PART B – SHIRE OF MOORA

1. Declarations of Due Consideration

2. Disclosure of Interests

3. Form 1 DAP Applications

3.1 Lot 502 (No. 330) Kalinga Road, Walebing; Lot 3 (No. 721) Old Geraldton South Road, Berkshire Valley; Lot 612 Cranmore Road, Bindi Bindi; & Lot 11 on Deposited Polan No. 45074 – Four (4) Meteorological Masts – DAP/26/03155

4. Form 2 DAP Applications

Nil

5. Section 31 SAT Reconsiderations

Nil

Part B – ITEM 3.1 – LOT 502 (NO. 330) KALINGA ROAD, WALEBING; LOT 3 (NO. 721) OLD GERALDTON SOUTH ROAD, BERKSHIRE VALLEY; LOT 612 CRANMORE ROAD, BINDI BINDI; & LOT 11 ON DEPOSITED PLAN NO. 45074 – FOUR (4) METEOROLOGICAL MASTS

RESPONSIBLE AUTHORITY REPORT – FORM 1	
DAP Name:	Regional DAP
DAP File No:	DAP/26/03155
LG Reference:	TP/DATR/2627
Proposed Development:	Four (4) Meteorological Masts
Value of Development:	$2 million
Owner:	Mr Graham Leonard Popplewell, Ms Rebecca Faye Popplewell, Boolardy Pastoral Co Pty Ltd, Kalinga Nominees Pty Ltd, Raheen Nominees Pty Ltd
Applicant:	Central Midlands Wind Farm Pty Ltd ATF The Central Midlands Wind Farm Trust
Local Government Area:	Shire of Moora
Responsible Authority:	Shire of Moora
Authorising Officer:	Sai Katam – Manager Infrastructure Services
Application Acceptance Date:	27 July 2026

LOCATION PLAN

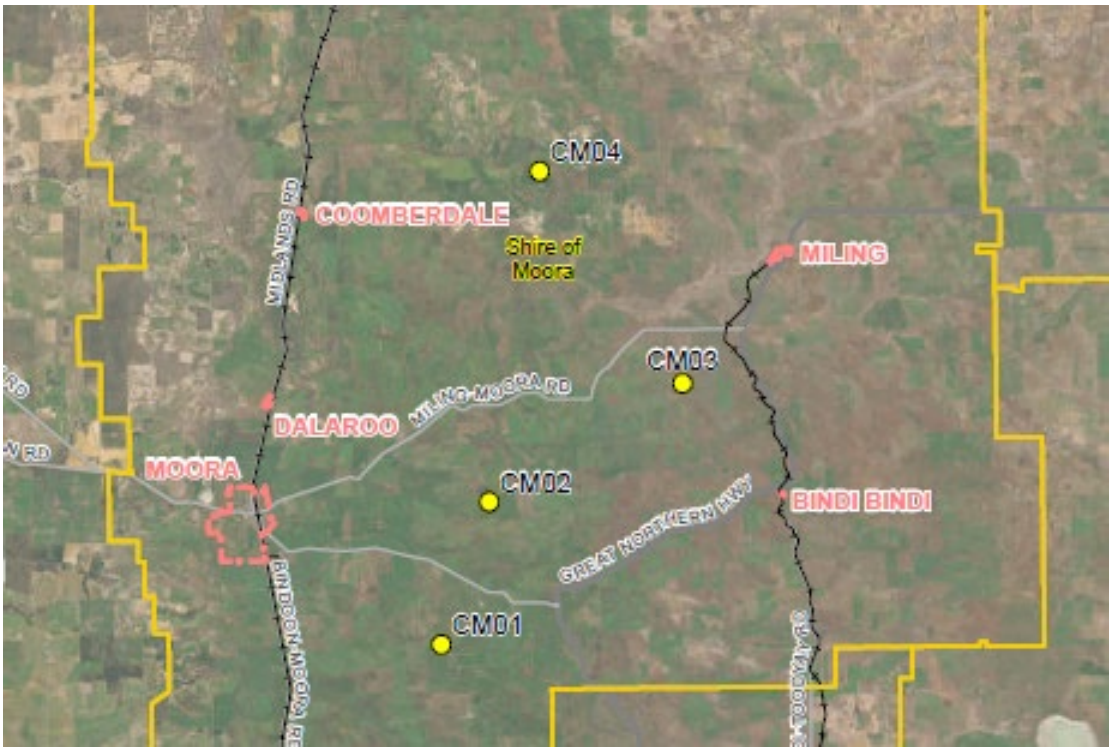


Figure 1: Overall Location Plan (Source: Figure 1.1 of Applicant's Justification Report)

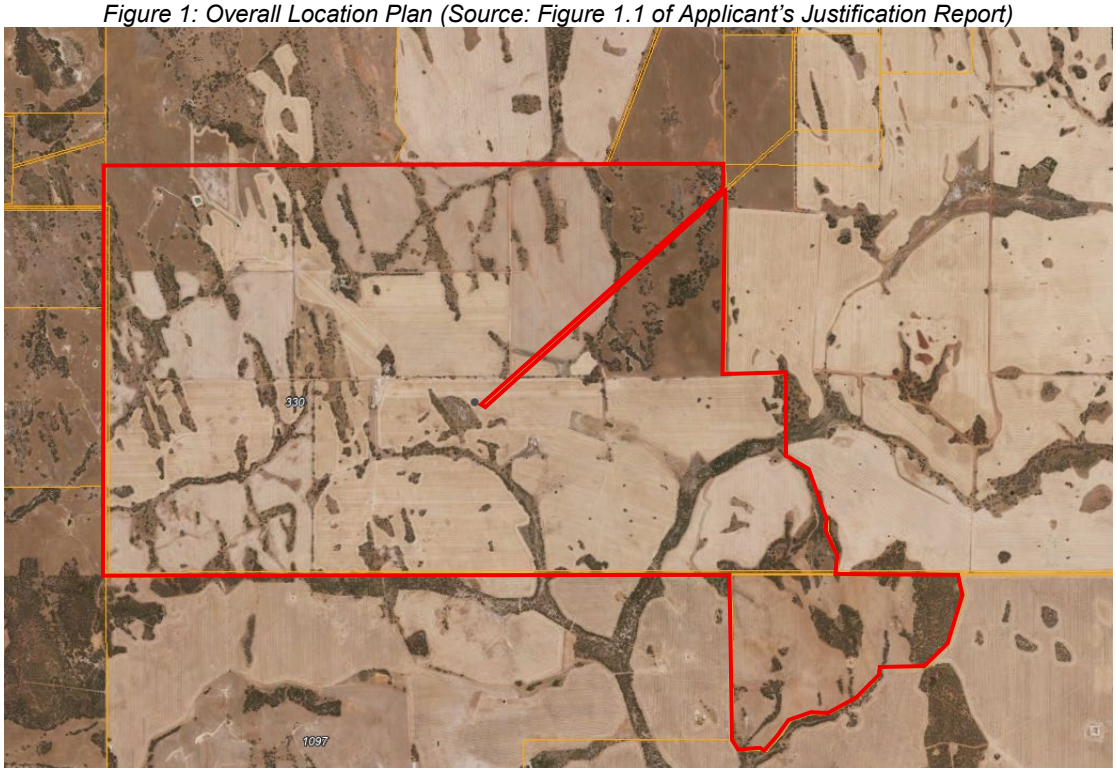


Figure 2: Location Plan for Lot 502 (No. 330) Kalinga Road, Walebing (Source: SLIP Locate, 2026)

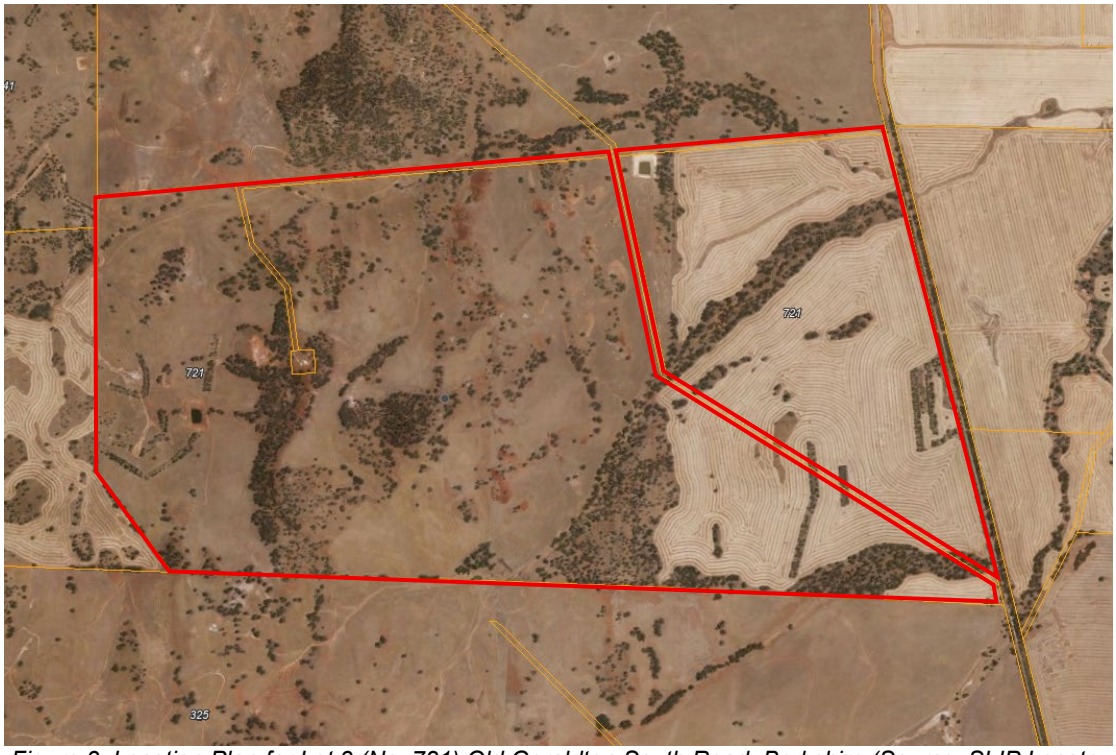


Figure 3: Location Plan for Lot 3 (No. 721) Old Geraldton South Road, Berkshire (Source: SLIP Locate, 2026)



Figure 4: Location Plan for Lot 612 Cranmore Road, Bindi Bindi (Source: SLIP Locate, 2026)



Figure 5: Location Plan for Lot 11 On Deposited Plan No. 45074 (Source: SLIP Locate, 2026)

RESPONSIBLE AUTHORITY RECOMMENDATION

That the Regional DAP resolves to **APPROVE** DAP Application reference DAP/26/03155 for four (4) meteorological masts at Lot 502 (No. 330) Kalinga Road, Walebing, Lot 3 (No. 721) Old Geraldton South Road, Berkshire Valley, Lot 612 Cranmore Road, Bindi Bindi, and Lot 11 on Deposited Plan No. 45074, in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of the Shire of Moora Town Planning Scheme No. 4, subject to the following conditions:

1. The development is to be undertaken in accordance with the approved plans and documents attached to this approval, as listed below, except where amended by subsequent conditions:

Plan/ Document Name	Reference	Date
Site Plan	Figure 1.2	2026
G.A. Guyed Lattice Mast Type 55-36	DWG No: AEDGA-GLA53-0150-003 Issue: 02 Sheet: 2/3	20 March 2024
G.A. Guyed Lattice Mast Type 55-36	DWG No: AEDGA-GLA53-0150-003 Issue: 02 Sheet: 3/3	20 March 2024

2. This decision constitutes planning approval only and is time limited for a period of eight (8) years from the date of approval. Upon the expiration of this approval, the Applicant shall, at the Applicant's cost:

   a. Remove the Meteorological Masts (including footings); and

   b. Rehabilitate the affected land to its pre-development condition, to the specifications and satisfaction of the Shire of Moora.

3. Prior to the commencement of any works, a Construction and Decommissioning Management Plan (CDMP) is to be submitted to and approved by the Shire of Moora. The CDMP is to outline vehicle types and number of movements associated with the construction and decommissioning phases, the proposed transport route and remedial works to the property crossover post-construction and decommissioning phases. The approved CDMP is to be implemented and adhered to thereafter to the satisfaction of the Shire of Moora.

4. The meteorological masts are to be marked in accordance with the recommendations of the Aviation Impact Assessment prepared by Aviation Projects dated 26 May 2026, including:

   a. The top one third of each mast being painted in alternating contrasting bands of colour;

   b. Marker balls, high visibility flags or high visibility sleeves being placed on the outside guy wires; and

c. The guy wire ground attachment points being a contrasting colour to the surrounding ground and vegetation, or a flashing strobe light being installed and operated during daylight hours.

The markings are to be installed prior to the masts being erected to full height and maintained for the life of the development, to the satisfaction of the Shire of Moora.

Advice Notes

1. If an Applicant is aggrieved by this determination there is a right of appeal under Part 14 of the *Planning and Development Act 2005*. An appeal must be lodged within 28 days of the determination with the State Administrative Tribunal.

2. In relation to removal of the development and rehabilitation of the development site, "pre-development condition" means a bare earth area, free of any structure or footings related to the development and returned to pasture cover.

3. Tall structures may present a hazard to civil and military aviation, particularly during low-level operations. Recording these structures in the national obstacle database supports aeronautical charting, flight planning and the safe navigation of aircraft. The Department of Defence requests that the Applicant:

   a. complete the current Airservices Australia Vertical Obstruction Data Form (ATS-FORM-0085), or the Multiple Vertical Obstruction Data spreadsheet, and submit it to VOD@airservicesaustralia.com;

   b. provide a copy of the submitted information to the Aeronautical Information Service – Air Force (ais.af@defence.gov.au); and

   c. provide updated, verified as-constructed information once the final coordinates, ground elevation and maximum height of each structure have been confirmed. The initial notification should be provided as early as practicable and before the relevant structure is erected.

4. The meteorological masts will need to comply with any Airservices Australia, Department of Defence and/or Civil Aviation Safety Authority's requirements in relation to tall structure requirements. Airservices Australia has advised that its previous advice (WA-MA-402) remains valid so long as there is no change to the coordinates and maximum heights of the meteorological masts.

5. This Development Approval is not a Building Permit or an approval to commence or carry out development under any other law. It is the responsibility of the Applicant to obtain any other necessary approvals, consents and licenses required under any other law, and to commence and carry out development in accordance with all relevant laws.

6. This approval is not an authority to ignore any constraint to development on the land, which may exist through statute, regulation, contract or on title, such as an easement or restrictive covenant. It is the responsibility of the Applicant and not the Development Assessment Panel or the Shire of Moora to investigate any such constraints before commencing development. This approval will not

necessarily have regard to any such constraint to development, regardless of whether or not it has been drawn to the Development Assessment Panel or the Shire of Moora's attention.

7. The Applicant is responsible for ensuring all lot boundaries as shown on the approved plans are correct.

8. Development shall comply in all respects with the attached approved plans and any requisite amended plans required by a condition of this approval which have been stamped accordingly.

9. DWER advises that the proposal will not have a significant impact on environment or water resources, however it is noted that some minor clearing of native vegetation will be required for one of the masts. DWER advises that under section 51C of the *Environmental Protection Act 1986* (EP Act), clearing of native vegetation is an offence unless:

    - it is undertaken under the authority of a clearing permit;
    - it is done after the person has received notice under Section 51DA(5) that a clearing permit is not required;

    - the clearing is subject to an exemption.

    Exemptions for clearing that are a requirement of written law, or authorised under certain statutory processes, are contained in Schedule 6 of the EP Act. Exemptions for low impact routine land management practices outside of environmentally sensitive areas (ESAs) are contained in the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (the Clearing Regulations).

PROPOSAL:

The Applicant has provided a report detailing the proposal and describes the four (4) subject lots that comprise the development site. The officer does not seek to duplicate the entirety of the Applicant's report.

The proposal consists of the installation of four (4) meteorological masts (**met masts**) for the purpose of gathering wind data. The Applicant intends to install two (2) met masts initially, and then the remaining two (2) masts within a four (4) year period.

The masts will be developed on four (4) separate lots, that is one (1) met mast per lot. These lots are as follows:

- Lot 502 (No. 330) Kalinga Road, Walebing (**CM01**);
- Lot 3 (No. 721) Old Geraldton South Road, Berkshire Valley (**CM02**);
- Lot 612 Cranmore Road, Bindi Bindi (**CM03**); and
- Lot 11 On Deposited Plan No. 45074 (**CM04**).

The Applicant has indicated that the proposal will be decommissioned following the future progression of a separate wind farm application. To allow sufficient time for the

development to collect the necessary data for the intended wind farm and to maintain flexibility with timings, an eight (8) year operational period is sought.

The proposed met masts will be guyed lattice structures with a maximum height of 150m from natural ground level. Each met mast will be comprised of a footing for the tower foundation and nine (9) guy anchors located from the mast base at approximately 30m, 70m, and 90m intervals.

BACKGROUND:

All lots are currently used for agricultural purposes, with a minimum lot size of approximately 319.65 hectares (CM04). The met masts will be located generally within cleared areas to limit the need for clearing.

As mentioned, the met masts will collect climatic data to provide critical information needed for the design and feasibility of the proposed Central Midlands Wind Farm in the locality. The information collected will estimate energy generation, inform turbine selection, and the design of associated infrastructure to suit the relevant site conditions.
The Applicant has previously conducted preliminary consultation with the following stakeholders:

- All relevant landowners;
- Shire of Moora (**Shire**);
- Yued Aboriginal Corporation;
- Air Services Australia; and
- Department of Defence.

PLANNING ASSESSMENT:

PLANNING FRAMEWORK	
Region Scheme	N/A
Region Scheme - Zone/Reserve	N/A
Local Planning Scheme	Town Planning Scheme No. 4 (**TPS4**)
Local Planning Scheme - Zone	General Agriculture
Lot Size	Lot 502 Kalinga Road – 1,759.8819ha Lot 3 Old Geraldton South Road – 545.1231ha Lot 612 Cranmore Road – 390.0714ha Lot 11 – 319.6523ha
Existing Land Use	Agriculture – Extensive
Heritage Status	☒ N/A ☐ State Register of Heritage Places ☐ Local Heritage List ☐ Local Heritage Area
Bushfire Prone Area	Yes

The proposal has been assessed against all the relevant legislative requirements of the local and state planning framework. The following matters have been identified as key considerations for the determination of this application:

- Land use and permissibility
- Site requirements
- Height, compatibility and visual impact
- Traffic and access
- Environmental
- Aviation safety

These matters are outlined and discussed below.

Land Use & Permissibility:

TPS4 does not contain a use class definition that suitably aligns with the proposal.

Clause 3.2.4 of TPS4 states:

> *9.2.4 If the use of land for a particular purpose is not specifically mentioned in the Zoning Table and cannot reasonably be determined as falling within the interpretation of one of the use categories the local government may:*
>
> *(a) determine that the use is consistent with the objectives and purposes of the particular zone and is therefore permitted; or*
>
> *(b) determine that the proposed use may be consistent with the objectives and purposes of the zone and thereafter follow the 'A' advertising procedures of clause 64 of the deemed provisions in considering an application for developmental approval; or*
>
> *(c) determine that the use is not consistent with the objectives and purposes of the particular zone and is therefore not permitted.*

Clause 3.2.4 therefore contemplates development that is not specifically mentioned in the Zoning Table and cannot reasonably be determined as falling within the type, class or genus of activity of any other use category.

The subject lots are all zoned 'General Agriculture' under TPS4, the objectives of which are to:

> *(a) To ensure the continuation of broad-hectare farming as the principal land use in the district and encouraging where appropriate the retention and expansion of agricultural activities.*
>
> *(b) To consider non-rural uses where they can be shown to be of benefit to the district and not detrimental to the natural resources or the environment*
>
> *(c) To allow for facilities for tourists and travellers, and for recreation uses.*

The officer forms the view that the proposed development sufficiently meets the objectives due to the following:

- The proposal does not displace or interfere with any ongoing agricultural activities. The temporary nature and limited footprint of the met masts and investigation sites are compatible with broad-hectare agriculture, allowing continued rural use of the land.

- The proposal does not introduce a sensitive land use. It supports investigation of a potential rural-compatible use (renewable energy generation) and does not constrain other existing or future rural activities. The intended future renewable energy source will largely create a positive impact to the locality.

- With the temporary and minimal building footprint proposed, the development is not one that would create any adverse impacts to tourism and recreational uses.

As such, in accordance with Clause 3.2.4(b) of TPS4, the required advertising as a 'Use Not Listed – Meteorological Masts' was undertaken with no submissions received. It has therefore been determined that the proposal is capable of receiving development approval.

Site Requirements

In accordance with clause 3.16.2 of TPS4, all development within the 'General Agriculture' zone shall be set back a minimum of 20 metres from the front boundary and 15 metres from all other boundaries.

All meteorological mast locations exceed the setback requirement, with the smallest setback proposed (CM01) being 88m.

Where a development on a lot abuts an unconstructed road, consideration is to be given to the following under clause 4.7 of TPS4:

> *(a) refuse the application until the road has been constructed or access by means of a constructed road is provided as the case may be; or*
>
> *(b) grant the application subject to a condition requiring the applicant to pay a sum of money in or towards payment of the cost or estimated cost of construction of the road or part thereof and any other conditions it thinks fit to impose; or*
>
> *(c) require such other arrangements are made for permanent access as shall be to the satisfaction of the local government.*

The development site will be accessed via existing access arrangements for all properties, including informal access tracks within each lot which does not require clearing or adverse impacts to existing agricultural activities.

Clause 4.9 of TPS4 provides requirements for radio masts, television antennae, and satellite dishes. Whilst the proposal does not specifically relate to these uses, it is of a similar design. Reference should be made to the assessment below in respect to the proposal's height, compatibility and visual impact. Clause 4.9 requires such development to be located so that, in the opinion of the Shire, they do not detract from or adversely affect local amenity.

No other applicable site requirements apply to this proposal, pursuant to TPS4.

Height, Compatibility & Visual Impact

Particular consideration is afforded to balancing visual impacts and locating infrastructure to ensure optimum functionality of data gathering. The main visual consideration relates to the mast itself; however, the guyed supports will also be somewhat visible. The following points summarise the above considerations:

- It is inevitable that the met masts will be viewable within the local catchment, however the visual prominence of the masts in their rural context is not expected to visually dominate the landscape, detract from views of significance or adversely impact nearby landowners.

- The proposal does not interfere with existing agricultural activities on the subject land, nor any activities in the locality. The proposal introduces temporary infrastructure for an eight (8) year period, at which time the structures will be removed from the land or earlier.

- The met masts are setback substantial distances from sensitive receptors, being approximately 1km from CM01 (the landowner's dwelling). No dwellings are located within 2km of CM02, CM03 or CM04.

- The met masts are slimline and open-framed in nature, reducing bulk and mass when viewed from a distance. As the structures are painted with neutral tones, except for aviation markings, their overall visibility within the broader rural landscape is limited.

While the meteorological masts will be visible, they are not anticipated to result in unreasonable adverse amenity impacts.

Traffic & Access

As mentioned, access will be provided via existing arrangements for each property, and informal access tracks leading to the development site. Considering that the only traffic generated will be for construction/decommissioning and general maintenance, the access to the site is deemed acceptable.

With the low traffic volumes proposed, no traffic reporting is required pursuant to the Western Australian Planning Commission (WAPC) Transport Impact Assessment Guidelines.

Environmental

The met masts are proposed in locations that are generally clear of native vegetation. The Applicant has provided an Ecological Assessment that was prepared by RPS AAP Consulting Pty Ltd dated 27 May 2026. This can be found at **Attachment 3**.

The Ecological Assessment has determined that the development of met masts CM01, CM03 and CM04 will not result in any native vegetation clearing or pruning. However, CM02 may require some clearing of York Gum trees. This proposed clearing, if required, is considered acceptable due to the following:

- No objection was raised by DWER.

- The clearing will not create an adverse impact on restricted vegetation associations, conservation significant flora, ecological communities or Carnaby's cockatoos.

DWER advised that the proposal will not have a significant impact on environment or water resources and raised no objection but did not confirm whether a clearing permit or exemption applies to the minor clearing required for one of the masts.

CONSULTATION:

PUBLIC CONSULTATION

The application was advertised in accordance with clause 64 of the *Planning and Development (Local Planning Schemes) Regulations 2015*. This included advertising to surrounding landowners by way of letter and a notification on the Shire's website and a notification on the Shire's social media platform. The Shire provided a 28-day consultation period.

Pursuant to the Local Government Exemptions under the *Planning and Development (Local Planning Schemes) Regulations 2015,* the requirement for a sign to be on site in accordance with clause 64(3)(c) of the Deemed Provisions was waived. The Shire considered that due to the remoteness and size of properties, the addition of a sign on site would have negligible effectiveness.

At the conclusion of the advertising period, the Shire received nil submissions.

REFERRALS/CONSULTATION WITH GOVERNMENT/SERVICE AGENCIES

The application was referred to the following agencies for a period of 42 days in accordance with clause 66 of the *Planning and Development (Local Planning Schemes) Regulations 2015*:

Civil Aviation Safety Authority (CASA)

- CASA advised (2 September 2026) that there is no certified aerodrome in the vicinity of the proposed masts requiring protection and agreed with the painting, marking and lighting recommendations of the Aviation Impact Assessment (provided at **Attachment 5**) including:

    - The top one third of wind monitoring towers to be painted in alternating contrasting bands of colour.

    - Marker balls or high visibility flags or high visibility sleeves placed on the outside guy wires.

    - Ensuring the guy wire ground attachment points have contrasting colours to the surrounding ground/vegetation; or a flashing strobe light during daylight hours.

CASA also noted that consideration will need to be given to potential community impacts from mast lighting and recommended that Airservices Australia be advised and an assessment carried out to confirm there are no impacts on airspace procedures, air traffic control or communications/navigation/surveillance facilities (see Airservices Australia response below).

Department of Defence (DoD)

- No objection subject to appropriate advice notes being included within any determination. DoD's updated advice of 27 August 2026 requests notification of the structures to Airservices Australia (Vertical Obstruction Data Form) and AIS-AF and the provision of as-constructed information.

Air Services Australia

- Airservices Australia advised (13 August 2026) that its previous advice (WA-MA-402) remains valid so long as there is no change to the coordinates and maximum heights of the meteorological masts.

Department of Water and Environmental Regulation (DWER)

- No objection raised. DWER's advice on the clearing of native vegetation is reflected in the recommended advice notes to be imposed.

- The proposal will not have a significant impact on environment or water resources; however, it is noted that some minor clearing of native vegetation will be required for one of the masts.

Department of Primary Industries and Regional Development

- No objection.

- Cleanliness will need to be maintained to ensure biosecurity requirements are met. A minimal impact proposal like this is low risk. DPIRD also recommended that DWER be contacted to verify the Applicant's self-assessment that no clearing permit is required for the clearing at CM02.

The comments received from State and Federal agencies reinforce the need to impose relevant conditions, however no comments object to the development.

As no public submissions were received, no schedule of submissions has been prepared. Copies of the correspondence received from State and Commonwealth agencies are included as **Attachment 6**.

DESIGN REVIEW PANEL ADVICE

Not applicable.

CONCLUSION:

The above assessment has determined that the proposal constitutes a 'Use Not Listed' under the Scheme, and given the development generally aligns with the objective of the General Agriculture zone, is capable of approval.

The subject land is a suitable location to achieve the required data gathering functions of the met masts, with substantial setbacks to sensitive land uses (dwellings) and potentially impacted landowners/occupiers. State and Federal agencies have also raised no objection, subject to the recommended advice notes being imposed.

The works are time-limited, with all structures to be removed and the land rehabilitated at the end of the approval period.

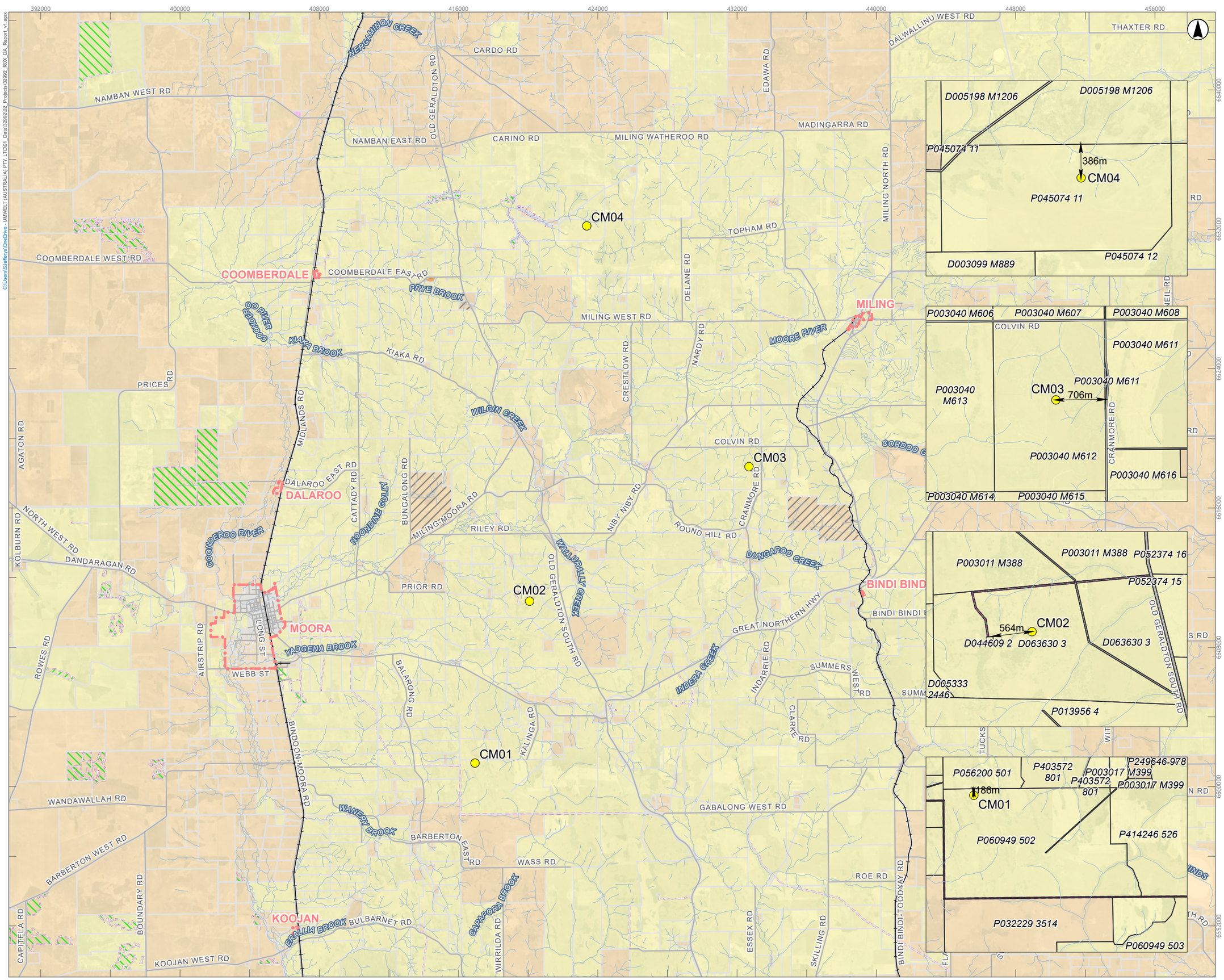
The proposal is viewed as satisfying the requirements of the Scheme and the relevant planning framework. In light of the above, the proposal is supported subject to conditions.

ATTACHMENTS

1. Development Plans
2. Applicant Justification Report
3. Ecological Assessment
4. Aboriginal and Historic Heritage
5. Aviation Impact Assessment
6. Copies of external referral responses

FIGURE 1.2

Site Plan



Legend

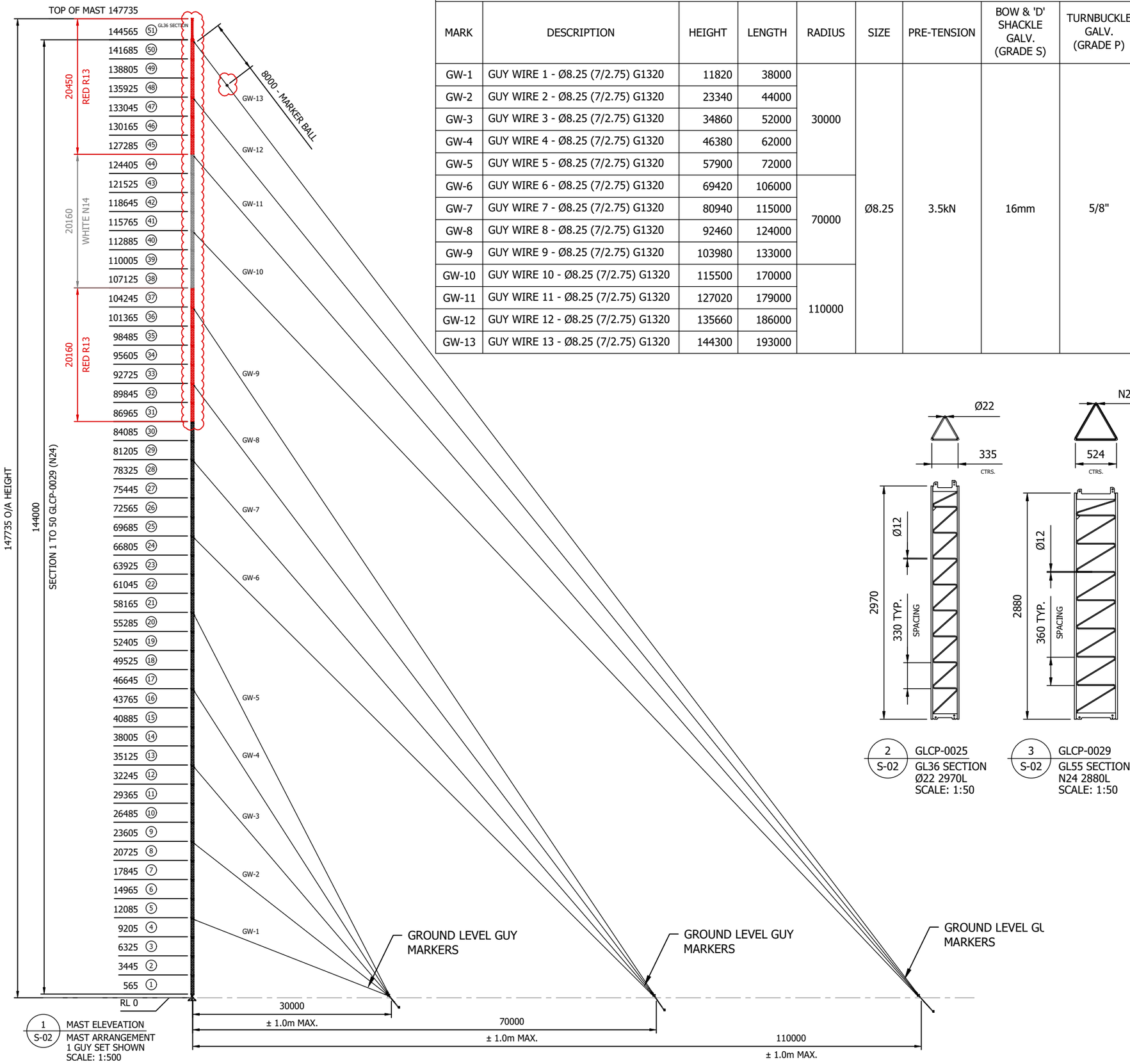
- Met Mast Location
- Road
- Railway
- Watercourse
- Townsite Boundary
- Property Boundary
- Easements
- Other Interests
- Crown Lease
- Crown Reserve
- Public Road
- Unallocated Crown Land
- Miscellaneous (Type3)
- Crown Allotment (Type 2)
- Building, Survey Strata Lots
- Lot on Survey (Type 1)

0 4 8 km

Scale 1:200,000 at A3
GDA2020 MGA Zone 50

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Image Source: ESRI Basemap (2025) | **Data Source:** Landgate (2022, 2026), Tilt (2026), Umwelt (2026)



1 S-02 MAST ELEVEATION
MAST ARRANGEMENT
1 GUY SET SHOWN
SCALE: 1:500

GUY WIRE SCHEDULE (RIGGING EQUIPMENT TO AS 1138. AS 2319. AS 2714. AS 2759. AS 4991.)

MARK	DESCRIPTION	HEIGHT	LENGTH	RADIUS	SIZE	PRE-TENSION	BOW & 'D' SHACKLE GALV. (GRADE S)	TURNBUCKLE GALV. (GRADE P)	FAN-WRAP GALV. (GRADE GFG 083)	THIMBLE GALV. (GRADE 3025)
GW-1	GUY WIRE 1 - Ø8.25 (7/2.75) G1320	11820	38000	30000	Ø8.25	3.5kN	16mm	5/8"	8.25mm	11mm
GW-2	GUY WIRE 2 - Ø8.25 (7/2.75) G1320	23340	44000							
GW-3	GUY WIRE 3 - Ø8.25 (7/2.75) G1320	34860	52000							
GW-4	GUY WIRE 4 - Ø8.25 (7/2.75) G1320	46380	62000							
GW-5	GUY WIRE 5 - Ø8.25 (7/2.75) G1320	57900	72000							
GW-6	GUY WIRE 6 - Ø8.25 (7/2.75) G1320	69420	106000	70000						
GW-7	GUY WIRE 7 - Ø8.25 (7/2.75) G1320	80940	115000							
GW-8	GUY WIRE 8 - Ø8.25 (7/2.75) G1320	92460	124000							
GW-9	GUY WIRE 9 - Ø8.25 (7/2.75) G1320	103980	133000							
GW-10	GUY WIRE 10 - Ø8.25 (7/2.75) G1320	115500	170000	110000						
GW-11	GUY WIRE 11 - Ø8.25 (7/2.75) G1320	127020	179000							
GW-12	GUY WIRE 12 - Ø8.25 (7/2.75) G1320	135660	186000							
GW-13	GUY WIRE 13 - Ø8.25 (7/2.75) G1320	144300	193000							

2 S-02 GLCP-0025
GL36 SECTION
Ø22 2970L
SCALE: 1:50

3 S-02 GLCP-0029
GL55 SECTION
N24 2880L
SCALE: 1:50

NOTES:

REV	DESCRIPTION	DATE
02	ADDED PAINT & MARKER BALL	20 MAR. 24
01	SECTION DETAILS ADDED	12 JAN. 24
00	ISSUED FOR CONSTRUCTION	09 JAN. 24

CONSULTING ENGINEERS

GEOTECHNICAL ENGINEERS

ART GROUP
119-125 QUARRY ROAD
MURWILLUMBAH NSW 2484
(02) 6672 6200
admin@artowers.com.au
australianradiotowers.com.au

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CLIENT

CLIENT DOC. REF.

PROJ. | PROD.
GL - GUYED LATTICE

SITE NAME

DRAWING TITLE
G.A. GUYED LATTICE MAST TYPE 55-36
HEIGHT 150m
LAYOUT 003

STATUS
ISSUED FOR CONSTRUCTION

SCALE: (PLOTTED AT A3)
AS SHOWN @ A3

THIRD ANGLE PROJECTION

DRAWN	CHECKED	APPROVED	CO-ORDINATED
CG	HY	AA	HY

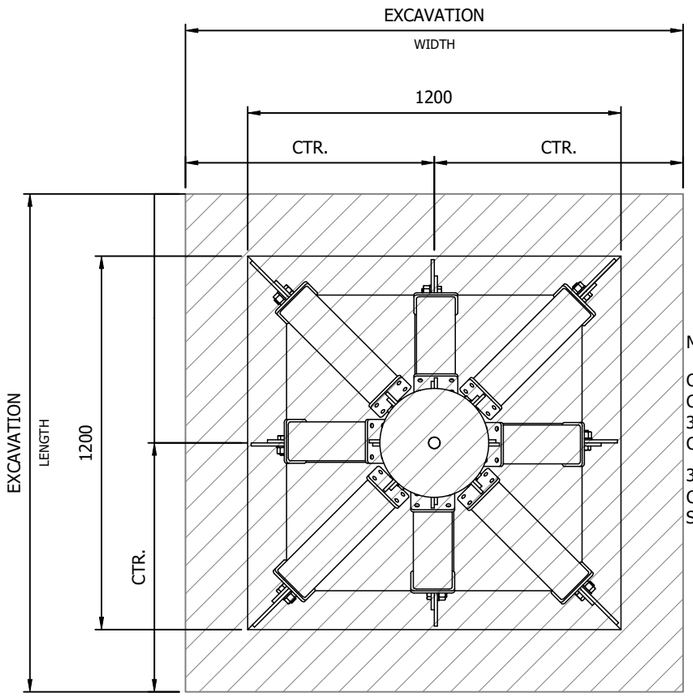
DRAWING NUMBER: AEDGA-GLA53-0150-003
ISSUE: 02
SHT./SHTS 2/3

0 10 20 30 40 50mm

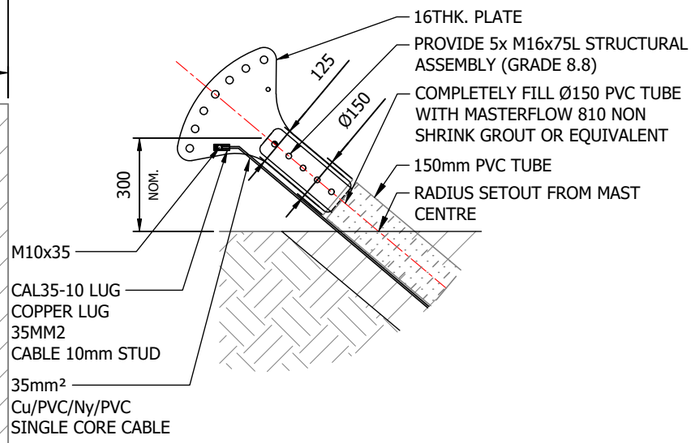
ART-A3Ls_R01

MAST BASE FOUNDATION					
EXCAV. WIDTH	EXCAV. LENGTH	EXCAV. DEPTH	SELECT FILL DEPTH	BLUE METAL VOL. (m^3)	CEMENT (kg)
1800	1800	1112	650	2.11m^3	510

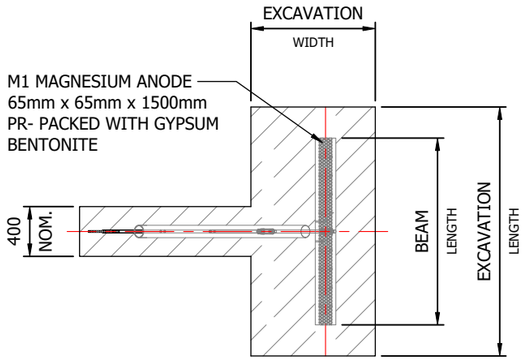
GUY ANCHOR FOOTING SCHEDULE													
FOOTING	RADIUS	No. GUYS	EXCAV. WIDTH	EXCAV. LENGTH	EXCAV. DEPTH	ANCHOR BEAM	ANGLE	DIM A	DIM B	DIM C	GROUT WEIGHT (kg)	PIPE LENGTH	ANCHOR HEAD
INNER	30000	5	800	3400	1600	3000	51°	1288	400	2360	62	2200	7 HOLE
INTERMEDIATE	70000	4	800	3400	2000	3000	50.5°	1627	400	2825	76	2700	7 HOLE
OUTER	110000	4	800	3400	2200	3000	48°	1967	400	3260	87	3100	7 HOLE



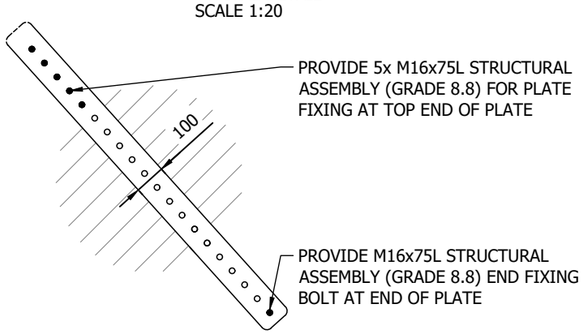
1 / S-03 PLAN VIEW
BURIED STEEL MAST FOUNDATION
TYPICAL DETAIL
SCALE 1:20



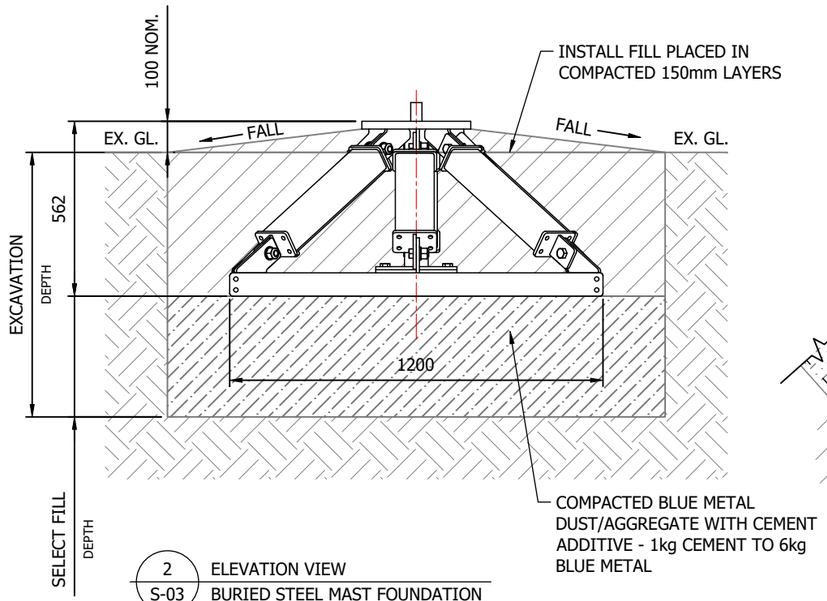
A / S-03 DETAIL VIEW
ANCHOR HEAD ASSEMBLY
TYPICAL DETAIL
SCALE 1:20



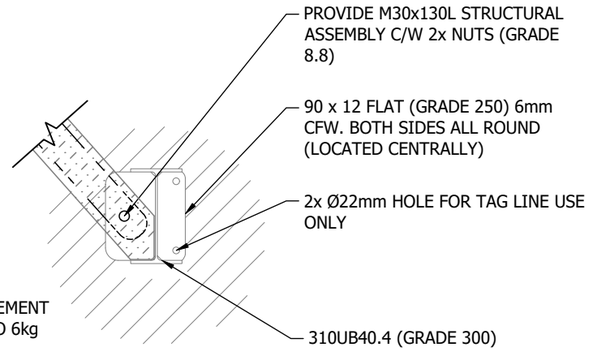
3 / S-03 PLAN VIEW
GUY ANCHOR FOOTING
TYPICAL DETAIL
SCALE 1:50



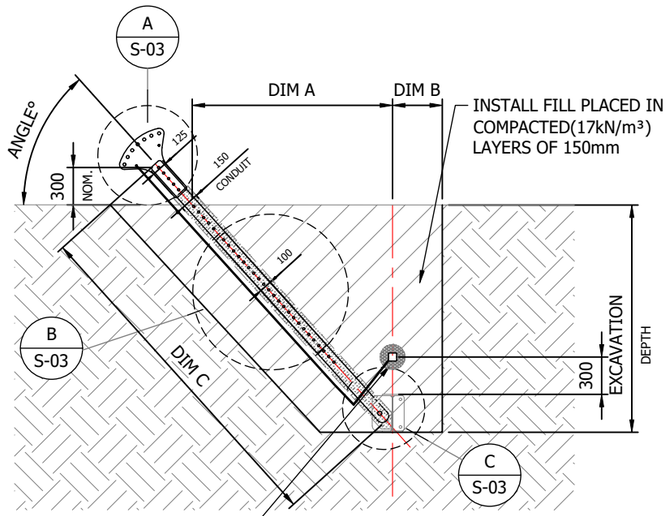
B / S-04 DETAIL VIEW
ANCHOR ROD CONNECTION
PVC TUBE & EARTH NOT SHOWN FOR CLARITY
TYPICAL DETAIL
SCALE 1:20



2 / S-03 ELEVATION VIEW
BURIED STEEL MAST FOUNDATION
TYPICAL DETAIL
SCALE 1:20



C / S-03 DETAIL VIEW
ANCHOR BEAM ASSEMBLY
TYPICAL DETAIL
SCALE 1:20



4 / S-03 ELEVATION VIEW
GUY ANCHOR FOOTING
ANCHOR ASSEMBLY SHOWN FOR CLARITY
TYPICAL DETAIL
SCALE 1:50

NOTES:

REV	DESCRIPTION	DATE
02	ADDED PAINT & MARKER BALL	20 MAR. 24
01	SECTION DETAILS ADDED	12 JAN. 24
00	ISSUED FOR CONSTRUCTION	09 JAN. 24

CONSULTING ENGINEERS

GEOTECHNICAL ENGINEERS

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CLIENT

CLIENT DOC. REF.

PROJ. | PROD.
GL - GUYED LATTICE

SITE NAME

DRAWING TITLE
G.A. GUYED LATTICE MAST TYPE 55-36
HEIGHT 150m
LAYOUT 003

STATUS
ISSUED FOR CONSTRUCTION

SCALE: (PLOTTED AT A3)
AS SHOWN @ A3

THIRD ANGLE PROJECTION

DRAWN	CHECKED	APPROVED	CO-ORDINATED
CG	HY	AA	HY

DRAWING NUMBER: AEDGA-GLA53-0150-003
ISSUE: 02
SHT./SHTS 3/3

0 10 20 30 40 50mm

ART-A3Ls_R01

5 June 2026

Gavin Robins
Chief Executive Officer
Shire of Moora

E ceo@moora.wa.gov.au

Dear Gavin

RE: Application for Development Approval - Central Midlands Meteorological Masts

Central Midlands Wind Farm Pty Ltd (ACN 672 068 754) as Trustee for the Central Midlands Wind Farm Project Trust (ABN 18 554 103 685), operating as Tilt Renewables Pty Ltd (Tilt), is seeking Development Approval from the Shire of Moora (the Shire) under *Local Planning Scheme No. 4* (LPS No. 4) to construct and operate four (4) meteorological mast towers (met masts) (the Project). Two met masts are proposed to be installed between August and December 2026, subject to DA approval, with the remaining to be installed within the following four years.

The purpose of constructing and operating the met masts is to conduct climatic monitoring to determine the suitability of the area for a potential future wind farm.

