

Ref: 230172 Tangkam Station 1 Figure 1-2 Project Site Context Author: drcd Date created: 10/10/2023 © NGH 2023 © ESRI 2023 © State of Queensland (Department of Resources), 2023 © State of Queensland

LEGEND

- Project Site
- Development Footprint - BESS
- Access Road - BESS
- Setback
- Easement
- Least concern remnant (category B) vegetation
- Lot Boundaries
- Roads

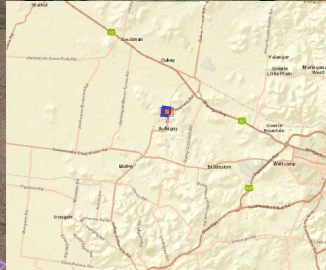


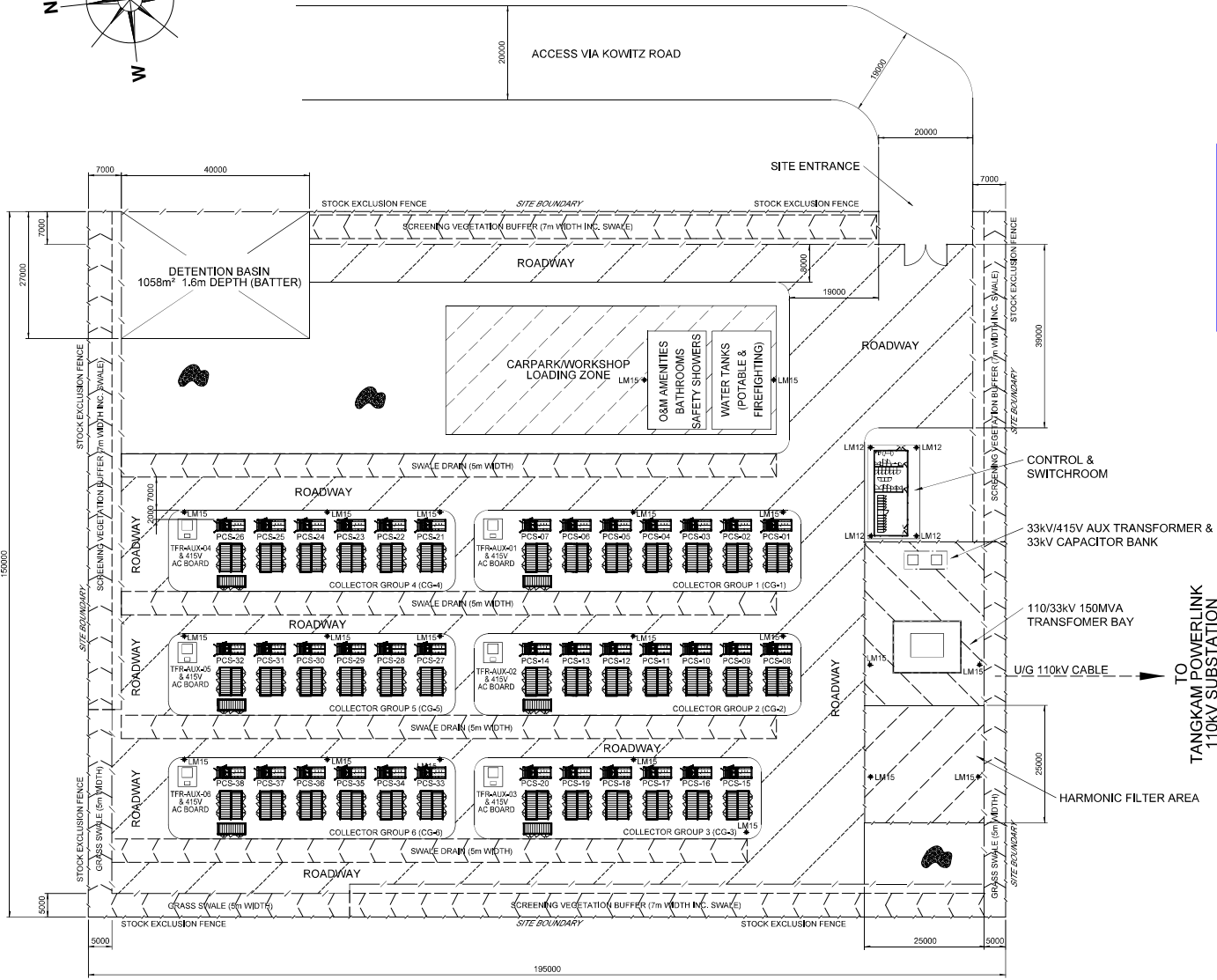
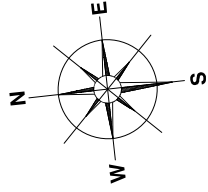
TOOWOOMBA REGIONAL COUNCIL
APPROVED PLAN
 referred to in Council's Decision Notice dated
 8 January 2024
 This plan is subject to conditions of Approval Number
 MCUI/2023/3647

