SHIRE OF WEST ARTHUR
LOCAL PLANNING SCHEME NO.2

NOTICE OF PUBLIC ADVERTISEMENT OF PLANNING PROPOSAL

Planning and Development Act 2005
Shire of West Arthur

The local government has received an application to use and/or develop land for the following purposes and public comments are invited.

Property Address: Lot 8 on Plan 16470 Gibbs Road and Lot 1710 on Deposited Plan 114867 Cordering Road North, Darkan.

Proposal: Construction and use of a proposed new temporary meteorological mast on Lot 8 on Plan 16470 Gibbs Road, Darkan with all access via Lot 1710 on Deposited Plan 114867 Cordering Road North, Darkan. The proposed mast will have an overall height of approximately 160 metres and will be used for a period of up to seven (7) years to gather meteorological data to help plan for a future possible wind farm in the immediate locality.

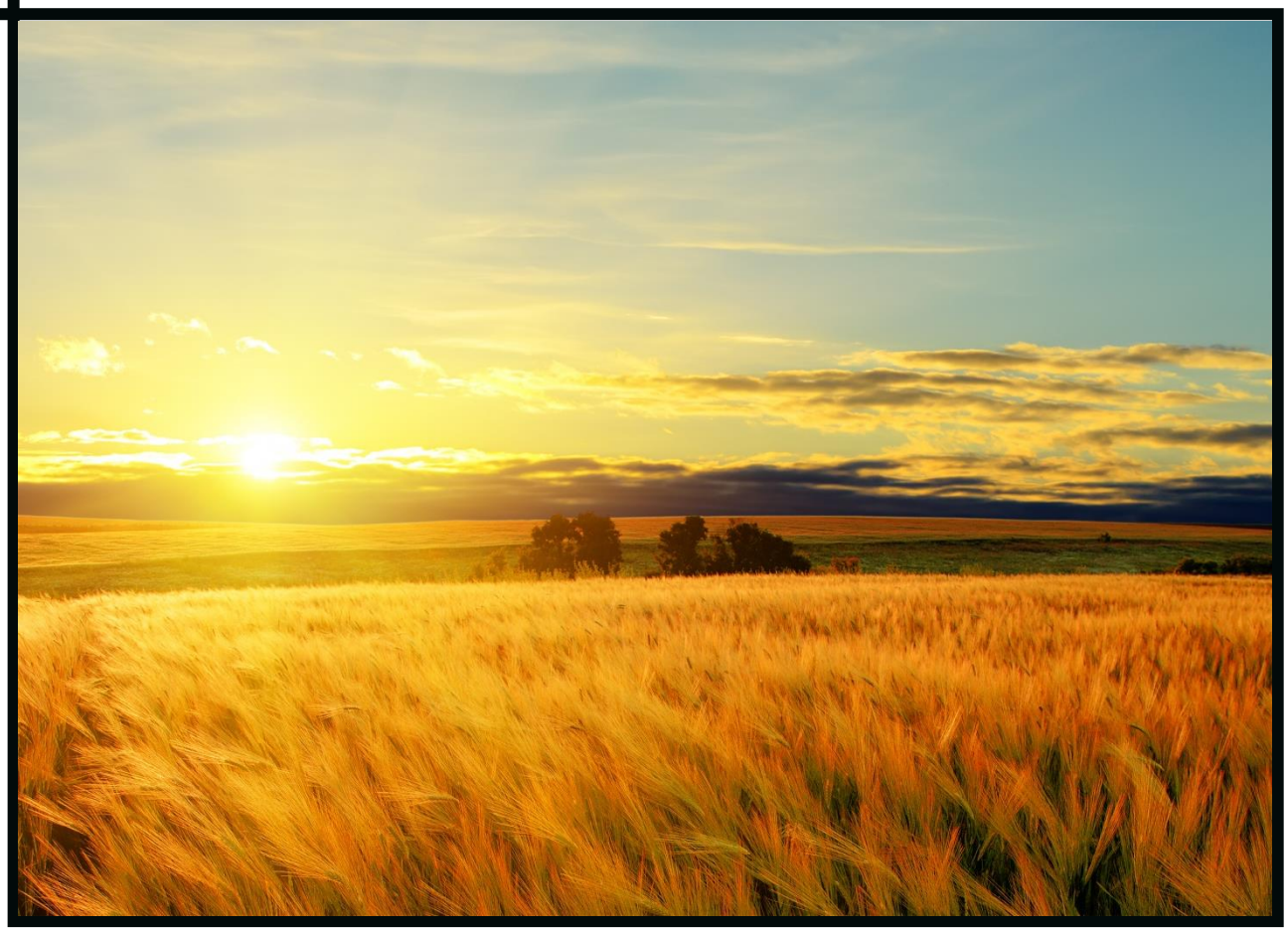
Details of the proposal including various documentation and plans are attached.