This supporting letter:

- Provides a description of the proposed met masts, including location, construction, and operational activities.
- Summarises consultation completed to date for the met masts, noting that a consultation programme will be implemented as part of the future potential wind farm project (separate to this application).
- Provides a brief outline of technical studies completed to support the development application.
- Provides a brief assessment against relevant aspects of the Western Australian planning framework relevant to this DA, including the LPS No.4 and other relevant policies and planning considerations.

In addition to this supporting letter, the following attachments have been provided as part of the application:

- **Appendix A** Development Application Form
- **Appendix B** Certificates of Title
- **Appendix C** Example General Arrangement Drawings.
- **Appendix D** Ecological Assessment

P 1300 793 267 E info@umwelt.com.au W umwelt.com.au NSW | ACT | WA | QLD | VIC | SA Umwelt (Australia) Pty Ltd ABN 18 059 519 041

- **Appendix E** Aboriginal and historic heritage due diligence assessment
- **Appendix F** Aviation Assessment

We trust the information presented meets with your current requirements. Please do not hesitate to contact the undersigned should you require clarification or further information.

Yours sincerely



Rob Karelse
Regional Director WA

E rkarelse@umwelt.com.au
M 0423 168 807

1.0 Project Description

1.1 Project Overview

The Project will involve the installation of four met masts to collect climatic data to inform the design and feasibility of constructing and operating the proposed Central Midlands Wind Farm in the locality. Data collected will estimate energy generation, inform turbine selection, and the design of associated infrastructure to suit site conditions.

The met masts will be guyed lattice structures with a maximum height of 150 m from natural ground level. Each met mast will be comprised of a footing for the tower foundation and nine guy anchors located radially from the mast base at approximately 30 m, 70 m, and 90 m intervals.

Two met masts are proposed to be installed between August and December 2026 (subject to development approval) with the intention to install the remaining masts within the following four years.

Should a wind farm development progress (subject to future application), the met masts will be decommissioned shortly after commissioning of the wind farm. However, to maintain flexibility, approval is sought for the masts to remain in place for up to eight years post installation. Should the met masts still be required after eight years, an extension to the approval period will be sought.

Locations of the proposed met masts are shown on **Figure 1.1** and **Figure 1.2**, general arrangement drawings of a typical met mast are provided in **Appendix C**, and an example of an installed met mast is shown in **Photo 1.1**.

Lot and Certificates of Title details for the proposed met masts are set out in **Table 1-1** and **Appendix B,** along with the land holder consents.

Table 1-1 Met mast location details and certificate of title

Proposed met mast	Lot	Diagram or Plan Number	Volume/Folio
CM01	502	60949	2777/401
CM02	3	63630	1633/384
CM03	612	3040	2683/991
CM04	11	45074	2590/594

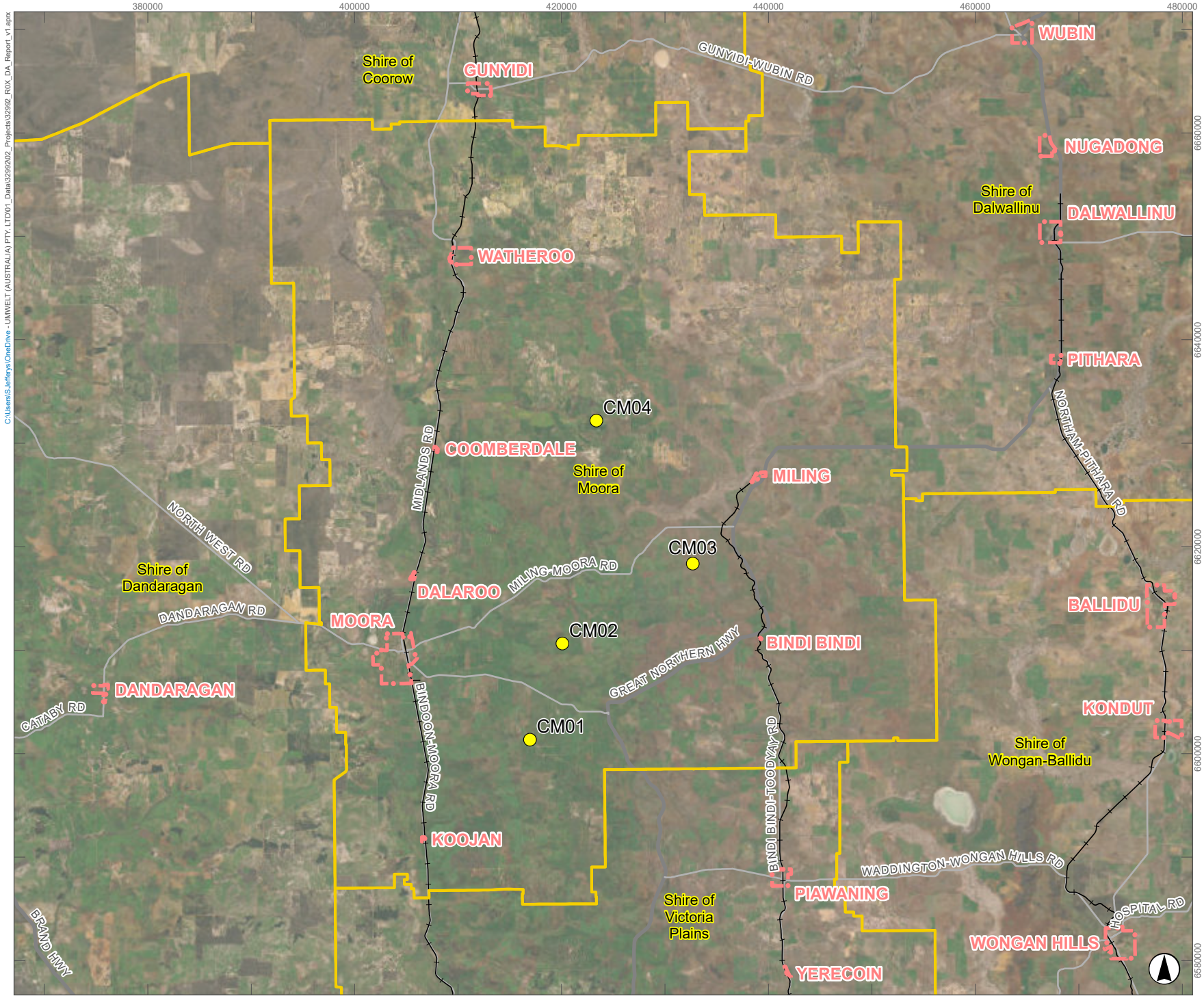
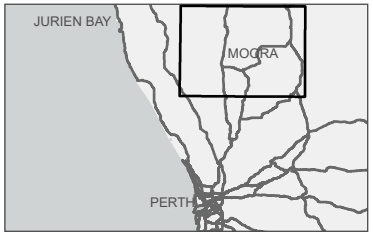


FIGURE 1.1
Project Location

Legend

- Met Mast Location
- Highway
- Main
- Railway
- Townsite Boundary
- Local Planning Scheme Boundar



0 10 20 km

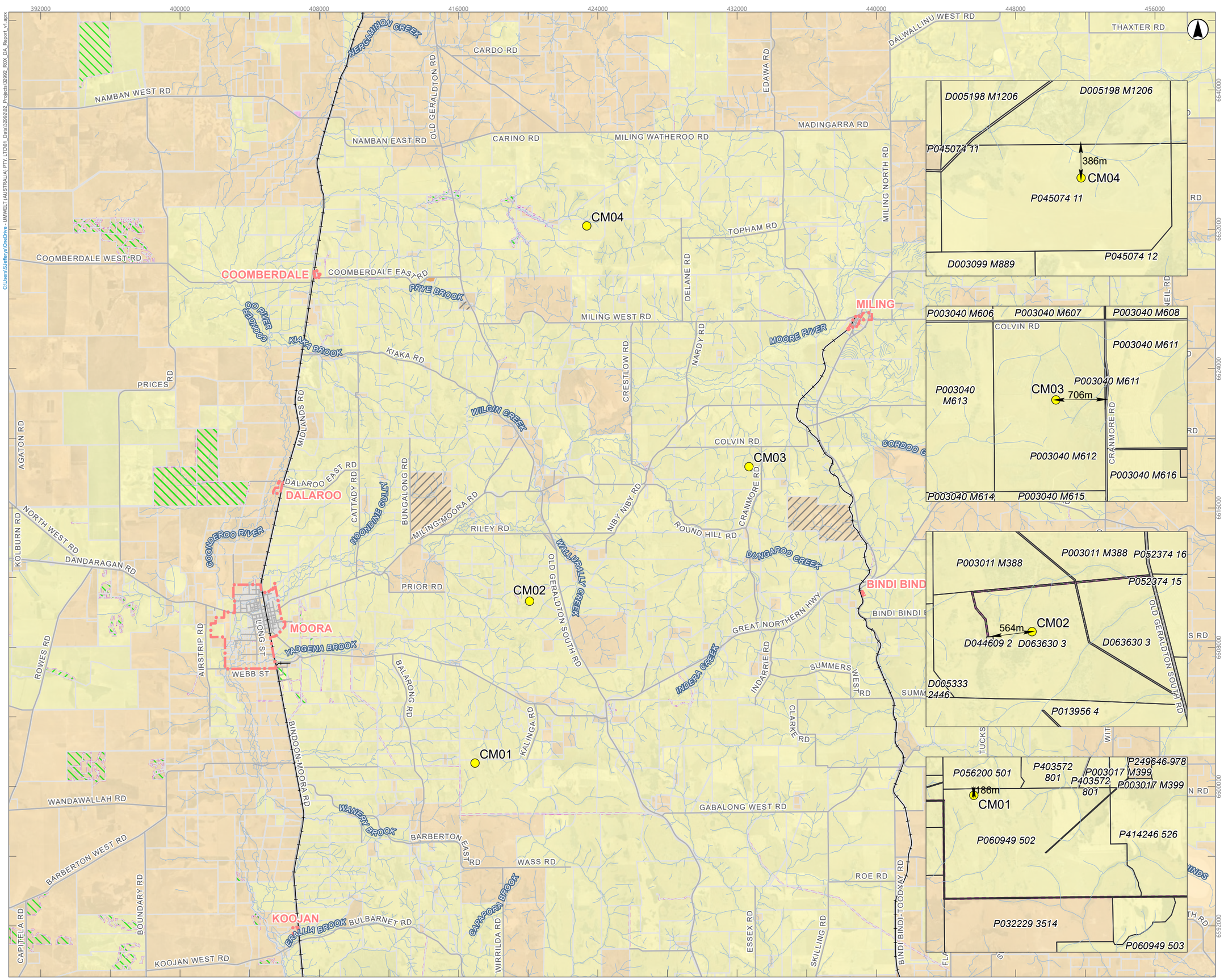
Scale 1:500,000 at A4
GDA2020 MGA Zone 50

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FIGURE 1.2

Met Mast Locations and Certificate of Titles



Legend

- Met Mast Location
- Road
- Railway
- Watercourse
- Townsite Boundary
- Property Boundary
- Easements
- Other Interests
- Crown Lease
- Crown Reserve
- Public Road
- Unallocated Crown Land
- Miscellaneous (Type3)
- Crown Allotment (Type 2)
- Building, Survey Strata Lots
- Lot on Survey (Type 1)

0 4 8 km

Scale 1:200,000 at A3
GDA2020 MGA Zone 50

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Photo 1.1 Completed met mast

1.2 Installation Method

The met masts will be fabricated off-site and transported to site in sections of approximately 3 m length.

The met masts will be erected using the following procedure:

- Excavation and installation of guy wire anchors and mast tower foundation.
- Section by section erection of tower structure using the gin pole method (no crane is required).
- Installation and commissioning of the wind monitoring system.

The tower foundation will consist of a buried metal structure filled with concrete or packed earth. Guy wire anchors are either buried in compacted soil or concrete. A flat platform is not required for installing a met mast, its design accommodates deployment in moderately uneven terrain. Grass and small shrubs can be retained under the met mast structure.

Photo 1.2 and **Photo 1.3** depict typical construction of a met mast foundation and typical installation of a guy wire anchor respectively.



Photo 1.2 Construction of mast foundation



Photo 1.3 Construction of guy wire anchor

Construction personnel numbers will vary between three to six contractors depending on the installation stage. Installation of each mast is expected to take two to three weeks.

The types of vehicles used for met mast installation and an estimate of related vehicle movements associated with installation of one mast is set out in **Table 1-2**. Access to site will be via existing landholder access tracks and no road upgrades will be required.

Table 1-2 Vehicle types and estimate of movements associated with the installation of one mast

Vehicle Type	Use during installation	Traffic movement estimate
12-19 m flatbed truck	Dropping off and picking up excavator from site	4 vehicle movements
	Dropping off tools and mast sections to site	2 vehicle movements
Concrete truck	Bringing concrete to site	6-8 vehicle movements
Light vehicles (mine spec)	Bringing contractors to and from site	~60 movements assuming a maximum 3-week construction period

1.3 Ground Disturbance

Ground disturbance will be required to construct the met mast foundations and the nine guy wire anchor points. The installation of the four met masts will result in a total disturbance (temporary construction area, inclusive of operation area) of approximately 216 m^2 (0.02 ha), or approximately 54 m^2 (0.005 ha) per mast per mast (**Table 1-3**). The foundation and anchors that remain in place will be within this footprint. Areas not used during operation will be allowed to naturally regenerate.

Table 1-3 Construction and operational disturbance

Infrastructure	Temporary Construction Area
Met mast base foundation	3 m x 3 m = 9 m^2
Guy wire anchors	1m x 5 m x 9 anchors = 45 m^2
Total for one mast	**~54 m^2**
Total for four masts	**~216 m^2**

The current layout allows flexibility to relocate the met masts within 40 m of its designated position, provided that any movement does not impact vegetation greater than that which has been identified as requiring clearing or pruning.

No clearing of native vegetation will be required for met masts CM01, CM03, and CM04.The installation of met mast CM02 is likely to require minor clearing of York Gum (*Eucalyptus loxophleba*) trees comprising 1,350 m^2 (0.135 ha) of canopy.

1.4 Operation and Maintenance

The met masts will be regularly serviced (approximately every 6 to 12 months) and monitored throughout their operational life to maintain structural integrity, safety, and data availability. Routine maintenance of the met masts will involve:

- Inspection of the foundations, met mast structure, and guy wires for corrosion,
- Guy wire tension checks.
- Climbing of the mast to inspect the wind monitoring system.

1.5 Decommissioning

Decommissioning will involve removal of all above ground infrastructure including the mast structure, tower foundation, and guy wire anchors. The steel components of the met masts (tower structure and guy wires) can be recycled. All impacted areas are expected to regenerate naturally and without intervention following decommissioning.

2.0 Pre-Submission Consultation

Tilt has undertaken consultation with nearby landholders and relevant government stakeholders with respect to the development approval application, and broader discussions related to the potential wind farm development. Stakeholder engagement to date can be seen below in **Table 2-1**.

Table 2-1 Consultation summary

Stakeholder	Consultation Outcomes
Landholder 1 (CM01)	Landholder requested that met mast CM01 be moved 200 m to the north.
Landholder 2 (CM02)	Met mast to be installed at a location preferred by the landholder.
Landholder 3 (CM03)	The met mast will be designed and installed in a manner that ensures the landholder's harvesters can access the paddock to the north of the mast.
Landholder 4 (CM04)	Landholder confirmed that they were happy with the proposed met mast location and confirmed preferred route to access the site.
Moora Shire Council	Separate meetings have been held with the Shire to introduce Tilt, provide updates about the proposed future wind farm and to inform the Shire about Tilt's intention to install met masts and apply for associated development approval. The Shire raised no concerns about installation of the met masts.
Yued Aboriginal Corporation	Tilt have advised YAC about its intentions to install met masts within the locality. Tilt has an established relationship with the Yued Aboriginal Corporation (YAC) and is currently negotiating a Yued Heritage Protection Agreement to facilitate Yued's surveying of the proposed met mast locations. YAC will be provided the opportunity to carry out cultural heritage surveys at the proposed mast locations prior to construction.
Air Services Australia	AirServices Australia were provided the coordinates and the height of the met masts on 8 May 2026 and are currently assessing the application (application reference WA-MA-402).
Department of Defence	The Department of Defence were provided the coordinates and the height of the met masts on 8 May 2026

Consultation with stakeholders such as the Shire, landholders, the community, and the YAC will continue to occur during development of the wind farm. This consultation is separate from the scope of this development approval application.

3.0 Technical considerations

3.1 Biodiversity

Tilt completed a reconnaissance flora and vegetation survey and basic fauna habitat survey of the proposed met mast footprints in February 2026. Prior to this survey, ecological assessments were completed for the broader wind farm area.

The proposed met masts are in a landscape with extensive historical clearing and disturbance associated with agricultural land use (RPS, 2026). Met masts CM01, CM03, and CM04 are situated within cleared cropping areas. Met mast CM02 is located within predominantly cleared land though intersects with remnant York gum (*Eucalyptus loxophleba*) woodland. Although this site retains a tree canopy, the understory is highly degraded. The trees are below threshold size to be considered as potential breeding trees for black cockatoo species, provide low priority foraging habitat, and are not considered to be part of any restricted vegetation association or conservation significant community.

Construction of met masts CM01, CM03, and CM04 will avoid impacts to native vegetation, with no clearing or trimming proposed. Construction of met mast CM02 will require the clearing of part or all of the York gum trees within the development corridor, resulting in the disturbance of approximately 0.135 ha of tree canopy.

Any clearing of native vegetation requires a permit under Part V Division 2 of the *Environmental Protection Act 1986* (EP Act), unless an exemption applies under Schedule 6 of the EP Act or the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* and the area is not mapped as an Environmentally Sensitive Area (ESA) (DWER, 2019). The met mast locations are not within an ESA. Therefore, clearing to construct a building exemption (Regulation 5, Item 1) is considered to apply, and the up to 0.135 ha of York gum (*Eucalyptus loxophleba*) canopy proposed to be cleared for CM02 does not require a clearing permit.

Additional information can be found in the ecological assessment for the project found in **Appendix D**.

3.2 Heritage

An Aboriginal and Historical Heritage Due Diligence Assessment has been completed for the met mast footprints (Archae-aus, 2026). This assessment considers Aboriginal Cultural Heritage (ACH), registered sites and lodged places, historic (non-Aboriginal heritage) places located within the site, and potential archaeological constraints.

3.2.1 Aboriginal cultural heritage

The proposed met masts fall entirely within the Yued Indigenous Land Use Agreement Area (WI2015/009), which forms part of the broader South West Native Title Settlement (WCD2021/010) (Archae-aus, 2026).

Tilt has an established relationship with the YAC and are in the process of negotiating a Yued Heritage Protection Agreement, establishing a framework for the management and protection of Aboriginal cultural heritage that has the potential to occur in the Project area. Under the proposed terms of the

Yued Heritage Protection Agreement, the Yued people will have the option to survey the met mast locations (at their discretion) prior to construction. If objects of cultural heritage significance are identified in the disturbance footprint, the met mast will be microsited (see Section **1.3**) to avoid impact.

The proposed met masts are not within, or adjacent to, known registered or lodged cultural heritage sites regulated under the *Aboriginal Heritage Act 1972* (WA). Additional information can be found in the Aboriginal and Historical Heritage Due Diligence Assessment for the Project found in **Appendix E.**

3.2.2 Historic heritage

A review of statutory heritage databases indicates that the met masts do not overlap with any places listed on the National Heritage List, the State Register of Heritage Places, or the former Register of the National Estate (Archae-aus, 2026).

3.3 Aviation Impact Assessment

The met masts will extend up to 150 m above ground level, reaching a maximum elevation of approximately 496 m AHD (1,627.3 ft AMSL), based on a highest ground elevation of approximately 346 m AHD (Aviation Projects, 2026)

Aviation Projects (Aviation Projects, 2026) undertook an assessment of certified aerodromes within the proposed met mast area and a 30 nautical mile (nm) radius. No certified aerodromes were identified within the 30 nm radius. The nearest is Gingin Airport (YGIG), located approximately 86 km (47 nm) southwest of the met masts. There are also no navigation or training aids within 30 nm of the site; the closest is the Remote TACAN at Beermullah.

Uncertified aerodromes, which are not subject to CASA CASR Part 139 regulations, were identified within 3 nm of CM01, CM02, and CM03 (one aerodrome per met mast). All met masts occur outside the circuit area of the uncertified aerodromes. Moora Aerodrome (YMRO), which is currently an uncertified aerodrome, is more than 3 nm away from all met mast locations.

The met masts are in a Class G airspace, outside of controlled airspace, and outside of all Prohibited Areas. They are situated within Danger Area D193 (except CM04), which is active from surface to 4,000 ft above mean sea level (AMSL) during military flying operations (typically weekdays, sunrise to sunset, or as advised by NOTAM). Consultation with the Department of Defence has commenced to determine any potential impacts of the proposed Project on military flying training within Danger Area D193.Tilt has also commenced consultation with AirServices Australia (application reference WA-MA-402).

The met masts are not expected to affect aviation navigation, communication, or surveillance facilities, and obstacle marking and lighting is not mandatory. In accordance with regulatory requirements, any met mast exceeding 100 m above ground level will be notified to CASA, and final structure details will be provided to Airservices Australia prior to construction. Subject to these measures and consultation requirements, the met masts are considered to achieve an acceptable level of aviation safety. Additional information can be found in the Aviation Impact assessment for the Project in **Appendix F**.

3.4 Visual amenity

The met masts are slender structures with minimal visual bulk and are located within a rural setting. The nearest sensitive receptor is the host landholder's house, located 1 km from the proposed met mast CM01. All other met masts have no sensitive receptors or sensitive viewpoints within a 2 km buffer (DPIRD, 2022). As such, the siting and development of the met masts are not expected to detract from the character or amenity of the locality.

3.5 Noise

Construction noise from met mast installation will be limited to short periods of excavation and concreting and temporary increases in vehicle movements along existing access tracks. Construction is expected to take approximately three weeks, with works undertaken during daytime hours, seven days a week. No high-noise activities, such as excavation or concreting, will occur before 7am or after 7pm Monday to Saturday, or before 9am or after 7pm on Sundays and public holidays. As the met masts contain no moving mechanical plant (e.g. turbines or compressors), they will not generate operational noise.

As noted above, the nearest dwelling to any met mast is approximately 1 km from CM01 and is associated with the host landholder. No dwellings are located within 2 km of CM02, CM03 or CM04.

Given the minor nature of mast construction activities and the distance between the mast sites and sensitive receptors (≥1 km), construction of the masts will not affect the amenity of associated or non-associated dwellings.

Furthermore, noise levels will comply with the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations) and therefore there is no requirement to prepare a noise management plan in accordance with Regulation 13.

No noise related local laws apply to the Project.

4.0 Planning Considerations

This section provides an assessment of the development application against relevant provisions of:

- The Shire of Moora *Local Planning Scheme No. 4* (LPS No.4) (Department of Planning Lands and Heritage, 1998),
- The Shire's *Local Planning Policy – 'Renewable Energy Facilities, Associated Transmission and Storage Infrastructure and Future Technologies'* (Shire of Moora, 2024),
- The *State Planning Policy 2.5: Rural Planning* (SPP 2.5) (Western Australian Planning Commission, 2016),
- The Western Australian Planning Commission's *Position Statement: Renewable Energy Facilities* (2020) (Western Australian Planning Commission, 2020), and
- The deemed provisions of the *Planning and Development (Local Planning Scheme) Regulations 2015*.

Relevant aspects of the Western Australian planning framework as they relate to the proposed met masts are summarised in the following sections.

4.1 Shire of Moora Local Planning Scheme No. 4 (LPS No. 4)

The LPS No. 4 classifies land zoning across the Shire of Moora and outlines the permissibility of land uses within each zone. It also provides objectives for the Shire and its various zones, along with requirements for development and planning approval. The proposed met masts have been assessed against each of the relevant aspects of the scheme in the following sections.

4.1.1 Land Use and Zoning

LPS No. 4 establishes the statutory framework for land use and development within the Shire, including the zoning of land and the permissibility of uses through the Zoning Table. The LPS No. 4 does not specifically define renewable energy infrastructure or met masts. On this basis, the proposed met masts are considered a use not listed.

In accordance with Clause 3.2.4, where an intended land use is not specifically mentioned in the Zoning Table and cannot reasonably be determined, the local government may determine whether the use is consistent with the objectives of the relevant zone.

As per Clause 3.1.6 of LPS No. 4, the objectives of the General Agriculture Zone are:

a. To ensure the continuation of broad-hectare farming as the principal land use in the district and encouraging where appropriate the retention and expansion of agricultural activities.

b. To consider non-rural uses where they can be shown to be of benefit to the district and not detrimental to the natural resources or the environment.

c. To allow for facilities for tourists and travellers, and for recreation uses.

The met masts are temporary structures with a small physical footprint and minimal infrastructure requirements. They do not require permanent access tracks or extensive clearing and can be located so that cropping and grazing activities continue largely unaffected.

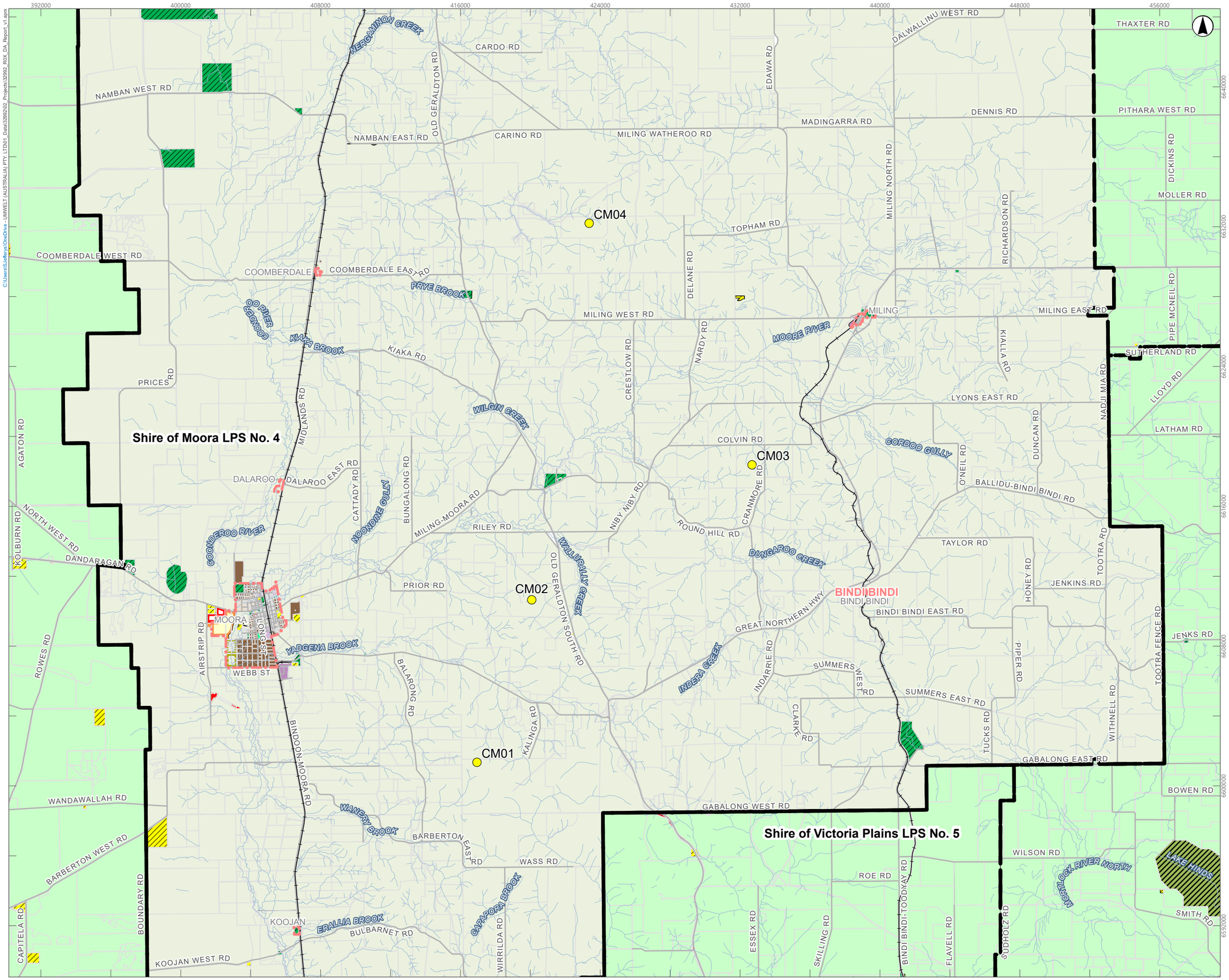
Given the scale, temporary nature, and limited disturbance, the met masts are considered compatible with the objectives of the General Agriculture zone and are not expected to result in any material impacts on land use, amenity, or the ongoing use of the land for agricultural purposes.

Land use zoning for the proposed met mast locations is shown in **Figure 4.1**.

FIGURE 4.1

Land Use

Zoning



Scale 1:200,000 at A3
GDA2020 MGA Zone 50

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4.1.2 General Development Requirements

Under Part IV of the LPS No.4 the following development requirements must be considered (**Table 4-1**).

Table 4-1 Project alignment with General Development Requirements (Part IV, LPS No.4)

No	General Development Requirements	Project Alignment
4.3	**Car Parking Requirements**	N/A – the development will be unattended, and the provision of permanent parking is not required. During construction, vehicle parking will be informal in adjoining paddock areas.
4.4	**Discretion to Modify Development Standards**	N/A – the proposed development does not abut or have frontage to a constructed road.
4.7	**Development of lots abutting unconstructed roads**	The proposed development will be unattended, and any required access for construction and maintenance activities will be via informal access tracks.
4.8	**Use of Setback Areas**	Due to the nature and size of the works, the Project will not interfere with setbacks for street alignments or buildings.
4.9	**Radio Masts, Television Antennae, and Satellite dishes**	While the met masts do not fit the definition of radio masts, an assessment of amenity to the locality has been completed (see **Section 3.4**).
4.10	**Special Control Areas**	N/A – the Project is not located near any SCA's.

4.2 Local Planning Policy – Renewable Energy Facilities, Associated Transmission and Storage Infrastructure and Future Technologies

The Shire adopted the *Local Planning Policy – Renewable Energy Facilities, Associated Transmission and Storage Infrastructure and Future Technologies* (the policy) in October 2024, prepared under LPS No.4. It provides a framework for assessment, approval, and regulation of renewable energy facilities and associated infrastructure and ensures impacts on community and environment are minimised and long-term benefits maximised.

Appropriate biosecurity measures will be implemented, including ensuring that all vehicles and machinery (including excavators) are clean prior to their initial entry onto the construction site. The excavator will remain onsite for the duration of the construction period, while daily vehicle movements (e.g. 4WDs) will be limited, where practicable, to public sealed roads to minimise potential impacts.

Consideration has been given to potential disturbance to livestock. The met masts will not impact grazing practices as livestock can continue to safely graze beneath operational met masts.

Relevant environmental, visual, access, safety, and consultation considerations have been addressed in accordance with **Section 4.4** of the *Position Statement – Renewable Energy Facilities* (WAPC, 2020). The met masts are considered a low impact component of a broader renewable energy facility permissible under the policy.

4.3 State Planning Policy 2.5 – Rural Planning (Western Australian Planning Commission, 2016)

The *State Planning Policy 2.5: Rural Planning* (SPP 2.5) provides the overarching planning objectives for land zoned for rural or agricultural purposes in local planning schemes. SPP 2.5 aims to protect rural land and rural land uses, avoid land use conflicts, and support sustainable economic growth. The policy seeks to promote economic development opportunities while acknowledging the need to balance economic opportunity with the protection of the State's primary production and natural resource assets.

Relevant policy measures of SPP 2.5 include retaining land identified as priority agricultural land for this purpose and the retention and protection of rural land for biodiversity protection, natural resource management, and protection of valuable landscapes and views.

The met masts will not significantly impact or decrease the area of agricultural land given they will be temporary, have a small footprint, and will allow ongoing agricultural use of the surrounding land. Installation of the met masts will support regional economic diversification without compromising the underlying rural land base and with minimal impact to amenity.

4.4 Position Statement – Renewable Energy Facilities (Western Australian Planning Commission, 2020)

This Position Statement identifies assessment measures for the appropriate development of renewable energy and renewable energy related facilities and applies to development applications of these facilities in Western Australia. It supports development of facilities in areas that minimise potential impacts to the environment, natural landscape, and amenity while maximising production and efficiencies.

Relevant aspects of the Position Statement and how they have been considered as part of this development application are described in **Table 4-2**.

Table 4-2 Consideration of the Position Statement - Renewable Energy Facilities

Planning Aspect	Project Alignment
Community Consultation	Tilt has undertaken consultation with community stakeholders as identified in **Section 2.0** and **3.0**. This includes discussions with the involved landholders, the YAC, and the Shire.

Planning Aspect	Project Alignment
Environmental Impact	Tilt completed a reconnaissance flora and vegetation survey and basic fauna habitat survey of the proposed met mast footprints in February 2026. Prior to this survey, broader ecological assessments have been completed for the broader wind farm area. Met masts CM01, CM02, and CM04 are predominantly situated within cleared agricultural land, while met mast CM02 may require the clearing of a small number of York Gum (*Eucalyptus loxophleba*) trees, totalling up to 0.135ha of tree canopy. These trees are below the size threshold to be considered as potential breeding trees for black cockatoo species, provide low priority foraging habitat, and are not considered to be part of any restricted vegetation association or conservation significant community. Further details on the ecology assessment are provided in **Section 3.1** and **Appendix D**.
Noise Impact	The met masts have no moving mechanical plant (no turbines, compressors, etc.), noise will be restricted to construction, and the nearest dwelling is 1 km from CM01 host landholder's house. Construction noise will be short-term, during daytime hours where practicable, and managed to comply with the *Environmental Protection (Noise) Regulations 1997*.
Bushfire Hazard Management	The Project does not trigger the requirements of State Planning Policy 3.7 – Planning in Bushfire Prone Areas, as the site is not located within a designated bushfire prone area. The met masts are not a high-risk land use and will not materially intensify bushfire risk.
Visual and landscape impact	The met masts are slender structures with minimal visual bulk and are located within a rural setting. The nearest dwelling is 1 km from CM01 host landholder's house. All other met masts, have no sensitive receptors or sensitive viewpoints within a 2 km buffer (DPIRD, 2022). The siting and development are not expected to detract from the character or amenity of the locality.

Planning Aspect	Project Alignment
Public and Aviation Safety	Aviation Projects (Aviation Projects, 2026) undertook an Aviation Impact Assessment for the proposed met masts. The assessment found: • No certified aerodromes or navigation or training aids were identified within a 30 nm radius. • Uncertified aerodromes, which are not subject to CASA CASR Part 139 regulations, were identified within 3 nm of CM01, CM02, and CM03, but outside the circuit area. Tilt will consult with the landholders that own the uncertified aerodromes (one is a host landholder) about the proposed installation of the met masts and the distance to the relevant uncertified aerodrome. • The met masts are outside of controlled airspace or Prohibited Areas. • CM01, CM02, and CM06 are located within Danger Area D193. Consultation with the Department of Defence has commenced to determine any potential impacts of the proposed Project on military flying training within Danger Area D193. The met masts are not expected to affect aviation navigation, communication, or surveillance facilities, and obstacle marking and lighting is not mandatory In accordance with regulatory requirements, any mast exceeding 100 m above ground level will be notified to CASA, and final structure details will be provided to Airservices Australia prior to construction. Subject to these measures and consultation requirements, the met masts are considered to achieve an acceptable level of aviation safety consistent with the Position Statement. Additional information can be found in the Aviation Impact assessment for the project found in **Appendix F.**
Heritage	The met masts do not intersect within any known registered or lodged heritage sites. The proposed met masts fall entirely within the Yued Indigenous Land Use Agreement Area (WI2015/009), which forms part of the broader South West Native Title Settlement (WCD2021/010) (Archae-aus, 2026). Tilt is in the process of entering into a Yued Heritage Protection Agreement with the YAC, establishing a framework for the management and protection of Aboriginal cultural heritage for the Project. The Yued people will be provided the opportunity to survey the met mast locations (at their discretion) prior to construction.
Construction Impact	The already small construction disturbance will be minimised by micro siting the met masts and associated works on existing cleared land, where practicable. Vehicle and machinery access and movement will use cleared areas and existing tracks where practicable, thereby limiting additional disturbance. Temporary parking during construction will be on cleared land adjacent to the proposed met masts.

4.5 Deemed Provisions – Matters to be Considered

Clause 67(2) of the Deemed Provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015* sets out the matters to which the local government is to give due regard in considering a development application, to the extent they are relevant to the proposed development. An assessment of the proposed Project against the provisions of Clause 67(2) of the Deemed Provisions is provided in **Table 4-3**.

Table 4-3 Consideration of the Deemed Provisions

Provision	Project Response
(a) The aims and provisions of this Scheme and any other local planning scheme operating within the Scheme area.	The aims and provisions of LPS No. 4 have been addressed in this report.
(b) The requirements of orderly and proper planning including any proposed local planning scheme or amendment to this Scheme that has been advertised under the *Planning and Development (Local Planning Schemes) Regulations 2015* or any other proposed planning instrument that the local government is seriously considering adopting or approving.	The Project is consistent with orderly and proper planning as it aligns with the regional and local planning frameworks that promote diversified industry, strategic infrastructure investment, and rural economic development in the Moora region.
(c) Any approved State planning policy.	The Project has considered and is consistent with: • State Planning Policy 2.5 – Rural • Planning Position Statement – Renewable Energy Facilities
(d) Any environmental protection policy approved under the *Environmental Protection Act 1986* section 31(d).	N/A
(e) Any policy of the Commission.	Policies and position statements of the Commission and State that are relevant to the Project are addressed under **Section 4** of this report.
(f) Any policy of the State.	
(fa) Any local planning strategy for this Scheme endorsed by the Commission.	N/A
(g) any local planning policy for the Scheme area	Local Planning Policy – Renewable Energy Facilities has been addressed under **Section 4.2** of this report.
(h) Any structure plan or local development plan that relates to the development;	There are no structure plans or local development plans relating to the Project.
(i) Any report of the review of the local planning scheme that has been published under the Planning and Development (Local Planning Schemes) Regulations 2015.	N/A

Provision	Project Response
(j) In the case of land reserved under this Scheme, the objectives for the reserve and the additional and permitted uses identified in this Scheme for the reserve.	N/A
(k) The built heritage conservation of any place that is of cultural significance.	There will be no impact on built heritage sites from the Project.
(l) The effect of the proposal on the cultural heritage significance of the area in which the development is located.	An Aboriginal Cultural Heritage Due Diligence Assessment has been completed. There are no registered or lodged sites that will be impacted by the Project. The Yued people will be provided the opportunity to survey the met mast locations (at their discretion) prior to construction.
(m) The compatibility of the development with its setting, including — (i) the compatibility of the development with the desired future character of its setting; and (ii) the relationship of the development to development on adjoining land or on other land in the locality including, but not limited to, the likely effect of the height, bulk, scale, orientation and appearance of the development.	The Project is compatible with its rural setting, being located within a predominantly broadacre agricultural landscape that is sparsely populated, enabling separation from sensitive receptors.
(n) The amenity of the locality including the following - (i) environmental impacts of the development; (ii) the character of the locality; (iii) social impacts of the development.	The rural character of the area, combined with existing agricultural land uses, provides an appropriate context for the Project. Sensitive receptors are limited, with the nearest dwelling located approximately 1 km from met mast CM01. As discussed in **Section 3.0**, there will be minimal environmental impacts as a result of the Project
(o) The likely effect of the development on the natural environment or water resources and any means that are proposed to protect or to mitigate impacts on the natural environment or the water resource.	The Project predominantly consists of previously cleared agricultural land, and minimal clearing of native vegetation is proposed. Natural drainage features will not be impacted.
(p) Whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or other vegetation on the land should be preserved.	N/A
(q) The suitability of the land for the development taking into account the possible risk of flooding, tidal inundation, subsidence, landslip, bush fire, soil erosion, land degradation or any other risk.	The proposed met masts are not located in flood risk areas, are not at high risk of impact for bushfire, and require minimal land and soil disturbance.

Provision	Project Response
(r) The suitability of the land for the development taking into account the possible risk to human health or safety.	The proposed met masts are located in a sparsely populated area, away from sensitive land uses or dwellings.
(s) The adequacy of - (i) the proposed means of access to and egress from the site; and (ii) arrangements for the loading, unloading, manoeuvring and parking of vehicles.	Minimal traffic will be generated as a result of the Project, and temporary construction access will be via formed tracks or cleared paddocks.
(t) The amount of traffic likely to be generated by the development, particularly in relation to the capacity of the road system in the locality and the probable effect on traffic flow and safety.	
(u) The availability and adequacy for the development of the following — (i) public transport services; (ii) public utility services. (iii) Storage, management and collection of waste; (iv) access for pedestrians and cyclists (including end of trip storage, toilet and shower facilities); (v) access by older people and people with disability.	N/A
(v) The potential loss of any community service or benefit resulting from the development other than potential loss that may result from economic competition between new and existing businesses.	The Project is not expected to result in loss of any community service or benefit.
(w) The history of the site where the development is to be located.	The location has a long history of agricultural use, which will not be materially impacted as a result of the Project.
(x) The impact of the development on the community as a whole notwithstanding the impact of the development on particular individuals.	The Project will assist in transitioning the local economy towards being more diversified.
(y) Any submissions received on the application.	Submissions received on the application are to be considered and addressed through the assessment process.
(za) The comments or submissions received from any authority consulted under clause 66.	Submissions will be considered by the applicant, and by the relevant regulatory authority in determining the application.

5.0 Closing

The four (4) met masts proposed as part of this Development Application are located on land zoned General Agriculture in the Shire of Moora and are considered consistent with the applicable local and State planning frameworks.

The met masts are a low-impact, small footprint, and time-limited form of renewable energy related infrastructure that can be accommodated within ongoing broadacre farming, in accordance with LPS No. 4, and relevant local and state planning provisions.

The met masts have been designed to maintain agricultural productivity, and appropriately manage amenity, traffic, aviation safety, heritage, and environmental considerations, informed by targeted technical studies and stakeholder consultation consistent with the Position Statement. While there is 0.135 ha of York gum trees at CM02, this vegetation is degraded and does not hold any significant conservation value. There are no known registered or lodged heritage sites in the met mast footprints.

6.0 References

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Our ref: 604-OEENVPER-387301

Date: 27 May 2026

Ruth Smith
Tilt Renewables
L24/600 Bourke Street
Melbourne VIC 3000

Dear Ruth,

Central Midlands wind farm – Meteorological mast ecological assessment

Project appreciation

Central Midlands Wind Farm Pty Ltd (ACN 672 068 754) as Trustee for the Central Midlands Wind Farm Project Trust (ABN 18 554 103 685) (hereon referred to as Tilt Renewables or the Proponent) proposes to develop the Central Midlands wind farm, located approximately 140 kilometres (km) north-east of Perth.

Tilt Renewables proposes the installation of up to 4 meteorological masts (met mast) for the wind farm. The met masts will be up to 150 metres (m) high and are designed to measure wind speed, direction and other weather data at various heights to understand wind conditions at the site. The location of the met masts are shown in Figure 1.

Purpose of the report

This ecological assessment report has been prepared to determine the ecological values relative to the flora, vegetation and fauna at each of the four met mast locations. Potential impacts associated with the construction of the met masts on identified ecological values have been defined.

Methodology

A field review of the met mast locations was undertaken by RPS Botanist Steven Madamecila on 11–12 February 2026 to determine ecological values at each met mast location.

The field review comprised of:

- Determination of vegetation type and condition
- Identification of individual trees / shrubs to species level
- Review of Diameter at Breast Height (DBH) for trees within 20 metres of each met mast.

Prior to this field review, the broader wind farm area inclusive of the met mast locations was subject to:

- Spring reconnaissance flora and vegetation survey (6 – 10, October 2025)
- Targeted searches for conservation significant flora (13 – 17, October 2025)
- Spring basic fauna survey (6 – 10, October 2025).

The outcomes of these assessments underpinned determination of the ecological values at each met mast location

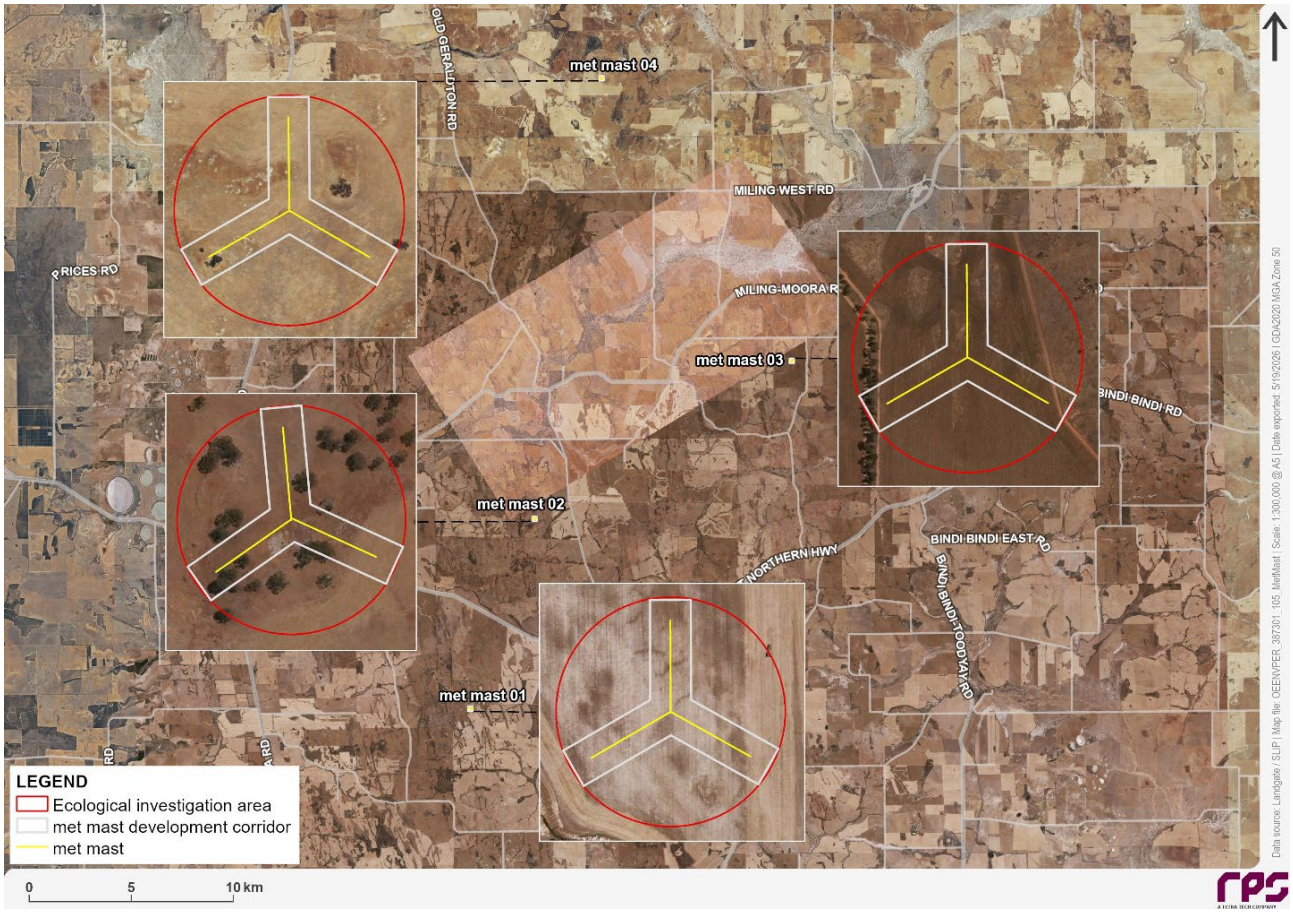


Figure 1: Met mast locations

Met mast characteristics

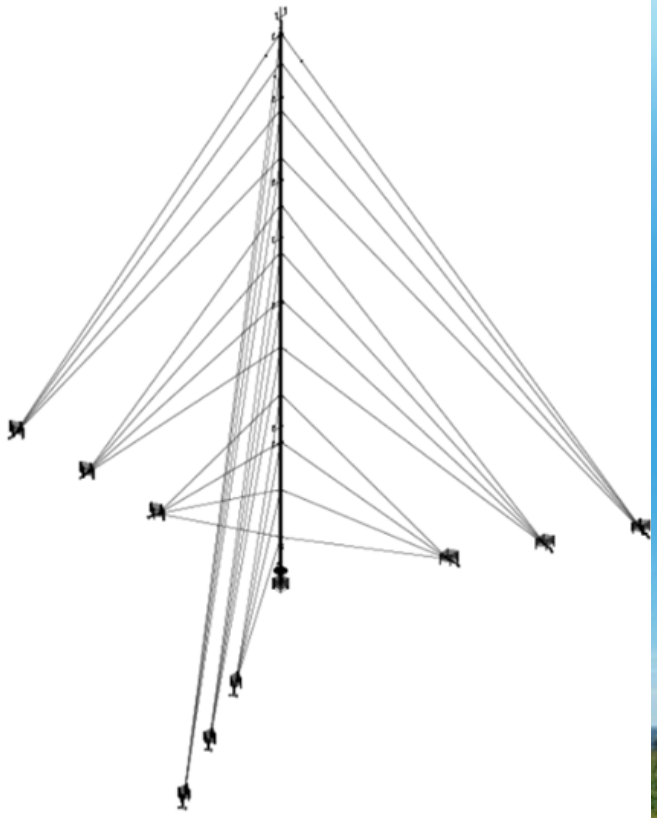
The met masts to be installed on site will be comprised of three primary components:

- Guy-wires fixed to constructed anchors
- A lattice mast mounted on a secured concrete foundation
- Wind-measurement instruments, including anemometers, wind vanes and pressure sensors.

The met masts will be guyed lattice tower structure with a maximum height of 150 m above natural ground level consisting of footing for a tower foundation and nine guy anchors located radially from the mast base at approximately 30 m, 65 m, and 90 m intervals.

For further information regarding the process to install a met mast refer to the accompanying Development Approval application.

Figure 2 provides an isometric view of the met mast design and an example of an operational met mast.