[Signature]
 Assessment Manager

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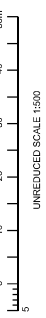
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- LEGEND**
- SECURITY FENCE
 - STOCK EXCLUSION FENCE
 - COMPACTED ROADWAY
 - CRUSHED ROCK TO ENTIRE YARD 1.2m PAST FENCE & BELOW BUILDING
 - LIGHTNING MAST 12m (HEIGHT FROM GROUND LEVEL) - PL II PROTECTION
 - LIGHTNING MAST 15m (HEIGHT FROM GROUND LEVEL) - PL II PROTECTION

- BESS MATERIALS**
- 38 x SMA MVPS 4200-S2 POWER PLANT SKIDS WITH INVERTER (SMA SCS-3600-JP-X1) & TRANSFORMER 6058 x 2438 x 2895mm
 - 82 x 0.5P CANADIAN SOLARBANK 0.5P BATTERY UNITS 8058 x 2438 x 2895mm
 - 1 x 110/33kV 150MVA TRANSFORMER 7800 x 5000 x 5500mm
 - 7 x 33kV/0.415V TRANSFORMER 2200 x 2100 x 1950mm
 - 1 x 33kV CAPACITOR BANK 2200 x 2100 x 1950mm

GENERAL ARRANGEMENT
 SCALE: 1:1500



0	ORIGINAL ISSUE DRN: 26/04/2023 DATE: P. BARNEY
1	REVISED AS PER DRN: P. BARNEY DATE: 29/05/2023
2	REVISIONS AS PER EMAIL: 07/06/2023 DATE: 29/05/2023
3	REVISIONS AS PER DRN: P. BARNEY DATE: 05/07/2023
4	REVISIONS AS PER DRN: P. BARNEY DATE: 15/07/2023

**CONCEPTUAL
 NOT FOR CONSTRUCTION**



REVISION CONTROL	
Drawn P. BARNEY	Date 19-07-2023
Checked J. WEBSTER	Date 21-07-2023
Approved A. BARKESSEH	Date 21-07-2023
Bus. Req. Approved	Date

