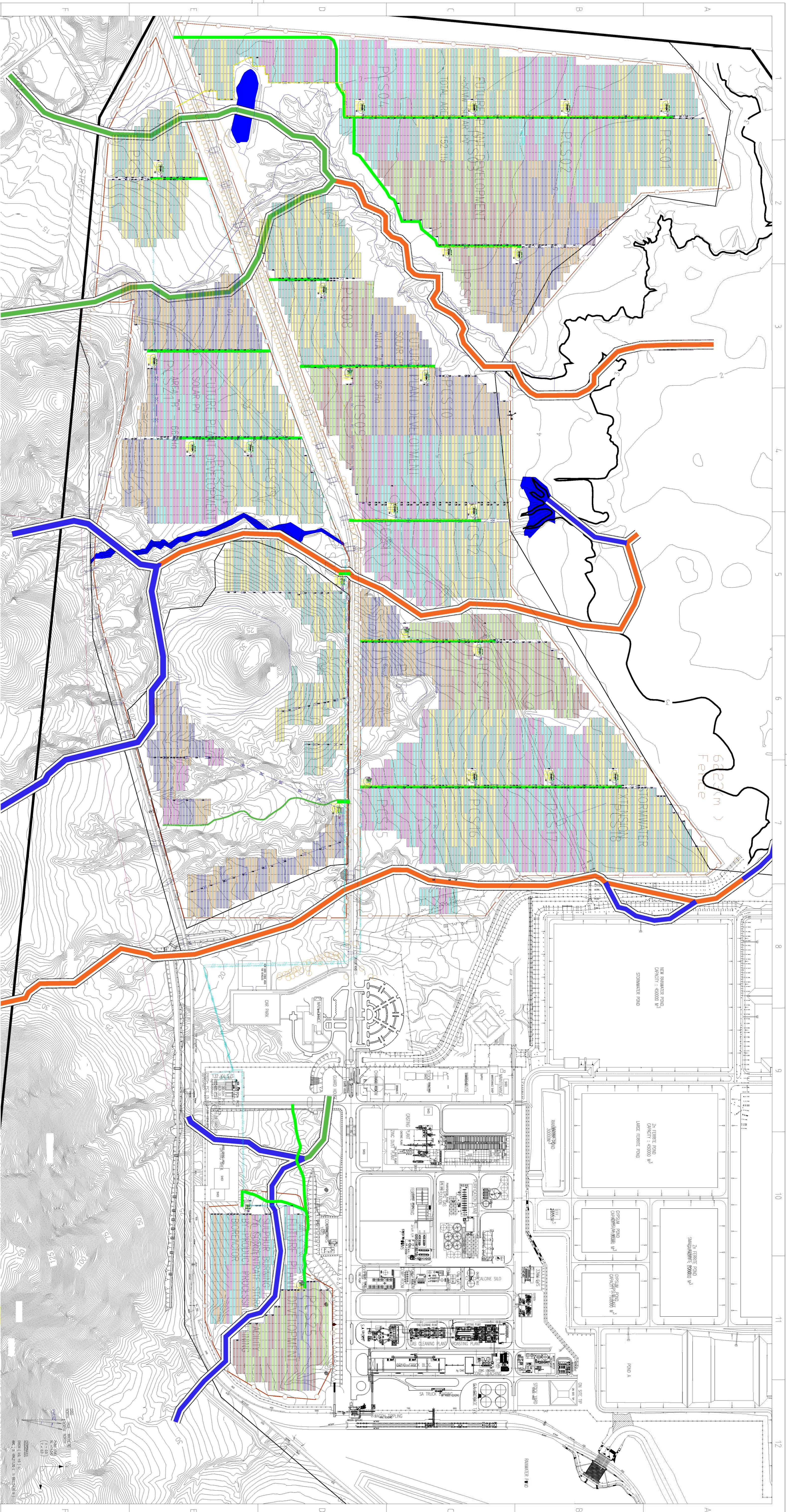
PLANS AND DOCUMENTS referred to in the SDA APPROVAL

SDA approval: AP2016/011-1



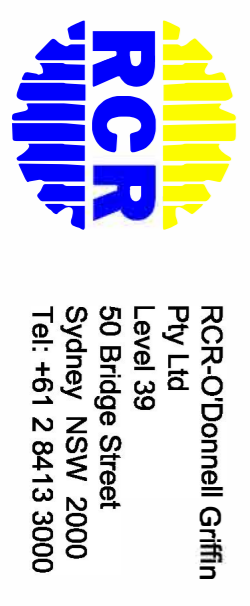
Title: SMESS Concept Layout the BESS (Site Location) (Issue 3)  
 Prepared by: Ark Energy  
 Dated: 09/12/2025