A) Met mast isometric view



B) Fully installed and operational met mast

Figure 2: Shows the met mast isometric view (A) and an example of a fully installed and operational met mast (B)

The extent of ground disturbance required to install a met mast is restricted to excavation to construct the mast foundation and minor excavation to bury the nine guy wire anchors. Table 1 below sets out the indicative disturbance footprint required for the construction and operation of a met mast.

Table 1: Met mast disturbance footprint during construction and operation

Development phase	Description	Dimensions		Total area
		Mast tower foundation	Guy wire anchor foundations (x 9)	
Construction	An area around the tower and guy wire foundations that will be disturbed during met mast construction to facilitate excavation and concreting of foundations. This area will be allowed to reseed during operation.	2.5m x 2.5m = 6.25m^2	1m x 5m x 9 = 45m^2	51.25m^2
Operation	Concreted area around tower base and guy wire foundations that will remain in use during operation.	2m x 2m = 4m^2	0.25m x 0.25 m x 9 = 0.56m^2	4.56m^2

In reference to Table 1, the disturbance footprint associated with the construction of the proposed four met masts will be 205m^2 (0.021ha) of which 18.25m^2 (0.002ha) will continue to be used in operation, the remaining disturbance area will be allowed to naturally regenerate.

In some circumstances, pruning or clearing of taller trees and shrubs within a 20 m buffer of the met masts will be required to facilitate construction vehicle access around the mast and to prevent trees or branches falling onto the guy wires. For the purposes of this assessment, vegetation within 20 m of the met mast (here on referred to as the development corridor) has been mapped (see Figure 3 and Table 3), to assist the

Proponent in siting the met masts to avoid clearing. The extent to which minor clearing is unavoidable is set out in Table 3.

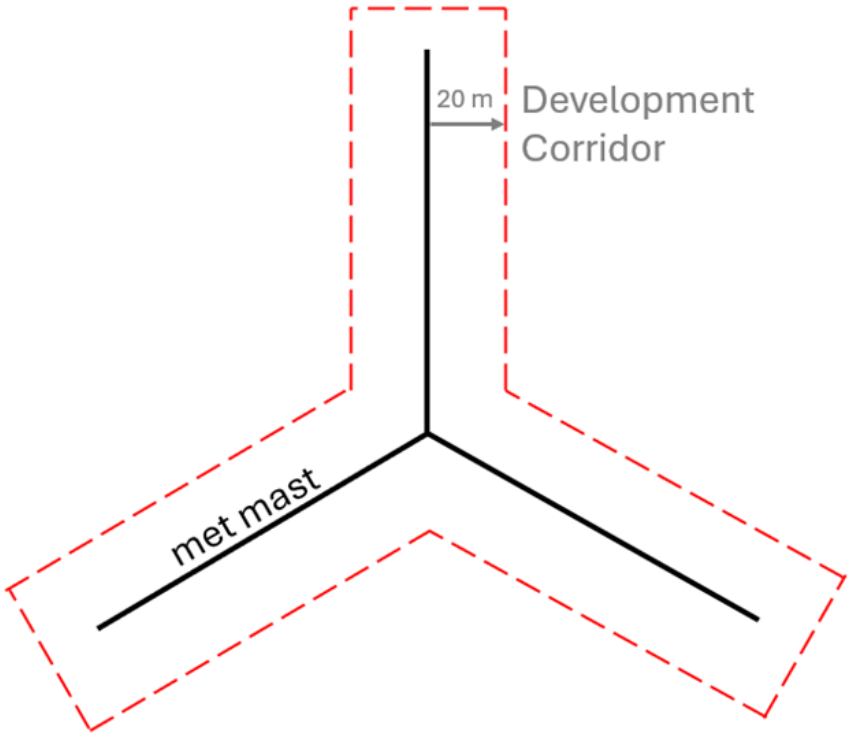


Figure 3: Met mast 20 m development corridor

Ecological values

IBRA bioregion

The Interim Biogeographic Regionalisation of Australia (IBRA) currently recognises 89 bioregions based on common climate, geology, landform native vegetation and species information. These bioregions are further split into 419 subregions that are more localised and geomorphologically homogenous within the bioregions. The met masts are situated in the Katanning subregion of the Avon Wheatbelt bioregion (AW2).

Avon Wheatbelt 2 (AW2 — Re-juvenated Drainage subregion; Beecham 2001)[1] covers 3,012,977 ha of gently undulating erosional rises to low hills with abrupt breakaways, active drainage and continuous stream channels that flow most years; the climate is semi-arid, warm Mediterranean. Soils form in colluvium or weathered in situ rock, and colluvial processes are active.

Residual lateritic uplands and sandplains support proteaceous scrub heaths with many endemics, while Quaternary alluvials and eluvials sustain mixed Eucalypt woodlands (including *Allocasuarina huegeliana*, Jam–York Gum) and pockets of Wandoo, York Gum and Salmon Gum with Jam and Casuarina.

[1] Beecham, B. 2001. Avon wheatbelt 2 (AW2 – Re-juvenated drainage subregion). A biodiversity Audit of Western Australia's 53 biogeographical subregions in 2002. Department of Environment and Conservation, Western Australia.

Regional vegetation associations

Pre-European vegetation mapping of Western Australia was undertaken in a broad scale of 1:1,000,000 by Beard (1975)[2]. This vegetation mapping was later refined by Shepherd et al. (2002)[3] to be in line with Native Vegetation Information System (NVIS) descriptions at a scale of 1:250,000 (Executive Steering Committee for Australian Vegetation Information (ESCAVI), 2003)[4].

The met masts located within the following mapped vegetation associations that occurred prior to agricultural disturbance (Table 2).

Table 2: Pre-European vegetation association and description

System	Vegetation associations	Structural description	Description	Associated met mast
Victoria Plains	142	Woodland other	Wheatbelt; York gum, salmon gum etc. *Eucalyptus loxophleba*, *E. salmonophloia*. Goldfields; gimlet, redwood etc. *E. salubris*, *E. oleosa*. Riverine; rivergum *E. camaldulensis*. Tropical; messmate, woollybush	Met mast 03 and met mast 04
	551	Thicket	Wattle, casuarina and teatree acacia-allocasuarina-melaleuca alliance.	Met mast 04
Walebing	7	Woodland other	Wheatbelt; York gum, salmon gum etc. *Eucalyptus loxophleba, E. salmonophloia*. Goldfields; gimlet, redwood etc. *E. salubris*, *E. oleosa*. Riverine; rivergum *E. camaldulensis*. Tropical; messmate, woollybush	Met mast 01 and met mast 02

The Commonwealth's National Targets and Objectives for Biodiversity Conservation (Department of Climate Change, Energy, the Environment and Water (DCCEEW) 2026)[5] recognises that retaining 30% or more of Australia's land mass, including intact pre-European vegetation communities, is necessary to maintain a healthy, sustainably managed environment and to protect Australia's biological diversity.

Most vegetation within the met mast development corridors are not representative of the region's pre-European vegetation mapping because the area has been extensively cleared and disturbed by agricultural land use. Met mast 01, 03 and 04 are located within cleared cropping land; only met mast 02 retains the structural formation of York gum trees, but its understory is completely degraded. The construction of the met mast 02 will result in clearing some or all of the York gum trees within the development corridor.

Vegetation / Fauna habitat type

The findings of Spring reconnaissance flora and vegetation survey and basic fauna habitat survey broadly identified that the met masts are primarily located in cleared agricultural land (met mast 01, 03 and 04), with met mast 02 being mapped as *Eucalyptus loxophleba* woodland (Figure 4).

[2] Beard, J. S. 1975. The vegetation survey of Western Australia. Vegetatio, 30(3), 179-187.

[3] Shepherd, D. P., Beeston, G. R., & Hopkins, A. J. M. 2002. Native vegetation in Western Australia: Extent, type and status. Perth, Western Australia: Western Australian Department of Agriculture.

[4] ESCAVI, Executive Steering Committee for Australian Vegetation Information. 2003. Australian vegetation attribute manual: National vegetation information system (version 6.0). Canberra, Australian Capital Territory: ESCAVI, Executive Steering Committee for Australian Vegetation Information.

[5] Department of Climate Change, Energy, the Environment and Water. 2026. "Australia's National Biodiversity Strategy and Action Plan." Last updated 27 March 2026. Accessed 2 April 2026. https://www.dcceew.gov.au/environment/biodiversity/conservation/strategy.

Met masts 01, 02 and 03 have been historically cleared and used for agricultural land uses (e.g. dryland cropping, grazing). The met mast 02 development corridor consists of *Eucalyptus loxophleba* woodland, a woodland community predominantly made up of *Eucalyptus loxophleba* (York Gum) and *Eucalyptus salmonophloia* (Salmon Gum) trees with limited native understorey and introduced weed species comprising the lower stratum.

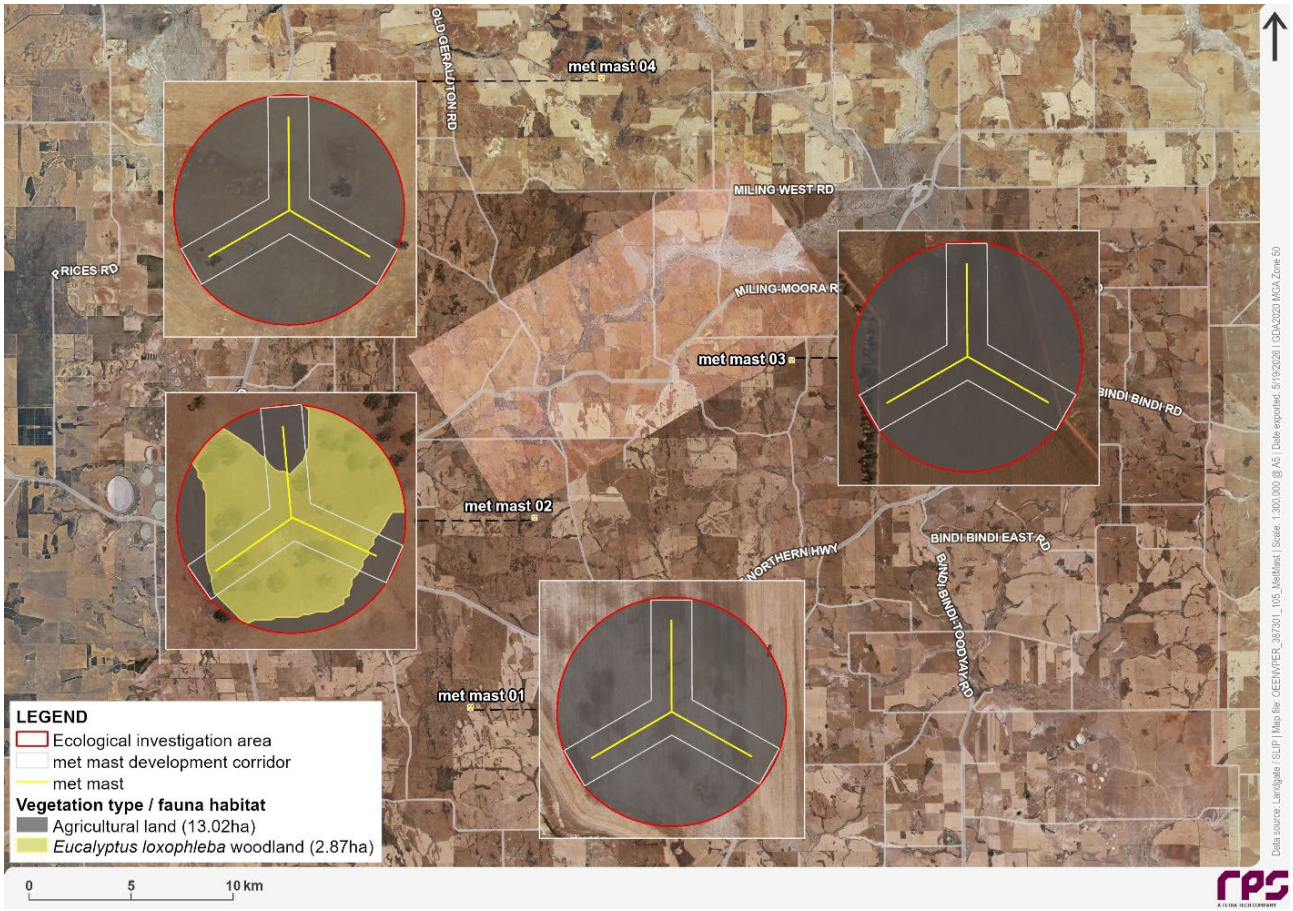


Figure 4: Vegetation / fauna habitat type associated within the met masts

Terrestrial fauna

Informed by the outcomes of the Spring flora, vegetation and fauna surveys, and modelled species distribution, it is considered that the York Gum trees are low priority foraging habitat for the Carnaby's cockatoo (Groom 2011)[6], listed as Endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the *Biodiversity Conservation Act 2016* (BC Act) (see Table 3). The York Gum trees are not considered potential breeding habitat for Carnaby's cockatoo, as all trees had DBHs of below 300 millimetre (mm). Trees suitable to develop a nest hollow in the future are 300-500 mm DBH (Department of Agriculture, Water and the Environment 2022)[7].

Other avian species may utilise the agricultural land and *Eucalyptus loxophleba* woodland vegetation within the met mast development corridors, particularly galahs and corellas. Galahs (*Eolophus roseicapilla* and *Eolophus roseicapilla roseicapilla*) are a common species with a widespread distribution throughout Australia

[6] Groom, C. 2011. Plants used by Carnaby's Black Cockatoo. Kensington, Perth.

[7] Department of Agriculture, Water and the Environment. 2022. Referral guideline for 3 WA threatened black cockatoo species. Department of Agriculture, Water and the Environment, Canberra, ACT.

(BirdLife Australia 2023a)[8]. The species has been observed frequently within the Shire of Moora, with 126 records of single birds to flocks of 40 birds recorded (Department of Biodiversity, Conservation and Attractions (DBCA) 2026)[9]. Corellas (*Cacatua* sp., *Cacatua pastinator*, *Cacatua sanguinea*) are a common species, with the *Cacatua pastinator* (western corella) being endemic to south-west Western Australia and the *Cacatua sanguinea* (little corella) having widespread distribution in arid and semi-arid Australia (BirdLife Australia 2023b[10] and 2023c[11]). The species has been observed frequently within the Shire of Moora, with 92 records of single birds to flocks of 400 birds recorded (DBCA 2026).

Considering the fauna habitat present within the met mast development corridors, galahs may forage on seeds of grasses and herbaceous plants including grains and *Eucalyptus* bark (BirdLife Australia 2023a), little corellas may forage on seeds of grasses and herbaceous plants (BirdLife Australia 2023b), and western corellas may forage on seeds (BirdLife Australia 2023c). These species are unlikely to rely on this fauna habitat as it is surrounded by larger extents of agricultural land and *Eucalyptus loxophleba* woodland vegetation.

Field review of met mast locations

The field review identified the site-based flora, vegetation and fauna values within the development corridor of each met mast (Table 3). The proposed orientation of each met mast has been identified within each met mast development corridor where the met mast, guy wires and concrete footings will be contained.

Table 3 identifies that the construction of met mast 01, 03 and 04 will avoid any impact to native vegetation. No clearing or trimming action will be proposed.

The construction of met mast 02 will result in clearing some or all of the York Gum (*Eucalyptus loxophleba*) trees within the development corridor, which comprise of 0.135 ha of tree canopy. The exact number of the York Gum trees within the development corridor was not recorded.

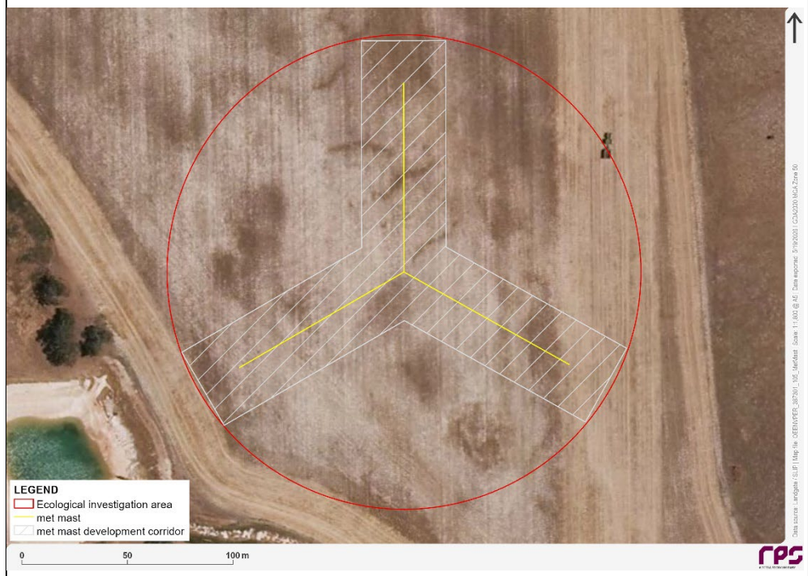
[8] BirdLife Australia. 2023a. Galah. [Text before updates sourced from: Marchant, S. et al (eds) 1990-2006 Handbook of Australian, New Zealand and Antarctic Birds. Volume 1 to 7.] Birdlife Australia. Birdlife Australia. Source: https://hanzab.birdlife.org.au/species/galah/. Accessed 26 May 2026.

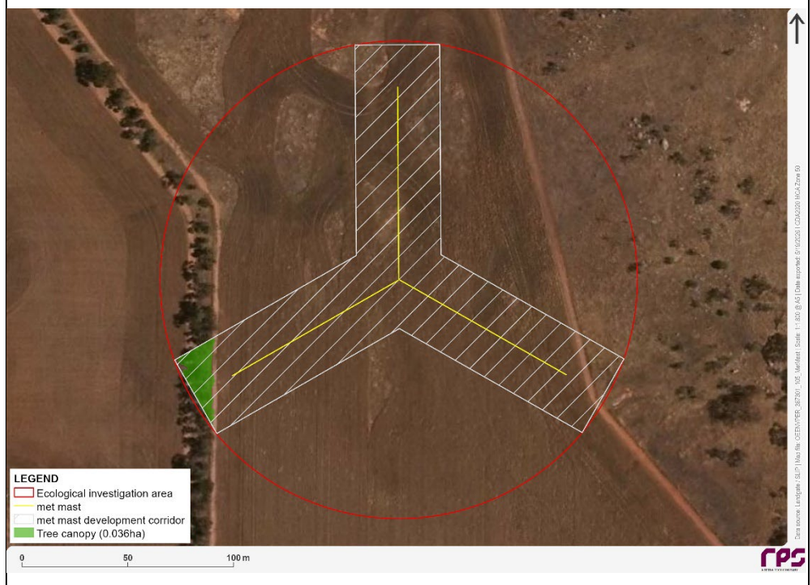
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[11] BirdLife Australia. 2023c. Little Corella. [Text before updates sourced from: Marchant, S. et al (eds) 1990-2006 Handbook of Australian, New Zealand and Antarctic Birds. Volume 1 to 7.] Birdlife Australia. Birdlife Australia. Source: https://hanzab.birdlife.org.au/species/little-corella/. Accessed 26 May 2026.

Table 3: Potential environmental impacts identified associated within each met mast

Met mast	Ecological impact	Disturbance footprint	Associated images
Met mast 01	The development corridor is located within a cropped agricultural paddock. The tree canopy was assessed by the Spring flora, vegetation and fauna surveys to be agricultural land. No native clearing will be undertaken and no direct impacts to native vegetation are expected from the proposed construction works.		None available.
Met mast 02	The development corridor is located within an agricultural paddock. A minor extent 0.135 ha (or 1,350 m²) of tree canopy appears to intersect the development corridor. The tree canopy was assessed by the Spring flora, vegetation and fauna surveys to be *Eucalyptus loxophleba* (York Gum) woodland in completely degraded condition (i.e. no native understorey). The field review confirmed the standalone trees within the development corridor to be York Gum (*Eucalyptus loxophleba*) trees. The York gum trees appeared to be 7-10 m tall, as observed by Proponent personnel (R. Smith, personal communication, 24 May 2026). All trees were below the 300-millimetre DBH threshold to be considered as potential breeding trees for black cockatoo species. York gums are a potential foraging resource for the Carnaby's cockatoo; however, no foraging evidence was identified as part of the field review. No other common fauna species were identified during the field review. The removal of 0.135 ha of potential foraging habitat would not constitute a material impact to Carnaby's cockatoo. The trees are not considered to be part of a restricted vegetation association or conservation significant ecological community because the vegetation / fauna habitat type is in completely degraded condition (i.e. no native understorey). The clearing of some or all of the York Gum (*Eucalyptus loxophleba*) trees which comprise the 0.135 ha of canopy may be required to install the met mast.		

Met mast	Ecological impact	Disturbance footprint	Associated images
			
Met mast 03	The development corridor is located within a cropped agricultural paddock. A minor extent (0.036 ha; 360 m²) of tree canopy intersects the development corridor along the fenceline. During the ecological field review the tree canopy was assessed as a planted mixture of *Eucalyptus* species trees with a completely degraded understorey. Since the field survey, the Proponent advised that the met mast design was revised to avoid impacts to the tree line. As such, no native vegetation clearing or trimming is required to install met mast 03.		 

Met mast	Ecological impact	Disturbance footprint	Associated images
Met mast 04	The development corridor is located within a cropped agricultural paddock. No native vegetation (trees / shrubs) was present within the development corridor. Aerial imagery on the right indicates a potential tree canopy on the southwest of the development corridor, however upon close inspection it was confirmed to be the remains of a burn-off pile. No native clearing will be undertaken and no direct impacts to native vegetation is required to install met mast 04.		 

Regulatory approval pathways

Clearing of native vegetation requires a permit under Part V Division 2 of the *Environmental Protection Act 1986* (EP Act) except where an exemption applies under Schedule 6 of the EP Act or a regulation in the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (Clearing of Native Vegetation Regulations).

A guide to the exemptions and regulations for clearing native vegetation under Part V of the EP Act (Department of Water and Environmental Regulation (DWER) 2019)[12] (the Guidelines) was considered to determine if any exemptions apply.

A review of the Guidelines identified that the minor clearing associated with the installation of met mast 02 could be undertaken under the "Clearing to construct a building" exemption set out in Regulation 5, Item 1 of the Clearing of Native Vegetation Regulations (see Table 4). The clearing meets the requirements of the exemption because:

- Met mast 02 is not mapped in an Environmentally Sensitive Area, therefore exemptions under the Clearing of Native Vegetation Regulations can be applied,
- A Development Approval is being sought from the Moora Shire Council,
- It is clearing associated with the construction of a lawful structure,
- It does not involve the clearing of riparian vegetation, and
- The Proponent has advised that clearing for this purpose at this property will not exceed 5 ha within this financial year.

In summary, the clearing of up to 0.135 ha of York gum canopy associated with the construction of met mast 02 would be exempt from obtaining a permit under Part V of the EP Act.

Table 4: Clearing to construct a building (Regulation 5, Item 1) exemption

Item no.	Wording of exemption	Comment / explanation
Regulation 5, Item 1 Clearing to construct a building Clearing must be done by or with the prior authority of: The owner of the property on which the clearing is to take place.	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.	Clearing of native vegetation for the lawful construction of a building or other structure is exempt as long as other relevant approvals have been obtained, including any planning approvals and building licence. "Building" means a roofed building or other roofed structure that is permanently fixed to the ground, and includes a transportable building that is: a. connected to a sewerage system or septic tank; or b. intended to be used as a permanent building. Clearing may also be carried out for the construction of other structures. Clearing must only be to the extent necessary for the building or other structure. For example, this exemption does not allow you to clear a large area to simply install a 2m x 3m garden shed. This exemption does not allow clearing of riparian vegetation.

[12] Department of Water and Environmental Regulation. 2019. A guide to the exemptions and regulations for clearing native vegetation under Part V of the *Environmental Protection Act 1986*. Joondalup, Western Australia.

Item no.	Wording of exemption	Comment / explanation
		"Riparian vegetation" means the distinctive vegetation associated with a wetland or watercourse. "Property" means an area of land that is managed as a single property whether or not it is made up of a number of properties held under separate titles. Under this item you should note that clearing for a building, combined with other exempt clearing activities on the property, must not exceed five hectares in a financial year. This means that if you clear for any of the following purposes, the clearing may not add up to more than five hectares in a financial year. • Clearing to construct a building (Item 1) • Clearing to collect firewood (Item 5) • Clearing to obtain fencing or farming materials (Item 6) • Clearing for woodwork (Item 7) • Clearing for fence lines (Item 10) • Clearing for vehicular tracks (Item 12) • Clearing for walking tracks (Item 13) • Clearing isolated trees (Item 19). This exemption does not apply in an environmentally sensitive area.

(modified from source: DWER 2019)

Environmental management actions

The following management actions are considered relevant to the met mast construction:

- Flora and vegetation:
  - Extent of approved DA development corridor to be defined and demarcated on appropriate plans and spatial files prior to the commencement of clearing to avoid accidental clearing of adjacent trees.
  - Appropriate hygiene / farm biosecurity protocols to be implemented to avoid the introduction and distribution of Declared Pests, other weed species during construction.
- Terrestrial fauna:
  - Should native fauna be encountered during tree removal works it should, initially, be allowed to make its own way from the field works area, however if this is not possible or practicable a qualified wildlife handler will be contacted to relocate it.

Concluding remarks

This letter has been prepared to describe and assess the significance of the potential environmental impacts to flora, vegetation and fauna associated with the construction of the four met masts. The location of the met masts have been informed by the ecological surveys and positioned to minimise clearing of native vegetation.

The installation of met masts 01, 03 and 04 will not result in any native vegetation clearing or trimming.

The installation of met mast 02 may require clearing of some or all of the York Gum trees within the development corridor, which comprise of 0.135 ha of tree canopy. This potential clearing:

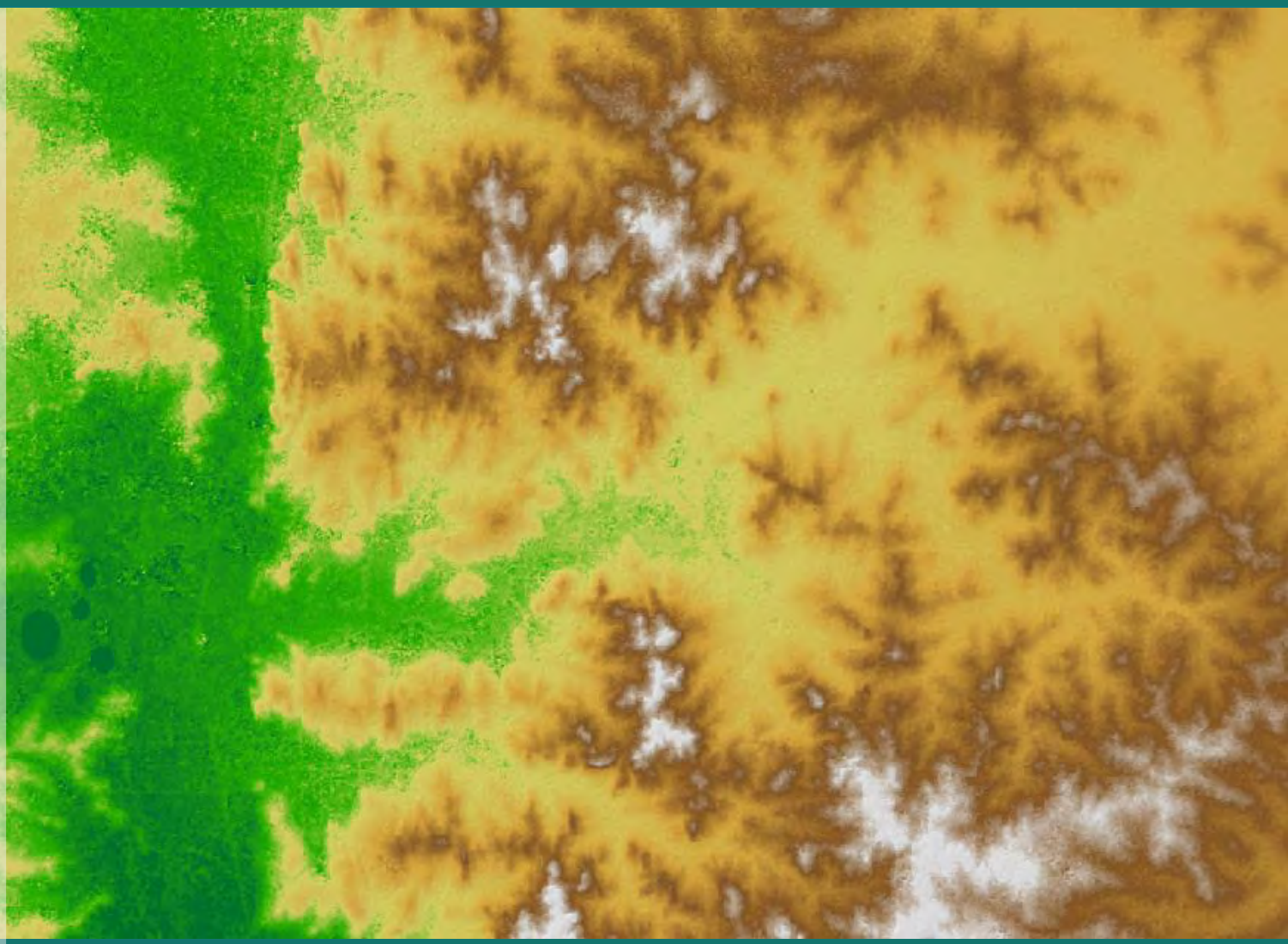
- Meets the requirements of the “Clearing to construct a building” exemption set out in Regulation 5, Item 1 of the Clearing of Native Vegetation Regulations, therefore a permit under Part V of the EP Act is unlikely to be required.
- Will not have a material impact on restricted vegetation associations, conservation significant flora, ecological communities or terrestrial fauna species (i.e. Carnaby’s cockatoos) that are listed under the EPBC Act and / or BC Act.

We trust this information is sufficient for your purposes; however, should you require further details or clarification, please do not hesitate to contact the writer by telephone.

Yours sincerely,
for RPS AAP Consulting Pty Ltd

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Reviewed by Margaret McCormack (22/05/2026) and Steve Rolls (27/05/2026)



ABORIGINAL AND HISTORIC HERITAGE DUE DILIGENCE ASSESSMENT FOR THE CENTRAL MIDLANDS FOUR METEOROLOGICAL MASTS PROJECT, MOORA, WA

JUNE 2026

For Umwelt

archae-aus

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Cover image: Digital Elevation Model of Moora (source: Archae-aus / SRTM)

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Warning

Please be aware that this report may contain images of deceased persons and the use of their names, which in some Aboriginal communities may cause sadness, distress, or offence.

Disclaimer

The authors are not accountable for omissions and inconsistencies that may result from information which may come to light in the future but was not forthcoming at the time of this research.

Acknowledgements

Archae-aus wish to pay respects to Elders past and present and extend those respects to all Aboriginal people, especially the Yued Noongar people who may view this report.

Spatial Information

All spatial information contained in this report uses the Geocentric Datum of Australia (GDA2020), Zone 50, unless otherwise specified. All information obtained from Umwelt is assumed to be accurate to two decimal places. All spatial information obtained during fieldwork was taken using a handheld Garmin GPS with a purported accuracy of ±3 m. Where we report spatial information collected in the field, we have opted for a slightly wider degree of accuracy of ±5 m.

Report Authors

This report was written by Marcel Teschendorff [BA & BComm, *Notre Dame*; MMarArch, *Flinders*] and Phoebe Oliver [BA (Hons) Anthropology and Sociology, *UWA*], with editing assistance from Renée Gardiner [BA (Hons) Archaeology, *La Trobe*] and Cat Morgan [BA Archaeology, *W.Aust;* PGDip (Archaeology & Cultural Heritage Management), MGIS&RS (GIS & Remote Sensing)].

The GIS data and maps were drafted by Marcel Teschendorff and Cat Morgan.

TERMS AND ABBREVIATIONS

Term / Abbreviation	Meaning / Interpretation
Aboriginal archaeological place or assemblage	A place (or group of physical sites) in which evidence of past activity by Aboriginal people is preserved (either prehistoric, historic or contemporary), and which has been, or may be, investigated using the discipline of archaeology and represents a part of the archaeological record.
Aboriginal Site	This term is used for Aboriginal heritage sites to which the AHA applies by the operation of Section 5. An Aboriginal site is defined by section 5 of the Act to mean: any place of importance where persons of Aboriginal descent have left any object, or have used, in connection with the traditional cultural life of the Aboriginal people, past or present; any sacred, ritual or ceremonial site, which is of importance and special significance to persons of Aboriginal descent; any place which is, or was, associated with Aboriginal people and which is of historical, anthropological, archaeological or ethnographical importance to the State; and any place where objects to which the Act applies are stored. How to report Aboriginal Cultural Heritage: https://www.wa.gov.au/government/document-collections/achknowledge-portal#how-to-report-potential-aboriginal-heritage
ACH	Aboriginal Cultural Heritage
ACHC	Aboriginal Cultural Heritage Council, which previously superseded the ACMC, now superseded by the Aboriginal Cultural Heritage Committee (Committee)
ACHknowledge Portal	The portal is used to request advice, lodge and track applications and report information concerning Aboriginal cultural heritage.
Activity Area	Proposed work area / development envelope / project area
AHA	The *Aboriginal Heritage Act 1972*
ACHIS	The Aboriginal Cultural Heritage Inquiry System, which holds information about: Registered Aboriginal Sites (ACH Register Layer) Lodged places (ACH Lodged Layer) Historic records (ACH Historic Layer)
Archaeological site	Is a place (or group of physical sites) in which evidence of human past activity is preserved (either prehistoric, historic or contemporary), and which has been, or may be, investigated using the discipline of archaeology and represents a part of the archaeological record. This term is used to refer to a place regardless of whether it has been assessed under section 5 of the AHA.
Artefact	Any object (article, building, container, device, dwelling, ornament, pottery, tool, weapon, work of art, etc.) made, affected, used, or modified in some way by humans.
Assessment	Professional opinion based on information that was forthcoming at the time of consideration
ATSIHP	*Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (the ATSIHP Act).
Committee	Aboriginal Cultural Heritage Committee (see ACHC)
Cultural material / archaeological material	Any object (article, building, container, device, dwelling, ornament, pottery, tool, weapon, work of art, etc.) made, affected, used, or modified in some way by humans.
DDA	Due Diligence Assessment
DPLH	Department of Planning, Lands and Heritage
Ethnographic Site	A place that is significant to an Aboriginal group because of its stories and connections. These places have intangible heritage values and are linked to traditional custom and law.

FPIC	Free Prior and Informed Consent
Harm	In relation to Activity impacting ACH, including destroying or damaging ACH – except where that harm relates to an Aboriginal person acting in accordance with the person's traditional rights, interests and responsibilities.
Heritage survey	Survey and inspection undertaken in order to investigate and document the archaeological record of a particular area
HISF	Heritage Information Submission Form now superseded by the ACHknoweledge portal submission form and Aboriginal Heritage Enquiry Form
Native Title	Recognition of the traditional rights and interests to land and waters of Aboriginal and Torres Strait Islander people
Noongar / Nyungar	The term Noongar is commonly used across the southwest of Western Australia and is the preferred spelling used by the Yued Aboriginal Corporation. However, during previous consultations undertaken by Archae-aus, Traditional Owners present during ethnographic surveys advised that Nyungar is the preferred spelling for Yued Country, reflecting the Yued Nyungar language dialect and local cultural usage. At Umwelt's request, per the proponent's discussions with Yued Aboriginal Corporation, Noongar is used throughout this report, unless directly quoting or referring to source material that uses the spelling Nyungar. It is noted, however, that Nyungar has been identified by Yued Traditional Owners as the preferred spelling when referring to Yued People and Country, and associated cultural knowledge.
NSHA	Noongar Standard Heritage Agreement https://www.wa.gov.au/government/document-collections/noongar-standard-heritage-agreement-south-west-native-title-settlement
NTA	*Native Title Act 1993*
Object	An artefact - any object made, affected, used, or modified in some way by humans. Objects may be protected under the AHA if they meet the section 5 criteria for an Aboriginal site.
Project Area	Entire area subject to the due diligence assessment, including CM01, CM02, CM03 and CM04 meteorological mast locations. (also Study Area)
Section 18 (s18)	The section of the *Aboriginal Heritage Act 1972* that details the process for permission to disturb the land on which a site is located.
Section 18 (s18) Approval	A letter from the Minister of Aboriginal Affairs providing consent for the disturbance of land on which a site is located.
Section 39(2) Assessment	Process of the ACMC (now the ACHC / Committee) assessing a reported site's significance and interest.
Study Area	Entire area subject to the due diligence assessment, including CM01, CM02, CM03 and CM04 meteorological mast locations. (also Project Area)
SWALSC	South West Aboriginal Land and Sea Council
Wagyl	The spiritual Serpent associated with creation, water systems, and cultural landscapes in southwest Western Australia. During previous consultations undertaken by Archae-aus, Yued Traditional Owners advised that Wagyl is the preferred spelling for Yued Country. This spelling is used in this report except where it refers to a place name, rather than Waugal, which is more commonly used in the Perth area and other Noongar contexts.
Whadjuk	Whadjuk Native Title Group (WI2017/015)
WAC	Whadjuk Aboriginal Corporation

EXECUTIVE SUMMARY

Archae-aus has been engaged by Umwelt (Australia) Pty Ltd on behalf of Tilt Renewables to undertake an Aboriginal and historical heritage desktop Due Diligence Assessment (DDA) for the proposed Central Midlands Four Meteorological Masts Project near Moora, Western Australia.

The Project comprises the installation of four meteorological masts (CM01, CM02, CM03, and CM04) (collectively, the Study Area or Project Area), located within the Shire of Moora, approximately 170 km north of Perth. The Project is situated wholly within the Yued Indigenous Land Use Agreement Area (WI2015/009), which forms part of the broader South West Native Title Settlement (WCD2021/010). Tilt Renewables is currently negotiating a Yued Heritage Protection Agreement with the Yued Aboriginal Corporation. This agreement will provide a framework for the engagement of any Yued Traditional Owners and for the management of any Aboriginal Cultural Heritage identified in the Project Area.

The purpose of this desktop assessment is to identify potential Aboriginal and historical cultural heritage places and values that may be impacted within and near the Study Area, in accordance with relevant legislation and industry guidelines; to identify key risks; to determine the next steps for cultural heritage management; and to provide advice to inform the design team during the design, planning, and development phases of the Project.

Desktop research was undertaken to identify:

- Previous Aboriginal heritage assessments within the Study Area and immediate surrounds.
- Recorded Aboriginal Cultural Heritage (ACH) sites and places within the Project Area.
- Historical heritage places within the Project Area.
- The potential risk of harm to Aboriginal and historical cultural heritage at a preliminary desktop level.
- Key next steps in the cultural heritage management process.
- The appropriate Aboriginal organisations that should be consulted.

To inform this research, searches were carried out using the Department of Planning, Lands and Heritage's (DPLH) Aboriginal Cultural Heritage Inquiry System (ACHIS) and the Heritage Council's site database (inHerit), together with the Shire of Moora Local Heritage Survey, and Archae-aus internal reports and data. The search focused on the Project Area and surrounding landscape to identify previous surveys undertaken in the region that may intersect the Study Area, as well as recorded Aboriginal heritage sites and other relevant findings. Understanding the types of heritage sites and the relationships between cultural heritage places in the wider landscape helps to inform the heritage risk assessment for unsurveyed areas within similar environments.

Results

Aboriginal Heritage Listings

The ACHIS search indicates that no previous Aboriginal heritage surveys have been undertaken within the Met Mast Study Area. Previous surveys have been undertaken in the broader Moora region; however, none intersect the Study Area.

Accordingly, there are no Registered Aboriginal Cultural Heritage Sites, Lodged Places or Historic Record Places recorded within the Study Area. This should not be interpreted as indicating an absence of Aboriginal heritage values, but rather as reflecting the limited extent of previous survey and assessment within the Study Area.

All Aboriginal sites and places, whether recorded or unrecorded, are protected under the *Aboriginal Heritage Act 1972*.

Historical Heritage Listings

The Study Area does not intersect any places listed on the National Heritage List, the State Register of Heritage Places, or the now-defunct Register of the National Estate. There are also no places listed in the Shire of Moora's Local Heritage Survey within or adjacent to the Study Area.

Recommendations

Based on the results of the desktop Due Diligence Assessment, it is recommended that:

Aboriginal Archaeological and Ethnographic Field Assessments

1. Ethnographic consultation should be undertaken with Yued Knowledge Holders for the Project, including for the proposed installation of the CM01, CM02, CM03 and CM04 met mast locations, and the small section of the access routes across paddocks, where there are no graded tracks.
2. An Aboriginal archaeological survey is not recommended for the CM01, CM02, CM03 and CM04 Met Mast locations, unless requested by the Yued Aboriginal Corporation (YAC) or where archaeological finds, sites or areas of archaeological potential are identified during ethnographic consultation.
3. Survey design and conduct should follow archaeological and ethnographic best practice guidelines, with input from archaeologists, anthropologists and Yued Knowledge Holders.

ACH Management and Mitigation

4. All ACH, including archaeological and ethnographic places identified during field surveys, should be lodged with DPLH with the agreement of Yued Knowledge Holders and YAC.
5. All previously recorded ACH sites and places on the ACHIS register, known places not currently included on the register, and any newly recorded sites and places should be avoided in Project design where feasible.
6. Cultural monitoring may be required during proposed works, subject to the outcomes of consultation with Yued Knowledge Holders.
7. Following heritage consultation and/or surveys, a Finds Management Procedure, including a Stop Work Procedure, should be prepared and implemented for all ground-disturbing works. The procedure should manage any unexpected Aboriginal cultural heritage material or places

identified during works and include unexpected finds protocols, contractor heritage inductions, recording methods, and artefact collection and retention policies developed in consultation with YAC.

Historical Heritage Management and Mitigation

8. No historical heritage field survey is required prior to the commencement of works. A Finds Management Procedure, combined with the ACH procedure, should be prepared and implemented for all ground-disturbing works to manage the potential for isolated historical heritage material to be encountered.
9. If historical heritage material or archaeological features are identified during ACH surveys or ground-disturbing works, the Project Team should consult with the Shire of Moora to determine whether works may proceed and whether any further management requirements apply. Any historical archaeological places identified should be recorded to industry standards prior to further disturbance.

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SECTION ONE – INTRODUCTION

Archae-aus has been engaged by Umwelt (Australia) to undertake an Aboriginal and historical heritage desktop assessment for the proposed installation of four meteorological masts associated with a proposed wind farm near Moora, Western Australia. Archae-aus understands that these initial investigations are required to confirm that places or items of cultural heritage are not located within the met mast development footprint.

Project Background

Tilt Renewables is investigating the feasibility of installing four meteorological masts (met masts) within the Central Midlands region of Western Australia. Meteorological masts are used to measure wind speed and direction at height and are a standard component of the pre-development feasibility phase for wind energy projects. Each proposed met mast location would require installation of a mast structure and associated access, using existing tracks, roads, and otherwise cleared areas, where possible.

Study Area

The Study Area comprises four meteorological mast installations (CM01, CM02, CM03, and CM04) (see Map 7 to Map 10). The four met masts are located within the Shire of Moora, approximately 170 km north of Perth. The Study Area extends from Namban to Walebing in the north–south direction, and from Moora to Bindi Bindi in the east–west direction (see Map 1). Each met mast area incorporates a discrete footprint (see Table 3; Figure 1 and 2), and will be accessed via existing tracks and roads, and no clearing for access to each of the locations is proposed:

- Met Mast Area CM01 is in the locality of Walebing, approximately 8 km west of the Walebing township, and accessed via existing tracks approximately 6 km south-east of Midlands Road.
- Met Mast Area CM02 is in the Berkshire Valley, approximately 27 km from the Moora town centre, and accessed via existing tracks approximately 4 km from Old Geraldton Road.
- Met Mast Area CM03 is located at Bindi Bindi, approximately 34 km east of Moora, and accessed via existing tracks from Colvin Road.
- Met Mast Area CM04 is in the locality of Coomberdale, accessed via Old Geraldton Road, followed by existing tracks for approximately 8 km.

Table 3. Met Mast Operational and Disturbance Areas

Name	Description	Dimensions
Operation Areas	This is the area that is concrete and remains in use during construction. Includes the small concrete area used around the guy wires and the mast foundation.	• Met mast base foundation – 2m x 2m = 4 m2 concrete base • 9 guy wire anchor points – 0.25m x 0.25 m x 9 = 0.56m2 buried concrete base
Disturbance Area	This is the small area around that concrete base that will be disturbed during construction; however, it will be allowed to reseed during operation.	• Met mast base foundation – 2.5 m x 2.5 m = 6.25m2 • 9 guy wire anchor points – 1m x 5 m x 9 = 45m2

The Study Area is situated wholly within the Yued Indigenous Land Use Agreement (ILUA) Area (WI2015/009), which forms part of the broader South West Native Title Settlement (WCD2021/010) (Map 2). Tilt Renewables is currently negotiating a Yued Heritage Protection Agreement with the Yued Aboriginal Corporation, which will provide a framework for engaging Yued Traditional Owners and for managing any Aboriginal Cultural Heritage identified in the Project Area.

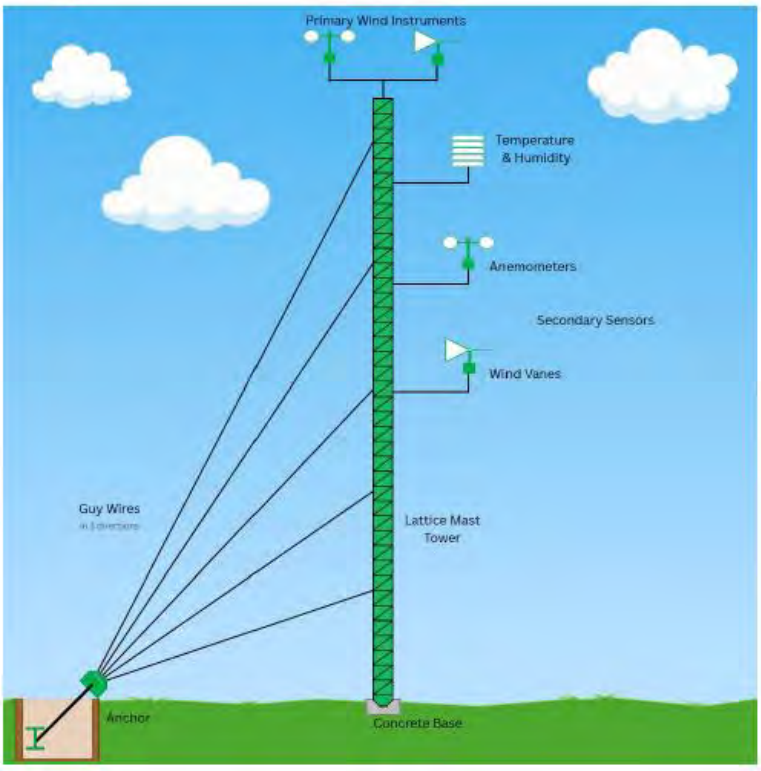
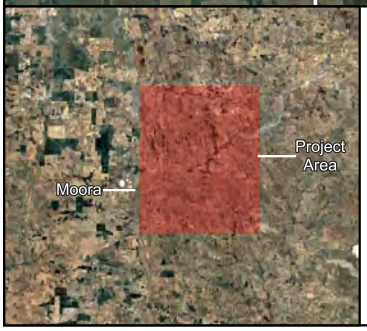


Figure 1. Met mast design (source: Tilt Renewables)



Figure 2. Met mast footprint (source: Tilt Renewables)





Legend

Study Area

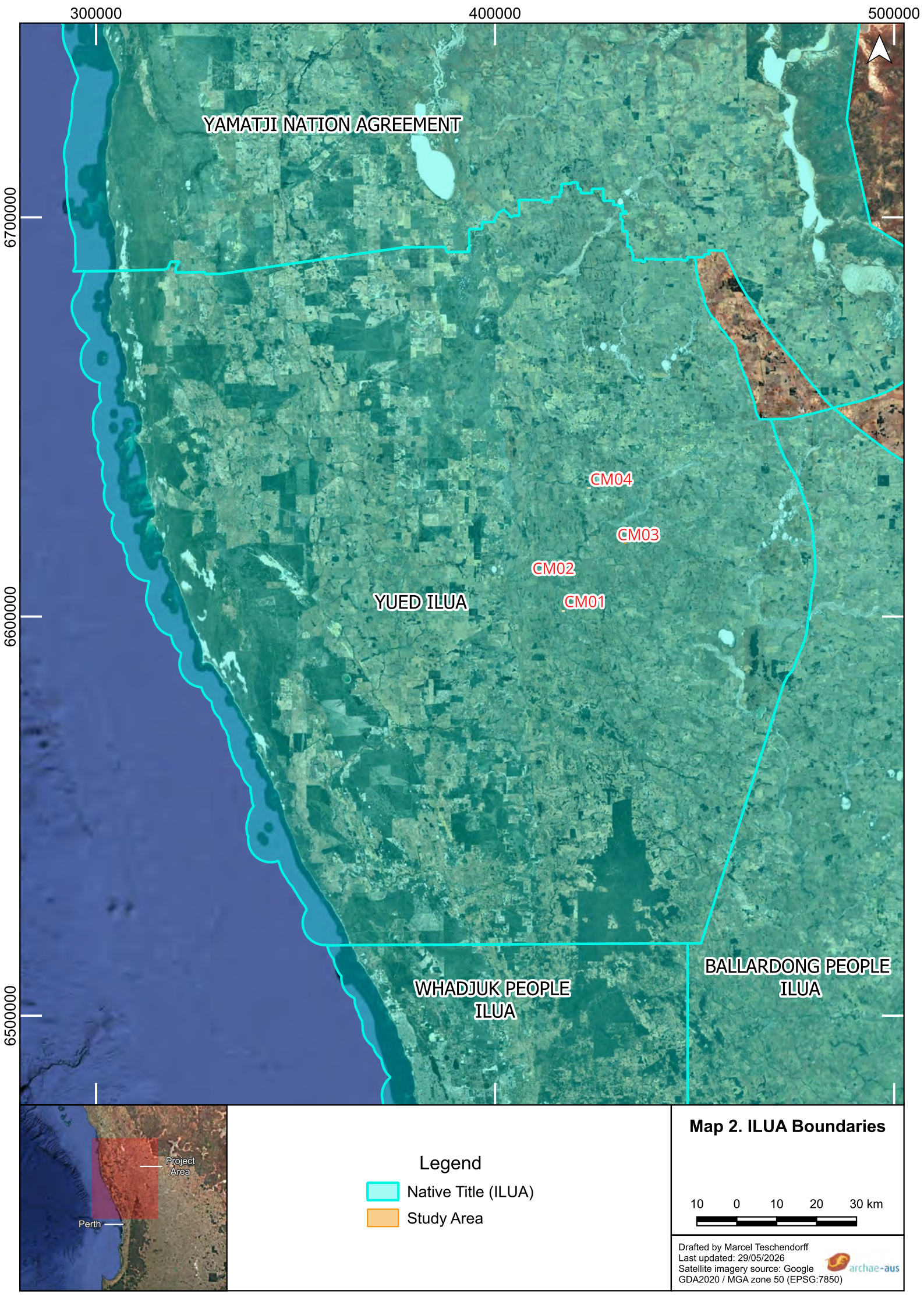
Access Track

Map 1. Study Area Overview

2 0 2 4 km

Drafted by Marcel Teschendorff
Last updated: 29/05/2026
Satellite imagery source: Google
GDA2020 / MGA zone 50 (EPSG:7850)

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300000
400000
500000
6700000
6600000
6500000
YAMATJI NATION AGREEMENT
CM04
CM03
CM02
CM01
YUED ILUA
WHADJUK PEOPLE ILUA
BALLARDONG PEOPLE ILUA
Project Area
Perth
Legend
Native Title (ILUA)
Study Area
Map 2. ILUA Boundaries
10 0 10 20 30 km
Drafted by Marcel Teschendorff
Last updated: 29/05/2026
Satellite imagery source: Google
GDA2020 / MGA zone 50 (EPSG:7850)
archae-aus

Scope

Umwelt engaged Archae-aus to carry out the following Scope of Works for this Due Diligence Assessment:

- Undertake desktop research into the Registered, Lodged and Historic Aboriginal archaeological and ethnographic sites and previous heritage surveys within and surrounding the Study Area. This includes requesting site files from the Department of Planning, Lands and Heritage (DPLH).
- Conduct a digital search of the State Records Office, inHerit portal, State Library of WA, Local Heritage Survey, Local Government Heritage List and Trove for past use evidence of the Study Area and surrounds, including historical plans, maps, articles and photographs.
- Conduct an internal search and review of relevant Archae-aus reports and data.
- Prepare GIS maps that outline the Study Area, including known cultural heritage and areas of potential subsurface archaeological risk.
- Undertake internal quality assurance by an experienced Archae-aus report editor.
- Deliver a report that includes the cultural heritage risk along with preliminary management and risk mitigation measures for the Project, an overview of the next steps regarding cultural heritage management, and recommendations for the design team to consider, including the identification of significant risks or constraints that may be avoided or minimised through design choices and responsive configuration of building infrastructure.
- Deliver the Due Diligence Assessment to Umwelt for comment.