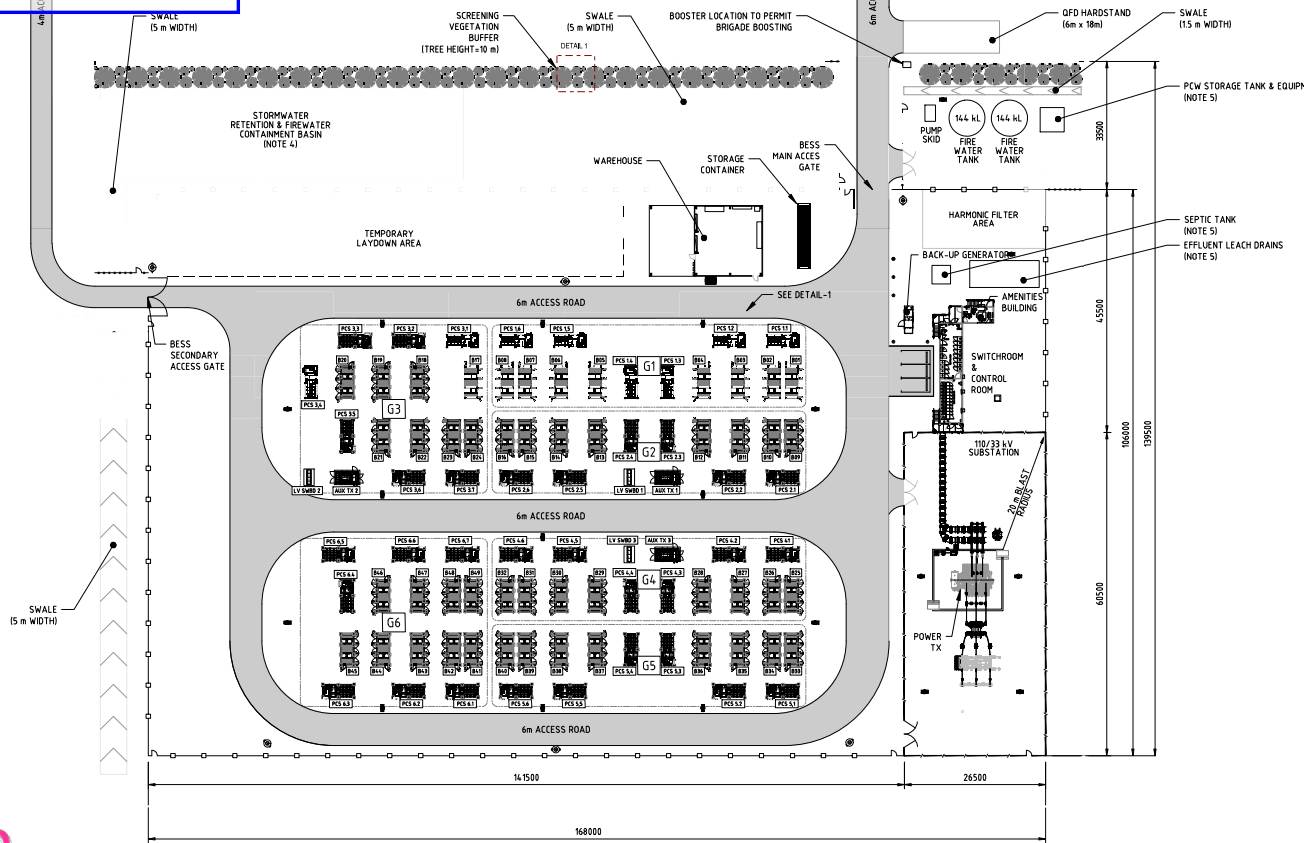
Power Systems Consultants Australia Pty Ltd

JA11242 ATRIA ENERGY
 TANGKAM BESS CONNECTION STUDIES
 CONCEPT DESIGN DRAWING
 BESS LAYOUT













Drawing Status CONCEPT	Contract No.	Revision 4
Project Number JA11242-000-EE-DWG-001	Scale	Next Sheet

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LEGEND:

-  BESS AREA BOUNDARY FENCE
-  STOCK FENCE
-  SUBSTATION FENCE
-  BATTERY
-  POWER CONVERSION SYSTEM
-  AUXILIARY TRANSFORMER
-  LOW VOLTAGE SWITCHBOARD
-  LIGHTING/LIGHTING POLE
-  EMERGENCY GENERATOR
-  33/0.4 kV EARTHING 8AUX TX
-  FIRE HYDRANT
-  BULLARD

NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. LAYOUT SUBJECT TO CHANGE SHOULD THERE BE ADJUSTMENTS IN THE SELECTED EQUIPMENT IN SUBSEQUENT DESIGN PHASES.
3. TYPICAL SPACING HAS BEEN USED TO ACCOUNT FOR DRAINAGE, CONSTRUCTION AND FIRE EQUIPMENT. THESE WILL BE SUBJECT TO CHANGE DURING DETAILED DESIGN.
4. STORMWATER RETENTION & FIREWATER CONTAINMENT BASIN SIZE AND DETAILS TO BE DETERMINED DURING DETAILED DESIGN.
5. LOCATIONS ARE SUBJECT TO DESIGN REVIEW.

LANDSCAPING NOTES
 THE PRIMARY PURPOSE OF LANDSCAPING IS TO PROVIDE EFFECTIVE VISUAL SCREENING OF THE DEVELOPMENT, ALONG THE EASTERN BOUNDARY AND TO ENSURE THE DEVELOPMENT INTEGRATES APPROPRIATELY WITH THE SURROUNDING RURAL LANDSCAPE. KEY PRINCIPLES ARE AS FOLLOWS:
 - VEGETATION BUFFER WILL BE ESTABLISHED ALONG THE EASTERN BOUNDARY OF THE DEVELOPMENT
 - SCREENING VEGETATION WILL BE CAPABLE OF REACHING A MINIMUM OF 10 METRES IN HEIGHT AT MATURITY, TO REDUCE VISUAL IMPACT WHEN VIEWED FROM SURROUNDING ROADS AND PROPERTIES.
 - LOCALLY APPROPRIATE NATIVE PLANT SPECIES WILL BE USED CONSISTENT WITH SPECIES CHARACTERISTIC OF THE LOCAL AREA AND RURAL LANDSCAPE SETTING (SEE PLANT SPECIES LIST).
 - WHERE LANDSCAPING INTERACTS WITH STORMWATER MANAGEMENT AREAS, PLANT SPECIES AND SOILS WILL BE APPROPRIATE FOR THAT FUNCTION.
 - ALL LANDSCAPING WORKS WILL BE ESTABLISHED AND MAINTAINED FOR THE LIFE OF THE DEVELOPMENT, ENSURING HEALTHY, EFFECTIVE SCREENING IS RETAINED.
 - ALL LANDSCAPING (INCLUDING DESIGN) WORKS WILL BE CARRIED OUT BY A SUITABLY QUALIFIED PROFESSIONALS.