Comments on the proposal are now invited and can be emailed to shire@westarthur.wa.gov.au or posted to the Shire's Chief Executive Officer at PO Box 112 DARKAN WA 6392 by no later than **Monday 22 September 2025**. All submissions must include the following information:

- Your name, address and contact telephone number;
- How your interests are affected; whether as a private citizen, on behalf of a company or other organisation, or as an owner or occupier of property;
- Address of property affected (if applicable); and
- Whether your submission is in support of, or objecting to the proposal and provide any arguments supporting your comments.

All submissions received may be made public at a Council meeting and included in a Council Agenda, which will be available on the Shire's website, unless a submission specifically requests otherwise.

Vin Fordham Lamont
Chief Executive Officer
Shire of West Arthur
22 August 2025



METEOROLOGICAL MAST DEVELOPMENT APPLICATION

West Arthur Wind Farm – Darkan

Prepared for
WEST ARTHUR ENERGY PTY LTD
08 August 2025

URBIS

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Director	Megan Gammon
Associate Director	Alex Campbell
Project Code	P0059582
Report Number	Updated to Client – 8 August 2025

Acknowledgement of Country

Urbis acknowledges the Traditional Custodians of the lands we operate on.

We recognise that First Nations sovereignty was never ceded and respect First Nations peoples continuing connection to these lands, waterways and ecosystems for over 60,000 years.

We pay our respects to First Nations Elders, past and present.

The river is the symbol of the Dreaming and the journey of life. The circles and lines represent people meeting and connections across time and space. When we are working in different places, we can still be connected and work towards the same goal.