Limitations

This report constitutes a desktop due diligence assessment only. No field survey has been undertaken as part of this assessment. The findings and recommendations are based solely on the results of desktop research, including heritage database searches, published literature, and available historical records. The absence of recorded ACH places within the Study Area does not preclude the presence of previously unrecorded places; the potential for subsurface or surface ACH not captured by existing records is assessed and discussed in Section Four.

Assessment of heritage risk is based on the known locations of the met masts in the Study Area; this assessment should be reviewed if the disturbance footprint changes materially.

This desktop review is intended to provide a preliminary assessment of constraints associated with known and potential Aboriginal and historical heritage, including archaeological and ethnographic values within the Study Area. Engagement with Yued Aboriginal Corporation is recommended.

Legislation

There are a number of relevant legislation and guiding principles that relate to the management of cultural heritage places. The legislation and guidelines include:

- Aboriginal Heritage Act 1972 (WA State)
- Coroners Act 1996 (WA State)
- Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth)
- Native Title Act 1993 (Commonwealth)
- Heritage Act 2018 (WA State)
- Planning and Development Act 2005 (WA State)
- Environmental Protection and Biodiversity Conservation Act 1999 (Commonwealth)
- Burra Charter 2013 (Australia ICOMOS Charter for Places of Cultural Significance - Guidelines)

A detailed discussion of the legislation and guidelines is located in Appendix One. This provides background and context from the perspective of legislation and best practice standards that may relate to cultural heritage places within the Study Area. It details WA State and Commonwealth legislation and processes in relation to Aboriginal and historical cultural heritage, as well as internationally recognised cultural heritage standards, and national and international best practice processes.

SECTION TWO – PREVIOUS HERITAGE ASSESSMENTS AND LISTED HERITAGE PLACES

Aboriginal Heritage Assessments

The following summary of previous research has been compiled from information that is available from the Department of Planning, Lands, and Heritage's (DPLH) Aboriginal Cultural Heritage Inquiry System (ACHIS). This may not be a comprehensive record of all heritage sites recorded and surveys undertaken. There is a possibility that some information may exist in the 'grey literature' held by private individuals and organisations, which has not yet been provided to the DPLH for addition to the ACHIS. Accordingly, caution should be exercised within unsurveyed sections of the proposed development. A copy of the ACHIS search results and maps can be found in Appendix Three.

A search of DPLH's ACHIS identified no previous Aboriginal heritage surveys intersecting the Study Area. Previously completed heritage surveys within the broader landscape surrounding the Study Area are shown in Map 3.

Previously Recorded Heritage Places

Listed Aboriginal Sites and Places

The CM01, CM02, CM03 and CM04 Study Areas do not intersect any Registered Aboriginal Cultural Heritage Sites, Lodged Places or Historic Record Places.

Table 4 provides an overview of previously recorded Aboriginal heritage places within the surrounding landscape. This information provides context for understanding the types of sites that have been identified in the broader environmental setting, noting that limited Aboriginal heritage surveys have been undertaken in the region. It also informs the predictive statements provided in Section Four.

Table 4. Previously recorded ACH Places within the surrounding landscape outside the Study Area

DPLH ID	Name	Status	Restrictions	Type	Culturally Sensitive	Restricted Place
5880	Moora	Register	No Gender / Initiation Restrictions	Traditional Structure	No	No
5881	Walebing	Register	No Gender / Initiation Restrictions	Burial	No	No
20008	Gingin Brook Waggyl Site	Register	No Gender / Initiation Restrictions	Camp; Creation / Dreaming Narrative; Historical; Hunting Place; Plant Resource; Water Source	Yes*	Yes
20749	Moore River Waugal	Register	No Gender / Initiation Restrictions	Creation / Dreaming Narrative	No	No

DPLH ID	Name	Status	Restrictions	Type	Culturally Sensitive	Restricted Place
21620	Chandala Brook #Duplicate of ID 3525	Register	No Gender / Initiation Restrictions	Creation / Dreaming Narrative	No	NO
20650	Lennard Brook	Lodged	No Gender / Initiation Restrictions	Creation / Dreaming Narrative; Landscape / Seascape Feature; Other; Water Source	No	No
21619	Breera Brook	Lodged	No Gender / Initiation Restrictions	Creation / Dreaming Narrative	No	No
19183	Red Gully Creek	Historic	No Gender / Initiation Restrictions	Creation / Dreaming Narrative; Plant Resource	No	No
5573	Nardy Well	Lodged	No Gender / Initiation Restrictions	Artefacts / Scatter; Camp	No	No
20898	Bindi Bindi FS 1	Lodged	No Gender / Initiation Restrictions	Artefacts / Scatter	No	No
20899	Bindi Bindi FS 2	Lodged	No Gender / Initiation Restrictions	Modified Tree	No	No
36739	Walebing Reserve	Lodged	Women only	Burial; Historical	No	Yes
36967	Walebing Scarred Tree	Lodged	Non listed	Modified Tree	No	No
37674	Clovalley Farm	Historic	Non listed	Burial; Artefacts / Scatter; Engraving; Modified Tree; Water Source	No	No
21616	Boonanarring Brook	Lodged	No Gender / Initiation Restrictions	Creation / Dreaming Narrative	No	No
21617	Wallering Brook	Lodged	No Gender / Initiation Restrictions	Creation / Dreaming Narrative	No	No
21618	Nullilla Brook	Lodged	No Gender / Initiation Restrictions	Creation / Dreaming Narrative	No	No
19138	Wetlands & Watercourses Moore River to Bullsbrook	Historic	No Gender / Initiation Restrictions	Creation / Dreaming Narrative	No	No

***** *Boundary restricted at the request of Traditional Owners; exact location and extent withheld by DPLH.*

Summary of Previously Recorded Aboriginal Cultural Heritage Places

This section provides a summary of previously recorded ACH sites and places within the broader landscape surrounding the Project Area. Site files are yet to be received from the DPLH at the time of writing. As such, only a brief summary is provided below. A copy of the ACHIS search results can be found in Appendix Three.

Moora (ID 5880)

Registered Site. Moora is recorded as a Traditional Structure place. ACHIS notes no gender or initiation restrictions, and the place is not identified as culturally sensitive or restricted.

Walebing (ID 5881)

Registered Site. Walebing is recorded as a Burial place. ACHIS notes no gender or initiation restrictions, and the place is not identified as culturally sensitive or restricted.

Moore River Waugal (ID 20749)

Registered Site. The Moore River Wagyl encompasses the Moore River and its principal branches and is recorded as significant for its enduring association with the Wagyl.

Gingin Brook Waggyl Site (ID 20008)

Registered Site, boundary restricted, culturally sensitive. Gingin Brook is recorded as a Wagyl Dreaming place with additional attributes including Camp, Historical, Hunting Place, Plant Resource, and Water Source. The site is culturally sensitive and the precise location and extent are withheld by DPLH at the request of Traditional Owners.

Chandala Brook (ID 21620)

Registered Site. Chandala Brook is recorded as a Wagyl Dreaming place within the Moore River drainage. ACHIS notes that this entry duplicates the earlier ID 3525.

Lennard Brook (ID 20650)

Lodged Place. Lennard Brook is recorded as a Wagyl Dreaming place with additional Landscape/Seascape Feature and Water Source attributes.

Breera Brook (ID 21619)

Lodged Place. Each of these four tributary brooks is recorded as a Wagyl Dreaming place within the Moore River drainage system and forms part of a connected Wagyl complex documented in ethnographic surveys of the Moora–Gingin region.

Wallering Brook (ID 21617)

Lodged Place. Each of these four tributary brooks is recorded as a Wagyl Dreaming place within the Moore River drainage system and forms part of a connected Wagyl complex documented in ethnographic surveys of the Moora–Gingin region.

Boonanarring Brook (ID 21616)

Lodged Place. Each of these four tributary brooks is recorded as a Wagyl Dreaming place within the Moore River drainage system and forms part of a connected Wagyl complex documented in ethnographic surveys of the Moora–Gingin region.

Nullilla Brook (ID 21618)

Lodged Place. Each of these four tributary brooks is recorded as a Wagyl Dreaming place within the Moore River drainage system and forms part of a connected Wagyl complex documented in ethnographic surveys of the Moora–Gingin region.

Nardy Well (ID 5573)

Lodged Place. Nardy Well is recorded as an Artefacts / Scatter and Camp place. ACHIS notes no gender or initiation restrictions, and the place is not identified as culturally sensitive or restricted.

Bindi Bindi FS 1 (ID 20898)

Lodged Place. Bindi Bindi FS 1 is recorded as an Artefacts / Scatter place. ACHIS notes no gender or initiation restrictions, and the place is not identified as culturally sensitive or restricted.

Bindi Bindi FS 2 (ID 20899)

Lodged Place. Bindi Bindi FS 2 is recorded as a Modified Tree place. ACHIS notes no gender or initiation restrictions, and the place is not identified as culturally sensitive or restricted.

Walebing Reserve (ID 36739)

Lodged Place, restricted place. Walebing Reserve is recorded as a Burial and Historical place. ACHIS identifies the place as subject to women-only restrictions and as a restricted place, although it is not listed as culturally sensitive.

Walebing Scarred Tree (ID 36967)

Lodged Place. Walebing Scarred Tree is recorded as a Modified Tree place. ACHIS lists no specific gender or initiation restrictions, and the place is not identified as culturally sensitive or restricted.

Clovalley Farm (ID 37674)

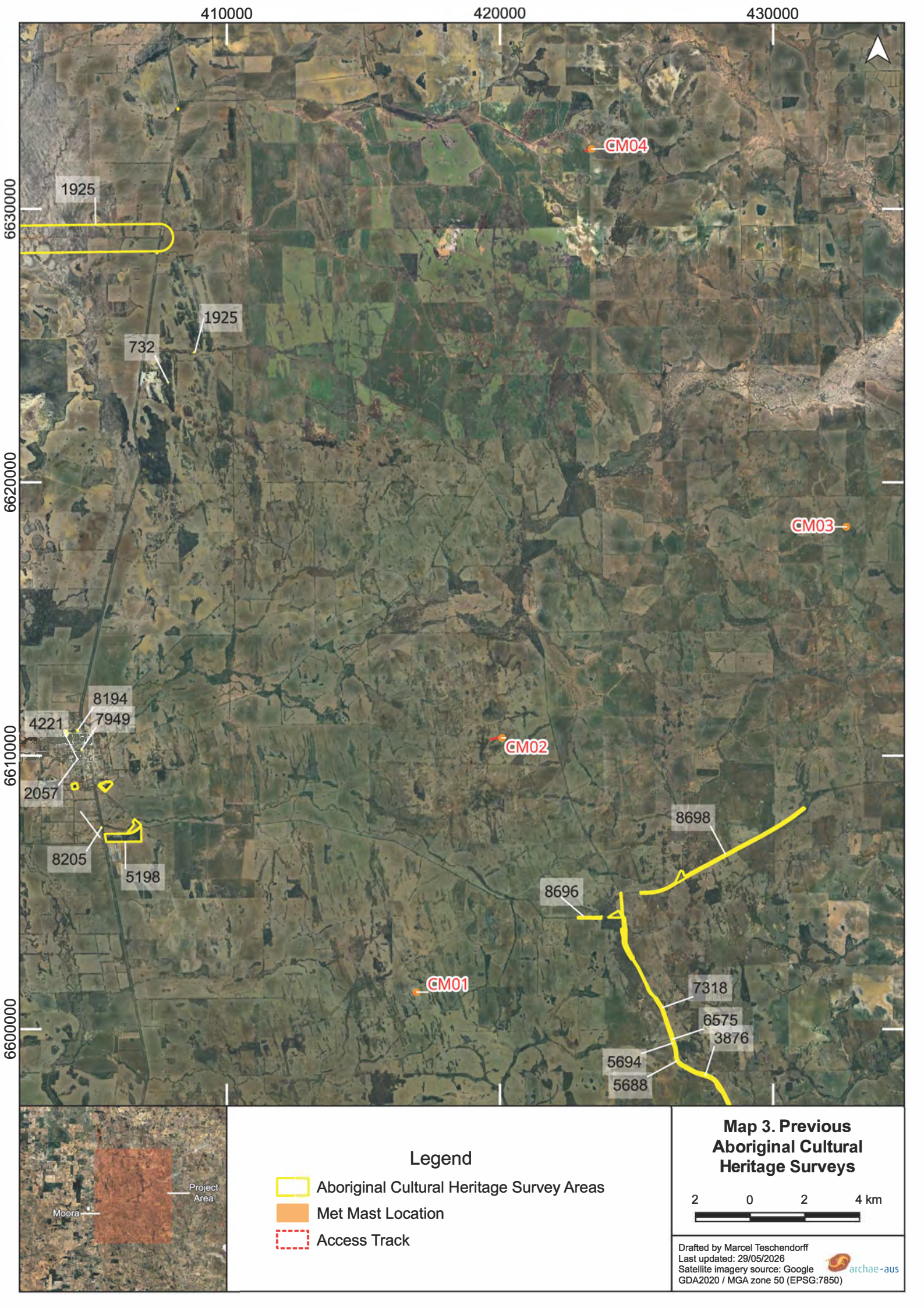
Historic Record Place. Clovalley Farm is recorded with multiple attributes, including Burial, Artefacts / Scatter, Engraving, Modified Tree, and Water Source. The place has a Historic status on ACHIS, meaning it has been assessed as not meeting the criteria of section 5 of the *Aboriginal Heritage Act 1972*.

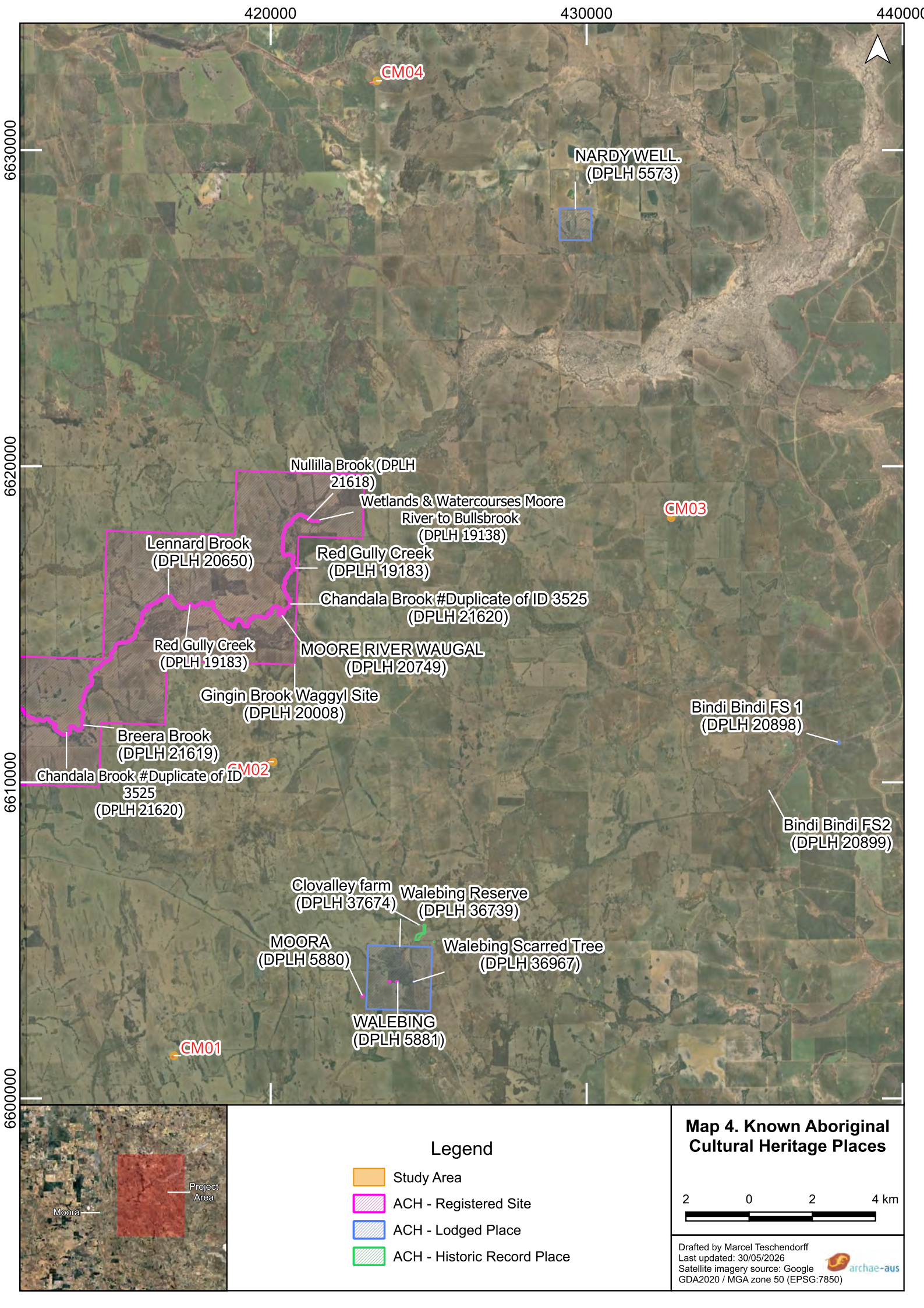
Red Gully Creek (ID 19183)

Historic Record Place. Recorded as a Wagyl Dreaming narrative place with additional Plant Resource attributes. The place has a Historic status on ACHIS, meaning it has been assessed as not meeting the criteria of section 5 of the *Aboriginal Heritage Act 1972*.

Wetlands & Watercourses Moore River to Bullsbrook (ID 19138)

Historic Record Place. Recorded as a Wagyl Dreaming narrative place. The place has a Historic status on ACHIS, meaning it has been assessed as not meeting the criteria of section 5 of the *Aboriginal Heritage Act 1972*.


410000
420000
430000
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6600000
CM04
CM03
CM02
CM01
1925
1925
732
8194
7949
4221
2057
8205
5198
8698
8696
7318
6575
3876
5694
5688
Project Area
Moora
Legend
Aboriginal Cultural Heritage Survey Areas
Met Mast Location
Access Track
Map 3. Previous Aboriginal Cultural Heritage Surveys
2 0 2 4 km
Drafted by Marcel Teschendorff
Last updated: 29/05/2026
Satellite imagery source: Google
GDA2020 / MGA zone 50 (EPSG:7850)
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420000
430000
440000
6630000
6620000
6610000
6600000
CM04
NARDY WELL.
(DPLH 5573)
Nullilla Brook (DPLH
21618)
Wetlands & Watercourses Moore
River to Bullsbrook
(DPLH 19138)
CM03
Lennard Brook
(DPLH 20650)
Red Gully Creek
(DPLH 19183)
Chandala Brook #Duplicate of ID 3525
(DPLH 21620)
Red Gully Creek
(DPLH 19183)
MOORE RIVER WAUGAL
(DPLH 20749)
Gingin Brook Waggyl Site
(DPLH 20008)
Bindi Bindi FS 1
(DPLH 20898)
Breera Brook
(DPLH 21619)
CM02
Chandala Brook #Duplicate of ID
3525
(DPLH 21620)
Bindi Bindi FS2
(DPLH 20899)
Clovalley farm
(DPLH 37674)
Walebing Reserve
(DPLH 36739)
MOORA
(DPLH 5880)
Walebing Scarred Tree
(DPLH 36967)
WALEBING
(DPLH 5881)
CM01
Project
Area
Moora
Legend
Study Area
ACH - Registered Site
ACH - Lodged Place
ACH - Historic Record Place
Map 4. Known Aboriginal
Cultural Heritage Places
2
0
2
4 km
Drafted by Marcel Teschendorff
Last updated: 30/05/2026
Satellite imagery source: Google
GDA2020 / MGA zone 50 (EPSG:7850)
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Historical Heritage Places

Heritage places in Western Australia may be recorded under a range of statutory and non-statutory listings, including the State Register of Heritage Places, Heritage Council Assessment Program, Local Heritage Surveys, local Heritage Lists and non-statutory registers such as the National Trust (Table 5). These listings vary in their level of protection, with statutory listings generally maintained by government bodies and non-statutory lists often arising from local, community-based or thematic heritage surveys. The relevant heritage databases have been cross-referenced to identify known historical heritage places located within or near the Study Area.

Table 5. Types of historical heritage statutory listings

Listing Type	Organisation	Legislation
National Heritage List	Australian Heritage Council	*Environment Protection and Biodiversity Conservation Act 1999*
State Register of Heritage Places	Heritage Council of WA	*Heritage Act 2018*
Protection Order	Heritage Council of WA	*Heritage Act 2018*
Heritage Agreement	Heritage Council of WA	*Heritage Act 2018*
National Trust Listing	National Trust Western Australia	*National Trust of Australia (W.A.) Act 1964*
Heritage List	Local Governments	*Planning and Development Act 2005; Local Planning Schemes*

Historical Heritage Listings

National Heritage List

A search of the National Heritage List identified **no** National Heritage Listed Places which intersect the Study Area (see Map 5).

State Heritage Register

A search of the Western Australian State Register of Heritage Places (State Register) identified **no** State Registered Places which intersect the Study Area (see Map 5).

Shire of Moora Local Heritage Survey and Heritage List

The Shire of Moora adopted its first Local Heritage Survey (previously referred to as the Municipal Heritage Inventory or Local Government Inventory) in 1997. The most significant places are also often included on the Shire's Heritage List, the State Heritage Register and the National Heritage List.

A search of the Heritage Council's inHerit database, which lists all places included in local government heritage assessments, reveals that there are **no** Local Heritage Survey or Heritage List places within or adjacent to the Study Area (see Map 5).


410000
420000
430000
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6620000
6610000
6600000
Moora Town Precinct (East) (11240)
Moora Post Office & Quarters (1601)
Moora Town Hall (1599)
St John The Baptist Church (R.C.) (1598)
St James' Anglican Church, Moora (1594)
CM04
CM03
CM02
CM01
Midlands Rd
Miling-Moora Rd
Moora Post Office & Quarters (1601)
Moora
Walebing (3268)
Walebing
Great Northern Hwy
Project Area
Moora
Legend
Study Area
Access Track
State Registered Place
Local Heritage Place
Map 5. Listed Historic Heritage Places
2 0 2 4 km
Drafted by Marcel Teschendorff
Last updated: 29/05/2026
Satellite imagery source: Google
GDA2020 / MGA zone 50 (EPSG:7850)
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SECTION THREE – CULTURAL HERITAGE BACKGROUND

Environmental Context

Environmental parameters such as landform, soils, hydrology, and vegetation strongly condition the distribution of Aboriginal cultural materials in southwestern Australia (Anderson, 1984; Bird, 1985; Hallam, 1987). The environmental setting of the Project Area is summarised here and is referenced throughout the archaeological discussion that follows.

Regional Setting

The Study Area lies in the Shire of Moora, east of the township of Moora, in the northern Wheatbelt of Western Australia. The region occupies the ecotone between the Avon Wheatbelt bioregion to the south and east and the Geraldton Sandplains bioregion to the west and north (Thackway and Cresswell, 1995; DCCEEW, 2023). It has a Mediterranean climate with cool, wet winters and warm to hot, dry summers, and very high floristic diversity (Hopper and Gioia, 2004; Gioia and Hopper, 2017). Mean annual rainfall at Moora is approximately 450 mm, concentrated in the winter months (Bureau of Meteorology, 2024).

The Study Area spans the transition between the inland margin of the Dandaragan Plateau, a sedimentary plateau that descends to the Swan Coastal Plain in the west, and the gently undulating laterite and granite landscapes of the Yilgarn Block to the east (Playford, Cockbain and Low, 1976; Meagher and Ride, 1979). The Moore River and its tributaries form the principal drainage system through the region, flowing westward to the Indian Ocean at Guilderton. Tributary brooks, seasonal creeks, soaks, and gnamma holes developed within granite outcrops supplement the Moore River as freshwater sources. The hydrographic information presented in this section is derived from the Hydrography Linear (Hierarchy) dataset (DWER-031) maintained by the Department of Water and Environmental Regulation (DWER, 2024).

Regional Vegetation

Vegetation around Moora reflects the Wheatbelt–Dandaragan Plateau setting (Beard, 1990). On lateritic uplands, breakaways, and weathered granite landforms, the dominant community is York Gum (*Eucalyptus loxophleba*) and Jam (*Acacia acuminata*) woodland, typically with a mixed shrub and grass understorey. On better-drained loamy soils and in valley contexts, Wandoo (*Eucalyptus wandoo*) and Salmon Gum (*Eucalyptus salmonophloia*) woodlands occur, commonly with Sheoak (*Allocasuarina* spp.) as a sub-dominant.

In riparian zones along the Moore River, its tributaries, and seasonal creeks, the canopy shifts to Flooded Gum (*Eucalyptus rudis*) and Melaleuca species, with flood-tolerant rushes, sedges, and herbs at ground level. Further west and north, the region borders sandplain and lateritic plain areas that support open *kwongan* heathland dominated by Proteaceae, Myrtaceae, and Fabaceae and characterised by exceptionally high species richness (Hopper and Gioia, 2004). These vegetation communities are archaeologically significant because riparian and wetland communities coincide with the freshwater and floral resource zones preferentially occupied by Aboriginal people in the Southwest (Anderson, 1984; Hallam, 1987). Plant foods documented for Yued Country include yams (*Dioscorea hastifolia*), native tubers, roots, fruits, and seeds (Meagher and Ride, 1979; Monks, 2021).

Landform, Soils, and Hydrology at Each Met Mast Location

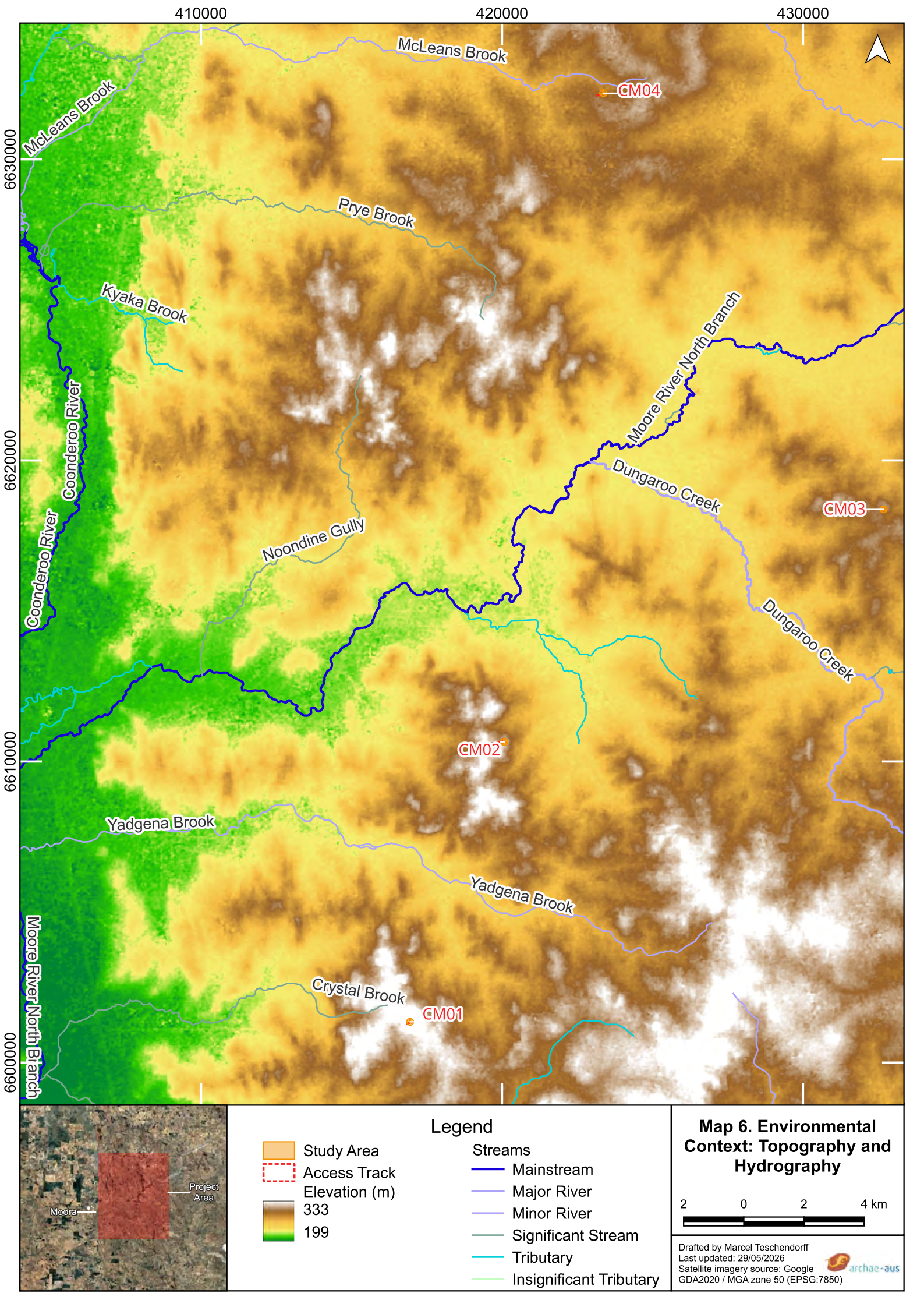
The met masts are typically located on topographic highs. Soil-landscape descriptions in this section follow the Soil-Landscape Mapping — Zones dataset DPIRD-017, maintained by the Department of Primary Industries and Regional Development (DPIRD, 2024). Hydrographic information follows the Hydrography Linear (Hierarchy) dataset DWER-031 (DWER, 2024).

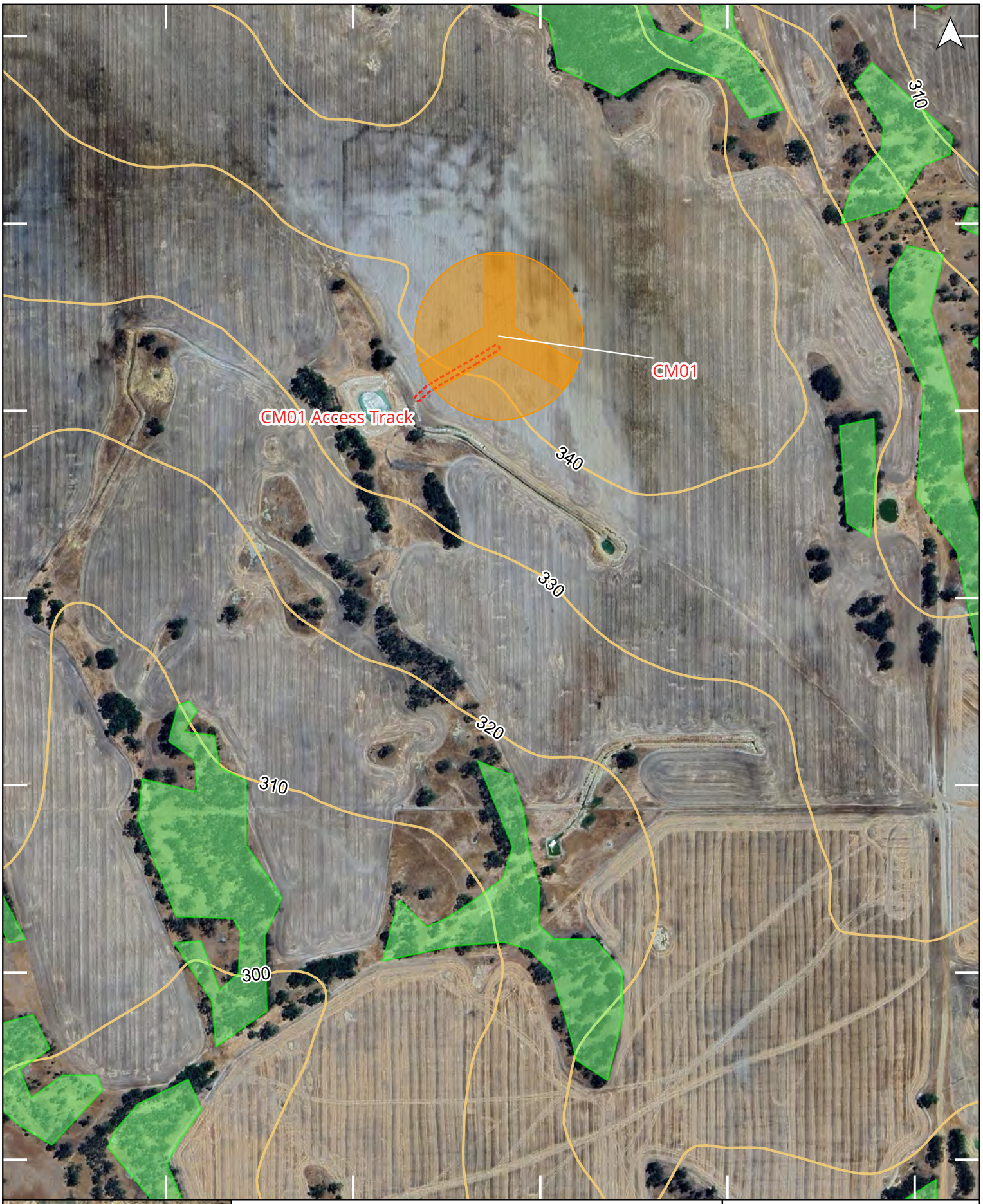
The Glentrome System comprises loamy earths, loams, loamy gravel, and some clay and rock, formed on weathered granite and migmatite. The Burabidge Hill System consists of brown and red loamy and sandy earths, yellow–brown shallow loamy duplex, and some stony soil, typically supporting York Gum–Jam woodland. The Ranfurly System is a level to gently undulating relict floodplain with loamy earths, clays, and duplex soils developed on alluvium. The Coorow System is characterised by yellow deep sand, pale deep sand, and grey sandy duplex (some alkaline), with minor loamy earths. The Goomalling System comprises poorly drained valley flats with grey deep sandy duplex (sometimes alkaline) and saline wet soils, supporting York Gum–Jam–Wandoo–Salmon Gum–Sheoak woodland (DPIRD, 2024).

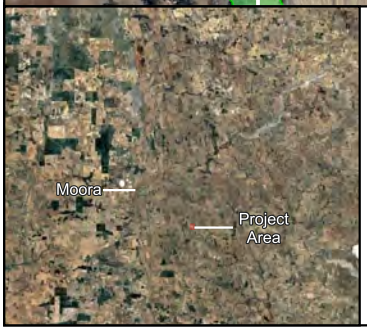
Elevated sand dunes, particularly those located close to water sources, are more likely to contain archaeological material. Subsurface archaeological material has been identified in comparable environments, including the Swan Coastal Plain, Lake Ninan and areas near Calingiri (Archae-aus, 2022, 2025b, 2025a; Dortch and Thorpe, 2023; Dortch, Leopold and Thorpe, 2023a, 2023b). The granite outcrop country of the Burabidge Hill System, which occurs near CM01, CM03 and CM04, is also an important landform class in Wheatbelt archaeology (Bird, 1985; Randolph, 2011). Table 6 summarises the landform, soil system, and nearest surface water sources for each met mast location.

Table 6. Environmental setting of the four met mast locations

Met mast	Soil system(s) traversed	Landform	Nearest water sources
CM01 (approx. 15 km SE of Moora)	Glentrome	Topographic high on stripped, weathered plateau with undulating low hills; transitions east to undulating rises and low hills with granite/migmatite/gneiss rock outcrop	Crystal Brook (significant stream, to the west); Yadgena Brook (minor river to the north)
CM02 (approx. 16 km E of Moora)	Burabidge Hill → Glentrome	Undulating rises to low hills with rock outcrop (Burabidge Hill); weathered plateau (Glentrome)	Moore River and tributaries (spanning to the north and east)
CM03 (approx. 28 km NE of Moora)	Burabidge Hill	Topographic high on undulating rises to low hills with granite/ migmatite/gneiss outcrop	Moore River North Branch (approx. 5.5 km to the north); Dungaroo Creek (approx. 4.8 km to the west)
CM04 (approx. 16 km E of Coomberdale)	Burabidge Hill	Undulating rises to low hills with granite/migmatite/gneiss outcrop	McLean Brook (minor river, approx. 100 m north)


410000
420000
430000
6630000
6620000
6610000
6600000
McLeans Brook
McLeans Brook
CM04
Prye Brook
Kyaka Brook
Coonderoo River
Coonderoo River
Moore River North Branch
Dungaroo Creek
CM03
Noondine Gully
Dungaroo Creek
CM02
Yadgena Brook
Yadgena Brook
Moore River North Branch
Crystal Brook
CM01
Project Area
Moora
Legend
Study Area
Access Track
Elevation (m)
333
199
Streams
Mainstream
Major River
Minor River
Significant Stream
Tributary
Insignificant Tributary
Map 6. Environmental Context: Topography and Hydrography
2 0 2 4 km
Drafted by Marcel Teschendorff
Last updated: 29/05/2026
Satellite imagery source: Google
GDA2020 / MGA zone 50 (EPSG:7850)
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Legend

- Study Area
- Access Track
- 10 m Contours
- Native Vegetation Extent (DPIRD-005)

Map 7. CM01 Environmental Context

0 100 200 m

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Last updated: 29/05/2026
Satellite imagery source: Google
GDA2020 / MGA zone 50 (EPSG:7850)

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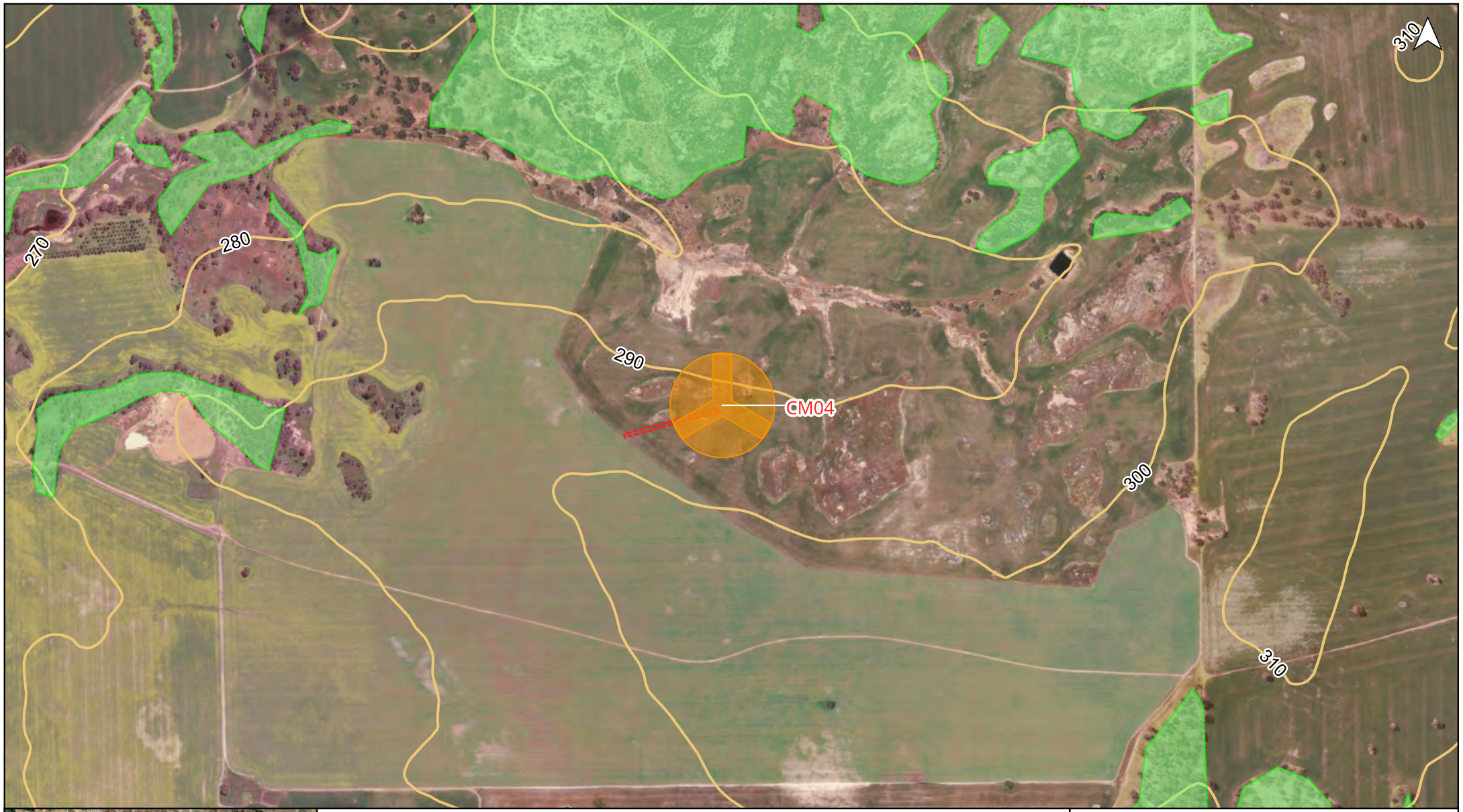


Map 8. CM02 Environmental Context

Drafted by Marcel
Last updated: 29/05/2026
Satellite imagery source: Google
GDA2020 / MGA zone 50 (EPSG:7850)

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432000
433000
6619000
6618000
270
280
290
300
CM03
300
300
300
300
Project Area
Moora
Legend
Study Area
10 m Contours
Native Vegetation Extent (DPIRD-003)
Map 9. CM03 Environmental Context
0
100
200 m
Drafted by Marcel Teschendorff
Last updated: 29/05/2026
Satellite imagery source: Google
GDA2020 / MGA zone 50 (EPSG:7850)
archae-aus





Legend

- Study Area
- Access Track
- Native Vegetation Extent (DPIRD-003)
- 10 m Contours

Map 10. CM04 Environmental Context

0 250 500 m

Drafted by Marcel
Last updated: 29/05/2026
Satellite imagery source: Google
GDA2020 / MGA zone 50 (EPSG:7850)

archae-aus

Archaeological Context

This section provides an archaeological overview of Yued Country, with a focus on the Moora region, to support the assessment of known and potential Aboriginal cultural heritage that may be affected by the proposed installation of four meteorological masts: CM01, CM02, CM03, and CM04.

Antiquity of Occupation in South Western Australia

Aboriginal people have occupied Southwest Australia since at least the late Pleistocene. The oldest dated site in the Southwest is Devil's Lair, a limestone cave on the Leeuwin–Naturaliste Ridge, which records initial human visitation at approximately 48,000 cal BP (Turney *et al.*, 2001). On the Swan Coastal Plain, excavations near Munday Swamp at Perth Airport have produced an open artefact scatter dated to approximately 41,000 years ago (Dortch, Leopold and Thorpe, 2023a, 2023b). The open site at Upper Swan Bridge, on a terrace of the Swan River, has been dated to at least approximately 38,000 years ago (Pearce and Barbetti, 1981). Additional sites on the Swan Coastal Plain with Pleistocene antiquity include Fiona Stanley Hospital at 33,000 BP (Dortch, Dortch and Cuthbert, 2009), the Helena Valley at approximately 29,400 BP (Schwede, 1990), and the Minim Cove site near the mouth of the Swan River dated to approximately 9,930 BP (Clarke and Dortch, 1977).

Genetic evidence indicates that Aboriginal groups across Australia have remained in their respective Countries for most of the period of continental occupation (Malaspinas *et al.*, 2016). Combined with the relatively stable ecological conditions of the Holocene (Pickett, 1997), it is reasonable to infer that the ancestors of the Yued People have occupied Yued Country for a comparable period to that established elsewhere in the South West, despite the limited number of Pleistocene-dated sites currently recorded within Yued boundaries (Dortch and Thorpe, 2023).

Yued Country: Archaeology and Dated Sites

The most suitable dated evidence for Aboriginal occupation in a comparable biogeographic setting to the Study Area is provided by a small number of sites in the northern Swan Coastal Plain, which borders Yued Country to the west, and by recent work within Yued Country itself.

Yellabidde Cave, approximately 50 km north of Jurien Bay, was first occupied at approximately 25,500 cal BP in the late Pleistocene and shows continuing visitation to the recent past (Monks *et al.*, 2016). Caladenia Cave, a small single-chamber cave between Guilderton and the Gingin Scarp, records repeated human use during the mid- to late Holocene, from 4,731 cal BP to 2,868 cal BP (Monks *et al.*, 2014). Excavations at Caladenia Cave recovered hearths, burnt mammal bone, stone artefacts, and a human jawbone (Monks *et al.*, 2014). Faunal remains at the site, including quokka, tammar wallaby, ringtail possum, and freshwater mussel, indicate hunting and foraging in nearby wetlands and watercourses (Thorn *et al.*, 2017; Monks, 2021). Mid-Holocene shell middens at Jurien Bay and adjacent coastal locations further demonstrate coastal resource use during the last 5,000 years (Dortch, Kendrick and Morse, 1984; Monks, Sheppard and Dortch, 2015).

Inland, within Yued Country and closer to the Study Area, dated sequences are rare but emerging. Test excavation of site *CP2201* (ID 39041) near Calingiri, a surface artefact scatter on a sandy blow-out within a paddock approximately 25 km east of Moora, demonstrated intact subsurface artefact-bearing deposits in a landform broadly analogous to the Burabidge Hill and Coorow Systems within the Study Area (Dortch and Thorpe, 2023). Recent survey work at Lake Ninan, approximately 65 km east of Moora, identified four new artefact concentrations around the lake shores and sandy lake-edge dunes, with high potential for stratified subsurface deposits in the dune systems (Archae-aus, 2025b).

Yued Landscape Use and Settlement Patterns

Aboriginal use of the inland Southwest was strongly conditioned by the Mediterranean climate and the distribution of freshwater. Yued people moved seasonally through their Country in accordance with the availability of water and food resources, occupying the coast and coastal wetlands in summer and autumn and the interior plateau in winter and early spring (Anderson, 1984; Hallam, 1987). Anderson's (1984) seasonal land-use model for the Swan Coastal Plain and Darling Scarp is widely applied to the broader southwestern region of Australia. Under this model, artefact sites are concentrated close to rivers, creeks, wetlands and lakes, and are dominated by quartz as raw material.

The most systematic regional model of Wheatbelt site distribution is Bird's (1985) survey from Lake Grace to Bremer Bay. Bird found that the widest range of food resources was associated with the woodlands of valley bottoms, where soaks and occasional freshwater swamps provided the most reliable water sources. Larger sites were concentrated at reliable water sources in valley bottoms and around granite outcrops, while populations dispersed during the wet season to take advantage of increased water flows and congregated at permanent water sources during summer.

The region is known to contain a variety of yam species, Warrine (*Dioscorea hastifolia*) or *Warran* in Noongar, that were once cultivated along waterways by Aboriginal people for their edible tubers (Hallam, 1986, 1991).

> *Warran – One of the Dioscoree. A species of yam, the root of which grows generally to about the thickness of a man's thumb; and to the depth of sometimes four to six feet in loamy soils. It is sought chiefly at the commencement of the rains [i.e April of May] when it is ripe and when the earth is most easily dug; and it forms the principal article of food for the natives at that season – George Fletcher Moore (cited in Hallam, 1986, p. 122)*

Warran has been recorded in several locations along the Moore River and its associated tributaries; it is likely that this species would have been more widespread prior to European land clearing. An account from 1831, written by George Fletcher Moore, as cited in Hallam (1986, p. 120), describes how he and a group of settlers, including Governor Stirling, were crossing the Swan Coastal Plain near Gingin and were:

> *…obliged to change our course, on account of the ground, which here consisted of a deep red loam, being so cut up into holes as to be almost impassable. The native "yam" seems very abundant here.*

The distribution of *Warran* extends from the Swan River up the coast to the Shark Bay region, with several soil types, including granitic screes, supporting yams; however, "most are on alluvial loams of river terraces" (Hallam, 1986, p. 123). In the Gingin area, approximately 80 km south of Moora, ethnohistorical records of yam cultivation indicate that they were often noted near and around lakes 'with swampy margins' (Hallam, 1986, p. 124). The procurement and processing of yams is likely to

have left an archaeological signature in the form of associated stone tool technology; mullers, millstones and related grinding implements.