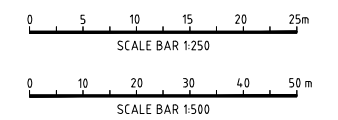
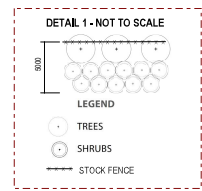
SYSTEM DETAILS

BESS EXPORT (MW)	100
BESS UNITS	REPT Y104R04C12-314
BESS UNIT RATED ENERGY (kWh)	5,015.9
BESS UNIT MAX POWER (kW)	2,500
BESS UNIT VOLTAGE RANGE (Vdc)	1,04.0 - 1,500
BESS UNIT DIMENSIONS (LxWxH, mm)	6,058 x 2,436 x 2,896
BESS UNITS PER INVERTER	1 / 15
BESS UNITS PER PCS	1 / 15
INVERTERS	SMA SCS 3600 UP-XT
INVERTER RATED POWER (kVA)	3,465
INVERTER RATED VOLTAGE DC (Vdc)	921 - 1,500
INVERTER RATED VOLTAGE AC (VAc)	630
INVERTERS PER PCS	1
POWER CONVERSION STATION (PCS)	SMA MUPS 4200-S2
PCS RATED POWER (kVA)	3,465
PCS RATED VOLTAGE AC (LV/HV, V)	630/33,000
PCS DIMENSIONS (LxWxH, mm)	6,058 x 2,436 x 2,896
TOTAL NUMBER OF BESS UNITS	49
TOTAL NUMBER OF INVERTERS	38
TOTAL NUMBER OF PCS	38
TOTAL STORAGE ENERGY (MWh)	245.78
TOTAL DC POWER (MW)	122.58
TOTAL AC APPARENT POWER (MVA)	131.67

Plant Species List

Scientific Name	Common Name	Height at Maturity	Source
<i>Acacia hybridifolia</i>	Engelwood	10 m	>
<i>Banksia integrifolia</i>	Kangaroo	20 m	>
<i>Corymbia erythrophloia</i>	Bloodwood	12 m	>
<i>Corymbia tessellata</i>	Moreton Bay Ash	15 m	>
<i>Eucalyptus bridgmanii</i>	Apple Box	25 m	>
<i>Eucalyptus crebra</i>	Narrow Leaved Ironbark	35 m	>>
Undesirable Trees			
<i>Acacia species</i>	Wattle	2-7 m	>
<i>Alcyonon oleifolius</i>	Broomrape	8 m	>>
<i>Callitris glaucophylla</i>	White Cypress	3 m	>>
<i>Conoselinum ciliolatum</i>	Mourou	10 m	>>
<i>Callistemon species</i>	Bottlebrush	3 m	>
<i>Dalmanea species</i>	Hoop bush	1-3 m	>
<i>Gajoparia parviflora</i>	Willow	10 m	>>
<i>Hebea species</i>	Hovea	2-4 m	>
<i>Nelkia floridana</i>	Three-merral willow	5 m	>
<i>Arctostaphylos species</i>	Dogwood	12 m	>
<i>Leptospermum species</i>	Tateno	2-3 m	>
<i>Lamandra-rotundifolia</i>	Man-cash	1 m	>
<i>Melaleuca species</i>	Paperbark	10 m	>
<i>Notolana microcarpa</i>	Native Olive	10 m	>>
<i>Platypodium argusfolium</i>	Butterbush	10 m	>>
<i>Pydrois colorata</i>	Shiny-leaved carnation	8 m	>