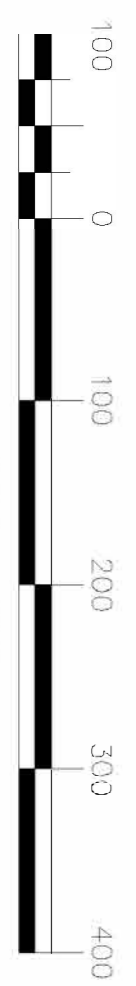


**PLANS AND DOCUMENTS referred to in the SDA APPROVAL**

**SDA approval: AP2016/011-1**



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**LEGEND**

	EASEMENT
	PROJECT PERIMETER FENCE
	SUBSTATION FENCE PERIMETER
	INTERNAL ROAD
	30M LANDSCAPE BUFFER
	4C/DC TRENCH
	DC 9000 X 600V TRENCH
	HV
	HV 9000 X 600V TRENCH (90)
	MV/ EARTH
	PV TABLE FRAME

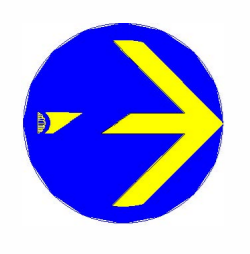
	BARE COPPER 50mm
	EARTH TERMINATION
	COMMS & SECURITY POWER
	FIBER COMMS & SECURITY
	COMBINER BOX TYPE 1 (64 INPUTS)
	COMBINER BOX TYPE 2 (16 INPUTS)

**SUNMETALS CONSTRAINT TRACKER**

	PV TABLE FRAME
	INGETEAM CON40 92KVA
	INVERTER STATION EARTH GRID LAYOUT

DESIGNED	03/11/16	C.WILSON
DRAWN	03/11/16	
CHECKED		
APPROVED		
LETTER	A	
APPROVED		

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**SUPERSEDES**

RECOMMENDED	
ACCEPTED	

**SUNMETALS CONSTRAINTS**

AI	PROJ.No. A005553	DRAWING STATUS: PRELIMINARY
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**DRAWING No. S-100**

REV	SHEET No.
A	1

## **ANNEXURE A – GENERAL CONDITIONS**

**The conditions contained in this annexure have been compiled to assist persons (the applicant) intending to undertake work within the vicinity of high-voltage electrical installations and infrastructure owned or operated by Powerlink. The conditions are supplementary to the provisions of the Electrical Safety Act 2002, Electrical Safety Regulations 2002 and the terms and conditions of registered easements and other forms of occupational agreements hereinafter collectively referred to as the “easement”. Where any inconsistency exists between this annexure and the easement, the easement shall take precedence.**

### **1. POWERLINK INFRASTRUCTURE**

You may not do any act or thing which jeopardises the foundations, ground anchorages, supports, towers or poles, including (without limitation) excavate or remove any soil, sand or gravel within a distance of twenty (20) metres surrounding the base of any tower, pole, foundation, ground anchorage or support.

### **2. STRUCTURES**

No structures should be placed within twenty (20) meters of any part of a tower or structure foundation or within 5m of the conductor shadow area. Any structures on the easement require prior written consent from Powerlink.

### **3. EXCLUSION ZONES**

Exclusion zones for operating plant are defined in Schedule 2 of the Electrical Safety Regulation 2002 for Untrained Persons. All Powerlink infrastructure should be regarded as “electrically live” and therefore potentially dangerous at all times.

In particular your attention is drawn to Schedule 2 of the Electrical Safety Regulation 2002 which defines exclusion zones for untrained persons in charge of operating plant or equipment in the vicinity of electrical facilities. If any doubt exists in meeting the prescribed clearance distances from the conductors, the applicant is obliged under this Act to seek advice from Powerlink.

### **4. ACCESS AND EGRESS**

Powerlink shall at all times retain the right to unobstructed access to and egress from its infrastructure. Typically, access shall be by 4WD vehicle.

### **5. APPROVALS (ADDITIONAL)**

Powerlink's consent to the proposal does not relieve the applicant from obtaining statutory, landowner, third party or shire/local authority approvals.

### **6. MACHINERY**

All mechanical equipment proposed for use within the easement must not infringe the exclusion zones prescribed in Schedule 2 of the Electrical Safety Regulation 2002. All operators of machinery, plant or equipment within the easement must be made aware of the presence of live high-voltage overhead wires. It is recommended that all persons entering the Easement be advised of the presence of the conductors as part of on site workplace safety inductions. The use of warning signs is also recommended.