Additionally, there is the possibility that evidence of these cultivation practices may be preserved within the landscape: “in March 1972, Mrs Robin Roe, a Gingin local historian, reported pasture immediately south of Lennard’s Brook filled with humps and hollows up to about five feet across and about two feet to three feet deep (ca 1.5 m diameter by 0.7 to 1.0 m deep) said by the present owners to have been once three or four feet deep (1 to 1.3 m) and to have been ‘ left by native digging yams or *Woorine*’. Both here and at another similar area of ‘humps and hollows’ at the foot of the scarp northwest of Gingin, all traces of yam plants had been eaten out in the pasture, but yam vines were climbing up the bushes and trees along the adjacent verge” (Hallam, 1986, p. 121). Hallam notes how these areas would have provided not only yams, but also “reed rhizomes, zamia, and fish, fowl and other minor products of the swamps and lakes”. Similar landforms may exist around the waterways in the Moora vicinity.

Aside from streams and wetlands, granite outcrops and domes are particularly important focal points in the Wheatbelt archaeological record. They commonly retain water in gnamma holes and soaks, support concentrations of faunal and floral resources, and contain exposures of quartz that provided the primary raw material for stone tools (Bird, 1985; Randolph, 2011). Gnamma holes were actively maintained by Aboriginal people, with stone covers placed over them to prevent evaporation and animal contamination, and these features commonly survive intact. Stone arrangements consisting of boulders set into geometric shapes on granite sheets have been recorded in the general vicinity of Wongan Hills, approximately 60 km east of the Study Area (Dortch and Thorpe, 2023), and similar features may be present on granite outcrops within Yued Country near the Study Area.

In summary, the distribution of archaeological sites in Yued Country suggests a long-term stable pattern of land use focused on rivers and resource-rich wetlands and swamps, consistent with the archaeological signature seen in other parts of the Southwest (Anderson, 1984; Hallam, 1987; Teschendorff, Benjamin and O’Leary, 2025).

Post-contact Yued History and Archaeology

European contact in Yued Country intensified following the establishment of the New Norcia Mission by the Benedictine Bishop Rosendo Salvado in 1847 (Stormon, 1977; Rooney, 2002; Dortch and Thorpe, 2023). Salvado's contemporary observations record Yued people hunting, collecting gum, and gathering yams under a system of recognised individual territorial rights that were 'respected as sacred' (Dortch and Thorpe, 2023). The Aborigines Act 1905 (WA) and successor legislation forced many Yued people off their Country and onto reserves at Moora, Northam, and Walebing, where they worked in farming and domestic roles (Haebich, 1988; Rooney, 2002). Overcrowding at these reserves led the State Government to establish the Moore River Native Settlement at Mogumber in 1918, which subsequently became a site of forced removals under the 'Stolen Generations' policies (Perpitch, 2018).

From an archaeological perspective, the post-contact period is represented in the record of Yued Country by historic camps, meeting places, and continuing use of pre-contact site types. Post-contact material culture, including flaked tools made from bottle glass, ceramics, and telegraph insulators, is chronologically diagnostic of occupation continuing after approximately 1830 and has been found in association with archaeological sites across the Southwest (Hallam, 1987; Dortch and Dortch, 2019).

Limited Investigation and Survey Bias

There has been comparatively little archaeological investigation of the Wheatbelt and the inland Dandaragan Plateau relative to coastal regions of the Southwest. Three factors account for this (Hallam, 1975; Bird, 1985). First, caves and rock shelters, the landforms most conducive to stratified, datable sites, are rare in the region. Second, the agricultural character of the Wheatbelt has produced lower development pressure than coastal regions, with compliance-driven archaeological work historically small-scale. Third, the long history of agricultural land use has generated a perception that little archaeological material is likely to survive.

The limited dated archaeological record for the Wheatbelt reflects survey bias and the rarity of stratigraphically useful landforms, rather than the absence of Aboriginal occupation. Excavated sequences from Frieze Cave near York and Mulka's Cave near Hyden have produced occupation sequences confined to the last few thousand years (Hallam, 1975), but genetic studies and archaeological evidence from the broader Southwest region suggest that the Wheatbelt has been occupied for as long as neighbouring parts of Noongar Country (Malaspinas *et al.*, 2016; Dortch and Dortch, 2019; Dortch *et al.*, 2019).

The Swan Coastal Plain as a Comparative Model for Subsurface Archaeological Potential

The archaeological record for the Wheatbelt and Yued Country is limited. This is particularly the case for dated subsurface assemblages. As a result, the archaeological record of the adjoining Swan Coastal Plain has been used as a comparative indicator. It helps identify the types of material and landform associations that may occur within and near the Study Area (Archae-aus, 2025a). The rationale for this proxy approach is threefold.

First, both regions lie within Noongar *Boodjar* and share a single seasonal land-use system in which Noongar people moved between the coastal plain, the Darling Scarp, and the interior plateau (Tindale, 1974; Anderson, 1984). Second, the Swan Coastal Plain has a substantially denser history of development-driven investigation and open-area excavation, providing a body of excavated evidence not yet available for the Wheatbelt (Dortch and Dortch, 2019; Dortch *et al.*, 2019). Third, the landforms that host subsurface archaeology on the Swan Coastal Plain, alluvial terraces, sandy rises near water, and the margins of freshwater wetlands and lakes, have direct analogues in the Moora region along the Moore River, its tributaries, and inland seasonal watercourses.

Several subsurface excavations on the Swan Coastal Plain are informative for the Study Area. At Fiona Stanley Hospital (Murdoch), stone tools identified during construction led to targeted shovel test-pitting and open-area excavation, recovering a mylonite stone adze dated to approximately 33,000 years old in strata that had survived prior urban development (Dortch, Dortch and Cuthbert, 2009; Dortch and Dortch, 2019). In the Beeliar Wetlands, Archae-aus (2022) recovered intact archaeological material at depths of up to approximately one metre below the ground surface in elevated, sandy areas between Lake Walliabup (Bibra Lake) and Lake Coolbellup (North Lake), even in strata affected by disturbance processes; artefact density suggested the entire wetland complex should be considered a single cultural landscape with a high probability of encountering cultural material anywhere within it. More recently, excavation at Perth Airport recovered hundreds of flaked stone artefacts near Munday Swamp at depths of up to 2.1 m, with artefact density peaking at two depth intervals between 0.3 m and 0.5 m and between 1.7 m and 1.9 m (Dortch, Leopold and Thorpe, 2023a, 2023b).

These results collectively demonstrate three principles directly applicable to the Study Area. First, subsurface archaeological deposits are widespread and laterally extensive, particularly on sandy and alluvial landforms adjoining freshwater bodies. Second, visible surface disturbance, including long-term agricultural use and urban development, does not preclude the preservation of intact subsurface deposits. Third, depth of burial can exceed 1 m, so standard visual surface survey alone is not sufficient to characterise subsurface potential in archaeologically prospective landforms. Similar subsurface preservation should be anticipated on analogous landforms within the Study Area, particularly at sandy landforms within the Burabidge Hill, Coorow, and Ranfurly Systems.

Expected Site Types in Yued Country and the Study Area

Drawing together the broader archaeological evidence for south-western Australia, the dated archaeological record of Yued Country and the northern Swan Coastal Plain and the Swan Coastal Plain proxy for subsurface archaeology, the following site types are expected within Yued Country and, specifically, within the Study Area and its immediate surrounds.

The most common site type expected in Yued Country is the surface stone artefact scatter (Hallam, 1975; Anderson, 1984; Bird, 1985; Dortch and Thorpe, 2023). Scatters are typically dominated by quartz and may include dolerite, granite, mylonite, silcrete, crystal quartz, and fossiliferous chert. Chert is a chronological marker in the Southwest: its probable Eocene source has been drowned by post-glacial sea-level rise, and where sites have been dated, its presence indicates use extending back more than approximately 5,000 years (Glover, 1984; Bowdler, Strawbridge and Schwede, 1991; Bird, Dortch and Hook, 2021) . Examples within approximately 25 km of the Study Area include site CP2201 near Calingiri (ID 39041) (Dortch and Thorpe, 2023) and the scatters CP2202–CP2207 around Lake Ninan (Archae-aus, 2025b).

On the evidence of the Swan Coastal Plain site analogues and CP2201, many such scatters have a subsurface expression to depths of at least one metre (Dortch, Dortch and Cuthbert, 2009; Archae-aus, 2022; Dortch, Leopold and Thorpe, 2023a, 2023b). Post-contact material culture, including flaked bottle-glass and ceramic fragments, is also found in association with surface scatters (Hallam, 1987). Post-contact historical places, including camps, meeting places, and working areas, form a further expected site that may contain artefactual material (Hallam, 1987; Haebich, 1988).

Culturally modified trees are also expected, particularly in areas retaining mature eucalypts and wandoo. These include scars from bark or wood extraction for tools and shelter, and toe-holds cut into trunks to enable possum hunting (Dortch and Thorpe, 2023). Examples in the broader Calingiri region include several scarred Wandoo (*Eucalyptus wandoo*) recorded on road verges (Dortch and Thorpe, 2023).

Gnamma holes, grinding patches, and stone arrangements on granite outcrops are expected within the Burabidge Hill System landforms that affect CM01, CM03, and CM04. Gnamma holes were covered to prevent evaporation and contamination, and the covers commonly survive intact. Stone arrangements of the type documented by Randolph (2011) for the southwestern Wheatbelt, are found on granite sheets throughout the region; examples in the broader Yued area are recorded at Wongan Hills (IDs 5894 and 5945) (Dortch and Thorpe, 2023).

Mythological places and Dreaming narrative places, particularly those associated with the Wagyl (also rendered Waugal or Waakal), are the predominant recorded site type within 1 km of the Study Area and across the broader Moore River drainage. The Wagyl is the creative Dreaming serpent that Noongar people understand to have carved the rivers, springs, and waterways of Noongar boodjar

and to continue to inhabit them (Berndt and Berndt, 1996; Dortch and Thorpe, 2023). Any watercourse or waterbody within Yued Country has the potential to be a Wagyl place, whether or not it is currently registered with DPLH. The ethnographic significance of these places is addressed in detail in the Ethnographic Context section.

Ethnographic Context

Yued Country and Cultural Context

The Study Area falls within the Country of the Yued People of the Noongar Nation in southwestern Australia. Yued Country spans approximately 29,253 km^2 and includes the towns of Moora, Jurien Bay, Lancelin, Gingin, New Norcia, Calingiri and Coorow, among others. The present-day boundaries of Yued Country are those that were agreed to during the establishment of an Indigenous Land Use Agreement (ILUA) with the State Government in 2015 (National Native Title Tribunal, 2014). However, traditionally and historically, the boundaries of Yued Country were defined by the locations where the Yued dialect of the Noongar language was spoken (Oates and Oates, 1970a; Tindale, 2019).

The Noongar language belongs to the Nyunga Subgroup of the Pama-Nyungan Family of Aboriginal Languages (Oates and Oates, 1970b: xiii). Yued tribes were divided by complex kinship relationships or moiety groups: *Wardanmart*, named for the ancestral *Wardang* (crow) who brought the first Noongar people on his back and left them to care for the land, and *Manatjmart*, named for the *Manatj* (white cockatoo) (Laurie, 1995:2). The traditional language of the Yued people is known as Djiralay and belongs to the northern dialect of the three dialect groups of the south-west Noongar cultural bloc (Oates and Oates, 1970b:60–2). Early ethnographer Norman Tindale (1974) described "Juat" Country as being:

> *At Gingin, Moora, New Norcia, Moore River, and Cape Leschenault; north to about Hill River; inland to near 243 Miling and Victoria Plains. The last surviving male member of the Whadjuk tribe, Ngepal, spoke the name of this tribe as ['I:wat] = [I:wat].*

For Aboriginal people throughout Australia, the spiritual significance of the physical landscape is rooted in a shared set of creation beliefs commonly referred to in English as 'the Dreaming' or 'the Dreamtime'. A key feature of this complex belief system is the understanding that during a time in the deep past, the world was transformed from a featureless plain by the activities of many ancestral beings. As these supernatural beings moved through the landscape, their exploits created most of the land's distinctive features. As described by anthropologist Bob Tonkinson (1991:21):

> *Every Aboriginal group attribute a host of physical features in its territory to the creative acts of the Dreaming beings. These are forever imprinted on the landscape as visible signals of extra human powers and are immortalised in myths, songs and rituals, which are religions for meaning. In the act of creating landscape features across the earth, the beings imbued landscape features with spiritual power. In some instances, when finished with their earthly pursuits the beings are known to have metamorphosed into stones, mountains, salt flats, and other landscape features, and in some instances ascended into the sky to become stars. The landscape features associated with the exploits of the beings which are imbued with their spiritual essence, continue to have a central place in Aboriginal mythology and are highly valued by, and particularly significant for contemporary Aboriginal people.*

Yued Cultural Landscapes and Ethnographic Heritage Values

Based on these beliefs, Aboriginal people do not conceptualise the ethnographic aspects of their cultural heritage as an assortment of distinct places but view their Country as a broader cultural landscape, replete with interconnections, meaning, and value. Ethnographic aspects of Aboriginal cultural heritage are often more difficult for non-Aboriginal people to understand than tangible aspects of cultural heritage, particularly within the paradigm of Western knowledge and worldviews. For this reason, a brief description of the basis for beliefs associated with ethnographic aspects of Aboriginal cultural heritage and their ongoing significance is provided in this report, with particular reference to Yued Country.

Landscape features connected to creation beliefs continue to hold particular significance for Aboriginal people today. These can include various geographic forms, including mountains, rivers, creek systems, clay pans, rock formations, etc. and can be linked through the creation narrative to which they are connected. While the general nature of such places is often common knowledge for Yued People, certain ritual-based knowledge can be subject to strict restrictions based on gender and seniority. Such knowledge is closely guarded and is only discussed with outsiders when necessary, often to avoid imminent threats of damage or destruction to these significant features.

Aboriginal people throughout the Noongar Nation also share beliefs in the sentience of the cultural landscape based on the eternal presence of different types of ancestral spirits. While stories of encounters and interactions with such spirits often refer to their cheeky nature, some spirits associated with specific locations can be particularly malevolent and pose a significant risk to outsiders (Palmer, 1981). Guidance must be sought from the appropriate Traditional Owners to safely navigate Country. Places associated with spiritual forces should be treated with extreme caution, or ideally, avoided altogether. For Aboriginal people throughout Australia, permanent water sources are commonly places of special cultural significance. According to accounts by senior Traditional Owners consulted by anthropologists Marcus Barber and Sue Jackson (2011:39) as part of an ethnographic consultation for the Commonwealth Scientific and Industrial Research Organisation:

> *Water gives the gift of life to everybody. The water snake is the creator of our culture. You need to respect these places. Animals and human beings need it to survive. Water is so central to Aboriginal peoples' wellbeing.*

Spiritual beliefs of giant supernatural serpents are universal throughout Australian Aboriginal culture (Cane, 2013, p. 51). For the Noongar Peoples generally, these serpents are known as Wagyl[1]; and they reside in all manner of freshwater and saltwater environments. Wagyl sites are sometimes associated with other spirit beings, too.

Depending on the nature of the residing spirit beings, water sites have the potential to be spiritually volatile and dangerous. This is an important consideration relative to the Study Area, which extends into several wetlands. All water systems within Yued Noongar Country are attributed to creation by the Wagyl, who remains living with standing water and pools across the landscape.

[1] Also spelt Waugal in other parts of Noongar Country.

"Koora-koora, nidja boodjar indjar, nidja boodjar baan. Boordawan, Wagyl yira-yaakiny —Waggly yoowal koorliny. Baal Yued boodjar koorliny. Boorda, Wakal yoowal-barang Nyoongara boola nidja! Mila, Wagyl wort koorl— bokadja! Nidjabaal Wagyl wort koorl. Baal yira koorliny—Yabara. Wagyl boodjara koorang-kooranginy. Baal Jurien Bay yaakiny-nyininy… Ali, Wagyl kwongkan baaminy, bilya baaminy. Boorda, baal ngarda-koorliny Guilderton. Ali, Wagyl bilya birniny. Baal Bwoora koombar birniny. Yeyi, Yued Nyoongara djinanginy Wagyl nidja. Wordel, Wagyl bwoora-nyininy. Yued kadidjiny nidja. Kaya, Wagyl nidja nyininy. Yeyi, nidja boodjar Wagyl boodjar. Nidja bilya Yued bilya!"

"In the beginning of the Dreaming, this land was dry, this land was sparse. Soon, Wagyl rose up — Wagyl came here. He came to Yued country. Soon, Wagyl brought many Nyoongar people here. Then, Wagyl went away—far away! He went away. He went up North. Wagyl twisted and turned through the country. He camped at Jurien Bay. There, Wagyl made sandplain, he made rivers. Soon, he went down to Guilderton. There he made rivers; he made big pools. Now, Yued people see Wagyl here. Always, Wagyl lives in the river pool (Yued People believe this.) Yes, Wagyl lives here. Now, this country is Wagyl country. This river is the Yued River." (Mr Charlie Shaw in The Shire of Gingin and the Yued Noongar People CHMP).

Yued Seasonal Movement and Connection to Country

Traditionally, the Yued people adopted localised, seasonal patterns of life whilst maintaining connections to the wider Noongar group through trade and cultural links that continued even toward the most distant Aboriginal bands in the Southwest of Western Australia. The Yued people moved seasonally between the coastal plains and the Dandaragan Plateau, 50 km inland (Hallam, 2014). In the spring, they would settle on the coastal plain near estuaries and swamps with an abundance of fish and game, before travelling inland for the colder months.

Maintaining connection and proximity to Country is fundamental to Noongar identity, which incorporates the responsibility to care for Country and the right to speak for it, which are inherited from ancestors and bequeathed to children through language and cultural practice. Contemporary Noongar society is still entrenched in traditional pre-colonial social structures; however, loss of agency, land and rights through processes of colonisation has forced Noongar culture to evolve, change and adapt to survive.

Noongar Custodianship, Kinship and Consultation

Fundamental to the fabric of Noongar society is family, and Noongar people will often define their primary identity by their family and kin relationships. A combination of these rights and responsibilities comprises the basis of contemporary Noongar Custodianship, which dictates a responsibility for all decisions affecting their Country. Central to this is a seat at the table for all discussions and developments impacting their traditional and ancestral lands. All Noongar people today live within a modern, Western economy; their time and knowledge have a monetary cost. The *Aboriginal Heritage Act 1972* (revised) stipulates consultation and heritage protection within a

narrowly defined set of principles and places. Noongar people have a custodial interest and responsibility for the entirety of their Country, and consultation practices should reflect this.

"Nidja boodjar ngany deman gaa maarm gaa moort baalup nitchja boodjar, gaa yey nganykurlingas boodjar gnaala moort Jenna biddi kura-kura gnalla gnamma gnaala bilya wer wardennaarluk nyinning kalla mia yey karditj nidja winditj boodjar."

"This country my grandmother's and grandfather's, all them this their country and now my children's country, our family walked the tracks for thousands of years our rock holes, our rivers and ocean we sat around campfires now understand this is sacred country for Nyoongars." (Spoken by a Yued Elder in the Shire of Gingin and the Yued Noongar People CHMP)

Historical Background

Early European Exploration

European exploration of the Moora district commenced in the 1830s. In 1836, George Fletcher Moore, Advocate-General of the Swan River Colony, explored the region while tracing the course of the river that now bears his name (Shire of Moora, no date c). Moore's observations described the fertile river flats, grassy plains, and water sources of the district (Shire of Moora, no date c). In 1842, Captain John Scully and others traversed the area of the Moore River and the Dalaroo Lakes, further recording the productive potential of the district's landscape (Shire of Moora, no date d).

These early European journeys followed existing Indigenous routes and waterways. The Moore River and the network of lakes and drainage channels connecting it to the broader Wheatbelt landscape had long served as a resource and movement corridor for Yued people, and European explorers relied on the same water and route networks to traverse the district.

European Settlement and Pastoral Expansion

The first pastoral lease in the Shire of Moora was claimed in December 1846 by the Lefroy Brothers (Shire of Moora, no date c). The following year, 1847, the first crop was reaped in the district (Shire of Moora, no date b). These early pastoral and agricultural activities established the pattern of land use that would come to define the Shire of Moora throughout the nineteenth and early twentieth centuries.

Country further from the main river systems tended to be released later by the Crown for grazing and farming under the Conditional Purchase (CP) Lease scheme, established under the *Land Act 1898* (WA) (Department of Creative Industries, 2025). Under this scheme, applicants were entitled to apply for land for agricultural purposes on the condition of residence, fencing, and improvement, with successful completion converting a lease to a freehold title (Department of Creative Industries, 2025). This process of incremental release shaped the spatial pattern of agricultural settlement across the Shire of Moora, with land closest to permanent water generally settled earliest and more distant localities, including Bindi Bindi and Coomberdale, settled later in the late nineteenth and early twentieth centuries.

In 1873, the Toodyay to Geraldton telegraph line was erected through the Shire, and a telegraph station was established at the Berkshire Valley homestead, where it was operated by Miss Clinch (Shire of Moora, no date c). This infrastructure reflects the early strategic and communications significance of the Berkshire Valley locality.

The name 'Moora' is understood to derive from a nearby Aboriginal well, recorded as 'Moira Well', located approximately three-quarters of a mile west of the present townsite (Shire of Moora, no date d, no date a). The adoption of a Yued place name for the emerging European settlement reflects the extent to which early colonists navigated by, and named places after, existing Aboriginal landscape features and water sources.

In 1883, John Waddington proposed the construction of a railway from Midland to Geraldton, on the basis that the construction company would receive a land grant for every mile built (Shire of Moora, no date d). The proposal posed a direct threat to existing pastoral leasehold tenures in the Victoria Plains. Bishop Salvado of New Norcia successfully prevented the line from passing through the Mission before the Government fixed the route and signed an agreement with the London-based Midland Railway Company in 1886 (Shire of Moora, no date d). Construction commenced in 1887,

the railhead reached Moora in 1893, and by 1894 the first train ran from Midland Junction to Walkaway (Shire of Moora, no date d).

The townsite of Moora was officially gazetted on 12 April 1895, coinciding with the establishment of the Midland Railway connection to the district (Shire of Moora, no date d, no date c). By the late 1890s, the town included a hotel, a general store and post office (established approximately 1896), and a police station (approximately 1897), the latter also serving initially as a courthouse and school (Shire of Moora, no date d, no date c).

Establishment of Missions and Government Institutions

Two institutions established in proximity to the Shire of Moora exerted a profound influence on the district and its Aboriginal population over more than a century and are outlined here as part of the broader historical context of the district.

New Norcia

The Benedictine mission of New Norcia was founded in 1846 and relocated to its present site, approximately 8 km from the original location, in 1847 (Aplin, Foster and McKernan, 1987). New Norcia is located approximately 50 km south of the Moora townsite. It operated as a working monastery, farm, and mission for well over a century, and its establishment preceded formal European agricultural settlement of much of the Shire of Moora. Its influence on the organisation of pastoral land use in the district was considerable, including the successful redirection of the Midland Railway alignment away from Mission lands (Shire of Moora, no date d).

Moore River Native Settlement and Mogumber

The Moore River Native Settlement was established in 1917 on the Bindoon–Moora Road at Mogumber, approximately 50 km south-west of the Moora townsite, under the direction of A.O. Neville, Chief Protector of Aborigines (Bourne, 1994). Initially, a holding centre for Aboriginal people living in camps near urban centres, within a year, the Settlement expanded to receive Aboriginal children of mixed descent who had been forcibly removed from their families (Bourne, 1994). As at New Norcia, children were trained to be a labour force for broader society; domestic service for girls, and farm labour for boys (Bourne, 1994). Although originally directed at Noongar people, the catchment area expanded to include Aboriginal people and children from across Western Australia (Bourne, 1994). Oral histories of former inmates record experiences of forced removal, harsh living conditions, family separation, and systematic cultural suppression (National Library of Australia, 2002; Perpitch, 2018). Survivors' testimonies, collected by the National Library of Australia's oral history project, document overcrowding, poor health outcomes, and the systematic suppression of Aboriginal identity and culture (National Library of Australia, 2002).

From 1951, control of the site was transferred to the Methodist Overseas Mission, and the settlement was renamed Mogumber (Bourne, 1994). Children from across Australia were held at Mogumber under the guardianship of the Commissioners of Native Affairs and Native Welfare until 1963 (Jacobs and Bannister, 1999; Dawes and George, 2001; Vicenti and Richardson, 2001). The Methodist Church continued to operate the site as the Mogumber Mission until 1974, after which the land was returned to the Aboriginal Lands Trust (Shire of Moora, no date a). The histories of the Moore River Settlement, Mogumber, and New Norcia are among the most significant elements of the post-contact history of the district, and the trauma they created continues to resonate through present-day generations (Perpitch, 2018; Tiwari and Stephens, 2020).

Old Moora Reserve

The Old Moora Reserve was established in 1953 and became home to many Nyoongar families following government policies that removed Aboriginal people from their Country (Shire of Moora, no date a). The Reserve was a functioning community until its closure in 1978 (Shire of Moora, no date a).

Establishment of Agriculture and Pastoralism

By 1907, the Moora district had developed sufficient commercial infrastructure to support a weekly newspaper — *The Midlands Advocate* — as well as storekeepers, machinery merchants, a doctor, banks, and a land agent (Shire of Moora, no date d). The town was referred to in the district as the 'Capital of the Plains'. By 1910, the district had become an established agricultural area, described by J.S. Battye in *The Cyclopaedia of Western Australia* (1913) as the centre of an important pastoral and agricultural district where the land was ideal for grazing and cereal growing (Shire of Moora, no date d).

In response to growing demand from local residents and farmers for dedicated local governance, the Moora Road Board was gazetted on 11 December 1908 (Shire of Moora, no date d). As Australia's agricultural economy expanded through the 1950s and 1960s, successive Western Australian governments released further Conditional Purchase leases on previously uncleared Crown Land across the Wheatbelt, including parts of Yued Country within the Shire of Moora (Department of Creative Industries, 2025). This expansion drove large-scale vegetation clearing and displaced Aboriginal people from the uncleared Country they had continued to use for seasonal camps, food gathering, and cultural purposes a direct link to the governmental policies associated with the Moore River Settlement, Mogumber, and the Old Moora Reserve (Haebich, 1988; Department of Creative Industries, 2025).

The Toodyay to Miling Railway was completed in 1925, further consolidating the transport and agricultural infrastructure of the district (Shire of Moora, no date d). By this period, the Moora district was firmly established as a producer of both wheat and wool, with the Moora townsite functioning as the principal service, commercial, and administrative centre for surrounding farming communities.

Twentieth Century Development

Infrastructure development in the Moora townsite continued through the early and mid-twentieth century. The first motor vehicles arrived in Moora in 1912, with the first motor trucks appearing in 1926 (Shire of Moora, no date d). The Moora Road Board Hall was opened in 1913. A reticulated water supply reached the townsite in 1933, officially opened on 15 November of that year, while road bituminisation in the townsite commenced during the 1930s (Shire of Moora, no date d).

Second World War

The Shire of Moora made a contribution to the Australian war effort between 1939 and 1945 (Shire of Moora, no date b). From 1940, men from the district began to volunteer for service, leading to the formation of a Recruiting Committee in the town, and several women from the district served as nurses. Twelve men from the Moora district were killed in action, and others were held as prisoners of war (Shire of Moora, no date b). A Volunteer Defence Corps unit was formed following a resolution of the Moora RSL branch in early 1940. A War Savings Campaign launched in 1940 generated a strong response; over 2,000 subscriptions had been submitted from the Moora area by 1941, and an

ambulance was donated to Western Command by the people of the Moora Road Board District (Shire of Moora, no date b).

Moora itself hosted a significant military presence during the war. Operational headquarters for the district were established at the Berkshire Valley property, where all farm buildings were taken over for military use (Shire of Moora, no date b). Numerous other units were stationed at places around the district, including the property 'Woolawa', the Moora sports ground, and along the coast west of Moora, with some estimates placing the number of troops in the area as high as 30,000 at peak periods. Army units stationed in the district constructed an Amenities Hall in 1943 with materials provided by the Talkie Trust and Moora Camp Comforts Fund; this building has since been demolished. The Peace Park Memorial commemorates the community's contribution and sacrifice in both World Wars.

Post-War Period

In the years following the Second World War, new settlers came to the district under the War Service Land Settlement Scheme, reinforcing the agricultural base of the Shire (Shire of Moora, no date d). The Moora–Miling Road was sealed in this period. The Shire of Moora was formally constituted on 1 July 1961, replacing the Moora Road Board that had governed the district since 1908.

Summary of Historical Periods

Based on the review of the known history of the Study Area, the following activities and periods of cultural significance can be identified:

- Continuous occupation and custodianship of Yued Country by the Yued people for thousands of years prior to European contact, including the use of the Moore River system, associated wetlands, and seasonal resource corridors across the district.
- Early European exploration of the Moora district from 1836, including the journey of George Fletcher Moore along the Moore River, and the 1842 traverse of the district by Captain John Scully and others, establishing European knowledge of the district's pastoral potential.
- Establishment of pastoral leasehold tenure from December 1846, initiated by the Lefroy Brothers and James Clinch, and its subsequent development as a significant pastoral and communications hub.
- Establishment of inland communications infrastructure from 1867, including the diversion of the Perth to Geraldton mail route through the district via Walebing and Berkshire Valley, followed by the construction of the Toodyay to Geraldton telegraph line in 1873, with telegraph stations operating at both Walebing and Berkshire Valley.
- Establishment and operation of the Benedictine Mission at New Norcia from 1846–1847, and its significant influence on land use, the alignment of the Midland Railway, and the displacement and forced labour of Yued and broader Noongar people throughout the nineteenth and early twentieth centuries.
- Construction of the Midland Railway from 1887, reaching Moora in 1893, and the gazettal of the Moora townsite on 12 April 1895, driving rapid agricultural expansion and the establishment of the town's civic and commercial infrastructure through the late nineteenth and early twentieth centuries.

- Establishment of the Moore River Native Settlement at Mogumber in 1917, operating under government direction until 1951 and subsequently as the Mogumber Methodist Mission until 1974, representing a period of systematic forced removal, cultural suppression, and displacement of Yued and Noongar people from their Country.
- Large-scale agricultural expansion and vegetation clearing under the Conditional Purchase Lease scheme through the late nineteenth and early twentieth centuries, and accelerating from the 1950s and 1960s, which transformed the landscape of the Shire of Moora and permanently altered the character of the region.
- Establishment of the Old Moora Reserve in 1953 as a direct consequence of government policies displacing Aboriginal people from Country, operating as a Noongar community until its closure in 1978.
- Military occupation of the district during the Second World War (1939–1945), with additional units stationed at multiple locations across the broader Shire, and active community participation in the war effort through the Volunteer Defence Corps, Red Cross, and War Savings Campaigns.
- Post-war agricultural consolidation and settlement under the War Service Land Settlement Scheme, the sealing of rural roads, and the formal constitution of the Shire of Moora on 1 July 1961, marking the transition to the modern administrative and agricultural landscape of the district.

SECTION FOUR – DUE DILIGENCE ASSESSMENT

This section provides a desktop assessment of the Aboriginal and historical cultural heritage potential and risk within the Study Area, in line with the background research and known listed heritage places. It outlines the likelihood of encountering different kinds of heritage sites, places, features, or objects within the Study Area and assesses the risk of impact to potential heritage. It also proposes mitigation measures and strategies to minimise the risk to potential heritage values within the Study Area during the works.

Cultural Heritage Potential

Predictive Statements

Predictive statements regarding archaeological (tangible) and ethnographic (intangible) values are informed by the desktop review and the assessment of known Aboriginal Cultural Heritage sites and places and historical heritage places previously recorded in the region. This information provides a baseline for evaluating the archaeological and ethnographic potential and heritage risk within the Study Area.

Table 7. Predictive Statements for the Study Area

Site Type	Description	Landform/Environment	Predictive Statement
ABORIGINAL CULTURAL HERITAGE			
Artefact Scatters / Isolated Artefacts	Accumulations of flaked stone material, including reduction waste, cores, and formal tools such as scrapers, adzes, and backed artefacts. Raw materials in Yued Country can include quartz, dolerite, mylonite, silcrete, and fossiliferous chert.	Found in both surface and subsurface contexts across many different landforms, including around creek lines, gravel flats, plains and rock shelters. Strongly associated with freshwater sources, including river flats, alluvial terraces, creek margins, and granite gnamma holes.	No previous heritage surveys intersect the Study Area, and no artefact scatters have been recorded within any of the four met mast locations, reflecting limited survey coverage rather than the absence of occupation. The alluvial landforms within the broader landscape are directly comparable to those yielding stratified subsurface assemblages at site *CP2201* and multiple Swan Coastal Plain sites, and the granite outcrop settings are well-established high-potential landforms in the Wheatbelt. Accordingly, there is a moderate likelihood that artefact scatters and isolated artefacts will be present within the Study Area.
Grind Stones / Grinding Patches	Areas of exposed bedrock bearing smoothed or abraded depressions produced by repetitive grinding of seeds,	Occur on flat or gently inclined bedrock, most commonly granite sheets and outcrops. Portable grinding stones may	Due to their often-distinctive nature, grindstones were sometimes collected during the historical period.

Site Type	Description	Landform/Environment	Predictive Statement
	plant materials, or ochre, ranging from shallow polished surfaces to well-defined grooves and hollows. Portable grinding stones may occur in association or as standalone artefacts across the broader landscape.	also be present on alluvial and sandy landforms near the Moore River and its tributaries, where ethnohistorical records document intensive Warran (*Dioscorea hastifolia*) cultivation on river terraces in the Moora–Gingin region.	There are no visible patches of grinding appropriate bedrock on aerial imagery; however, ethnohistorical evidence for Warran cultivation along river terraces in the Moora–Gingin region indicates associated ground stone use on alluvial landforms. Accordingly, there is an assessed low likelihood of encountering grindstones in the Study Area.
Quarries	Stone procurement sites comprising bedrock outcrops or primary stone nodule exposures from which raw material was extracted for tool manufacture, typically with an associated artefact scatter containing reduction debris. In Yued Country, quartz is the predominant raw material and is commonly obtained from surface exposures and vein outcrops on granite sheets rather than from formal quarry features. Ochre procurement sites, where iron-rich material was extracted for pigment, represent a further sub-type that may occur where suitable geological exposures are present.	Raw material procurement sites are associated with outcrops and exposures of suitable stone, including quartz veins on granite sheets and ironstone or haematite-bearing formations. Granite, migmatite, and gneiss outcrops within the Study Area provide potential raw material sources, particularly quartz, that would have been accessible to Aboriginal people across the Study Area.	No quarries or raw material procurement sites have been recorded within the Study Area. Granite outcrops within or near the Study Area may provide quartz vein exposures consistent with opportunistic raw material procurement, though formal quarry features are uncommonly recorded in Wheatbelt settings where quartz collection tends to be diffuse rather than concentrated. Accordingly, there is a low likelihood that quarries or discrete raw material procurement sites will be present within the Study Area.
Potential Archaeological Deposits (PAD)	Subsurface deposits that may contain cultural material, including stone artefacts, faunal remains, charcoal, and other organic material. Preservation of organic material varies with soil type and depositional history; where charcoal or other dateable material is present, deposits may be suitable for radiometric dating.	These types of sites are generally found in rock shelters where sediment builds up over time. Outside of rock shelters, most commonly associated with alluvial terraces, sandy rises adjacent to watercourses, and the margins of seasonal wetlands and lakes landforms that promote sediment accumulation and the burial of cultural material over time. These contexts are present within the Study Area along the Moore River and its tributaries.	Subsurface archaeological sites are commonly associated with waterways, particularly within approximately 100 m of a water source. Given the proximity of CM04 to McLeans Brook, subsurface archaeological material may be present within the broader landscape surrounding CM04. Surface disturbance associated with agricultural land use does not preclude the preservation of intact subsurface deposits, as demonstrated at multiple excavated sites across the

Site Type	Description	Landform/Environment	Predictive Statement
			Swan Coastal Plain and within Yued Country. There is a moderate likelihood that potential archaeological deposits will be present within the Study Area.
Burials	May comprise isolated bone fragments, partial remains, or complete primary or secondary interments, including cremated material. Isolated fragments may not be immediately recognisable during ground-disturbing works.	Most commonly associated with soft depositional sediments, including alluvial terraces and creek and riverbank margins. Relict floodplain and sandy depositional landforms within the Study Area, particularly those associated with the Moore River and its tributaries, represent the most conducive preservation contexts.	No burials have been recorded within the Study Area. However, three burials have been identified on the ACHIS within the broader landscape. As such, there is a low likelihood that burials or isolated human remains will be present within the Study Area.
Scar Trees	Trees bearing evidence of deliberate Aboriginal modification, including bark removal for coolamon or shelter manufacture, toe-hold cutting for possum hunting, and honey or timber extraction. Identification is confined to trees generally greater than 150 years old; wandoo (*Eucalyptus wandoo*) and York Gum (*Eucalyptus loxophleba*) are the species most commonly recorded as modified within Yued Country.	Broadly distributed across the landscape wherever Aboriginal people had reason to use tree resources; preservation depends on tree age and degree of historical land disturbance. Remnant wandoo and York Gum woodland persists along creek lines, road verges, and uncleared paddock margins within the Study Area.	Scarred wandoo has been recorded on road verges in the Calingiri region, approximately 25 km east of the broader Study Area, in a comparable Wheatbelt woodland setting. Broad-scale agricultural clearing across the Shire since the late nineteenth century has substantially reduced the population of mature trees, though remnant vegetation along creek lines and uncleared margins may retain examples. There is a low likelihood that scarred and culturally modified trees will be present within the Study Area.
Rock Art	Rock art may be in the form of engravings or paintings. There are many different styles of engravings, including incised, pecked, grooved and abrasion.	Rock art is associated with exposed bedrock outcrops, rock faces, and sheltered overhangs. Granite, migmatite, and gneiss outcrops within the Study Area provide surfaces theoretically suitable for engraving; sheltered overhang formations suitable for painted art are less commonly associated with the low-relief granite landforms typical of the Wheatbelt.	No rock art has been recorded within the wider region surrounding the Study Area. The desktop review identified no ethnographic or archaeological evidence specifically indicating the presence of rock art within the landscape, and sheltered overhang formations suitable for painted art are not a prominent feature of the low-relief granite landscapes of the Study Area.

Site Type	Description	Landform/Environment	Predictive Statement
			There is therefore a negligible likelihood that rock art will be present within the Study Area.
Rock Shelters	Natural landform features providing shelter or enclosed space that may have been used by Aboriginal people for habitation, tool manufacture, storage, or ceremonial purposes. Where sediment has accumulated within a shelter, stratified subsurface deposits with datable organic material may be present.	Occur where suitable bedrock formations produce overhangs, hollows, or enclosed cavities. True cave formations are absent from the granitic and lateritic geology of the Study Area; shallow overhangs or low rock shelters associated with granite outcrops and breakaways are possible but are not a prominent feature of the low-relief Wheatbelt landscape.	No rockshelters or caves have been recorded within the Study Area. The geology of the Study Area does not readily support the formation of substantial rock shelter features, and no sheltered landform contexts were identified in the desktop review. There is a negligible likelihood that rockshelters or caves will be present within the Study Area.
Human-Made Structures	Human-made structures include remnant structures used for housing, stone arrangements or other. House structures were possibly constructed from branches, stone, corrugated iron, mud or other materials, most likely in the historic period. Stone arrangements may include semi-circular rings of stacked stone, lizard traps, cairns, hunting hides, and standing stones.	The preservation of remnant structures, particularly those used for housing, may depend on the materials used, exposure to the elements and land use activities. Stone arrangements are most commonly recorded on and adjacent to granite outcrops and sheet rock, which provide both raw material and a stable surface for construction and preservation. Granite, migmatite, and gneiss outcrops within the Study Area represent the primary environmental context for this site type; stone arrangements have been recorded at Wongan Hills approximately 60 km east-southeast in a comparable granite Wheatbelt setting.	No stone arrangements have been recorded within the area surrounding the Study Area. Granite outcrops within the Study Area provide appropriate conditions, and comparable examples are documented within the broader Yued Country at Wongan Hills. There is a low likelihood that stone arrangements and ceremonial stone features will be present within the Study Area.
Ethnographic sites, including Creation/Dreaming, Aboriginal Ceremony and Songlines	These types of sites are places of significance to Aboriginal people and may be connected to ceremonial activities and/or spiritual stories. In addition, there may be ethnographic information related to the historic use of the area by Aboriginal people.	These may be present across a range of different landscapes. Certain natural features may be considered a part of these types of sites, including specific landforms, rock formations, water sources, and plant or animal concentrations.	There is a high potential for ethnographic sites or values to occur in certain areas of the broader landscape, with some potential also present at the met mast locations. This is due to the proximity of the Study Area to Creation / Dreaming narrative places associated with the Wagyl.
Plant and Animal Resources	Locations associated with the procurement, processing, or	Resource procurement sites are broadly distributed but are	No discrete plant or animal resource sites have been

Site Type	Description	Landform/Environment	Predictive Statement
	management of plant and animal resources, including yam gardens, seed-grinding areas, hunting locations, and fish or eel management features. In Yued Country, the cultivation of Warran (*Dioscorea hastifolia*) along river terraces and the seasonal harvesting of native seeds, fruits, and fauna are documented practices that may have left a material signature in the landscape.	concentrated near reliable water sources, alluvial river terraces, and areas of high floristic and faunal productivity. The Moore River floodplain and its tributary creek systems, together with areas of remnant York Gum and wandoo woodland within the Study Area, represent the landscape contexts most likely to retain evidence of resource procurement and management.	recorded within the Study Area. The met mast locations are situated within disturbed agricultural landscapes and are considered to have a low likelihood of containing plant resource sites or associated cultural material, although some are located near known remnant vegetation communities. There is therefore a low likelihood that plant and animal resource sites may be present within the Study Area.
Water Sources	Natural water sources including rivers, creeks, soaks, rockholes, gnamma holes, and seasonal wetlands that were vital to Aboriginal people for drinking water, resource procurement, and travel. In granite outcrop settings, gnamma holes were actively maintained, with stone covers placed over them to prevent evaporation and contamination; these features and their associated covers may survive intact.	Present across a range of landform settings, from the alluvial floodplains of the Moore River and its tributaries to granite gnamma holes on outcrop surfaces within the Study Area. The Moore River system is the principal drainage corridor of the Study Area and is directly associated with multiple registered and lodged Wagyl Dreaming places recorded in the desktop review.	No water sources have been identified within the Met Mast locations at a desktop level. However, given the elevated granitic landscape, seasonal creeks, soaks and granite water features may occur in and around the Study Area. This may include potential gnamma holes on granite outcrops, which can retain stone covers and associated cultural material. There is a low likelihood of water sources occurring within the Study Area.
HISTORICAL HERITAGE			
Historical Sites	Places listed on a statutory or non-statutory heritage register, including the State Register of Heritage Places, National Heritage List, or a Local Heritage Survey, on the basis of their historical, architectural, social, or cultural significance. Listed places may include buildings, structures, precincts, landscapes, and archaeological sites.	Historical sites are often situated on prominent landforms such as ridges, riverbanks, coastal terraces, or hilltops, in areas where European settlement has occurred in the past 200 years. These locations provided strategic, practical, or resource-based advantages for past communities and settlements, influencing patterns of occupation, activity, and landscape use.	No Local, State or National listed historical heritage places intersect the Study Area.
Archaeological Features and Structural Remains	Historical archaeological features and structural remains within the area provide evidence of past human activity, including settlements, industrial sites, and infrastructure. These	Archaeological features and structural remains are typically found in areas modified by human activity, including cleared flats, building platforms, terraces, or near watercourses. Their location reflects	The met mast locations are situated within disturbed historical agricultural settings and are assessed as having negligible potential for historical archaeology.

Site Type	Description	Landform/Environment	Predictive Statement
	remnants offer insights into historical land use, technology, and cultural practices, contributing to the understanding and preservation of the region's heritage.	functional, cultural, and environmental considerations of past inhabitants.	
Isolated Artefacts	Historical archaeological artefacts are physical objects left by past communities, such as tools, ceramics, metalwork, and personal items. They provide tangible evidence of everyday life, technology, trade, and cultural practices, helping to interpret the social, economic, and historical development of a site or region.	Isolated artefacts are often located in areas of past settlement, development, or in areas of past activity. Their distribution can indicate settlement patterns, former travel routes, resource-gathering locations, or dispersed occupation zones, providing insights into movement and land-use patterns.	The long history of pastoral, agricultural, and military activity across the broader landscape indicates that dispersed historical material culture may be present across a wide range of settings. As such, there is a low likelihood that isolated historical artefacts will be present within the met mast locations.

Aboriginal Cultural Heritage Potential

Based on the results of this desktop assessment, Aboriginal Cultural Heritage (ACH) potential within the Study Area varies according to heritage type, landform, proximity to waterways, disturbance history and the nature of proposed works. Tangible ACH potential is generally lower at the disturbed met mast locations, while intangible ACH values may occur across the broader cultural landscape.

Tangible (Archaeological) Heritage

There is a low to moderate potential for the proposed works to impact tangible Aboriginal Cultural Heritage (ACH) within the CM01, CM02, CM03 and CM04 Study Area. Archaeological potential is not uniform and varies according to landform, proximity to water, vegetation, disturbance history and the nature of proposed works.

The met mast locations are generally situated within disturbed agricultural landscapes and are assessed as having low potential for surface cultural material and moderate potential for subsurface tangible ACH. No recorded archaeological ACH places intersect the met mast locations, and no water sources have been identified within these areas. However, as no previous Aboriginal heritage surveys intersect the Study Area, the absence of recorded archaeological material should not be taken as evidence that tangible ACH is absent.

Granite and bedrock outcrop settings may also have moderate potential for tangible ACH, including surface artefact scatters, grinding patches, stone arrangements and gnamma water features. The extent to which these landforms intersect the proposed works footprint would require confirmation.

Overall, tangible ACH risk is assessed as low to moderate at the met mast locations. An Aboriginal archaeological survey is not recommended for the met mast locations at this stage. A Finds Management and Stop Work Procedure is recommended for the Project to manage any unexpected Aboriginal cultural heritage material or places identified during works.

Intangible (Ethnographic) Heritage

There is potential for intangible Aboriginal Cultural Heritage (ACH) values to occur within the CM01, CM02, CM03 and CM04 Study Areas and within the wider cultural landscape.

Intangible heritage refers to cultural values, knowledge, stories, traditions, lore, practices and responsibilities that are recognised and maintained by Aboriginal communities. These values may be associated with specific places, landforms or waterways, but they are not always visible in the physical landscape and may not be represented by archaeological material. As such, previous agricultural disturbance does not necessarily remove or diminish intangible cultural heritage values. The potential for intangible ACH is particularly relevant where the Study Area is located near water sources, such as near McLean Brook at CM04. Intangible values may also extend beyond the mapped boundaries of recorded ACH places and may be present in areas not previously surveyed.

On this basis, there is a potential for intangible ACH values to occur within the met mast Study Area and access routes, particularly near waterways, riparian areas and landforms associated with the Moore River. Ethnographic consultation with Yued Knowledge Holders is required to confirm the presence, nature and extent of these values.

Historical Heritage Potential

There is a low potential for significant historical heritage within the Study Area. No Local, State Registered, or National Heritage Listed places intersect the CM01, CM02, CM03 or CM04 Study Area.

Across the region, broad-scale agricultural land use is likely to have disturbed, obscured or removed surface historical material. However, isolated historical artefacts may still be encountered during ground disturbing works.

Accordingly, a historical heritage field survey is not recommended before the commencement of works. However, a Finds Management Procedure, combined with the ACH Finds Management and Stop Work Procedure, should be prepared and implemented for all ground disturbing activities.

Cultural Heritage Risk Assessment

This section assesses the relative risk of encountering Aboriginal and historical heritage within the Study Area. Risk has been assessed using the results of the desktop review, known heritage listings, landform sensitivity, disturbance history and the proposed nature of works.

Four levels of heritage risk have been applied: high, moderate, low and negligible (Table 8). No no-go areas have been identified for the Project at this stage.

The met mast locations are generally situated within disturbed agricultural landscapes and are assessed as having low to moderate tangible Aboriginal archaeological potential. Intangible Aboriginal Cultural Heritage values may still be present within the broader Study Area and can only be confirmed through ethnographic consultation with Yued Knowledge Holders.

Historical heritage risk is assessed as low to negligible. No Local, State or National heritage places intersect the met mast Study Area.

Table 8. Areas of Heritage Risk within the Met Mast Study Area

Risk Categories	Criteria	Assessment and Location within the Met Mast Study Area and Access Tracks
No-Go Areas	Aboriginal Cultural Heritage Registered Aboriginal Cultural Heritage Sites and Places considered by Noongar people to be of exceptional cultural heritage significance. Reserves and protected environmental areas are considered to be of exceptional cultural importance to the Noongar people. Historical Heritage Places included in the National, State or Local heritage registers and lists.	Aboriginal Cultural Heritage No no-go areas have been identified for ACH at this stage. Historical Heritage No no-go areas for historical heritage have been identified.
High Risk	Aboriginal Cultural Heritage Registered Aboriginal Cultural Heritage Sites and Places considered by Noongar people to be of exceptional or considerable cultural heritage significance. Reserves and protected environmental areas are considered to be of exceptional or considerable cultural importance to the Noongar people. Landforms where cultural heritage sites are typically found in this region. More likely to occur where there is undisturbed bedrock and rock formations, along undisturbed watercourses and where there is remnant vegetation. Areas with minimal disturbance or impacts to subsurface soils. Historical Heritage Places included in the National, State or Local heritage registers and lists.	Aboriginal Cultural Heritage No high-risk areas have been identified within the met mast Study Area. Historical Heritage No high-risk historical heritage areas have been identified.