> Regional Ecosystems 11 & 5
 >> Listed on suitable re-vegetation species - Crown Nest Landcare Nursery



GENERAL ARRANGEMENT
 SCALE 1:500



Rev	Description	Date	DSY	DSY	RS	Reg Eng	Reg No	Drawing No.	Reference Title
A	30% CONCEPT DESIGN	20/04/2026	DSY	DSY	RS				
1	Revision Details								

HYOSUNG HEAVY INDUSTRIES | **acciona**

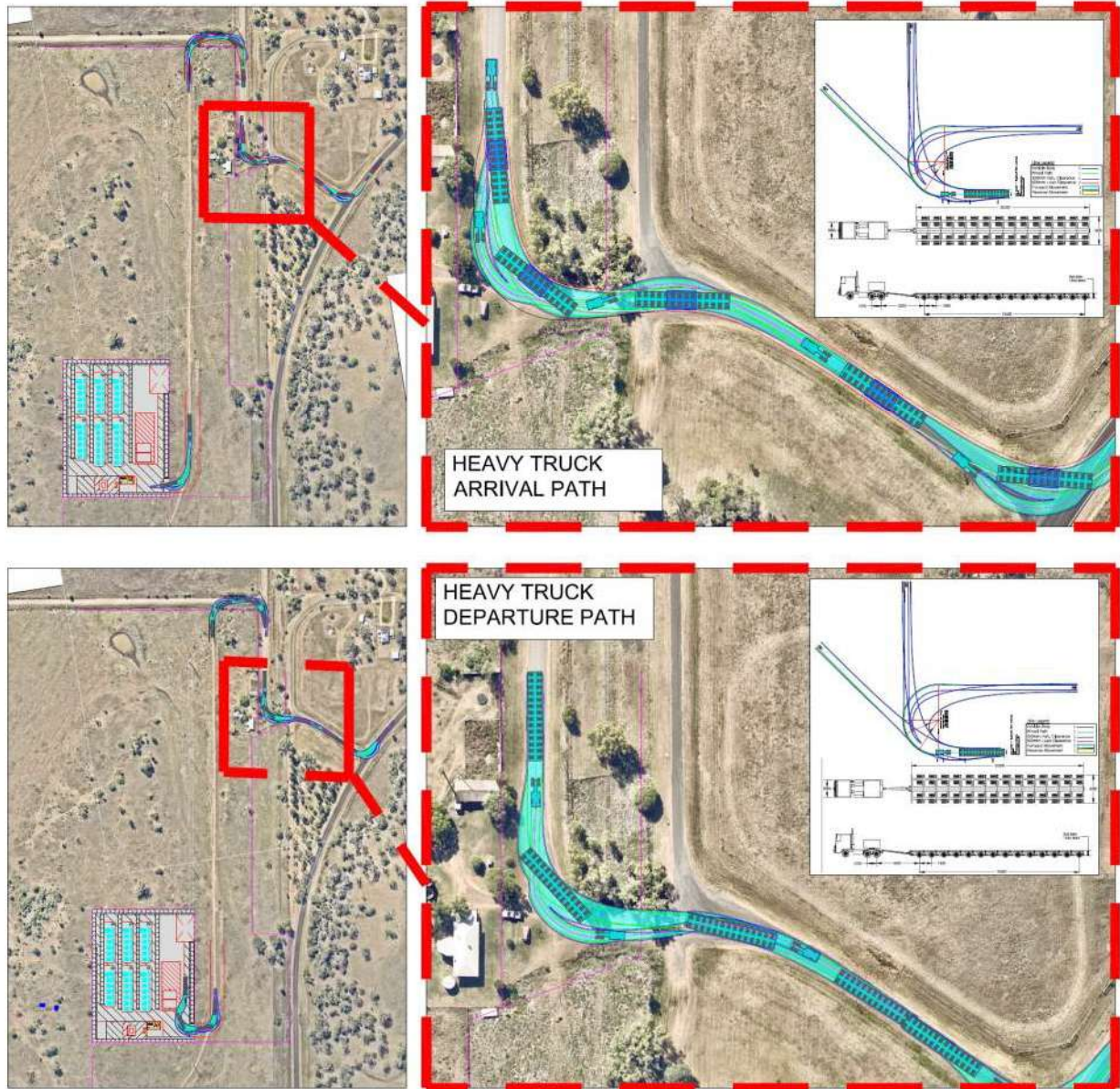
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TANGKAM BESS
 ECI DESIGN
 BESS
 LANDSCAPING PLAN