### **7. EASEMENTS**

All terms and conditions of the easement are to be observed. Note that the easement takes precedence over all subsequent registered easement documents. Copies of the easement together with the plan of the Easement can be purchased from the Department of Natural Resources, Mines & Water.

**8. EXPENDITURE AND COST RECOVERY**

Should Powerlink incur costs as a result of the applicant's proposal, all costs shall be recovered from the applicant.

Where Powerlink expects such costs to be in excess of \$10 000.00, advanced payments may be requested.

**9. EXPLOSIVES**

Blasting within the vicinity (500 metres) of Powerlink infrastructure must comply with AS 2187. Proposed blasting within 100 metres of Powerlink infrastructure must be referred to Powerlink for a detailed assessment.

**10. BURNING OFF OR THE LIGHTING OF FIRES**

We strongly recommend that fires not be lit or permitted to burn within the transmission line corridor and in the vicinity of any electrical infrastructure placed on the land. Due to safety risks Powerlink's written approval should be sought.

**11. GROUND LEVEL VARIATIONS**

**Overhead Conductors**

Changes in ground level must not reduce statutory ground to conductor clearance distances as prescribed by the Electrical Safety Act 2002 and the Electrical Safety Regulations 2002.

**Underground Cables**

Any change to the ground level above installed underground cable is not permitted without express written agreement of Powerlink.

**12. VEGETATION**

Vegetation planted within an easement must not exceed 3.5 metres in height when fully matured. Powerlink reserves the right to remove vegetation to ensure the safe operation of the transmission line and, where necessary, to maintain access to infrastructure.

**13. INDEMNITY**

Any use of the Easement by the applicant in a way which is not permitted under the easement and which is not strictly in accordance with Powerlink's prior written approval is an unauthorised use. Powerlink is not liable for personal injury or death or for property loss or damage resulting from unauthorised use. If other parties make damage claims against Powerlink as a result of unauthorised use then Powerlink reserves the right to recover those damages from the applicant.

**14. INTERFERENCE**

The applicant's attention is drawn to s.230 of the Electricity Act 1994 (the "Act"), which provides that a person must not wilfully, and unlawfully interfere with an electricity entity's works. "Works" are defined in s.12 (1) of the Act. The maximum penalty for breach of s.230 of the Act is a fine equal to 40 penalty units or up to 6 months imprisonment.

**15. REMEDIAL ACTION**

Should remedial action be necessary by Powerlink as a result of the proposal, the applicant will be liable for all costs incurred.

## **16. OWNERS USE OF LAND**

The owner may use the easement land for any lawful purpose consistent with the terms of the registered easement, the conditions contained herein, the Electrical Safety Act 2002 and the Electrical Safety Regulations 2002.

## **17. ELECTRIC AND MAGNETIC FIELDS**

Transmission lines produce electric and magnetic fields (EMF) and there have been concerns raised by some research about possible health effects particularly of magnetic fields. Although these fields are commonly experienced in the everyday environment, health authorities have been unable to conclude anything definite about their ability to adversely affect health.

Powerlink has adopted a prudent avoidance policy in relation to EMF. This policy is based upon a detailed assessment by authoritative scientific and medical review panels and is reviewed periodically in light of results of ongoing research in this area.

No standards currently exist to limit the level of magnetic fields to which the general public may be exposed in their everyday lives because no level has been demonstrated as being unsafe. The Australian National Health and Medical Research Council (NHMRC) has published Guidelines (Interim Guidelines of Limits of Exposure to 50/60 Hz Electric and Magnetic Fields – 1989). These are based on known biological effects and publications of the International Commission on Non-Ionising Radiation Protection (under the auspices of the World Health Organisation).

The guideline limit for continuous public exposure in the NHRMC document is 1000 mG. The fields from the powerlines affecting the proposed development will be much less than one tenth of this figure.

The Australian Government Agency ARPANSA (Australian Radiation Protection and Nuclear Safety Agency) continually reviews the EMF issue and reports on the most up to date research being undertaken. We refer you to their website; <http://www.arpansa.gov.au/> for the latest information.

We draw your attention to the uncertainty in the health science, the public perception of the EMF issue and the concept of prudent avoidance. Should the proposal include the positioning of sites close to the line for schools, day care centres or kindergartens we would encourage modification of the proposal to locate such facilities further from the powerlines.