Risk Categories	Criteria	Assessment and Location within the Met Mast Study Area and Access Tracks
Moderate Risk	Aboriginal Cultural Heritage Registered ACH Sites and Lodged or Historic Record Places considered by the Noongar people to be of considerable or some cultural heritage significance. Landforms that Aboriginal people were likely to have used occasionally, or may include landforms that would have been intensively used but have since been impacted by historical land development. Artefacts have been found in disturbed contexts elsewhere on the Swan Coastal Plain, including surface scatters and subsurface deposits up to 1.2 m, and so land clearing is not necessarily an indicator that an area has been significantly impacted ACH. Historical Heritage Areas away from previously identified historical sites that are still likely to contain historical features such as fences, stone walls, wells, outbuildings, and other farm infrastructure.	Aboriginal Cultural Heritage Moderate risk applies to parts of the access routes and the met mast Study Area surrounds where landforms retain archaeological potential but have been affected by clearing, cultivation, grazing or track formation. This includes partially disturbed alluvial margins, sandy deposits, granite or bedrock outcrops and remnant vegetation areas. Historical Heritage No moderate-risk historical heritage areas have been identified.
Low Risk	Aboriginal Cultural Heritage Areas where there is a low likelihood of encountering cultural heritage sites and where modern impacts are high to both the surface and subsurface soils. Plantations, graded tracks, sealed roads, dams and modern buildings. Historical Heritage Areas where known historical occupation or land use activities have occurred, but those activities are not considered to be of heritage significance and/or activities have removed potential archaeological remains.	Aboriginal Cultural Heritage Low risk applies to heavily modified agricultural land, existing roads, graded tracks and areas subject to broad-scale clearing or cultivation. The met mast locations are generally assessed as low to moderate risk for tangible ACH because they are located within disturbed agricultural settings and do not contain identified water sources. Historical Heritage Low risk applies across most of the Study Area. Isolated historical artefacts may be encountered, but significant historical heritage is unlikely.
Negligible	Aboriginal Cultural Heritage Areas where impacts have removed any potential for surface or subsurface archaeology. Areas that have previously been surveyed and cleared for ACH. Historical Heritage Areas where no known historical occupation or land use activities have occurred, or where activities have removed potential surface or subsurface archaeology.	Aboriginal Cultural Heritage Negligible risk applies to areas where intensive modern disturbance has removed the potential for intact surface or subsurface archaeological material. Historical Heritage Negligible risk applies to areas where modern disturbance has removed the potential for historical archaeological features or remains.

Mitigation and Management Measures

Effective cultural heritage management for the Project should focus on avoiding or reducing impacts where possible, ensuring appropriate consultation with Yued Knowledge Holders, and establishing clear procedures for managing unexpected finds during works.

Management measures should be guided by the Heritage Protection Agreement between Tilt Renewables and the Yued Aboriginal Corporation (YAC), and by the outcomes of consultation with YAC, Yued Knowledge Holders and, where required, the Department of Planning, Lands and Heritage (DPLH).

Aboriginal Cultural Heritage

The met mast locations are generally located within disturbed agricultural landscapes and are assessed as having lower tangible archaeological potential.

The following measures are recommended to manage potential impacts to known and potential Aboriginal Cultural Heritage.

1. Consultation with YAC and Yued Knowledge Holders

Ethnographic consultation with Yued Knowledge Holders is required for the proposed installation of the four met masts and for any proposed ground disturbance and vegetation clearing within each met mast footprint. No vegetation clearing will be undertaken along the access routes.

Consultation should be undertaken through YAC in accordance with the Heritage Protection Agreement. The purpose of consultation is to confirm the presence, nature and extent of any intangible cultural heritage values, identify any cultural constraints, and determine whether additional management measures are required.

2. Liaison with DPLH

DPLH advice should also be sought regarding any approval or consent requirements that may apply if works are proposed within or near Registered Aboriginal Sites or other recorded Aboriginal Cultural Heritage places.

3. Archaeological Survey and Cultural Monitoring

An Aboriginal archaeological survey is not recommended for the met mast locations at this stage. However, cultural monitoring may be required during works, subject to the outcomes of consultation with Yued Knowledge Holders.

4. Finds Management and Stop Works Procedure

A Finds Management and Stop Work Procedure should be prepared and implemented for all ground disturbing works.

The procedure should be developed in consultation with YAC and should include:

- Unexpected finds and stop-work protocols;
- Notification requirements for YAC, the Project heritage advisor and DPLH, where required;
- Contractor heritage induction requirements;
- Recording methods for any cultural material or features identified; and
- Artefact collection, retention or relocation policies developed in consultation with YAC.

The procedure should apply across the Project, including areas assessed as low risk, to manage any unexpected Aboriginal cultural heritage material or places identified during works.

Historical Heritage

No Local Heritage, State Registered or National Heritage listed places intersect the Met Mast Study Area. A historical heritage field survey is therefore not recommended prior to the commencement of works.

Historical heritage should be managed through the Finds Management and Stop Work Procedure prepared for the Project. If historical heritage material, archaeological features or structural remains are identified during Aboriginal cultural heritage consultation, survey, monitoring or ground-disturbing works, works should cease in the immediate area. The Project Team should then consult with the Shire of Moora and, where required, DPLH.

Any historical archaeological material or features should be recorded to industry standards before works recommence.

SECTION FIVE – DISCUSSION AND RECOMMENDATIONS

Discussion

Aboriginal Cultural Heritage

The Due Diligence Assessment identified that the met mast locations are generally situated within disturbed agricultural landscapes and are assessed as having lower potential for tangible Aboriginal archaeological material.

No previous Aboriginal heritage surveys intersect the Study Area. The absence of recorded tangible Aboriginal Cultural Heritage within the met mast locations should therefore be understood as reflecting limited survey coverage, rather than confirming the absence of Aboriginal occupation, use or cultural values.

Ethnographic consultation with Yued Knowledge Holders is required for the proposed installation of the four met masts. An Aboriginal archaeological survey is not recommended for the met mast locations at this stage.

Historical Heritage

No National Heritage List or State Register of Heritage Places listings intersect the Study Area. The risk of impacting significant historical heritage is therefore assessed as low, and no historical heritage field survey is required prior to works.

However, isolated historical artefacts or structural remains may be encountered during ground disturbance. These should be managed in accordance with the Project Finds Management and Stop Work Procedure.

Summary of Findings

The key findings of the assessment are:

- The met mast locations do not intersect any Registered ACH Sites, Lodged Places or Historic Record Places.
- Tangible ACH potential is generally low to moderate at the met mast locations.
- Intangible ACH values may occur within the met mast Study Areas and the broader cultural landscape. Ethnographic consultation with Yued Knowledge Holders is required to confirm the presence, nature and extent of these values.
- No State Registered or National Heritage Listed historical places intersect the Study Area.
- The risk of impacting significant historical heritage is low.
- Tilt Renewables' Heritage Protection Agreement with YAC, which is currently being negotiated, will provide the framework for engagement with Yued Traditional Owners for the Project.

Recommendations

Based on the results of the desktop Due Diligence Assessment, it is recommended that:

Aboriginal Archaeological and Ethnographic Field Assessments

1. Ethnographic consultation should be undertaken with Yued Knowledge Holders for the Project, including for the proposed installation of the CM01, CM02, CM03 and CM04 met mast locations, and the small section of the access routes across paddocks, where there are no graded tracks.
2. An Aboriginal archaeological survey is not recommended for the CM01, CM02, CM03 and CM04 Met Mast locations, unless requested by the Yued Aboriginal Corporation (YAC) or where archaeological finds, sites or areas of archaeological potential are identified during ethnographic consultation.
3. Survey design and conduct should follow archaeological and ethnographic best practice guidelines, with input from archaeologists, anthropologists and Yued Knowledge Holders.

ACH Management and Mitigation

4. All ACH, including archaeological and ethnographic places identified during field surveys, should be lodged with DPLH with the agreement of Yued Knowledge Holders and YAC.
5. All previously recorded ACH sites and places on the ACHIS register, known places not currently included on the register, and any newly recorded sites and places should be avoided in Project design where feasible.
6. Cultural monitoring may be required during proposed works, subject to the outcomes of consultation with Yued Knowledge Holders.
7. Following heritage consultation and/or surveys, a Finds Management Procedure, including a Stop Work Procedure, should be prepared and implemented for all ground-disturbing works. The procedure should manage any unexpected Aboriginal cultural heritage material or places identified during works and include unexpected finds protocols, contractor heritage inductions, recording methods, and artefact collection and retention policies developed in consultation with YAC.

Historical Heritage Management and Mitigation

8. No historical heritage field survey is required prior to the commencement of works. A Finds Management Procedure, combined with the ACH procedure, should be prepared and implemented for all ground-disturbing works to manage the potential for isolated historical heritage material to be encountered.
9. If historical heritage material or archaeological features are identified during ACH surveys or ground-disturbing works, the Project Team should consult with the Shire of Moora to determine whether works may proceed and whether any further management requirements apply. Any historical archaeological places identified should be recorded to industry standards prior to further disturbance.

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APPENDIX ONE – LEGISLATION AND INDUSTRY GUIDELINES

This section provides background and context from the perspective of legislation and best practice standards that may relate to cultural heritage places in the Study Area. It details WA State and Commonwealth legislation and processes in relation to Aboriginal and historical cultural heritage, as well as internationally recognised cultural heritage standards, and national and international best practice processes.

Aboriginal Heritage Legislation

WA Legislation

Aboriginal cultural heritage in WA is protected by the *Aboriginal Heritage Act 1972* (the AHA), currently administered by the Department of Lands, Planning and Heritage (DPLH). In the 1970s, the AHA was a progressive piece of legislation. However, it has come under increasing criticism in recent years and is widely recognised as not meeting 21st century best practice standards of heritage legislation. Consultation on the development of new Aboriginal heritage legislation began in 2017 following the election of a new ALP state government.

The destruction of Juukan Gorge by Rio Tinto in 2020 brought problems with the AHA into sharp focus, particularly the section 18 process for approving the destruction of Aboriginal Sites. The Parliamentary Inquiry into the destruction of Juukan Gorge strongly criticised the section 18 process in its final report (Parliament of the Commonwealth of Australia, 2021). The committee concluded that the original good intentions of AHA had failed and it had become in practice 'a mechanism through which the disturbance, damage and destruction of both physical and intangible Aboriginal cultural heritage has repeatedly taken place' (para 4.125).

In summary, the 'AHA has failed to strike a balance between the needs and aspirations of the various parties and has excessively favoured the interests of proponents' (para 4.126).

Other problems identified include the formal role of Aboriginal people in the protection of their heritage, including the absence of legislated representation on the ACMC, definitions of Aboriginal cultural heritage and the lack of integration with Native Title legislation.

The committee encouraged the WA government to continue its consultation with regard to its draft Aboriginal Cultural Heritage Bill, recommending that it address the concerns already expressed in submissions by Aboriginal people and that it accommodate 'the principles of free, prior and informed consent', conducting consultation 'in a way that accords with Aboriginal traditions of dialogue' (para 4.135).

After extensive consultation, the WA government passed the *Aboriginal Cultural Heritage Act 2021* (ACH Act) in December 2021, and it came into effect in July 2023. The objectives of this legislation were:

- To recognise the importance of Aboriginal cultural heritage and Aboriginal custodianship.
- To recognise, protect and preserve Aboriginal cultural heritage.

- To manage activities that may harm Aboriginal cultural heritage.
- To promote an appreciation of Aboriginal cultural heritage.

However, following extensive criticism of the new legislation, the WA Government has now repealed the ACHA and instead introduced amendments to the AHA, which was proclaimed on the 15 November 2023. The amendments to the AHA attempt to address the criticisms of the Section 18 process by:

- Formal recognition of Native Title holders and rights of appeal in respect of s18 decisions by the Minister.
- Replacement of the ACMC with an Aboriginal Cultural Heritage Committee (ACHC), based on the composition of the Aboriginal Heritage Council established under the ACHA, with male and female Aboriginal co-chairs, and preferably a majority of members of Aboriginal descent.
- Requirement to bring any new information to the attention of the Minister through DPLH with respect to a s18 approval.

Currently, DPLH have published the following information documents in relation to the amended AHA:

- **Consultation Policy** – outlining 'the Government's expectations of proponents to undertake consultation with Aboriginal people prior to submitting a section 18 notice'. https://www.wa.gov.au/government/document-collections/aboriginal-heritage-approvals#policy-and-guidelines
- **Aboriginal Heritage Act 1972 Guidelines** – providing practical guidance for landowners where section 18 consent is required to impact Aboriginal cultural heritage (sites and objects). https://www.wa.gov.au/system/files/2023-11/aboriginal_heritage_act_1972_guidelines.pdf

Under the AHA (s17) it remains an offence to alter an Aboriginal site in any way, including collecting artefacts; conceal a site or artefact; or excavate, destroy or damage in any way an Aboriginal site or artefact; without the authorisation of the Registrar of Aboriginal Sites under Section 16 or the Minister of Aboriginal Affairs under Section 18 of the AHA.

An Aboriginal site is defined in Section 5 of the AHA as:

a) Any place of importance and significance where persons of Aboriginal descent have, or appear to have, left any object, natural or artificial, used for, or made or adapted for use for, any purpose connected with the traditional cultural life of the Aboriginal people, past or present.
b) Any sacred, ritual or ceremonial site which is of importance and special significance to persons of Aboriginal descent.
c) Any place which, in the opinion of the Committee [i.e. Aboriginal Cultural Heritage Committee, or ACHC], is or was associated with Aboriginal people and which is of historical, anthropological, archaeological or ethnographical interest and should be preserved because of its importance and significance to the cultural heritage of the State.
d) Any place where objects to which this Act applies are traditionally stored, or to which, under the provisions of this Act, such objects have been taken or removed.

Section 39 (2) states that:

> In evaluating the importance of places and objects the Committee [i.e. the ACHC] shall have regard to —
> a) any existing use or significance attributed under relevant Aboriginal custom;
> b) any former or reputed use or significance which may be attributed upon the basis of tradition, historical association, or Aboriginal sentiment;
> c) any potential anthropological, archaeological or ethnographical interest; and
> d) aesthetic values.

Section 39 (3) states that:

> Associated sacred beliefs, and ritual or ceremonial usage, in so far as such matters can be ascertained, shall be regarded as the primary considerations to be taken into account in the evaluation of any place or object for the purposes of this Act.

Information about known heritage places and their legal status is available through the DPLH Aboriginal Cultural Heritage Inquiry System (ACHIS). There are currently three categories by which the ACHIS characterises heritage places:

- Registered Aboriginal Sites – Aboriginal Cultural Heritage (ACH) **Register layer**. These places have been formally assessed by the ACMC or ACHC and have been determined to be sites under s5 of the AHA.
- Lodged places – Aboriginal Cultural Heritage (ACH) **Lodged layer**. Information about these places is in the process of being verified.
- Historic records - Aboriginal Cultural Heritage (ACH) **Historic layer**. These places have been determined not to meet the criteria under s5 of the AHA for a range of reasons, which may include insufficient information. The submission of new information about these places may result in reassessment of their status.

It should be noted that all Aboriginal heritage places are protected under the AHA whether they are recorded or not. ACHIS does not provide a comprehensive or definitive record of Aboriginal Cultural Heritage Places in Western Australia. The absence of records on ACHIS cannot be interpreted as the absence of sites.

Fees

The WA Government has introduced new fees associated with section 16 and section 18 applications. Commercial and Government proponents are expected to pay the following fees for new applications:

- A $250 application fee.
- $5,096 multiplied by the number of ***proposed investigation sites*** for section 16 applications and ***identified sites or places*** for section 18 applications.

> *'The Director General has the ability to waive, reduce or refund fees; and extend the time within which to pay fees. Any such matter will be considered on a case-by-case basis[2]'.*

The *Aboriginal Heritage Regulations 1974* (the Regulations) are subsidiary legislation made under the *Aboriginal Heritage Act 1972* (WA), providing detailed procedural, compliance and enforcement

[2] https://www.wa.gov.au/government/document-collections/aboriginal-heritage-approvals

mechanisms to support the Act's protection of Aboriginal heritage in Western Australia. The Regulations implement, specify and regulate a range of activities and authorisations under the Act, and remain in force following amendments and reprints associated with the restoration of the Act's legislative framework.

Purpose and Scope

The Regulations operationalise the *Aboriginal Heritage Act 1972* by prescribing practical detail relating to consent requirements, access controls, offences, penalties and enforcement. They apply to all activities that may affect Aboriginal heritage, including Aboriginal sites and objects of cultural significance, regardless of whether those places are formally registered under the Act.

Structure and Key Provisions

The Regulations establish a range of regulatory controls, including Ministerial powers, access restrictions, authorised activities, enforcement mechanisms and offences. Of particular relevance:

- Regulation 7 empowers the Minister to prohibit or restrict access to any land for the purpose of protecting an Aboriginal site. Where such a prohibition is in force, unauthorised entry onto the land constitutes an offence. This provision is used as a protective mechanism to prevent disturbance or damage to Aboriginal heritage where there is a risk of impact.
- Regulation 10 regulates the bringing of plant, machinery, equipment, materials or substances onto land that contains, or is suspected to contain, an Aboriginal site. Unless authorised by the Minister, such actions are prohibited, reflecting the intent to prevent inadvertent damage to Aboriginal heritage through ground-disturbing or preparatory works.

In addition, the Regulations provide for offences and penalties for contraventions of the Act and Regulations, outline consent and authorisation processes for activities that may affect heritage and enable the appointment and powers of authorised officers and honorary wardens to administer and enforce the legislation.

Interaction with the Act

The Regulations operate in conjunction with the *Aboriginal Heritage Act 1972*, which establishes the overarching statutory protections for Aboriginal heritage and Ministerial functions. While the Act defines the scope of protected heritage and offences, the Regulations provide procedural clarity and specific compliance obligations for land users, proponents and authorities. Recent amendments in 2023 support the restored operation of the Act and align the Regulations with transitional arrangements, updated procedures and fee-related matters for statutory approvals.

Commonwealth Legislation

Aboriginal heritage sites are also protected under the *Commonwealth Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (the HPA). The HPA complements state/territory legislation and is intended to be used only as a 'last resort' where state/territory laws and processes prove ineffective. Under the HPA the responsible Minister can make temporary or long-term declarations to protect areas and objects of significance under threat of injury or desecration. The HPA also encourages heritage protection through mediated negotiation and agreement between land users, developers and Aboriginal people. Commonwealth heritage legislation is currently under review, as recommended by the Juukan Inquiry.

Aboriginal human remains are protected under the AHA and the HPA. In addition, the discovery of human remains requires that the following people are informed: the State Coroner or local Police under section 17 of the *Coroners Act 1996*; the State Registrar of Aboriginal Sites under section 15 of the AHA and the Federal Minister for Aboriginal Affairs under Section 20 of the HPA.

In terms of broader recognition of Aboriginal rights, the Commonwealth *Native Title Act 1993* (the *NTA*) recognises the traditional rights and interests to land and waters of Aboriginal and Torres Strait Islander people. Under the NTA, native title claimants can make an application to the Federal Court to have their native title recognised by Australian law. The NTA was extensively amended in 1998, with further amendments occurring in 2007, and again in 2009. Under the future act provisions of the *Native Title Act 1993*, native title holders and registered native title claimants are entitled to certain procedural rights, including a right to be notified of the proposed future act, or a right to object to the act, the opportunity to comment, the right to be consulted, the right to negotiate or the same rights as an ordinary title holder (freeholder).

Environmental Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act* 1999 (the EPBC Act) is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the EPBC Act as matters of national environmental significance.

The EPBC Act enhances the management and protection of Australia's heritage places, including World Heritage properties. It provides for the listing of natural, historic or Indigenous places that are of outstanding national heritage value to the Australian nation as well as heritage places on Commonwealth lands and waters or under Australian Government control.

The National Heritage List includes natural, historic and Indigenous places of outstanding heritage value. The Commonwealth Heritage List comprises natural, Indigenous and historic heritage places on Commonwealth lands and waters or under Australian Government control.

Once a heritage place is listed under the EPBC Act, special requirements come into force to ensure that the values of the place will be protected and conserved for future generations. The EPBC Act provides for the preparation of management plans which set out the significant heritage aspects of the place and how the values of the site will be managed.

World heritage properties and national heritage places are recognised as a matter of national environmental significance under the EPBC Act. Consequently, any action that is likely to have a significant impact on heritage properties and places must be referred to the Minister and undergo an environmental assessment and approval process.

Nominated places are places that the Minister's delegate has received a nomination on the approved form and carried out an initial assessment on data adequacy. The nomination either will be or has been referred to the Council for assessment. The data will generally be that provided by the nominator but may be updated during assessment. The significance or values attributed to the place are the views of the nominator and not necessarily those of either the Council or the Minister. While waiting assessment these places with this status do not have any statutory protection.

Under the EPBC Act, the Australian Heritage Council (AHC) can only assess places for the National Heritage List if the places are on the AHC's assessment work plan (known as the "priority assessment list"). The Minister sets this work plan each financial year. A nomination becomes ineligible (given the status "nomination now ineligible for PPAL") if it has been considered for two consecutive work

plans but not included. However, it should be noted that a nominated place ruled ineligible in this way can be re-nominated, thereupon becoming eligible again for consideration. Places with this status do not have any statutory protection.

If at some stage during the assessment process for the Commonwealth Heritage List, but prior to listing, a place ceases to be in a Commonwealth area, or, if outside the Australian jurisdiction, is no longer owned or leased by the Commonwealth, then the place becomes "ineligible". Places with this status do not have any statutory protection.

Best Practice Guidelines

Australia

The Burra Charter

The Burra Charter (Australian ICOMOS, 2013) is the foundational document for conserving Australia's cultural heritage. The Charter encapsulates two important aspects in conserving heritage places. First, it establishes the best practice principles and processes for understanding and assessing a place's significance, as well as developing and implementing a conservation plan. Second, the Charter defines and explains the four primary cultural values that may be ascribed to any place: aesthetic, historic, social or spiritual, and scientific. These values are essential as they delineate the types and quality of information needed to accurately determine a heritage place's significance. More recent practice within DPLH with respect to site reporting and significance assessment under the AHA also refers to Burra Charter values.

Archaeological Sites

A Practice Note supplementing the Burra Charter entitled 'The Burra Charter and Archaeological Practice' states that the fundamental principles contained in the Burra Charter apply to archaeological sites. Article 13 of the Burra Charter states: 'Co-existence of cultural values should always be recognised, respected and encouraged. This is especially important in cases where there is conflict.' This will be relevant where:

> (a) archaeological features from the earliest phases of a site underlie more recent archaeological features of national, state or local significance, and
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> *In Australian cultural landscape management, it can be useful to think about the way certain categories (derived from UNESCO World Heritage meanings) can be used to frame the different attributes, character, and values of cultural landscape. The categories that are most useful are 'designed landscape', 'continuing or living landscape' and 'associative landscape'.*

The Practice Note discusses cultural landscape in terms of cultural landscape as place, practice, process, and management. Section 5 of the Practice Note outlines the principles of cultural landscape in these terms. UNESCO (2021, paragraph 47) defines Associative Cultural Landscape as:

'A landscape with 'powerful religious, artistic or cultural associations of the natural element rather than material cultural evidence, which may be significant or even absent.'

The 'Darwin Statement' – Implementing Best Practice Cultural Heritage Principles

In 2018, the Heritage Chairs and Officials of Australia and New Zealand (HCOANZ) agreed to implement best practice cultural heritage principles under what they termed the 'Darwin Statement'. The Heritage Chairs were joined by representatives of Aboriginal and Torres Strait Islander heritage organisations from the Commonwealth, states and territories in an approach aimed at working together to advance 'a shared approach to Australia's cultural heritage' (Heritage Chairs of Australia and New Zealand, 2020: 33). The HCOANZ group emphasised the principles of:

- Sharing the comprehensive Australian heritage story (including the 'critical importance' of recording and sharing the stories of Aboriginal and Torres Strait Islander cultural heritage).
- Inclusion and engagement with Aboriginal and Torres Strait Islander people.
- Cooperation and collaboration.

Their objective was to facilitate Indigenous Cultural Heritage (ICH) legislation and policy across the country that is consistently of the highest standards.

The HCOANZ group made their recommendations at a time of statutory reviews of Commonwealth Acts, including the *Environment Protection and Biodiversity Act 1999* (Cth) (EPBC Act) and the Australian Heritage Strategy, the Commonwealth's key heritage policy document. Their vision, captured in a document entitled *'Dhawura Ngilan'/Remembering Country*, reminds us that, as a foundational principle, Australia's Indigenous Peoples are entitled to expect that Indigenous Cultural Heritage legislation will uphold the international legal norms contained within the UN Declaration on the Rights of Indigenous Peoples (UNDRIP), and that the key to UNDRIP is the principle of self-determination. The four primary visions of *'Dhawura Ngilan'/Remembering Country* are:

1. Aboriginal and Torres Strait Islander people are the Custodians of their heritage. It is protected and celebrated for its intrinsic worth, cultural benefits and the well-being of current and future generations of Australians.

2. Aboriginal and Torres Strait Islander heritage is acknowledged and valued as central to Australia's national heritage.

3. Aboriginal and Torres Strait Islander heritage is managed consistently across jurisdictions according to community ownership in a way that unites, connects, and aligns practice.

4. Aboriginal and Torres Strait Islander heritage is recognised for its global significance.

This is the climate under which the *Aboriginal Cultural Heritage Act 2021* evolved and was enacted. Subsequent amendments to the AHA also reflect more of a rights-based approach, including the replacement of the ACMC with an Aboriginal Cultural Heritage Committee, with Aboriginal male and female chairs and majority Aboriginal membership, and the recognition of Native Title holders.

Corporate Social Responsibility – Aboriginal Community Engagement

In the *A Way Forward* report (Parliament of the Commonwealth of Australia, 2021) the Centre for Social Responsibility in Mining submitted that mining companies do not have the capacity to avoid incidents such as the destruction of Juukan Gorge. The Centre suggested mining companies are not performing in their social responsibility to prevent activities that would be detrimental to the community:

> *The field of mining and social performance is in decline. This has weakened the ability of community relations and social performance professionals to challenge production priorities in circumstances where risks to community exceed reasonable thresholds. Our research highlights shortcomings across organisational structures, internal lines of reporting, management systems, incentives, and talent management.*

Furthermore, Hon Warren Entsch MP (Chair) stated in the Foreword of the 2020 *Never Again Interim Report*, following the Juukan disaster, that corporate Australia 'can no longer ignore the link between its social licence to operate and responsible engagement with Indigenous Australia' (Joint Standing Committee on Northern Australia, 2020). One of the key lessons learnt by Rio Tinto has been the recognition that they put their social licence to operate in jeopardy by focussing on commercial gain ahead of 'meaningful engagement with Traditional Owners' (*ibid.*: 7). According to Recommendation 6.91 of the later *A Way Forward* Report:

> *…. These actions remind corporations that their social licence to operate and corporate ethical positions will affect how they are able to do business in the future – it will affect their investment prospects and return on investment. The same principles apply to other industries, particularly in the context of a transition to renewables, opening the way for them to learn from the mistakes of the mining boom and pay respect to the living heritage of Aboriginal and Torres Islander peoples.*

The idea of 'meaningful engagement' is encapsulated by the UNDRIP (United Nations, 2008) and is underpinned by inter-related principles that include:

- Acknowledging and understanding of the individual aspirations and unique circumstances of different people and groups.
- Building trust.
- Maintaining a respectful manner, that acknowledges the need for reciprocity.
- Effective communication.
- Ensuring informed consent.
- Sustaining the relationship.

International

United Nations Declaration on the Rights of Indigenous People (UNDRIP)

The UN Declaration on the Rights of Indigenous People (UNDRIP) sets out the rights of Indigenous people around the world to set and pursue their own priorities for development, and to maintain and control their cultural heritage (United Nations, 2008). The key provisions relevant to mineral development in the Australian context include Indigenous people having the right to:

- Practice and revitalise their cultural traditions and customs, and states shall provide redress for cultural property taken without free, prior and informed consent (Article 11).
- Practice their spiritual and religious traditions, customs and ceremonies, maintain sites, control ceremonial objects and repatriate human remains, and states shall seek to enable the access and/or repatriation of ceremonial objects and human remains (Article 12).
- Maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions and intellectual property over such heritage, knowledge and culture, and states shall, in conjunction with Indigenous peoples, take effective measures to recognize and protect the exercise of these rights (Article 31).
- Determine and develop priorities and strategies for the development or use of their lands or territories and other resources, and states shall consult and cooperate with Indigenous peoples in order to obtain their free and informed consent before the approval of any project affecting their lands, territories and resources, provide effective mechanisms for redress for any adverse impact from such activities (Article 32).

A core principle of UNDRIP is the right of Indigenous people to make decisions about development proposals that have the potential to impact their land and culture from an informed position that is free from coercion, intimidation, or manipulation. In order to uphold these principles, Free and Prior Informed Consent (FPIC) has been recognised as the best practice approach for engaging with Indigenous people when seeking consent for projects or activities that affect Indigenous people's culture or country (Kemp and Owen, 2014).

While the UNDRIP has not been formally adopted into Australian law, there has been an increasing recognition within industry and through new cultural heritage legislation of the importance of FPIC in building meaningful relationships with Traditional Owners and maintaining a social licence to operate.

Free, Prior and Informed Consent (FPIC)

In relation to cultural heritage and development, the UNDRIP means that Indigenous communities have a right to know, and make decisions about, projects that affect them and their heritage. The principles of Free, Prior and Informed Consent (FPIC) for Indigenous persons or communities, in relation to development projects, are a best practice standard that should be applied. They protect and promote Indigenous Rights within the development process. The processes of FPIC should be ongoing throughout the life of the project. To break this down:

- ***Free*** **-** the process to be free of manipulation or coercion (including financial).

- ***Prior -*** the process occurring in advance of any activity associated with the decision being made and allowing time for traditional decision-making processes.
- ***Informed -*** objective, accurate, current and easily understandable information.
- ***Consent -*** right to approve or reject a project (Hill, Lillywhite and Salmon, 2010).

According to the International Council on Mining and Metals' Good Practice Guide (ICMM, 2015), FPIC is of notable importance in the context of Indigenous Peoples involved with mining, for the following reasons:

- Historically, Indigenous Peoples have commonly been excluded from decision-making processes, and the result has often been detrimental to their well-being.
- FPIC has been mandated or recommended in a number of international and national legal and policy documents.
- Calls for the right to FPIC are closely linked to Indigenous Peoples' pursuit of the right to self-determination and the rights to lands and territories.
- The issue of FPIC is linked to the broader debate around ensuring a fair distribution of the costs, benefits, risks and responsibilities associated with mining activities.
- FPIC is also linked to an ethical principle that those who could be exposed to harm or risk of harm should be properly informed about these risks and have an opportunity to express a willingness to accept such risks or not. (ICMM 2015).

International Council on Mining and Metals – Good Practice Guide: Indigenous Peoples and Mining

In realising the need for more meaningful involvement of Aboriginal peoples in decision making processes affecting their heritage, the International Council on Mining and Metals (ICMM, 2015: 19) has outlined 'meaningful involvement in project decision-making', as follows:

- Develop a shared understanding of affected indigenous groups in terms of their culture, spirituality, organizational and decision-making structures, claims and rights to lands, values, concerns and history, including previous experiences with state-led decision-making processes and with mining or other development projects.
- Collaboratively develop an effective means to ensure that Indigenous Peoples are informed about and understand the full range (short, medium and long term) of potential environmental, social and health impacts from a mining project on their community, and any benefits it may offer across the full project cycle. Companies should also seek to communicate the perspectives of relevant stakeholders on proceeding with the project (both positive and negative). It is good practice for local stakeholders to hear the views of other people about the project (e.g. from non-governmental organizations (NGOs), government bodies, academics, industry experts and other communities that have dealt with the company) where they may be able to usefully contribute additional information or perspectives. If requested and appropriate, companies should also

consider providing Indigenous Peoples with the means to engage independent information-gathering experts of their own choice.

- Agree on appropriate decision-making processes for the ongoing involvement of Indigenous Peoples, which are based on a respect for customary decision-making processes and structures. … Companies will need to spend time in gaining an understanding of the complexities and dynamics of such local processes and structures, as well as any differences or divisions that may exist within communities, in order to achieve the most representative outcomes.
- Ensure that the involvement of Indigenous Peoples is inclusive and captures the diversity of views within and between communities (rather than only community leaders' views), and constructively engages with affected Indigenous Peoples to address any concerns they may have that the principle of inclusivity might undermine customary decision-making processes. Companies should also ensure that their engagement is characterized by openness and honesty, and could not be construed as involving coercion, intimidation or manipulation.
- Agree acceptable timeframes to make decisions throughout the lifetime of the project, taking into consideration logistics, local customs, commercial requirements and time needed to build trusting relationships. Ensure that it is clear how the timetable for involvement links into when project decisions are made. Potentially impacted Indigenous Peoples' initial involvement should be sought well in advance of commencement or authorization of activities, taking into account Indigenous Peoples' own decision-making processes and structures.
- Agree on the terms and conditions for the provision of any ongoing community support with affected indigenous stakeholders and any associated reciprocal obligations.
- Record the process and decisions reached where Indigenous Peoples are involved, including the results of any monitoring or reviews, to provide a record for current or future generations who may be affected by the decisions, and to ensure transparency in the decision-making process.
- Support indigenous communities' capacity to engage in decision making, for example by providing access to independent expert advice where appropriate, capacity building, facilitation and mediation, or involving external observers. Capacity-building efforts can be included as an element of an Indigenous Peoples' development plan, which aims to enhance benefits and minimize the adverse effects of a project on significantly impacted Indigenous Peoples.

Such principles should inform the co-development of Cultural Heritage Management Plans with Aboriginal individuals and communities in the contemporary context.

International Finance Corporation – Performance Standards on Environmental and Social Sustainability

Within an international framework, the International Finance Corporation (IFC), the World Bank Group, has established Performance Standards on Environmental and Social Sustainability (IFC, 2012). The standards are:

> *directed towards its clients, providing guidance on how to identify risks and impacts, and are designed to help avoid, mitigate, and manage risks and impacts as a way of doing business in a sustainable way … In the case of its direct investments (including project and corporate finance provided through financial institutions), IFC requires its clients to apply the Performance Standards to manage environmental and social risks and impacts so that development opportunities are enhanced (IFC, 2012).*

The Performance Standards (PS) were developed and are a requirement by the World Bank for projects in developing countries. The Standards do, however, provide an International Benchmark that resource companies worldwide can use in their projects. Performance Standards 7 and 8 are most relevant to Aboriginal cultural heritage.

IFC Performance Standard 7

Includes guidance where restoration *in situ* is not possible, including: minimising adverse impacts and implementing restoration measures in a different location that ensure maintenance of the value and functionality of the cultural heritage, including maintaining or restoring any ecosystem processes needed to support it; ensuring the permanent removal of historical archaeological artefacts and structure is carried out in a manner that complies with applicable law for the protection of cultural heritage and/or the developer engages competent professionals to assist with the identification and protection of cultural heritage; and/or compensation is provided to the Affected Indigenous Communities in instances where:

- it is demonstrably not feasible to minimise adverse impacts and ensure the maintenance of the value and functionality of the cultural heritage; or
- the Affected Communities are using tangible cultural heritage for long-standing cultural purposes.

IFC Performance Standard 8

Performance Standard 8 concerns the importance of cultural heritage for present and future generations and seeks to ensure that developers protect cultural heritage in the course of their activities. The equitable sharing of the benefits for the use of cultural heritage is another objective (IFC, 2012). The scope of the standard relates to the implementation of actions within the framework of the developer's Environmental and Social Management System. Cultural heritage refers to:

- Tangible forms of cultural heritage (moveable and immoveable objects, sites and structures having a range of values – archaeological, historic, cultural and religious).
- Unique natural features and tangible objects that embody cultural values, such as sacred groves, rocks, lakes, and waterfalls. (IFC, 2012).

There are three specific requirements for tangible forms of cultural heritage during the Project Design and Execution Phase:

- Compliance with the applicable laws regarding cultural heritage.

- Identification and protection of cultural heritage through the employment of internationally recognised practices for the protection, field-based study and documentation of cultural heritage.
- Where the likelihood of risk or direct impact are determined, competent professionals are retained to assist with the identification and protection of cultural heritage (IFC, 2012).

When the development area contains cultural heritage or prevents access to previously accessible cultural heritage sites used by the community, the developer will allow access and, if necessary, provide an alternative way to the cultural site, subject to overriding health, safety, and security considerations (IFC, 2012).

For replicable cultural heritage, avoidance is the preferred cultural heritage management technique. Where this is not possible, restoration measures may be used; however, this is not a common practice in Australian contexts. The permanent removal of replicable cultural heritage (i.e. through salvage) is acceptable if carried out by a competent heritage professional.

Non-replicable cultural heritage is best protected by preservation *in situ*, since removal is likely to result in irreparable damage or destruction of the cultural heritage. The removal of any non-replicable cultural heritage will be acceptable if the following conditions are met:

- There are no technically or financially feasible alternatives to removal.
- The overall benefits of the project conclusively outweigh the anticipated cultural heritage loss from removal.
- Any removal of cultural heritage is conducted using the best available technique (IFC, 2012).

In exceptional circumstances when impacts on critical cultural heritage are unavoidable:

> The *developer will use a process of Informed Consultation and Participation (ICP) of the Affected Communities which uses a good faith negotiation process that results in a documented outcome. The client will retain external experts to assist in the assessment* and protection of critical cultural heritage (IFC, 2012).

UNESCO Convention for the Safeguarding of Intangible Cultural Heritage

As noted in the *'Dhawura Ngilan'/Remembering Country* visionary document (Heritage Chairs of Australia and New Zealand, 2020: 38–39), intangible cultural heritage can exist independently of the association with a particular place. Thus, 'the management, protection and promotion of this form of cultural heritage can provide particular challenges in a legislative context'. Whilst this is understood, the HCOANZ group point to the importance of this manifestation of ACH as indicated by the number of international instruments, in addition to the UNDRIP, that address this topic. The 2003 UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (UNESCO, 2003) remains the key instrument in the recognition and protection of such cultural heritage; however, Australia has not yet ratified it. Acknowledging the constitutional arrangements in Australia, the HCOANZ group support the development of national legislation for the recognition and protection of intangible ICH/ACH.

For the purposes of this Convention (UNESCO 2003: Appendix 2) 'intangible cultural heritage':

- means the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity.
- is manifested inter alia in the following domains:
  (a) oral traditions and expressions, including language as a vehicle of the intangible cultural heritage
  (b) performing arts
  (c) social practices, rituals and festive events
  (d) knowledge and practices concerning nature and the universe
  (e) traditional craftsmanship.

The AHA (Section 5 and Section 39 (2) and (3)) does include consideration of intangible cultural heritage values that are considered important to the Aboriginal people of the State, and are recognised through social, spiritual, historical, scientific or aesthetic values, as part of Aboriginal tradition. However, most forms of intangible cultural heritage, including oral traditions and rituals, are excluded unless they are associated with place.

Historic Heritage Legislation

WA Legislation

Heritage of Western Australia Act 1990 (repealed)

In July 2019, the *Heritage of Western Australia Act 1990* (the HWAA) was repealed and replaced by Heritage Act 2018. Any heritage agreements entered into under Section 29 of the HWAA that were in effect on the commencement day of the Heritage Act 2018 continue to have effect as if it were certified under the new legislation. The municipal heritage inventories that were compiled and maintained under the HWAA are still a maintained repository of information for local governments today. Indeed, the collation of local heritage information is still required under Part 8 of the *Heritage Act 2018*, now referred to as Local Heritage Surveys.

Heritage Act 2018

The purpose of the *Heritage Act 2018* (HA) is to recognise and promote WA cultural heritage by defining principles for conservation, use, development or adaptation for heritage places. In repealing the HWAA, the HA is the main legislative framework for historical heritage, sometimes referred to as European heritage, in the State.

The HA sets out processes for the management of the State Register of Heritage Places, including the establishment of a Heritage Council. The purposes of this Council include assessing places of significance, advising the Minister for Heritage, guiding public authorities on best practice, promoting public awareness and administration of the register of places. The Heritage Council of

Western Australia is Western Australia's advisory body on heritage matters and focuses on places, buildings and archaeological sites, with a mission to provide for and encourage the conservation of places significant to the cultural heritage of WA under the jurisdiction of the HA.

The HA requires the keeping of a Register of Heritage Places for places that are protected by the provisions of the Act. Heritage places generally gain registration under the HA by being shown to be of cultural heritage significance or possessing special interest relating to or associated with cultural heritage. Section 38 outlines relevant factors in determining the significance of heritage places. This section uses definitions and values like those of the Burra Charter (see above): the Council are to consider values such as aesthetic, historical, scientific, social or spiritual, and characteristics such as fabric, setting, associations, use and meaning.

Places registered under the HA may also have Aboriginal heritage values listed within the significance statement.

Part 5 outlines the responsibilities of public authorities to consider heritage matters within development planning. Under Section 73 of the HA, public authorities must refer a development proposal to the Council when the proposed works have the potential to impact a registered place. The advice provided by the Council in response to a referred proposal may consider the restoration, maintenance and interpretation of the heritage place in question.

Part 11 outlines the definitions and penalties for offences and contraventions of the Act. Under section 129 of the HA, unauthorised impact on registered heritage places is subject to penalty. Section 129 defines damage as including altering, demolishing, removing or despoiling any part of, or thing in, a registered place. The penalties for contravention of the Act are severe, including a $1 million fine, imprisonment for one year and a daily penalty of $50,000. Applications to develop, disturb or alter any place entered on the Register can be made under Part 5 Division 2 of the HA. The HA is currently administered by the Department of Planning, Lands and Heritage in Perth.

Planning and Development Act 2005

The purposes of the *Planning and Development Act* 2005 (the PDA) are to consolidate the provisions of the Acts repealed by the Planning and Development (Consequential and Transitional Provisions) Act 2005 (i.e. the *Metropolitan Region Town Planning Scheme Act* 1959, the *Town Planning and Development Act* 1928 and the *Western Australian Planning Commission Act* 1985). The PDA is intended to provide for an efficient and effective land use planning system in the State, as well as promoting the sustainable use and development of land in the State.

Under Section 73 of the *Heritage Act* 2018, any development proposal that is likely to affect a Registered place must be referred to the Heritage Council for its advice. Under Section 75 of the HA, it is important to comply with Heritage Council advice in order to not adversely affect a registered place.

Under the PD Act, the definition of development 'includes the concept of physical development and the use of the land'[3].

[3] https://www.dplh.wa.gov.au/getmedia/475ca92d-87a9-45b9-9313-efe3684f6f70/Making-Good-Planning-Decisions-(website-published)-2

"Development means the development or use of any land, including – (a) any demolition, erection, construction, alteration of or addition to any building or structure on the land; (b) the carrying out on the land of any excavation or other works; in the case of a place to which a Conservation Order made under section 59 of the Heritage of Western Australia Act 1990 applies, any act or thing that – (i) is likely to change the character of that place or the external appearance of any building; or (ii) would constitute an irreversible alteration of the fabric or any building."

Local Planning Scheme and Strategies

Shire of Moora Local Planning Scheme No.4 2021

The proposed Project is consistent with the Shire of Moora's investment in renewable energy production with several new and major investments in a number of solar and wind renewable projects. The Study Area is located entirely within the Shire of Moora and the following related directly to local planning strategies outlined in *Local Planning Policy – Renewable Energy Facilities, Associated Transmission And Storage Infrastructure And Future Technologies* (available at Renewable Energy in Moora » Shire of Moora).

The Policy facilitates the conservation of places of heritage value and provides for development to occur in conjunction with heritage values. Specifically:

Applications for renewable energy facilities, utility installations, transmission and storage networks and future technologies located on, near or adjacent to properties or buildings identified on the Shire's Heritage List or Municipal Inventory of Heritage Places, will require a written justification by a suitably qualified person (e.g. a qualified Heritage Advisor) justifying or supporting the location, unless determined otherwise by the Shire's Planning Services in consultation with the State Heritage Office.

Renewable energy facilities, utility installations, transmission and storage networks and future technologies shall be designed and sited to minimise adverse impacts on the community and environment and be based on a combination of industry best practice, published industry standards, regulatory frameworks, and local government authority requirements, whichever is the more authoritative and accepted methodology.

Best Practice Guidelines

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APPENDIX TWO – ABORIGINAL HERITAGE ASSESSMENTS AND SITES

Report Relevance and Reliability Criteria

This guideline provides a framework for assessing the reliability and relevance of Aboriginal cultural heritage survey reports, specifically in the context of satisfying the requirements for desktop or due diligence assessments. Table 9 outlines the criteria for determining the validity of survey reports and has been adapted by Archae-aus with reference to the former guidelines developed by the Department of Planning, Lands and Heritage (2023).[4]

Table 9. Report Relevance and Reliability Criteria

Criteria	Description
1. The report has the involvement, agreement or endorsement of the relevant Aboriginal party	A report can be relied upon for the purposes of a desktop or due diligence assessment where: The report is no longer than 10 years old, and the persons who participated in informing the Report were nominated by the relevant Aboriginal party and/or; (a) it can be demonstrated that the report has been subsequently endorsed or agreed to by the Aboriginal party and/or; (b) the report is no longer than 10 years old and has been informed, agreed to or endorsed, whether within the report or separately, by the Aboriginal party.
2. The report must relate to tangible (archaeological) and/or intangible (anthropological) elements of Aboriginal cultural heritage	The report must relate to the tangible (archaeological) and/or intangible (anthropological) elements of Aboriginal cultural heritage. This may have been reported through archaeological and/or anthropological surveys. A single report or multiple reports may address both of these elements. Where only one element (tangible or intangible) has been addressed, for the Report to be relied on for the purposes of a desktop or due diligence assessment, it must be able to be demonstrated that the Aboriginal party has been party to, directed, or otherwise endorsed this decision or survey procedure. The endorsement must be sufficiently clear to demonstrate this.
3. The report must include a clear statement as to the presence of Aboriginal cultural heritage	The report must contain a clear statement as to: (a) whether or not Aboriginal cultural heritage is located in the proposed activity area; or (b) whether areas have been cleared or approved for activities to be undertaken.
4. The area covered by the report(s) must completely cover the proposed activity area	The report must clearly identify the specific geographical area that is the subject of the report. This may include maps, GPS coordinates, a detailed description and/or land parcel or tenement identification: The proposed activity area must be covered by an Aboriginal cultural heritage report(s). Multiple reports (collectively) can cover the activity area. Further, where a report completely covers the proposed activity area but is regional in scope and does not specifically relate to the proposed activity area or proposed activity, the report cannot be relied upon.

[4] DPLH developed comprehensive in 2023 for determining the reliability of archaeological and/or anthropological survey reports for Aboriginal cultural heritage due diligence assessments. The guidelines have since been removed from the DPLH website; however, they provided a sound basis for establishing the validity of reports within or adjacent a Project Area.

5. The scope of activities for which the report was completed must correspond to the proposed activity	Reports which specify a proposed activity can only be relied upon where the activity being undertaken results in land use or development that is no greater in surface area, depth or height than the specified activity. The above does not apply if the report contains a clear statement that Aboriginal cultural heritage is not located in the proposed activity area.

APPENDIX THREE – HERITAGE REGISTER SEARCHES

Aboriginal Cultural Heritage Inquiry System

List of Heritage Surveys

For further important information on using this information please see the WA.gov.au website's Terms of Use at https://www.wa.gov.au/terms-of-use

Search Criteria

13 Heritage Surveys containing 13 Survey Areas in Custom search area - Polygon - 115.97620451876°E, 30.7588754442298°S (GDA94) : 115.97620451876°E, 30.4047862626852°S (GDA94) : 116.313347463095°E, 30.4047862626852°S (GDA94) : 116.313347463095°E, 30.7588754442298°S (GDA94) : 115.97620451876°E, 30.7588754442298°S (GDA94)

Disclaimer

Heritage Surveys have been mapped using information from the reports and / or other relevant data sources. Heritage Surveys consisting of small discrete areas may not be visible except at large scales. Reports shown may not be held at the Department of Planning, Lands and Heritage (DPLH). Please consult report holder for more information. Refer to https://www.wa.gov.au/organisation/department-of-planning-lands-and-heritage/aboriginal-heritage for information on requesting reports held by DPLH.

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Access

Some reports are restricted.

Spatial Accuracy

The following legend strictly applies to the spatial accuracy of heritage survey boundaries as captured by DPLH.

Very Good	Boundaries captured from surveyed titles, GPS (2001 onwards) submitted maps georeferenced to within 20m accuracy.
Good / Moderate	Boundaries captured from GPS (pre 2001) submitted maps georeferenced to within 250m accuracy.
Unreliable	Boundaries captured from submitted maps georeferenced to an accuracy exceeding 250m.
Indeterminate	Surveys submitted with insufficient information to allow boundary capture.