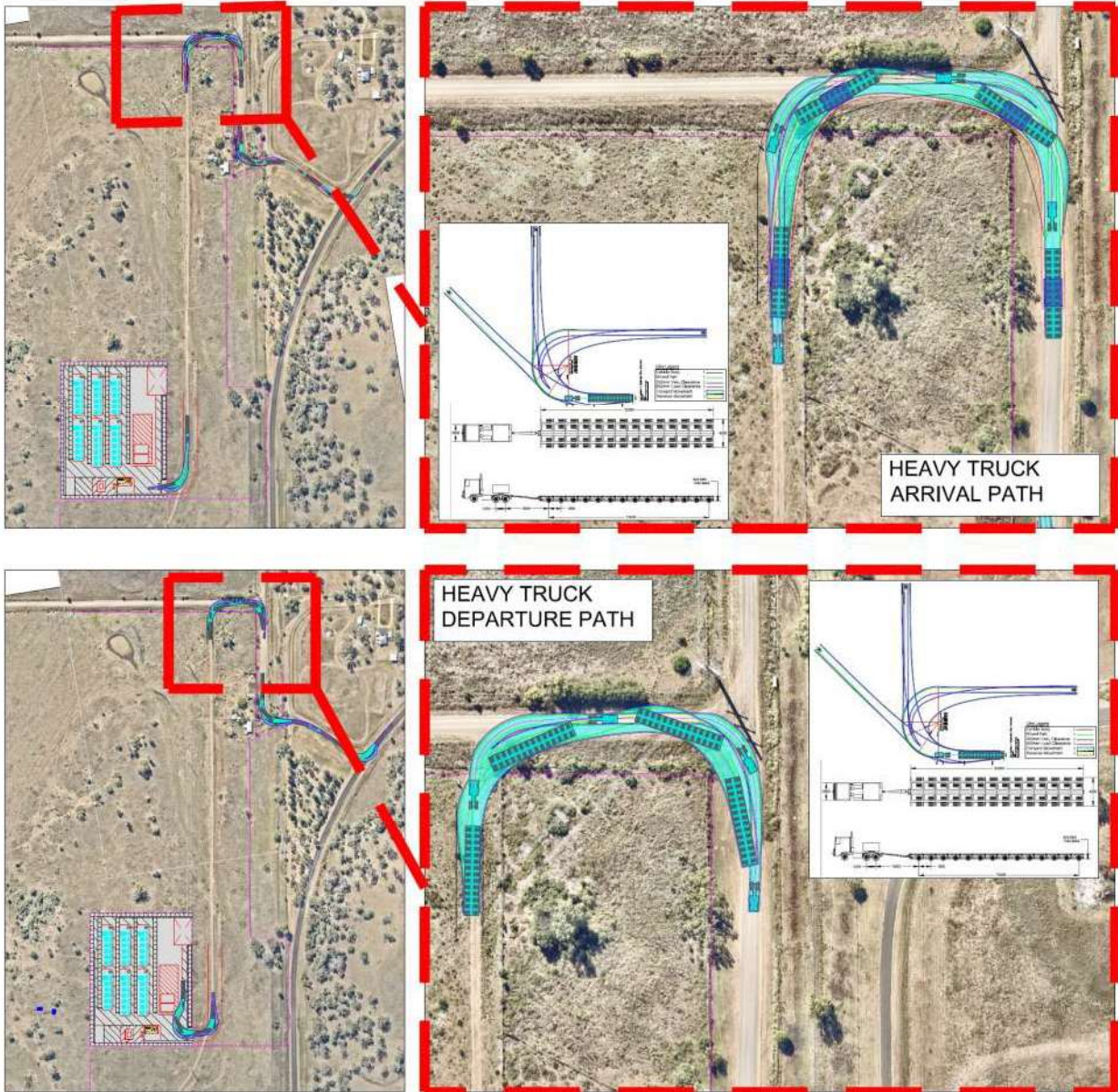
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Scale: A1 1:500
 Drawing No: 10
 Rev No: 1



**FIGURE 4.6 – SWEEP PATH OF OVERSIZE VEHICLE
 AT THE KEARNEY ROAD / BRENNAN ROAD INTERSECTION**

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**FIGURE 4.7 –SWEEP PATH OF OVERSIZE VEHICLE
 AT THE KOWITZ ROAD / SITE ACCESS INTERSECTION**

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