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Aboriginal Cultural Heritage Inquiry System

List of Heritage Surveys

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Survey Report ID	Survey Area ID	Report Title	Report Authors	Year of Publication	Survey Program	Survey Type	Area Description	Spatial Accuracy	Field / Desktop
21356	15138	Report on an Archaeological Investigation for Aboriginal Sites Great Northern Highway H006 Muchea to Walebing Road Widening Programme	Quartermaine, Gary.			Archaeological/ Ethnographic	Great Northern Highway road widening project, between Muchea and Walebing, to the north-east of Perth. It involves up to four metres of widening on each side of the highway at the following locations: SLK41.57 - 43.01; SLK74.73 - 77.45; SLK80.18 - 85.35;	Good	Field only
21518	15347	Report on an ethnographic survey of proposed road widening and passing lane areas between SLK 41.57 and SLK 145.50	O'Connor, R. & E.			Archaeological/ Ethnographic	Great Northern Highway road widening project, between Muchea and Walebing, to the north-east of Perth. It involves up to four metres of widening on each side of the highway at the following locations: SLK41.57 - 43.01; SLK74.73 - 77.45; SLK80.18 - 85.35;	Good	Field only
21948	17452	Report on an ethnographic survey of proposed road widening and passing lane areas between SLK 37.20 and SLK 146 Great Northern Highway	R & E O'Connor Pty Ltd			Ethnographic	Road widening and passing lane areas between SLK 37.20 and SLK 146, Great Northern Highway, between Muchea and Walebing, Western Australia	Good	Field and Desktop
21949	18393	Report on further archaeological investigations for Aboriginal Sites Great Northern Highway H0006 Muchea to Walebing Road widening programme	Quartermaine, Gary.			Archaeological	Great Northern Highway road widening project, between Muchea and Walebing, Western Australia. It involves a survey corridor of fifty metres on each side of the highway at several sections.	Good	Field and Desktop
23832	17863	Moora Reserves Site Visit: New Reserve, Old Reserve, Long Street Pensioner Housing Lot and Clarke Street Reserve	Thomson, Sarah			Archaeological/ Ethnographic	New Reserve, Old Reserve and Clarke Street Reserve and the former pensioner housing lot on the corner of Long and Stack Streets are all within the Shire of Moora.	Moderate	Field and Desktop
103989	14540	Report of the survey for Aboriginal sites at the area proposed for a quarry development by Cliffs International Ltd, Moora, W A	Kee, S			Archaeological/ Ethnographic	The survey area comprises the area of direct impact at the proposed quartzite quarry site, near Moora, as per Figure 2.	Indeterminate	Field and Desktop

Aboriginal Cultural Heritage Inquiry System

List of Heritage Surveys

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Survey Report ID	Survey Area ID	Report Title	Report Authors	Year of Publication	Survey Program	Survey Type	Area Description	Spatial Accuracy	Field / Desktop
106011	14143	Site avoidance survey under the Aboriginal Heritage Act (1972) of an effluent reuse pipline and an emergency overflow pond at Katanning W A : volume 2 of 2 -Waggyl kaip, Southern Noongar & South West Commission of Elders	Parker, Ronald T			Ethnographic	An effluent reuse pipeline and emergency overflow pond at Katanning.	Indeterminate	Field and Desktop
106750	14570	Coomberdale site survey : stage 2	Ridgway, Peter			Archaeological	Coomberdale site survey stage two. The Kiaka site complex where 3 sites were examined, KSC1 to the east of the complex, near Shepherds Well, KSC2 in the middle of the valley near Kiaka Well and KSC 3 to the west against a steep chert hill. The survey area	Indeterminate	Field only
200334	19300	Report of an Aboriginal Heritage Survey of the Great Northern Highway from Batty Bog Road To Walebing: In the Wheatbelt North Region Western Australia : July 2013 [TBD]	Goode, Brad ; Harris, Jacqueline	2013		Archaeological	Report of an Aboriginal Heritage Survey of the Great Northern Highway from Batty Bog Road To Walebing: In the Wheatbelt North Region Western Australia : July 2013 [TBD]	Good	Field and Desktop
200462	19779	Report of an Aboriginal Heritage Survey for Bridge 0782 on the Midlands Road at SLK 22.68 in the Shire of Moora, Western Australia	Huxtable, Louise ; Johnston, Stuart	2016		Archaeological/ Ethnographic	Survey for Bridge 0782 on the Midlands Road at SLK 22.68 in the Shire of Moora, Western Australia		Field and Desktop
200685	20385	Report Of An Aboriginal Heritage Survey For The Bridge Capital Works Program, Bridges 0783, 0785 And 0786, In The Shire Of Moora, Western Australia	Brad Goode, Louise Huxtable	2017		Archaeological	Bridge Outline Approx		Field only
200706	20187	Report Of An Ethnographic Aboriginal Heritage Survey For Bridges 4049 & 4040 In The Shire Of Moora, Western Australia	Brad Goode	2018		Ethnographic	Bindoon Moora Road		Field and Desktop
201066	11503	PRELIMINARY REPORT OF AN ABORIGINAL HERITAGE SURVEY OF THE GREAT NORTHERN HIGHWAY: WALEBING SECTIONS: WESTERN AUSTRALIA	Goode, Huxtable, O'Reilly	2017		Archaeological/ Ethnographic	Walebing Sections		Field only

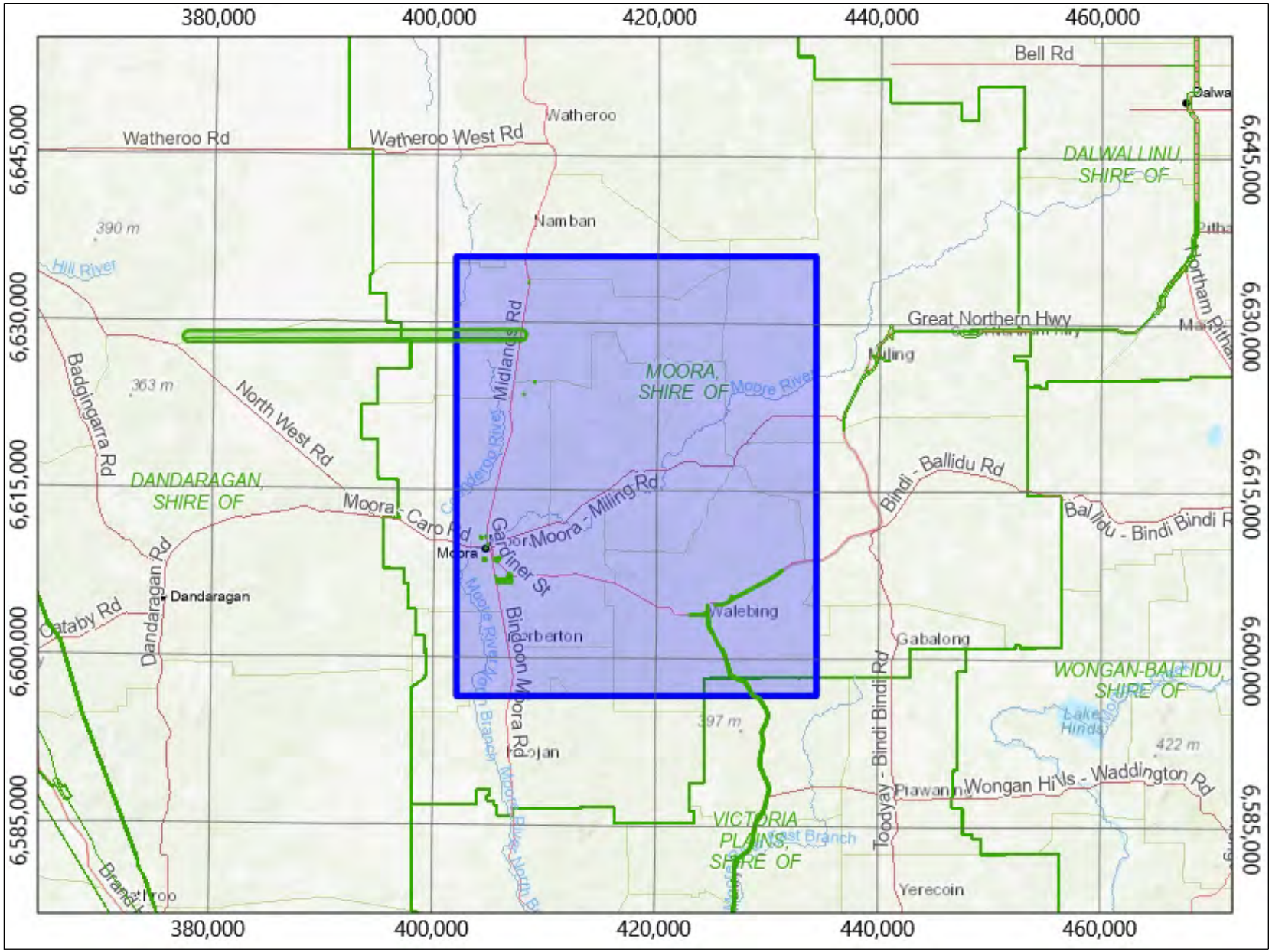
Department of Planning, Lands and Heritage

GOVERNMENT OF WESTERN AUSTRALIA

Aboriginal Cultural Heritage Inquiry System

Map of Heritage Survey Areas

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Legend

- Heritage Survey Area
- Search Area
- Aboriginal Community
  - *Permanent*
  - *Seasonal*
  - *Town Based*
- Town
- Road
- River
- Local Government Authority

19.93 kilometres

Map Scale 1 : 604,000

MGA Zone 50 (GDA2020)

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Search Criteria

5 Aboriginal Cultural Heritage (ACH) Register in Shapefile - DPLH_SearchArea

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Terminology

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Access and Restrictions:

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  - No Gender / Initiation Restrictions: Anyone can view the information.
  - Men only: Only males can view restricted information.
  - Women only: Only females can view restricted information.

Status:

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Place Type: The type of Aboriginal cultural heritage place. For example an artefact scatter place or engravings place.

Legacy ID: This is the former unique number that the former Department of Aboriginal Sites assigned to the place.

Coordinates

Map coordinates are based on the GDA 2020 Datum.

Basemap Copyright

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Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Register

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ID	Name	Boundary Restricted	Boundary Reliable	Culturally Sensitive	Culturally Sensitive Nature	Status	Place Type	Knowledge Holders	Legacy ID
5880	MOORA	No	No	No	No Gender / Initiation Restrictions	Register	Traditional Structure	*Registered Knowledge Holder names available from DPLH	S00138
5881	WALEBING	No	Yes	No	No Gender / Initiation Restrictions	Register	Burial	*Registered Knowledge Holder names available from DPLH	S00139
20008	Gingin Brook Waggyl Site	Yes	Yes	Yes	No Gender / Initiation Restrictions	Register	Camp; Creation / Dreaming Narrative; Historical; Hunting Place; Plant Resource; Water Source	*Registered Knowledge Holder names available from DPLH	
20749	MOORE RIVER WAUGAL	No	Yes	No	No Gender / Initiation Restrictions	Register	Creation / Dreaming Narrative	*Registered Knowledge Holder names available from DPLH	
21620	Chandala Brook #Duplicate of ID 3525	No	Yes	No	No Gender / Initiation Restrictions	Register	Creation / Dreaming Narrative	*Registered Knowledge Holder names available from DPLH	

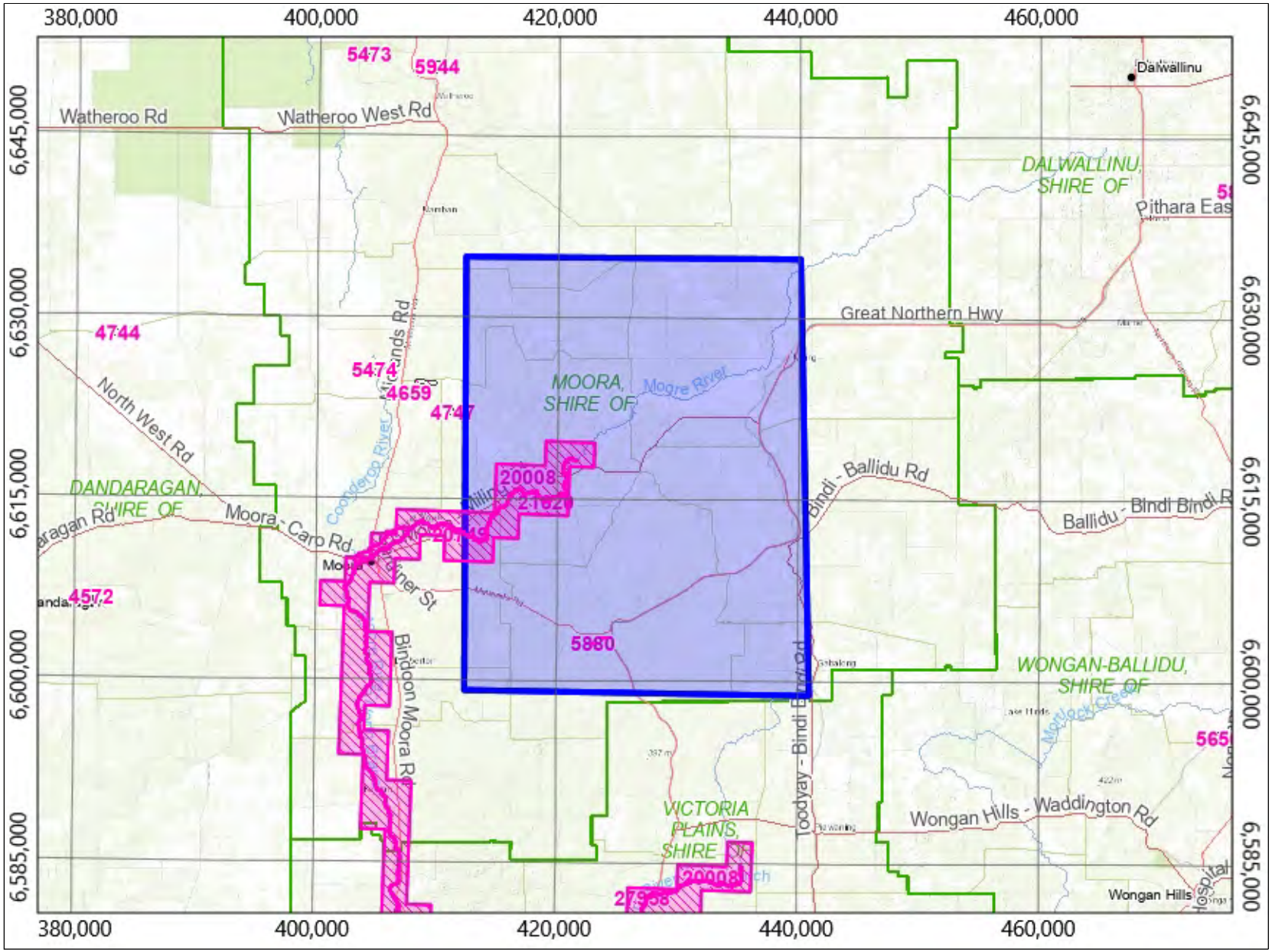
Department of Planning, Lands and Heritage

GOVERNMENT OF WESTERN AUSTRALIA

Aboriginal Cultural Heritage Inquiry System

Map of Aboriginal Cultural Heritage (ACH) Register

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Legend

- Aboriginal Cultural Heritage (ACH) Register
- Search Area
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  - *Permanent*
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- River
- Local Government Authority

18.37 kilometres

Map Scale 1 : 557,000

MGA Zone 50 (GDA2020)

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Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Lodged

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Search Criteria

10 Aboriginal Cultural Heritage (ACH) Lodged in Shapefile - DPLH_SearchArea

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Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Lodged

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ID	Name	Boundary Restricted	Boundary Reliable	Culturally Sensitive	Culturally Sensitive Nature	Status	Place Type	Knowledge Holders	Legacy ID
5573	NARDY WELL.	No	No	No	No Gender / Initiation Restrictions	Lodged	Artefacts / Scatter; Camp	*Registered Knowledge Holder names available from DPLH	
20650	Lennard Brook	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Creation / Dreaming Narrative; Landscape / Seascape Feature; Other; Water Source	*Registered Knowledge Holder names available from DPLH	
20898	Bindi Bindi FS 1	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Artefacts / Scatter	*Registered Knowledge Holder names available from DPLH	
20899	Bindi Bindi FS2	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Modified Tree	*Registered Knowledge Holder names available from DPLH	
21616	Boonanarring Brook	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Creation / Dreaming Narrative	*Registered Knowledge Holder names available from DPLH	
21617	Wallering Brook	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Creation / Dreaming Narrative	*Registered Knowledge Holder names available from DPLH	
21618	Nullilla Brook	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Creation / Dreaming Narrative	*Registered Knowledge Holder names available from DPLH	
21619	Breera Brook	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Creation / Dreaming Narrative	*Registered Knowledge Holder names available from DPLH	
36739	Walebing Reserve	Yes	Yes	No	Women only	Lodged	Burial; Historical	*Registered Knowledge Holder names available from DPLH	
36967	Walebing Scarred Tree	No	Yes	No		Lodged		*Registered Knowledge Holder names available from DPLH	

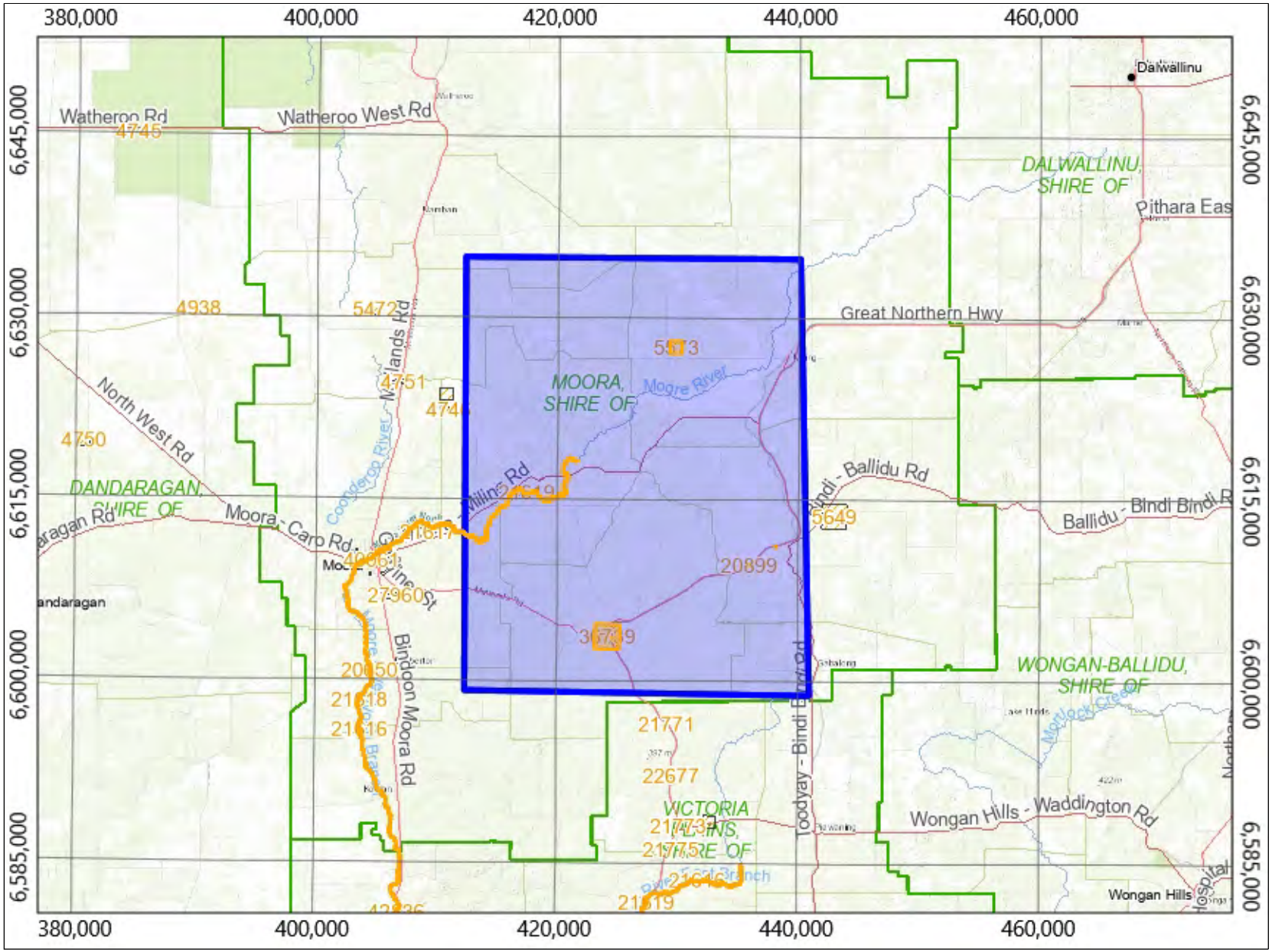
Department of Planning, Lands and Heritage

GOVERNMENT OF WESTERN AUSTRALIA

Aboriginal Cultural Heritage Inquiry System

Map of Aboriginal Cultural Heritage (ACH) Lodged

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Legend

- Aboriginal Cultural Heritage (ACH) Lodged
- Search Area
- Aboriginal Community
  - *Permanent*
  - *Seasonal*
  - *Town Based*
- Town
- Road
- River
- Local Government Authority

18.37 kilometres

Map Scale 1 : 557,000

MGA Zone 50 (GDA2020)

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Search Criteria

3 Aboriginal Cultural Heritage (ACH) Historic in Shapefile - DPLH_SearchArea

Disclaimer

Aboriginal heritage holds significant value to Aboriginal people for their social, spiritual, historical, scientific, or aesthetic importance within Aboriginal traditions, and provides an essential link for Aboriginal people to their past, present and future. In Western Australia Aboriginal heritage is protected under the Aboriginal Heritage Act 1972.

All Aboriginal cultural heritage in Western Australia is protected, whether or not the ACH has been reported or exists on the Register.

The information provided is made available in good faith and is predominately based on the information provided to the Department of Planning, Lands and Heritage by third parties. The information is provided solely on the basis that readers will be responsible for making their own assessment as to the accuracy of the information. If you find any errors or omissions in our records, including our maps, it would be appreciated if you provide the details to the Department via https://achknowledge.dplh.wa.gov.au/ach-enquiry-form and we will make every effort to rectify it as soon as possible.

South West Settlement ILUA Disclaimer

Your heritage enquiry is on land within or adjacent to the following Indigenous Land Use Agreement(s): Yued Indigenous Land Use Agreement.

On 8 June 2015, six identical Indigenous Land Use Agreements (ILUAs) were executed across the South West by the Western Australian Government and, respectively, the Yued, Whadjuk People, Gnaala Karla Booja, Ballardong People, South West Boojarah #2 and Wagyl Kaip & Southern Noongar groups, and the South West Aboriginal Land and Sea Council (SWALSC).

The ILUAs bind the parties (including 'the State', which encompasses all State Government Departments and certain State Government agencies) to enter into a Noongar Standard Heritage Agreement (NSHA) when conducting Aboriginal Heritage Surveys in the ILUA areas, unless they have an existing heritage agreement. It is also intended that other State agencies and instrumentalities enter into the NSHA when conducting Aboriginal Heritage Surveys in the ILUA areas. It is recommended a NSHA is entered into, and an 'Activity Notice' issued under the NSHA, if there is a risk that an activity will ‘impact’ (i.e. by excavating, damaging, destroying or altering in any way) an Aboriginal heritage site. The Aboriginal Heritage Due Diligence Guidelines, which are referenced by the NSHA, provide guidance on how to assess the potential risk to Aboriginal heritage.

Likewise, from 8 June 2015 the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) in granting Mineral, Petroleum and related Access Authority tenures within the South West Settlement ILUA areas, will place a condition on these tenures requiring a heritage agreement or a NSHA before any rights can be exercised.

If you are a State Government Department, Agency or Instrumentality, or have a heritage condition placed on your mineral or petroleum title by DEMIRS, you should seek advice as to the requirement to use the NSHA for your proposed activity. The full ILUA documents, maps of the ILUA areas and the NSHA template can be found at https://www.wa.gov.au/organisation/department-of-the-premier-and-cabinet/south-west-native-title-settlement.

Further advice can also be sought from the Department of Planning, Lands and Heritage via https://achknowledge.dplh.wa.gov.au/ach-enquiry-form.

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Terminology

ID: ACH on the Register is assigned a unique ID by the Department of Planning, Lands and Heritage using the format: ACH-00000001. For ACH on the former Register the ID numbers remain unchanged and use the new format. For example the ACH ID of the place Swan River was previously '3536' and is now 'ACH-00003536'.

Access and Restrictions:

- Boundary Reliable (Yes/No): Indicates whether to the best knowledge of the Department, the location and extent of the ACH boundary is considered reliable.
- Boundary Restricted = No: Represents the actual location of the ACH as understood by the Department..
- Boundary Restricted = Yes: To preserve confidentiality the exact location and extent of the place is not displayed on the map. However, the shaded region (generally with an area of at least 4km²) provides a general indication of where the ACH is located. If you are a landowner and wish to find out more about the exact location of the place, please contact the Department of Planning, Lands and Heritage.
- Culturally Sensitive = No: Availability of information that the Department of Planning, Lands and Heritage holds in relation to the ACH is not restricted in any way.
- Culturally Sensitive = Yes: Some of the information that the Department of Planning, Lands and Heritage holds in relation to the ACH is restricted if it is considered culturally sensitive information. This information will only be made available if the Department of Planning, Lands and Heritage receives written approval from the people who provided the information. To request access please contact via https://achknowledge.dplh.wa.gov.au/ach-enquiry-form.
- Culturally Sensitive Nature:
  - No Gender / Initiation Restrictions: Anyone can view the information.
  - Men only: Only males can view restricted information.
  - Women only: Only females can view restricted information.

Status:

- Register: Aboriginal cultural heritage places that are assessed as meeting Section 5 of the Aboriginal Heritage Act 1972.
- Lodged: Information which has been received in relation to an Aboriginal cultural heritage place, but is yet to be assessed under Section 5 of the Aboriginal Heritage Act 1972.
- Historic: Aboriginal heritage places assessed as not meeting the criteria of Section 5 of the Aboriginal Heritage Act 1972. Includes places that no longer exist as a result of land use activities with existing approvals.

Place Type: The type of Aboriginal cultural heritage place. For example an artefact scatter place or engravings place.

Legacy ID: This is the former unique number that the former Department of Aboriginal Sites assigned to the place.

Coordinates

Map coordinates are based on the GDA 2020 Datum.

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Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Historic

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ID	Name	Boundary Restricted	Boundary Reliable	Culturally Sensitive	Culturally Sensitive Nature	Status	Place Type	Knowledge Holders	Legacy ID
19138	Wetlands & Watercourses Moore River to Bullsbrook	No	Yes	No	No Gender / Initiation Restrictions	Historic	Creation / Dreaming Narrative	*Registered Knowledge Holder names available from DPLH	
19183	Red Gully Creek	No	Yes	No	No Gender / Initiation Restrictions	Historic	Creation / Dreaming Narrative; Plant Resource	*Registered Knowledge Holder names available from DPLH	
37674	Clovalley farm	No	Yes	No		Historic	Burial; Artefacts / Scatter; Engraving; Modified Tree; Water Source	*Registered Knowledge Holder names available from DPLH	

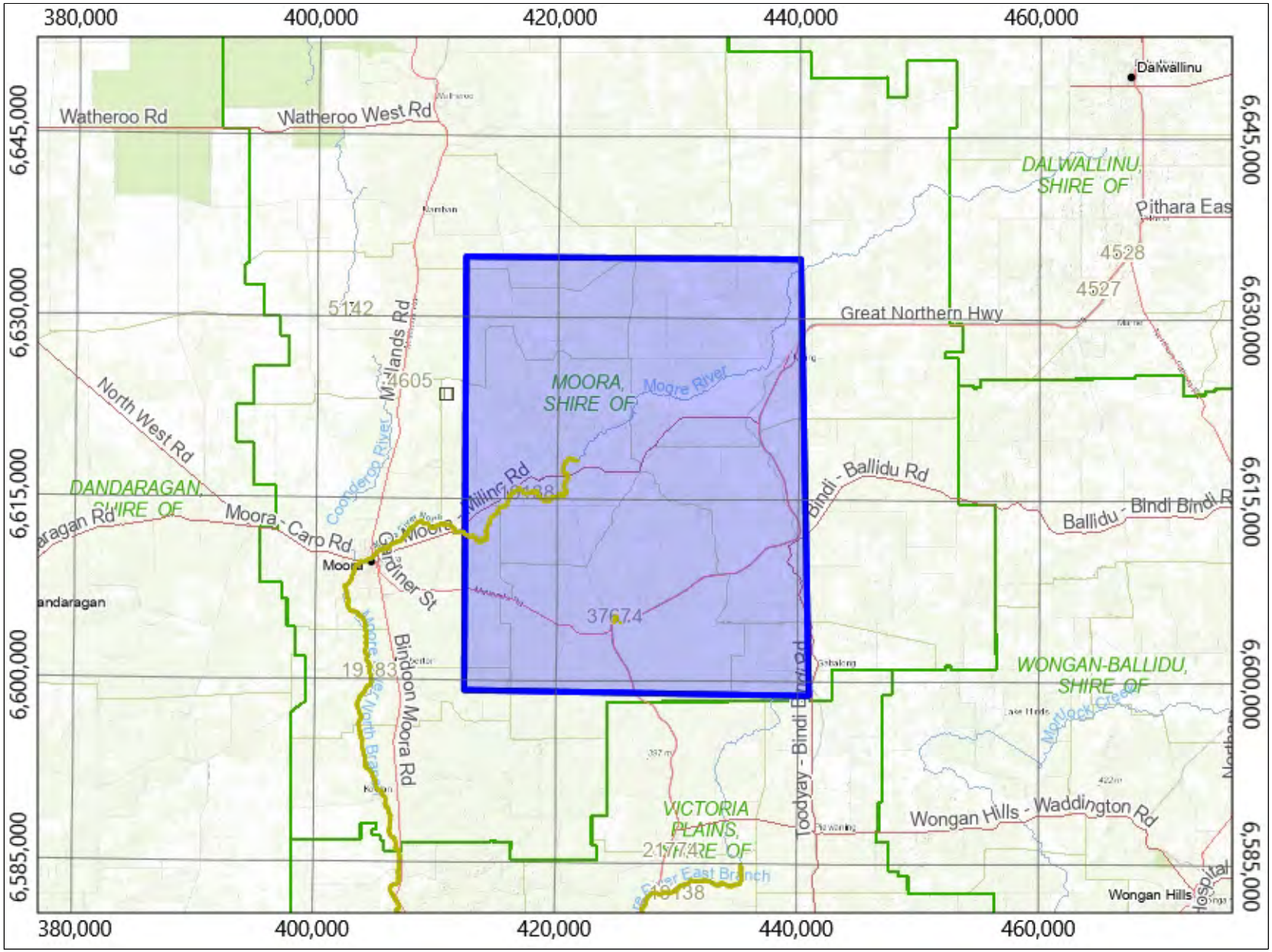
Department of Planning, Lands and Heritage

GOVERNMENT OF WESTERN AUSTRALIA

Aboriginal Cultural Heritage Inquiry System

Map of Aboriginal Cultural Heritage (ACH) Historic

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Ruth Smith
Senior Environment and Development Planner
Tilt Renewables

By email: Ruth.Smith@tiltrenewables.com

May 2026

Our reference: 100610-01

Dear Ruth

Re: Central Midlands Wind Farm Met Mast – Aviation Impact Assessment

Tilt Renewables proposes to install four (4) Met Masts within the planned Central Midlands Wind Farm, which is located within the Shire of Moora Local Government Area (LGA), Western Australia.

Tilt Renewables has engaged Aviation Projects to prepare an Aviation Impact Assessment (AIA) for the proposed met masts against relevant aspects of the applicable planning scheme, Civil Aviation Safety Regulations (CASR) Part 139 —*Aerodromes* and National Airports Safeguarding Framework (NASF).

1.1. References

The following information sources were referenced during the preparation of this report:

- Airservices Australia
    - Aeronautical Information Package (AIP), effective 09 July 2026.
    - Designated Airspace Handbook (DAH), effective 09 July 2026.
- Civil Aviation Safety Authority (CASA)
    - Civil Aviation Regulations 1988 (CAR).
    - Civil Aviation Safety Regulations 1998 (CASR).
    - Advisory Circular (AC) 91-02 V1.2, *Guidelines for aeroplanes with MTOW not exceeding 5700 kg – suitable places to take off and land*, dated November 2022.
    - AC 91-10 v1.7: *Operations in the vicinity of non-controlled aerodromes*, dated April 2026.
    - CASR Part 173 Manual of Standards (MOS) – *Standards Applicable to Instrument Flight Procedure Design*, version 1.8, dated August 2022.
    - CASR Part 139 MOS– *Aerodromes,* F2025L00663 compilation date 12 June 2025.
    - AC 139.E-01 v1.0—*Reporting of Tall Structures*, dated December 2021.
    - AC 139.E-05 v1.1 *Obstacles (including wind farms) outside the vicinity of a CASA certified aerodrome* (October 2022).

- Department of Infrastructure, Transport, Regional Development, Communications and Arts, Australian Government, National Airport Safeguarding Framework, Guideline D *Managing the Risk to aviation safety of wind turbine installations (wind farms)/Wind Monitoring Towers*, dated July 2012.
- International Civil Aviation Organization (ICAO)
    - Annex 14—*Aerodromes.*
    - Doc 8168 *Procedures for Air Navigation Services—Aircraft Operations* (PANS-OPS).
- OzRunways, aeronautical navigation charts extracts, dated April 2026.
- Western Australia, *Planning Position Statement: Renewable energy facilities* (14 Dec 2022).
- Other references as noted.

1.2. Project description

Proposed Met Masts would be within the Shire of Moora LGA. The proposed masts' height would be 150 m (492.1 ft) above ground level (AGL), and the highest ground elevation of the proposed Met Masts would be approximately 346 m Australian Height Datum (AHD). This results in a maximum height of approximately 496 m AHD (1627.3 ft above mean sea level (AMSL)).

Figure 1 Shows the location of the proposed Met Mast Locations (Source: Tilt, Google Earth).

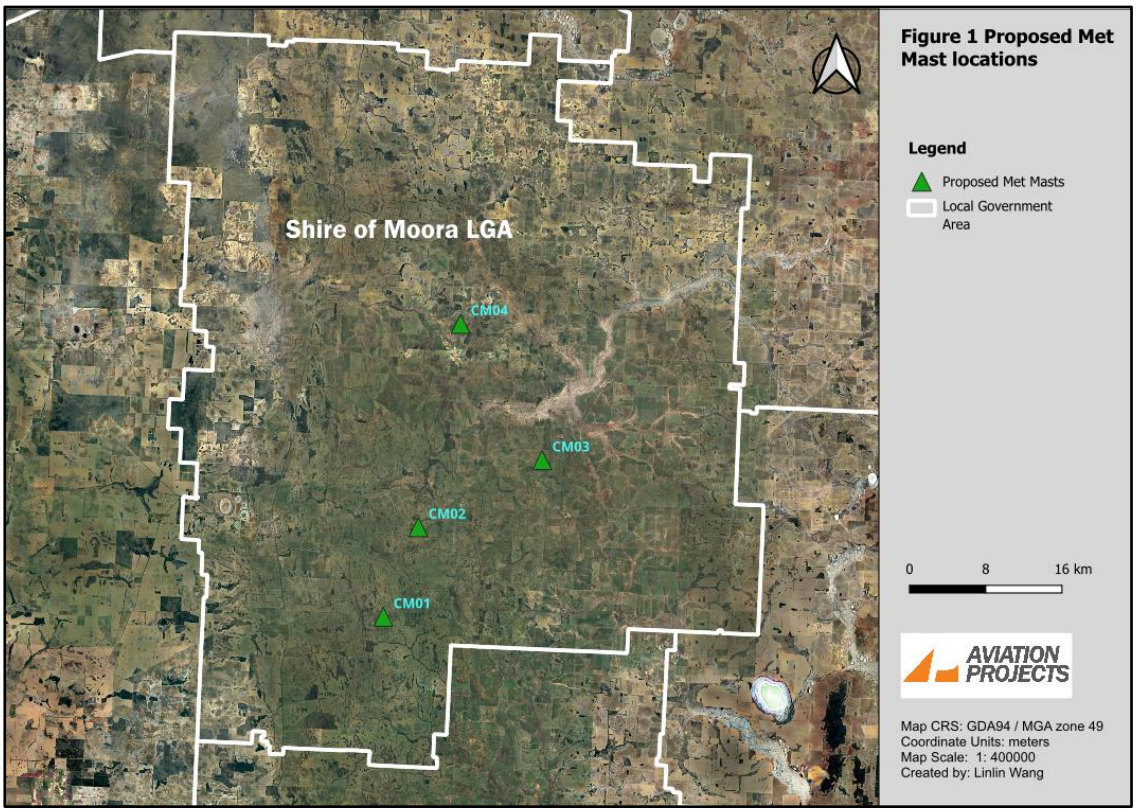


Figure 1 Proposed Met Mast locations

Figure 2 Shows a typical steel lattice and guy wire construction.

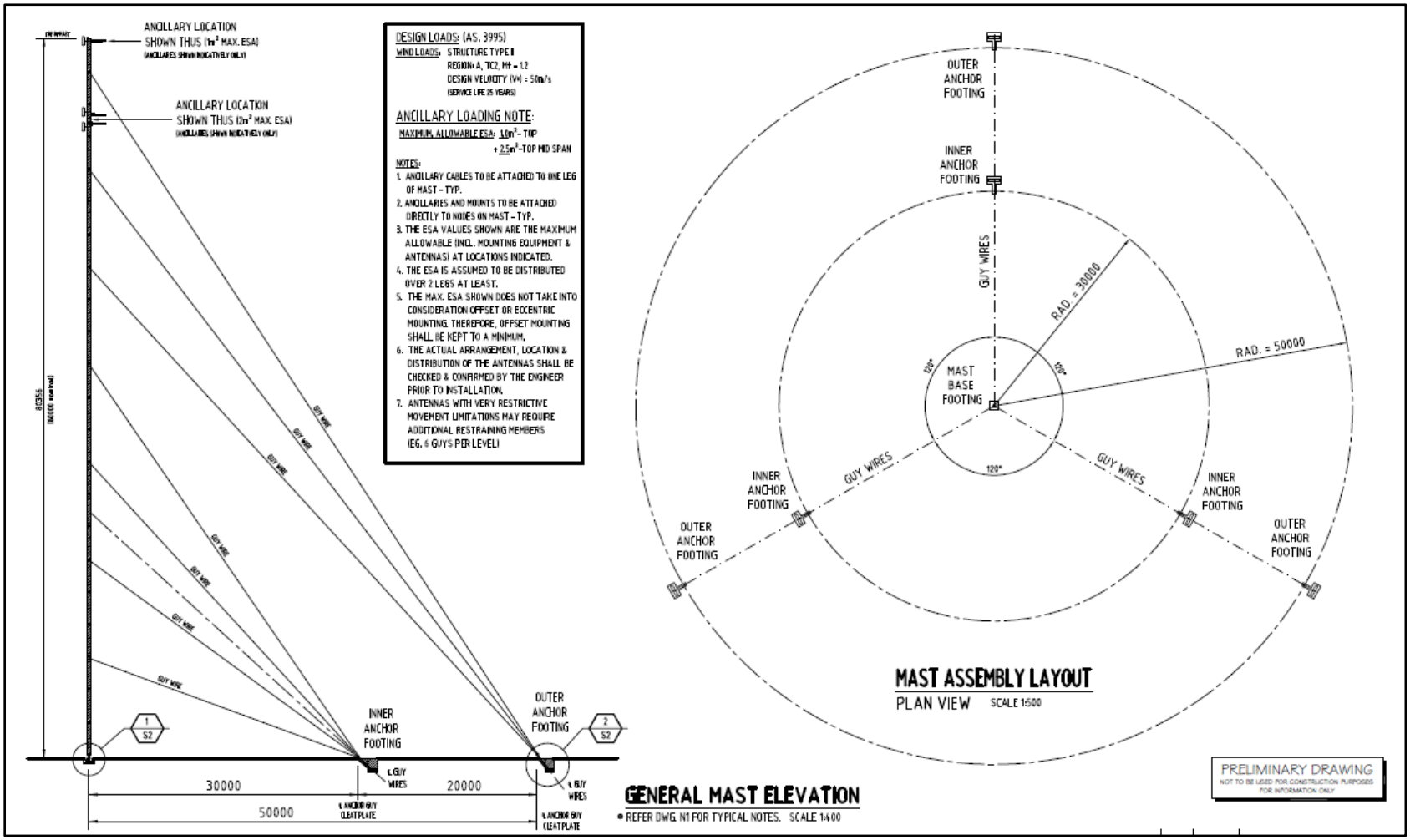


Figure 2 Typical Guyed Lattice Mast - general elevation

1.3. Western Australia Government, Department of Planning, Lands and Heritage

The Western Australian Planning Commission administers responsibility for approving renewable energy facilities through local councils. The Department of Planning, Lands and Heritage has published *Position Statement: Renewable energy facilities* (December 2022) on behalf the Western Australia Planning Commission. These guidelines provide advice to inform planning decisions about a wind energy facility proposal.

The intent of this position statement is to:

- Outline the Western Australian Planning Commission (WAPC) requirements to support the consistent consideration and provision of renewable energy facilities within Western Australia
- Identify assessment measures to facilitate appropriate development of renewable energy facilities.

The position statement applies to the preparation and assessment of planning instruments including regional and local planning schemes and strategies.

The position statement supersedes Planning Bulletin 67 Guidelines for Wind Farm Development (2004).

Section 5.3.1 *Community Consultation* and Section 5.3.5 *Public and Aviation safety* are relevant to this assessment and are extracted below:

> ***Section 5.3.1 Community Consultation***
>
> *Early consultation with the community and stakeholders by the proponents is encouraged to ensure that the proposal is compatible with existing land uses on and near the site. The local government should be consulted with respect to the community consultation program. Relevant stakeholders may include:*
>
> - *Air Services Australia …*
> - *Civil Aviation Safety Authority …*
> - *Department of Defence (Australian Government) …*
>
> ***5.3.5 Public and aviation safety***
>
> *Proponents of wind turbine proposals should refer to the National Airports Safeguarding Framework (NASF) Guideline D: Managing the Risk to Aviation Safety of Wind Turbine Installation (Wind Farms) / Wind Monitoring Towers to determine any potential aviation safety risks and possible mitigation measures.*
>
> *Any potential aviation safety risks identified require consultation with Civil Aviation Safety Authority (CASA), Air Services Australia and/or the Commonwealth Department of Defence.*

The position paper defines Renewable energy facility as premises used to generate energy from a renewable energy source and includes any building or other structure used in, or relating to, the generation of energy by a renewable resource. It does not include renewable energy electricity generation where the energy produced principally supplies a domestic and/or business premises and any on selling to the grid is secondary.

An AIA would include consultation with relevant aviation stakeholders and address aviation-related matters included in the Position Statement.

CASA have previously advised in other consultation, that when referred by the planning authority, CASA will review the AIA and provide a response directly to the planning authority.

1.4. Nearby certified aerodromes

A certified aerodrome is an aerodrome regulated by the Civil Aviation Safety Authority (CASA) under Part 139 of the Civil Aviation Safety Regulations (CASR), with defined standards established in Part 139 (Aerodromes) Manual of Standards (MOS) 2019.

There are no certified aerodromes located within 30 nm of the proposed Met Masts. The closest certified aerodrome would be Gingin Airport (YGIG), approximately 86 km/47 nm southwest of the Project Site.

There are no training aids within 30nm, the closest is the Remote TACAN at Beermullah.

The 30 nm radius represents the 25 nm minimum sector altitude (MSA) for aerodromes with terminal instrument flight procedures. The 25 nm MSA is determined by assessing obstacles within 30 nm (25 nm plus 5 nm buffer) of the aerodrome reference point or navigational aid on which the MSA is based.

The location of the proposed Met Masts relative to Gingin Airport (YGIG) and Remote TACAN is shown in Figure 3 (source: Tilt, Google Earth). The orange circle represents a 30 nm radius from the airport's aerodrome reference point (ARP) / TACAN Center.

Therefore, the proposed Met Masts would not impact any certified or military aerodromes.

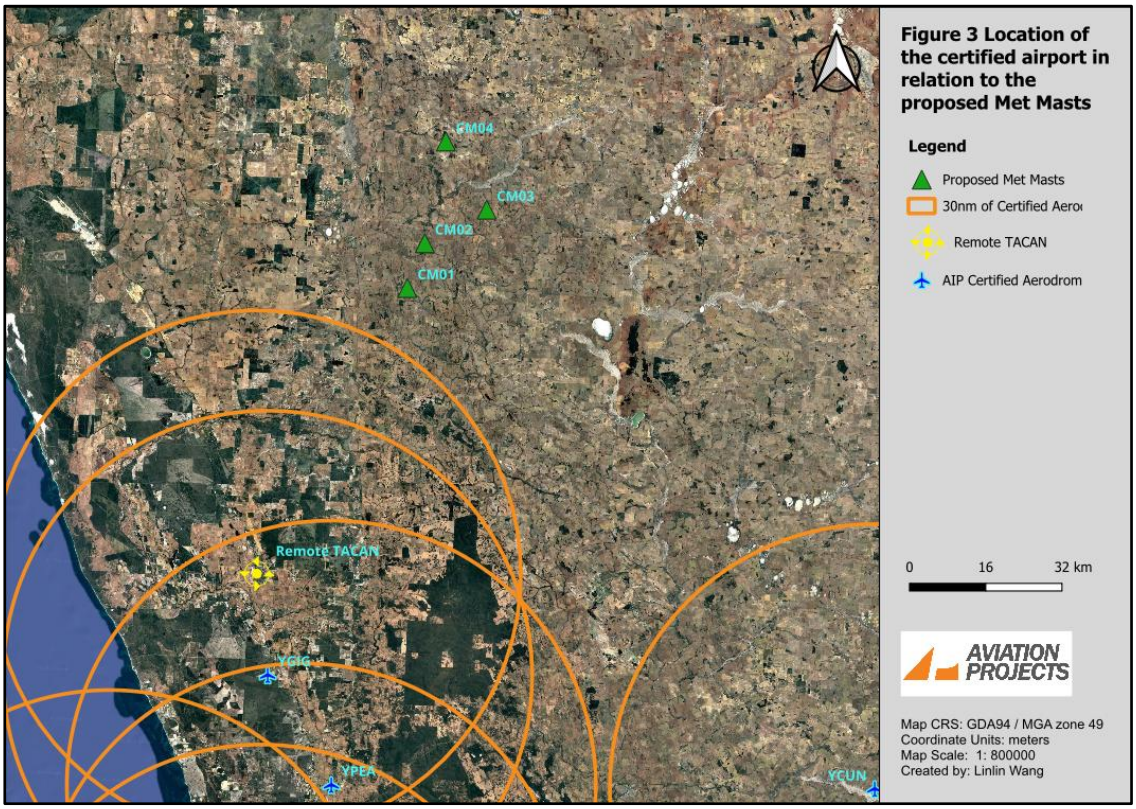


Figure 3 Location of the certified airport in relation to the proposed Met Masts

1.5. Nearby uncertified aerodromes

A search of the following aviation datasets was used to identify uncertified aerodromes near the project area. They are not subject to CASR Part 139 regulations:

- AIP aeronautical charts effective 09 July 2026
- OzRunways - which sources its data from Airservices Australia (AIP). The aeronautical data provided by OzRunways is approved under CASA CASR Part 175

As a guide, an area of interest within a 3 nm radius of an uncertified aerodrome is used to assess the potential impacts of proposed developments on aircraft operations at or within the vicinity of the uncertified aerodrome. The 3 nm radius is considered to be the area in which aircraft are making preparations to join the circuit prior to landing and within which to manoeuvre after take-off to depart from the aerodrome.

Figure 4 shows the location of nearby uncertified aerodromes relative to the proposed Met Masts and a nominal 3 nm buffer from the closer uncertified aerodromes (source: Tilt, Google Earth).

Proposed Met Mast CM01 is located within a 3 nm radius of Unknown Aerodromes (1), measured from the nearest runway centre. The proposed Met Mast CM02 is located within a 3 nm radius of Unknown Aerodrome (2), while the proposed Met Mast CM03 is located within a 3 nm radius of Cranmore Park Aerodrome.

There are no uncertified aerodromes within a 3 nm radius of the proposed Met Mast CM04.

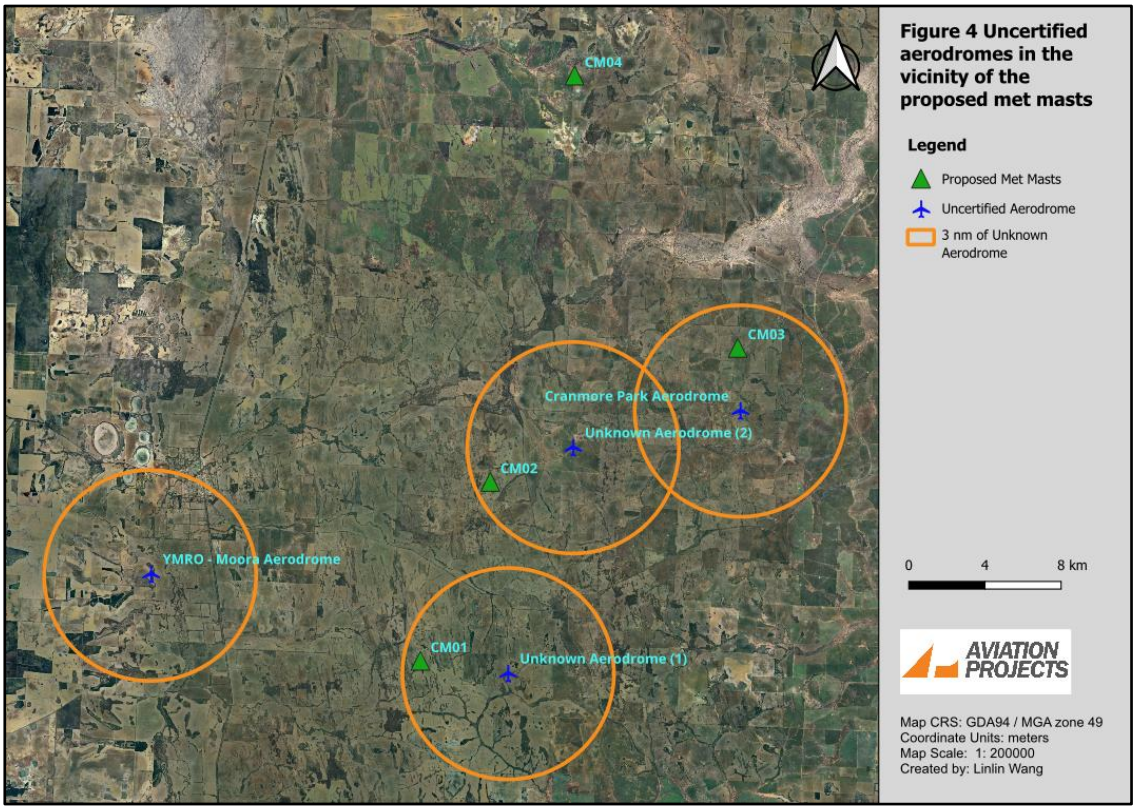


Figure 4 Uncertified aerodromes in the vicinity of the Project Site

1.5.1. AC 91-10 v1.7, Operations in the vicinity of non-controlled aerodromes, dated April 2026

This AC provides guidance on procedures that, when followed, will improve situational awareness and safety for all pilots when flying at, or in the vicinity of, non-controlled aerodromes.

7.2 Traffic circuit direction

7.2.1 The standard aerodrome traffic circuit facilitates the orderly flow. Unless an alternative requirement for an aerodrome is stated in the ERSA or NOTAMs, all turns must be made to the left (regulation 91.385).

7.2.2 When arriving at an aerodrome to land, the pilot will normally join the circuit on upwind, crosswind (midfield), or at or before mid-downwind. Landings and take-offs should be made on the preferred runway.

7.3.2 During initial climb-out, the turn onto crosswind should be appropriate to the performance of the aircraft but, in any case, not less than 500 ft above terrain so as to be at circuit height when turning downwind (regulation 91.390). Pilots may vary the size of the circuit depending on:

– the performance of the aircraft

– AFM/Pilot's Operating Handbook requirements

– company standard operating procedures

– other safety reasons.

7.8 Final approach

7.8.1 The turn onto final approach should be:

– completed by a distance and height that is common to all operations at the aerodrome

– commensurate with the speed flown in the circuit for all aircraft of the same type.

Illustrations of the standard aerodrome traffic circuit procedures provided in AC 91-10 v1.7. are shown in Figure 5 and Figure 6.

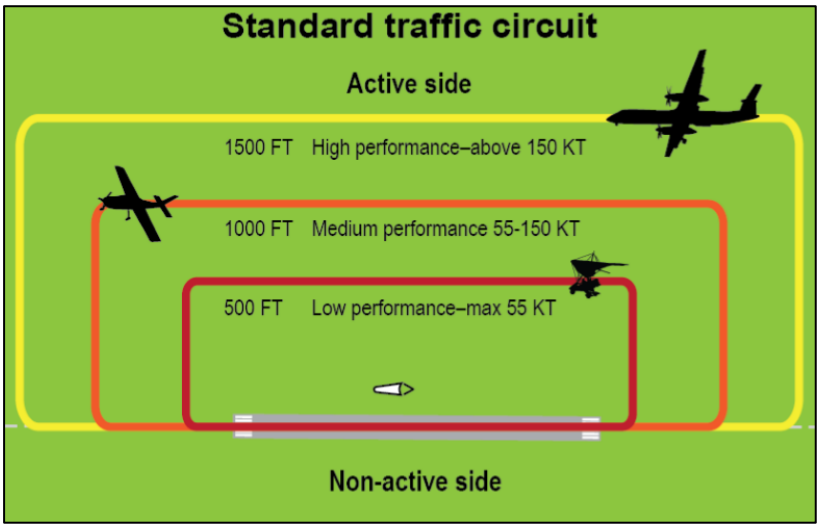


Figure 5 Lateral and vertical separation in the standard aerodrome traffic circuit

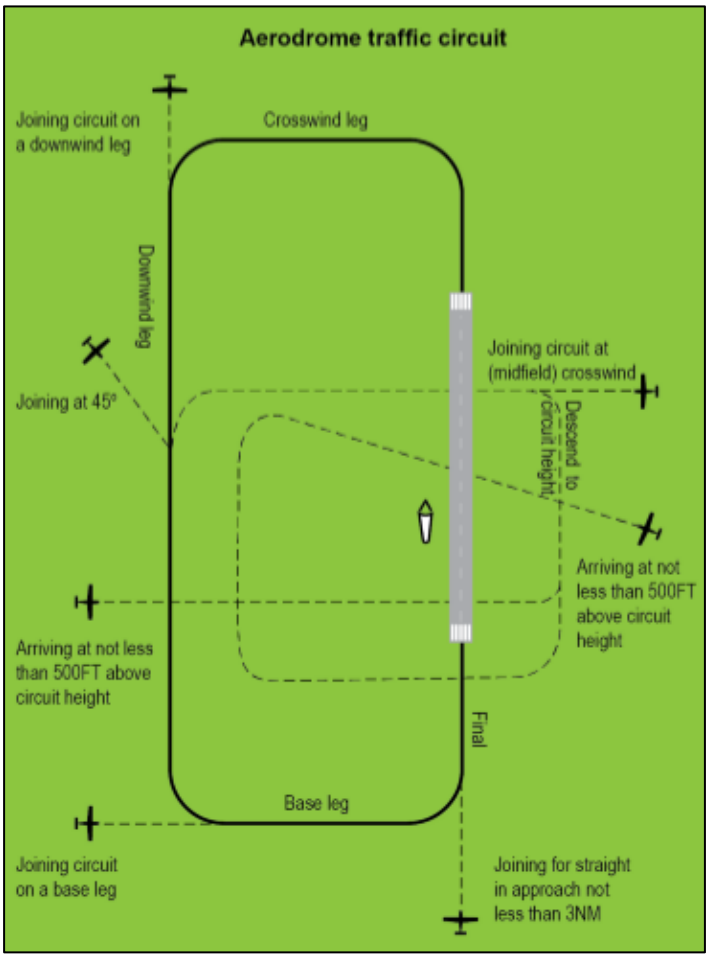


Figure 6 Aerodrome standard traffic circuit, showing arrival and joining procedures.

Paragraph 7.11 refers to a distance that is "normally" well outside the circuit area and where no traffic conflict exists, which is at least 3 nm. The paragraph is copied below:

> *7.11 Departing the circuit area*
>
> *7.11.1 Aircraft should depart the aerodrome circuit area by extending one of the standard circuit legs or climbing to depart overhead. However, the aircraft should not execute a turn to fly against the circuit direction unless the aircraft is well outside the circuit area and no traffic conflict exists. This should be 500 ft or more above the circuit height and at least 3 NM from the departure end of the runway but may be less for aircraft with high climb performance. In all cases, the distance should be based on the pilot's awareness of traffic and the ability of the aircraft to climb above and clear of the circuit area.*

1.5.2. Unknown Aerodrome (1)

Unknown Aerodrome (1) is located within 3 nm of the proposed Met Mast CM01. There is no information published about the uncertified aerodromes in aeronautical publications or publicly available information sources. Satellite imaging shows the potential runway of the aerodrome, as shown in Figure 7.



Figure 7 Close-up satellite image of Unknown Aerodrome (1)'s runway

Aircraft typically operate in circuit patterns when arriving and departing from an aerodrome. AC 91-10 *'Operations in the vicinity of non-controlled aerodromes'* describes the standard traffic circuit and heights at which aircraft should fly. This is shown in Figure 5.

In addition, various entry and departure procedures are described for aircraft joining and departing a standard traffic circuit. Figure 6 shows the standard arrival and joining procedures for a standard traffic circuit.

Proposed Met Mast CM01 would be located within 3 nm of the Unknown Aerodrome (1), but not within the circuit area. Based on the AC 91-10 guidance, aircraft would reach the circuit area at approximately 449 m AHD (1474 ft AMSL) (assume no other obstacle).

Proposed Met Mast CM01 would have a maximum elevation of approximately 496 m AHD (1627.3 ft AMSL). Although the proposed Met Mast CM01 would be outside the circuit area, as its height, which might affect aircraft operations and could therefore be considered a potentially hazardous obstacle, as shown in Figure 8 (Source: Tilt, Google Earth).

Consultation with the relevant landholder is recommended to notify the landholder about the installation of the Met Mast and the proximity to Unknown Aerodrome (1).

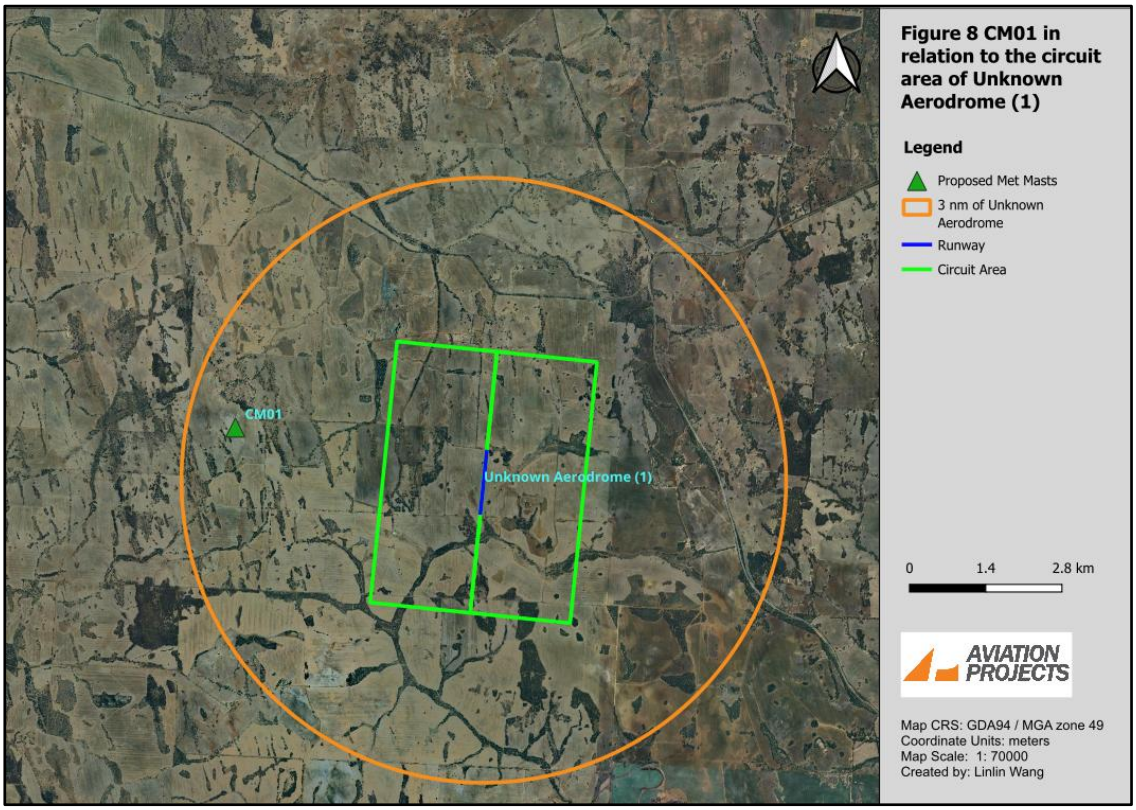


Figure 8 CM01 in relation to the circuit area of Unknown Aerodrome (1)

1.5.3. Unknown Aerodrome (2)

Unknown Aerodrome (2) is located within 3 nm of the proposed Met Mast CM02. There is no information published about the uncertified aerodrome in aeronautical publications or publicly available information sources. Satellite imaging shows the potential runway of the aerodrome, as shown in Figure 9.

Proposed Met Mast CM02 would be located within 3 nm of the Unknown Aerodrome (2), but not within the circuit area. Based on the AC 91-10 guidance, aircraft would reach the circuit area at approximately 399 m AHD (1310 ft AMSL) (assume no other obstacle).

Proposed Met Mast CM02 would have a maximum elevation of approximately 476 m AHD (1561.7 ft AMSL). Although the proposed Met Mast CM02 would be outside the circuit area, as its height, which might affect aircraft operations and could therefore be considered a potentially hazardous obstacle, as shown in Figure 10 (Source: Tilt, Google Earth).

Consultation with the relevant landholder is recommended to notify the landholder about the installation of the Met Mast and the proximity to Unknown Aerodrome (2).



Figure 9 Close-up satellite image of Unknown Aerodrome (2)'s runway

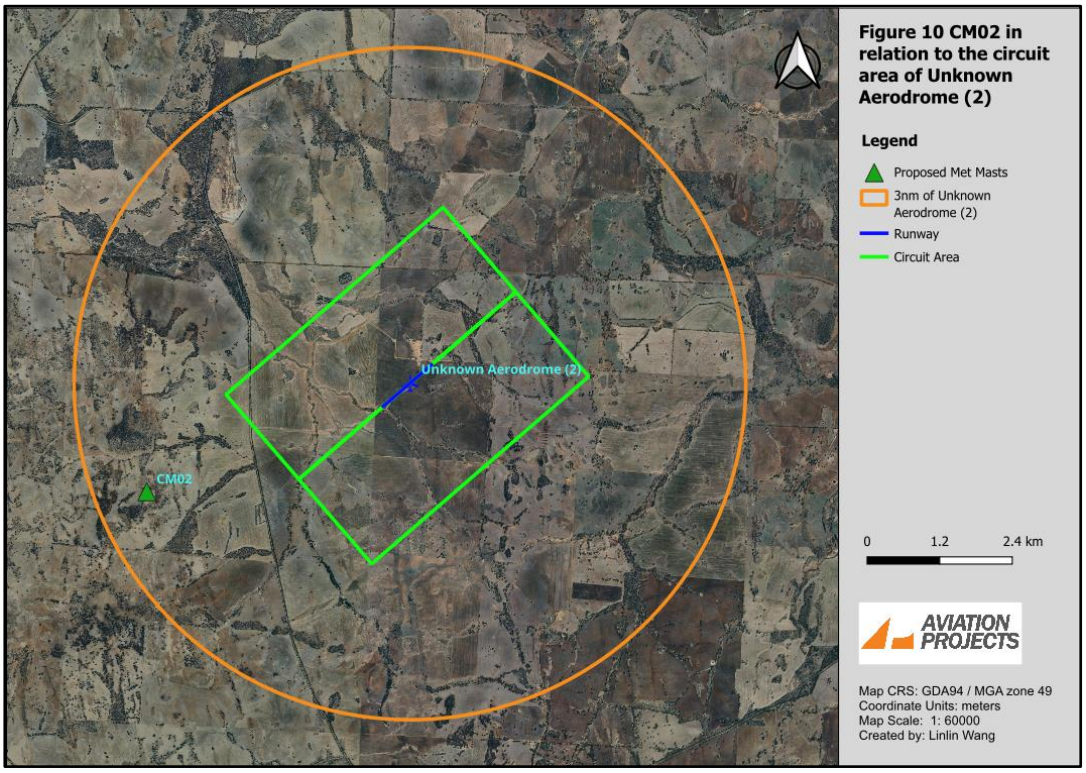


Figure 10 CM02 in relation to the circuit area of Unknown Aerodrome (2)

1.5.4. Cranmore Park Aerodrome

Cranmore Park Aerodrome is located within 3 nm of the proposed Met Mast CM03. There is no information published about the uncertified aerodrome in aeronautical publications or publicly available information sources. Satellite imaging shows the potential runway of the aerodrome, as shown in Figure 11.



Figure 11 Close-up satellite image of Cranmore Park Aerodrome's runway

Proposed Met Mast CM03 would be located within 3 nm of the Cranmore Park Aerodrome, but not within the circuit area. Based on the AC 91-10 guidance, aircraft would reach the circuit area at approximately 423 m AHD (1389 ft AMSL) (assume no other obstacle).

Proposed Met Mast CM03 would have a maximum elevation of approximately 457 m AHD (1499.3 ft AMSL). Although the proposed Met Mast CM03 would be outside the circuit area, as its height, which might affect aircraft operations and could therefore be considered a potentially hazardous obstacle, as shown in Figure 12 (Source: Tilt, Google Earth).

Consultation with the relevant landholder is recommended to notify the landholder about the installation of the Met Mast and the proximity to Cranmore Park Aerodrome.

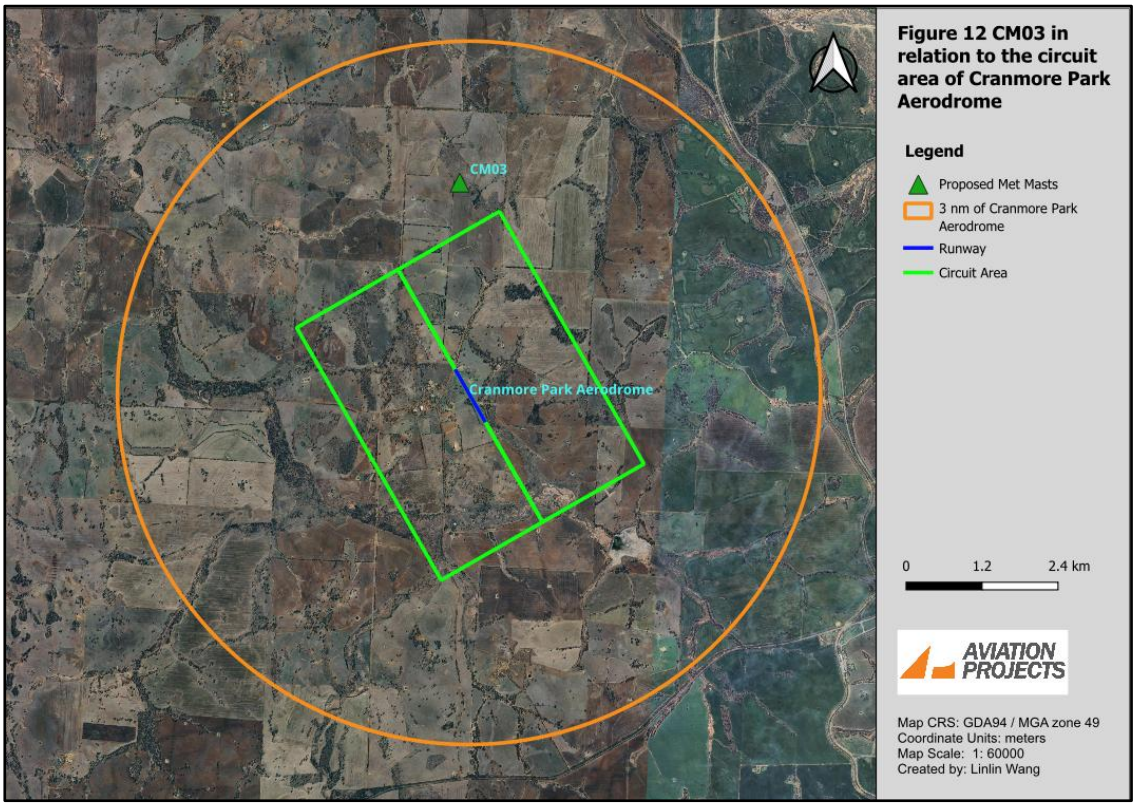


Figure 12 CM03 in relation to the circuit area of Cranmore Park Aerodrome

In Summary:

Proposed Met Mast CM01 would be located within 3 nm of the Unknown Aerodrome (1), and CM02 would be within 3 nm of Unknown Aerodrome (2), while CM03 would be within 3 nm of Cranmore Park Aerodrome. Proposed Met Masts would not be within the circuit area.

Proposed Met Masts might impact aircraft operations of those uncertified aerodromes, and that would be considered a potentially hazardous obstacle. Consultation with relevant landholders is recommended to notify the landholders about the installation of the Met Masts and the proximity to uncertified aerodromes.

There are no uncertified aerodromes within a 3 nm radius of the proposed Met Mast CM04.

1.6. Air routes and Grid LSALT

CASR Part 173 MOS requires that the published lowest safe altitude (LSALT) for a particular airspace grid or air route provides a minimum of 1000 ft clearance above the controlling (highest) obstacle within the relevant airspace grid or air route tolerances.

1.6.1. Grid LSALT

Proposed Met Masts would be within the airspace grid LSALT of 2900 ft AMSL, which has a protection surface of 1900 ft AMSL.

Figure 13 shows the Grid LSALT in proximity to the proposed Met Masts (source: ERC Low National, OzRunways, Google Earth).

The highest proposed Met Masts' height would be 496 m AHD (1627.3 ft AMSL), below the 1900 ft protection surface.

Therefore, the proposed Met Masts would not impact the 2900 ft Grid LSALT.

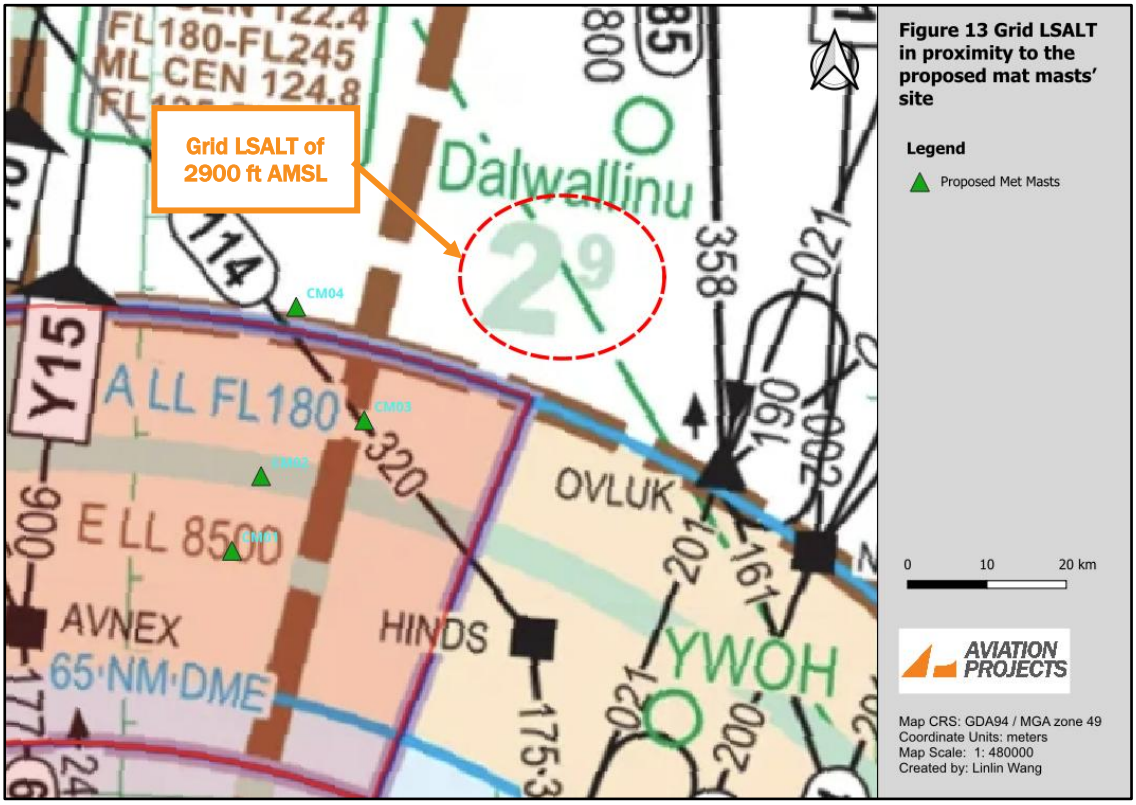


Figure 13 Grid LSALT in proximity to the proposed met masts' site.

1.6.2. Air Route LSALTs

A protection area 7 nm laterally on either side of an air route is used to assess the LSALT for the air route.

Proposed Met Mast CM03 and CM04 would be in proximity to one IFR air routes, as detailed in Table 1. CM 01 and CM02 would not be in proximity to any air routes.

Table 1 IFR Air Route LSALT Analysis

Air Route	*LSALT (ft AMSL)*	*LSALT Protection Surface (ft AMSL)*	*Covered Met Mast*	*Result*
Z41 (AVDIS to HINDS)	2900	1900	CM03 and CM04	No Infringement

Proposed Met Mast CM03 would be 457 m AHD (1499.3 ft AMSL) and CM04 would be 445 m AHD (1460 ft AMSL), below the 1900 ft protection surface.

Therefore, the proposed Met Masts would not impact any Air route LSALT.

1.7. Airspace

Proposed Met Masts would be located in Class G airspace, which is outside of controlled airspace, and outside of all Prohibited Areas.

Within Australia, special-use airspace may be established by the Office of Airspace Regulation for specific operations:

- Military Area
    - Designated airspace established for hazardous military activity, with specified conditions.
- Danger Area
    - Designated airspace for activities with heightened aviation risk. No clearance by air traffic control is required to enter or use this airspace. The pilot is responsible for being aware of the danger and taking appropriate precautions.
- Restricted Area
    - Designated airspace that restricts aircraft activity in accordance with specified conditions) and has varying levels of entry and use requirements.
- Prohibited Area
    - No aircraft activity is allowed within the defined area.

1.7.1. Danger Area

Proposed Met Masts would be located within the Danger Area D193. Based on OzRunway - Perth VNC, CM04 would be located outside Danger Area D193. The Danger Area D193 is operated between the surface and 4,000 ft AMSL when active.

A summary of the restrictions of D193 is detailed below:

- Military flying area from the surface up to 4,000 ft AMSL
- Hours of activity: Monday to Friday, Sunrise to Sunset, or as amended by NOTAM
- Operated by FLTCDR 453SQN PEARCE

Figure 14 shows D193 highlighted (source: OzRunways).

Consultation with the Department of Defence is required to determine any potential impacts of the proposed Project on military flying training within Danger Area D193.

1.7.2. Restricted Areas

Restricted Area R156 has vertical limits between 4,000 ft and FL 160 above the proposed Met Masts, as shown in Figure 14 (source: OzRunways). Therefore, the Project would not be located in any Restricted Areas.

1.7.3. Military Area and Prohibited Area

Proposed Met Mast would be not located in any military and prohibited areas.

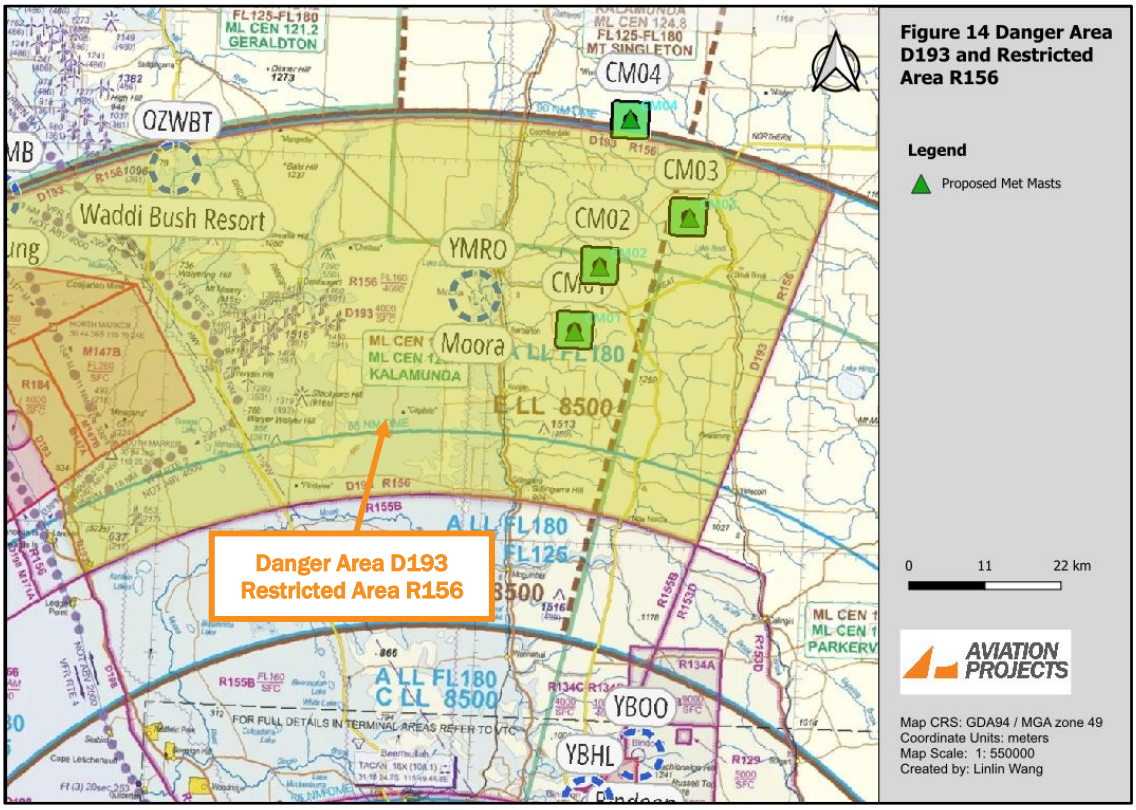


Figure 14 Danger Area D193 and Restricted Area R156

1.8. Aviation navigation facilities

NASF Guideline G, *Protection of Aviation Facilities - Communication, Navigation and Surveillance (CNS)* and CASR Part 139 MOS specify the area where development of buildings and structures has the potential to cause unacceptable interference to CNS facilities.

Proposed Met Masts would be located at a sufficient distance away from nearby certified aerodromes and aviation facilities and would not have an impact.

1.9. ATC Surveillance Radar Systems

Airservices Australia currently requires an assessment of the potential for wind farms to affect radar lines of sight.

The open lattice construction of slim wind monitoring towers does not impact ATC Surveillance Radar Systems.

1.10. Civil Aviation Safety Authority - regulatory context

CASA regulates aviation activities in Australia. Applicable requirements include the Civil Aviation Regulations 1988 (CAR), CASR 1998, Advisory Circular (AC) 139 E 0.1-v1.0, and AC.139 E 0.5-v1.1. Relevant provisions are outlined in further detail in the following section.

1.10.1. CASR Part 139—Aerodromes

CASR 139.165 requires the owner of a structure (or proponents of a structure) that will be 100 m or more above ground level to inform CASA. This must be given in written notice and contain information on the proposal, the height and location(s) of the object(s) and the proposed timeframe for construction. This is to allow CASA to assess the effect of the structure on aircraft operations and determine whether or not the structure will be hazardous to aircraft operations.

The proponent of the a Met Mast is required to report the Met Mast to CASA in accordance with CASR 139.165, ***as soon as practicable after forming the intention to construct or erect the proposed object or structure***.

Post receiving development approval, and prior to installation of the Met Mast, notification should be provided to CASA via email to Aerodromes@casa.gov.au and Airspace.Protection@casa.gov.au.

1.10.2. AC 139.E-01 v1.0—Reporting of Tall Structures

AC 139.E-01 v1.0—*Reporting of Tall Structures*, CASA guides those authorities and persons involved in the planning, approval, erection, extension or dismantling of tall structures so that they may understand the vital nature of the information they provide.

> *2.2.1 The hazards that such buildings or structures may pose to aircraft requires assessment. CASA routinely performs such assessments however needs to be first notified of the obstacle, structure of source of a hazardous plume. The need to report such hazards is outlined in this AC.*
>
> *2.2.2 If you are the person who owns, controls or operates the object, structure or a source of a hazardous plume which is either present, imminent or has been approved for erection/construction, details need to be provided about:*
>
> - *the construction, extension or dismantling of tall structures if the top is:*
>
> - *100 m or more above ground level*
>
> - *or*
>
> - *affects the obstacle limitation surface of an aerodrome as defined in*
>
> *2.2.3 In addition, tall structures may pose a specific hazard for the operation of low-flying Defence aircraft or to the flight paths of arriving/departing aircraft (refer Paragraph 2.1.3). Therefore, the RAAF and Airservices Australia require information on structures that are 30 m or more above ground level—within 30 km of an aerodrome or 45 m or more above ground level elsewhere for the RAAF, or 30 m or more above ground level elsewhere for Airservices Australia.*
>
> *2.2.4 Information provided for the database should be accurate and readily interpreted. The tall structure report form has been designed to help owners and/or developers in this respect. The form is available on the Airservices Australia website (including a spreadsheet for reporting multiple structures) at: https://www.airservicesaustralia.com/industry-info/airport-development-assessments/*

1.10.3. AC 139.E-05-v1.1 Obstacles including wind farms outside the vicinity of a CASA certified aerodrome – October 2022

AC 139.E-05-v1.1 provides advice about the lighting and marking of wind farms and other tall structures in submissions to planning authorities who are considering a wind farm or tall structure proposal.

2.1.2 Regardless of CASA advice, planning authorities make the final determination whether a wind farm or a tall structure not in the vicinity of a CASA regulated aerodrome will require lighting or marking.

2.2.1 All wind turbine developments and tall structures should be assessed to determine whether they could be a risk to aviation safety. This AC augments the information in the National Aerodromes Safeguarding Framework (NASF) Guideline D and provides additional guidance on the assessment of wind farm developments and guidance for establishing what reasonable measures may be put in place to mitigate any adverse effect the wind farm development could be to aviation safety.

2.2.2 For the purposes of this AC, navigable airspace is considered to be the airspace above the minimum altitudes of VFR and IFR flight, including airspace required to ensure the safe take-off and landing of an aircraft. Generally, minimum altitude limits equate to 500 ft (152 m) or 1 000 ft (305 m) above ground level depending on the situation, i.e., whether or not the flying is over a populous area. The presence of wind turbines, wind monitoring masts and other tall obstacles may create a risk to the safety of flight, due to the risk of collision. An entity that is proposing to introduce a hazard into navigable airspace, such as a wind farm, must mitigate the risk of the hazard on airspace users to ensure an acceptable level of safety is maintained.

2.2.4.1 Part 139 of the Civil Aviation Safety Regulations 1998 (CASR), regulates obstacles within the vicinity of certified aerodromes. This is supported by Part 139 (Aerodromes) Manual of Standards (MOS) which provides the definition of an obstacle as well as the standards for marking and lighting of an obstacle. Any wind turbine (where the height is defined to be the maximum height reached by the tip of the turbine blades), wind monitoring mast or other tall structure that penetrates an Obstacle Limitation Surface (OLS) of an aerodrome will be assessed in accordance with the provisions of Part 139 of CASR and the MOS.

2.2.6.1 Outside the vicinity of an aerodrome, which is defined as being outside the OLS of an aerodrome, wind farms and other tall structures may constitute a risk to low-flying aviation operations which may be conducted down to 500 ft above ground level (AGL) over non-populous areas. Additionally, wind monitoring masts can also be hazardous to aviation, given they are very thin and difficult to see. Wind farms can also affect the performance of communications, navigation and surveillance (CNS) equipment operated by Airservices or the Department of Defence.

2.5 Aviation hazard lighting - International best practice

2.5.2 Australian regulations state that aircraft in uncontrolled airspace may operate under visual flight rules (VFR), which requires the pilot to remain clear of clouds and to adhere to visibility minima.

> *- in Class G airspace below 3000 ft Above Mean Sea Level (AMSL) or 1000 ft AGL (whichever is the higher) – remain clear of cloud with minimum visibility of 5000 m.*
>
> *– in Class G airspace below 10 000 ft AMSL (subject to the above) – remain 1000 ft vertically and 1500 m horizontally from cloud and with 5000 m visibility.*

Note: Helicopters may be permitted to operate in lower visibility and that further exemptions may apply to special cases such as military, search and rescue, medical emergency, agricultural and fire-fighting operations.

2.5.4 2000 candela medium intensity obstacle lighting recommendation satisfies the 5000 m VFR visibility requirements, according to practical exercises undertaken by the FAA and documented in AC 70/7460-1L (FAA, 2015).

2.5.5 In Australia, CASA has accepted the use of 200 candela lighting in some circumstances due to a lack of back lighting in rural and remote areas, meaning that a lower intensity light is still visible to pilots at an acceptable distance to permit a pilot to see and avoid the obstacle.

2.6 Hazard Lighting

2.6.1 This describes the reasoning behind CASA's preference to recommend aviation hazard lighting for tall structures and aircraft detection systems for wind farms.

2.6.2 Hazard lighting for wind farms and other tall structures is intended to alert pilots, flying at low altitude, to the presence of an obstacle allowing them sufficient awareness to safely navigate around or avoid it. The pilot is responsible for avoiding other traffic and obstacles based on the "alerted" see-and-avoid principle.

2.6.3 Unless the wind farm or tall structure is located near an airport, it is not expected to pose a risk to regular public transport operations. The kind of air traffic that is usually encountered at low altitude in the vicinity of a wind farm or tall structure includes light aircraft (private operators, flight schools, sport aviation, agricultural, survey, fire spotting and control) and helicopters (military, police, medical emergency services, survey, fire spotting and control). Hazard lights are therefore designed to provide pilots with sufficient awareness about the presence of the structure(s), so they can avoid it. This means that the intensity of the hazard lights should be such that the acquisition distance is sufficient for the pilot to recognise the danger, take evasive action and avoid the obstacle by a safe margin in all visibility conditions. This outcome considers the potential speed of an aircraft to determine the distance by which the pilot must become aware of the obstacle to have enough time and manoeuvrability to avoid it.

2.7 CASA's commitment to aviation safety

2.7.1 CASA will consider the lighting intensity management and systems that achieve an acceptable level of aviation safety on a case-by-case basis during its assessment.

2.7.2 A CASA determination will consider the environmental setting when determining the need and level of lighting required on a wind farm or tall structure. This may include consideration of lower lighting intensities for obstacles away from an aerodrome. The backlighting of some locations is almost non-existent, meaning the risk of an aviation hazard light being compromised by background lighting from a rural and remote town is lower than would otherwise apply in a residential area closer to a city.

1.11. National Airport Safeguarding Framework Guideline D

NASF Guideline D: *Managing the Risk to Aviation Safety of Wind Turbine Installation (Wind Farms)/Wind Monitoring Towers* provides guidance to State/Territory and local government decision-makers, airport operators and developers of wind farms to jointly address the risk to civil aviation arising from the development, presence and use of wind farms and wind monitoring towers.

When wind turbines over 150 metres above ground level are to be built within 30 kms of a certified or registered aerodrome, the proponent should notify the Civil Aviation Safety Authority (CASA) and Airservices. If the wind farm is within 30km of a military aerodrome, Defence should be notified.

The Aeronautical Information Service of the Royal Australian Air Force (RAAF AIS) maintains a database of tall structures in the country. The RAAF AIS should be notified of all tall structures meeting the following criteria:

- *30 metres or more above ground level for structures within 30km of an aerodrome; or*

- *45 metres or more above ground level for structures located elsewhere.*

Marking and lighting of wind monitoring towers

Before developing a wind farm, it is common for wind monitoring towers to be erected for anemometers and other meteorological sensing instruments to evaluate the suitability or otherwise of a site. These towers are often retained after the wind farm commences operations to provide the relevant meteorological readings. These structures are very difficult to see from the air due to their slender construction and guy wires. This is a particular problem for low flying aircraft including aerial agricultural operations. Wind farm proponents should take appropriate steps to minimise such hazards, particularly in areas where aerial agricultural operations occur. Measures to be considered should include:

- *the top 1/3 of wind monitoring towers to painted in alternating contrasting bands of colour. Examples of effective measures can be found in the Manual of Standards for Part 139 of the Civil Aviation Safety Regulations 1998. In areas where aerial agriculture operations take place, marker balls or high visibility flags can be used to increase the visibility of the towers;*
- *marker balls or high visibility flags or high visibility sleeves placed on the outside guy wires;*
- *ensuring the guy wire ground attachment points have contrasting colours to the surrounding ground/vegetation; or*
- *a flashing strobe light during daylight hours.*

1.12. Consultation

The following list of stakeholders is identified as requiring consultation:

- Airservices Australia
- Department of Defence

Tilt has already kicked off consultation with Defence and Airservices Australia.

1.13. Summary

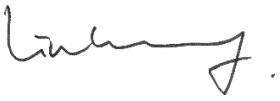
The following list of findings summarises the outcome of this assessment, based on the maximum height of the 150 m AGL, the highest Met Mast would be 496 m AHD (1627.3 ft AMSL):

- There are no certified aerodromes located within 30 nm (55.6 km) of the proposed Met Masts.
- There are a few uncertified aerodromes identified within 3 nm of the proposed Met Masts.
    - Proposed Met Mast CM01 would be located within 3 nm of the Unknown Aerodrome (1), and CM02 would be within 3 nm of Unknown Aerodrome (2), while CM03 would be within 3 nm of Cranmore Park Aerodrome, the proposed Met Masts would not be within the circuit area.
    - The proposed Met Masts might impact aircraft operations of those uncertified aerodromes, and that would be considered a potentially hazardous obstacle.
    - Consultation with relevant landholders is recommended to notify the landholders about the installation of the Met Masts and the proximity to uncertified aerodromes.

- Proposed Met Masts would not affect any Grid or airway route segment LSALT
- Proposed Met Masts would be within Class G airspace, which is outside of controlled airspace, and outside of all Prohibited Areas.
- Proposed Met Masts would be located within the Danger Area D193. Based on OzRunway - Perth VNC, CM04 would be located outside Danger Area D193. The Danger Area D193 is operated between surface and 4,000 ft AMSL. Consultation with the Department of Defence is required.
- Proposed Met Masts would not impact the aviation navigation, communication, and surveillance facilities.
- Marking the proposed met mast is not mandatory, but the provision of obstacle marking should be considered to ensure the narrow mast can be readily identified by pilots flying at low level in the area around them. The following markings are recommended to be implemented in consideration of potential day VFR aerial work operations in accordance with NASF Guideline D.
    - *the top 1/3 of wind monitoring towers to painted in alternating contrasting bands of colour. In areas where aerial agriculture operations take place, marker balls or high visibility flags can be used to increase the visibility of the towers;*
    - *marker balls or high visibility flags or high visibility sleeves placed on the outside guy wires;*
    - *ensuring the guy wire ground attachment points have contrasting colours to the surrounding ground/vegetation;*
- There is no regulatory requirement to provide obstacle lighting on a met mast that is not within the vicinity of an aerodrome. Generally, for Met Masts that would be installed prior to WTG installation and Met Masts that are not in close proximity to a WTG, the voluntary provision of obstacle lighting should be considered to ensure visibility in low light and deteriorating atmospheric conditions.
- Details of WMTs 100 m or more AGL must be reported to CASA, post receiving development approval, as soon as practicable after forming the intention to construct or erect the proposed object or structure, in accordance with CASR 139.165(1)(2). The notification should be provided to CASA via email to Airspace.Protection@casa.gov.au.
- Final details of met mast coordinates and elevation should be provided to Airservices Australia at least two weeks prior to construction commencing, by submitting the form at this webpage: https://www.airservicesaustralia.com/wp-content/uploads/ATS-FORM-0085_Vertical_Obstruction_Data_Form.pdf to the following email address: vod@airservicesaustralia.com.

If you wish to clarify or discuss the contents of this correspondence, please get in touch with me on 0491 739 503.

Kind regards



Lyn Wang

Aviation Specialist Consultant

26 May 2026

Outlook

RE: Development Application Referral - Meteorological Masts

From Airport Developments <Airport.Developments@AirservicesAustralia.com>
Date Thu 13/08/2026 10:48
To Jayden Pope | Altus Planning <jayden@altusplan.com.au>

OFFICIAL

Hi Jayden,

The advice provided in WA-MA-402 remains valid so long as there is no change to the coordinates and maximum heights of the MET masts.

Alex Kwan

Aeronautical Information Specialist

Da Vinci Building 101, 2A Boronia Road,

Brisbane Airport QLD 4008, Australia

www.airservicesaustralia.com

Outlook

F24/4336-68 - CASA Determination - Wind Monitoring Tower - Various Locations ((Walebing, Bindi Bindi, Berkshire Valley) - Altus Planning [SEC=OFFICIAL]

From Airspace Protection <Airspace.Protection@casa.gov.au>
Date Wed 02/09/2026 13:12
To Jayden Pope | Altus Planning <jayden@altusplan.com.au>

OFFICIAL

Good afternoon Jayden

Thank you for notifying CASA with regards to the construction of 4 Wind Monitoring Tower's (WMT) in the Shire of Moora, WA at the location lots specified in the Planning Report provided to CASA, Lot 502 (No. 330) Kalinga Road, Walebing, Lot 3 (No. 721) Old Geraldton South Road, Berkshire Valley, Lot 612 Cranmore Road, Bindi Bindi and Lot 11 On Deposited Plan No. 45074.

CASA is not aware of any civil certified aerodrome in the vicinity of the proposed WMT sites for which there would be an Obstacle Limitation Surface (OLS) that would require protection. The nearest identified certified aerodrome is Gingin Airport, approximately 86 km to the southwest. Therefore, it is outside CASA's formal regulatory framework for aerodromes.

In addition, CASA is also unaware of any unregulated aerodrome such as an 'Aeroplane Landing Area' (ALA) which is not published in the *Aeronautical Information Publications (AIP)* being within 2.5km of the proposed WMT site. The nearest identified ALA is Ballidu Airport, approximately 45km to the east of the Cranmore Road site at Bindi Bindi.

Should there be an unregulated aerodrome within 2.5 km of the proposed Wind Monitoring Tower site, the *CASA Advisory Circular 91-02 Guidelines for aeroplanes with MTOW not exceeding 5 700 kg - suitable places to take off and land* enclosed, makes recommendations with regard to enabling the safe take-off and landing of aircraft. Enquiries regarding whether there are any ALA's in close proximity to the proposed WMT site, should be directed to the local council.

As indicated in your information provided to CASA, the WMT's are a guyed mast structure which will have marker balls placed on the upper third of the outside guy wires to assist with its visibility to aircraft. The Aviation Projects report prepared May 2026 and contained in the Planning Report, recommends:

- *the top 1/3 of wind monitoring towers to be painted in alternating contrasting bands of colour. Examples of effective measures can be found in the Manual of Standards for Part 139 of the Civil Aviation Safety Regulations 1998. In areas where aerial agriculture operations take place, marker balls or high visibility flags can be used to increase the visibility of the towers;*
- *marker balls or high visibility flags or high visibility sleeves placed on the outside guy wires;*
- *ensuring the guy wire ground attachment points have contrasting colours to the surrounding ground/vegetation; or*
- *a flashing strobe light during daylight hours.*

CASA agrees with the above recommendations regarding painting, marking and lighting due to the WMT site's proximity to potential low level aerial agricultural flying during poor light and/or dusk. Consideration will need to be given to potential community impacts from the mast lighting. Obstacle marking and lighting information can be found in chapter 8, section 8.110 and chapter 9, division 4 of *Part 139 (Aerodromes) - Manual of Standards* . A copy of these *Manual of Standards* is available from the following link: Part 139 (Aerodromes) Manual of Standards 2019 (legislation.gov.au) .

CASA is not aware whether Airservices has completed an assessment of these WMT's and confirmed no impact to airspace procedures, air traffic control or communications/navigation/surveillance {CNS} facilities. Therefore, CASA also recommends that Airservices (airport.developments@airservicesaustralia.com) be advised and an assessment carried out to confirm that there are no impacts.

Kind regards

Rebecca Day

Aerodrome Specialist – Geospatial Assessment

Air Navigation, Airspace & Aerodromes Branch

CASA \ Air Navigation, Transformation and Risk Division

p: 03 9518 2781

GPO Box 2005 CANBERRA ACT 2601
www.casa.gov.au



Outlook

RE: Development Application Referral - Meteorological Masts [SEC=OFFICIAL]

From SEG Land Planning and Regulation <land.planning@defence.gov.au>
Date Thu 27/08/2026 11:25
To Jayden Pope | Altus Planning <jayden@altusplan.com.au>; SEG Land Planning and Regulation <land.planning@defence.gov.au>

OFFICIAL

Good afternoon Jayden,

A slight change to the advice is also to notify AIS-AF of the tall structures. Updated advice is as follows:

Tall structures and vertical obstacle notification

Tall structures may present a hazard to civil and military aviation, particularly during low-level operations. Recording these structures in the national obstacle database supports aeronautical charting, flight planning and the safe navigation of aircraft.

Defence requests that the proponent:

1. complete the current Airservices Australia Vertical Obstruction Data Form, ATS-FORM-0085, or the Multiple Vertical Obstruction Data spreadsheet where multiple structures are proposed
2. submit the completed information to Airservices Australia at VOD@airservicesaustralia.com
3. provide a copy of the submitted information to Aeronautical Information Service – Air Force at ais.af@defence.gov.au
4. provide updated, verified as-constructed information once the final coordinates, ground elevation and maximum height of each structure have been confirmed.

The initial notification should be provided as early as practicable and before the relevant structure is erected.

CASA recommends reporting permanent structures that are:

- 30 metres or more above ground level within 30 kilometres of a certified or military aerodrome
- 45 metres or more above ground level outside 30 kilometres of a certified or military aerodrome.

Separate mandatory reporting requirements apply where a structure, including associated construction equipment, will be 100 metres or more above ground level or exceed an aerodrome's obstacle limitation surface.

Kind regards,

Adam

Adam Murray

Assistant Director – Airspace Protection and Training Areas

Land Planning and Regulation

Estate Planning Branch / Infrastructure Division

Security & Estate Group

Department of Defence
BP26-1-A004 | Brindabella Business Park | Canberra Airport

T: (02) 5109 5509 E: adam.murray3@defence.gov.au

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Department of
Primary Industries and Regional Development
GOVERNMENT OF WESTERN AUSTRALIA

Your reference: Tilt Renewables Development Application
Our reference: LUP 2499
Enquiries: Grant Stainer

Gavin Robins
Chief Executive Officer
Shire of Moora
PO Box 211
Moora WA 6510
shire@moora.wa.gov.au
jayden@altusplan.com.au

11 August 2026

Dear Mr Robins

Development Application Referral - Meteorological Masts. Lot 502 (No. 330) Kalinga Road, Walebing; Lot 3 (No. 721) Old Geraldton South Road, Berkshire Valley; Lot 612 Cranmore Road, Bindi Bindi; Lot 11 On Deposited Plan No. 45074

Thank you for inviting the Department of Primary Industries and Regional Development (DPIRD) to comment on the above proposal.

DPIRD does not object to the proposal and offers the following comments.

The application states that clearing will only be required for meteorological mast CM02. Whilst the application has self-assessed that no clearing permit is required, it is recommended that the Department of Water and Environmental Regulation be contacted to verify this.

As noted in the application, cleanliness will need to be maintained to ensure biosecurity requirements are met. A minimal impact proposal like this is low risk.

For more information, please contact Grant Stainer at grantley.stainer@dpird.wa.gov.au.

Yours sincerely

Melanie Strawbridge

Dr Melanie Strawbridge
Commissioner of Soil and Land Conservation

1 Nash Street, Perth WA 6330
Telephone 9368 3383 landuse.planning@dpird.wa.gov.au
dpird.wa.gov.au
ABN: 18 951 343 745

Outlook

Re: FW: Development Application Referral - Meteorological Masts

From Karen McKeough <karen.mckeough@dwer.wa.gov.au>
Date Tue 22/09/2026 15:32
To Jayden Pope | Altus Planning <jayden@altusplan.com.au>

OFFICIAL

Dear Jayden,
Thank you for referring the above proposal to the Department of Water and Environmental Regulation (DWER) for comment.

DWER advises that the proposal will not have a significant impact on environment or water resources, however it is noted that some minor clearing of native vegetation will be required for one of the masts.

DWER advises that under section 51C of the *Environmental Protection Act 1986* (EP Act), clearing of native vegetation is an offence unless:

- it is undertaken under the authority of a clearing permit,
- it is done after the person has received notice under Section 51DA(5) that a clearing permit is not required,
- the clearing is subject to an exemption.

Exemptions for clearing that are a requirement of written law, or authorised under certain statutory processes, are contained in Schedule 6 of the EP Act. Exemptions for low impact routine land management practices outside of environmentally sensitive areas (ESAs) are contained in the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (the Clearing Regulations).
Information on exempt activities and application forms are available here Native vegetation clearing permit forms | Western Australian Government (www.wa.gov.au)

If further clarification is required, please contact the Department's Native Vegetation Regulation section by email admin.nvp@dwer.wa.gov.au or by telephone 6364 7098.

Please contact me if you require any further information.

Kind regards,

Karen McKeough
Program Manager Planning Advice
Mid West Gascoyne Region
Approvals – Statewide Delivery

Department of Water and Environmental Regulation
20 Gregory St Geraldton
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