Title: Sacred River Dreaming
Artist Hayley Pigram
Darug Nation
Sydney, NSW

urbis.com.au

CONTENTS

FIGURES

TABLES

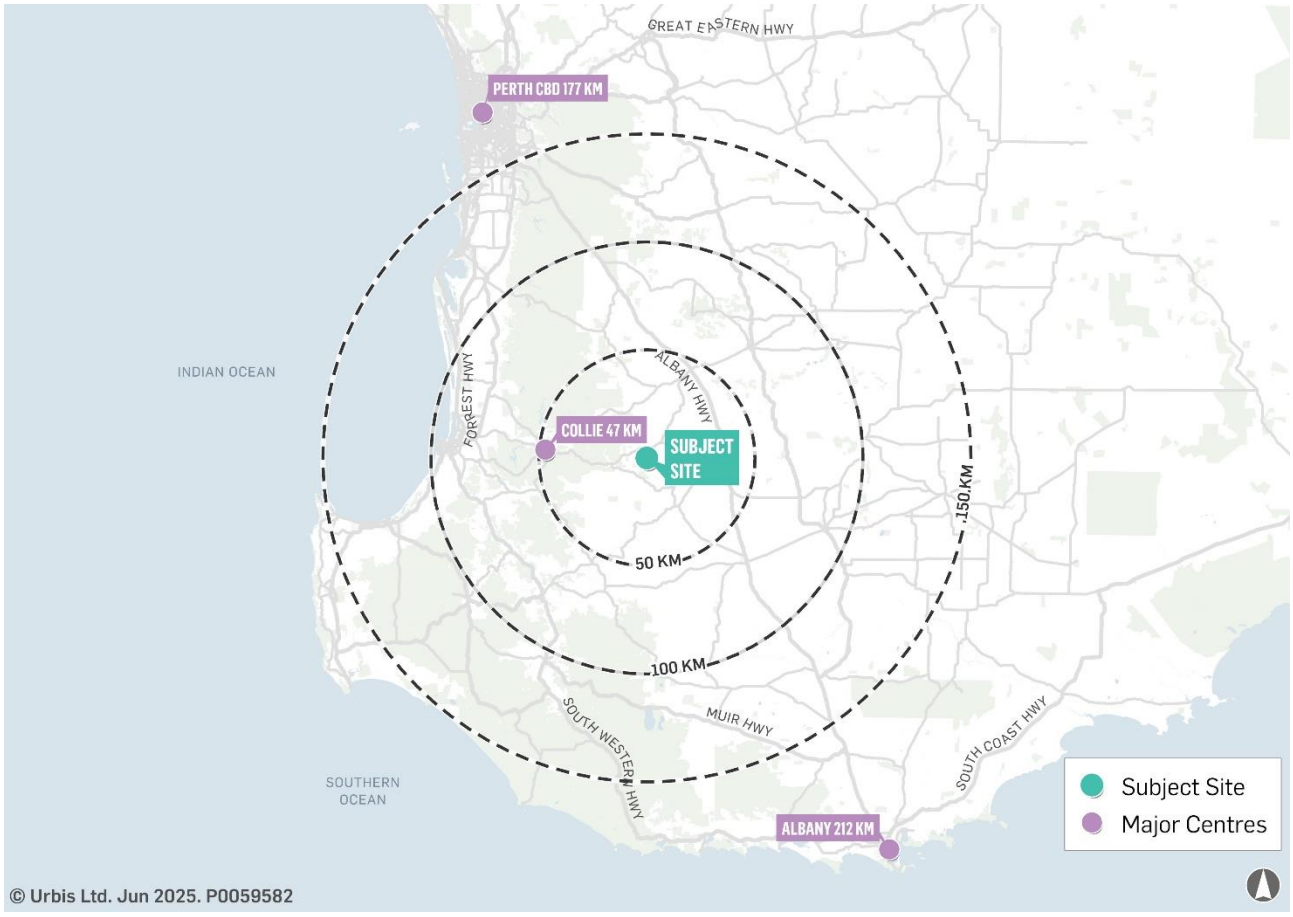
INTRODUCTION

This report has been prepared by Urbis on behalf of West Arthur Energy Pty Ltd (West Arthur Energy Pty Ltd is a subsidiary of Lacour Energy WA Pty Ltd, which is a subsidiary Lacour Energy Developments Pty Ltd) (**Client**) to support a development application for the installation of a meteorological mast (**met mast**) for the future West Arthur Wind Farm. The proposed met mast is situated within the Wheatbelt region located within the Shire of West Arthur Local Government Area (refer to **Figure 1** – Regional Context Plan).

This application seeks approval for the construction and installation of one met mast which will be a temporary structure in place for up to 7 years, at which point the met mast will be deconstructed and removed from site. The proposed met mast will measure approximately 160 metres tall and is designed to measure wind speeds at various heights. This is crucial to understand the wind conditions on the site and will assist in determining the final layout of the turbines for the West Arthur Wind Farm.

It is noted that the future development of the West Arthur Wind Farm is subject to a separate development application supported by extensive technical assessments.

Figure 1 - Regional Context Plan



1. SITE CONTEXT

1.1. LOCATION AND CONTEXT

The proposed met mast is located within the Shire of West Arthur (**Shire**) approximately 48km east of Collie, 10km southwest of Darkin, 44km south of Williams and 64km west of Wagin within the Wheatbelt region of Western Australia (refer to **Figure 2** – Local Context Plan).

The site is situated in the Wheatbelt South sub-region, known for its rich agricultural heritage and a major contributor to the State's grain and livestock production. The met mast is located in an area characterised by its rural setting surrounded by farmland.

Figure 2 - Local Context Plan

1.2. SITE CONTEXT

The site is comprised of broad acre farmland with small pockets of remnant vegetation and established tree lines. Dams for livestock are scattered throughout the site which are accessed via established unsealed access tracks. The proposed development will be located within a cleared area of land on the southern portion of Lot 8 and will avoid any existing remnant vegetation on site.

The subject site has no street address, however, access to the subject site is from Cordering Road North which runs along the eastern boundary of Lot 1710 and provides vehicle access to the development. Access to Lot 8 will be provided by an existing access track through Lot 1710 located along the eastern boundary of Lot 8 (refer to **Figure 3** – Aerial Map).

Figure 3 – Aerial Plan

1.3. LOT PARTICULARS

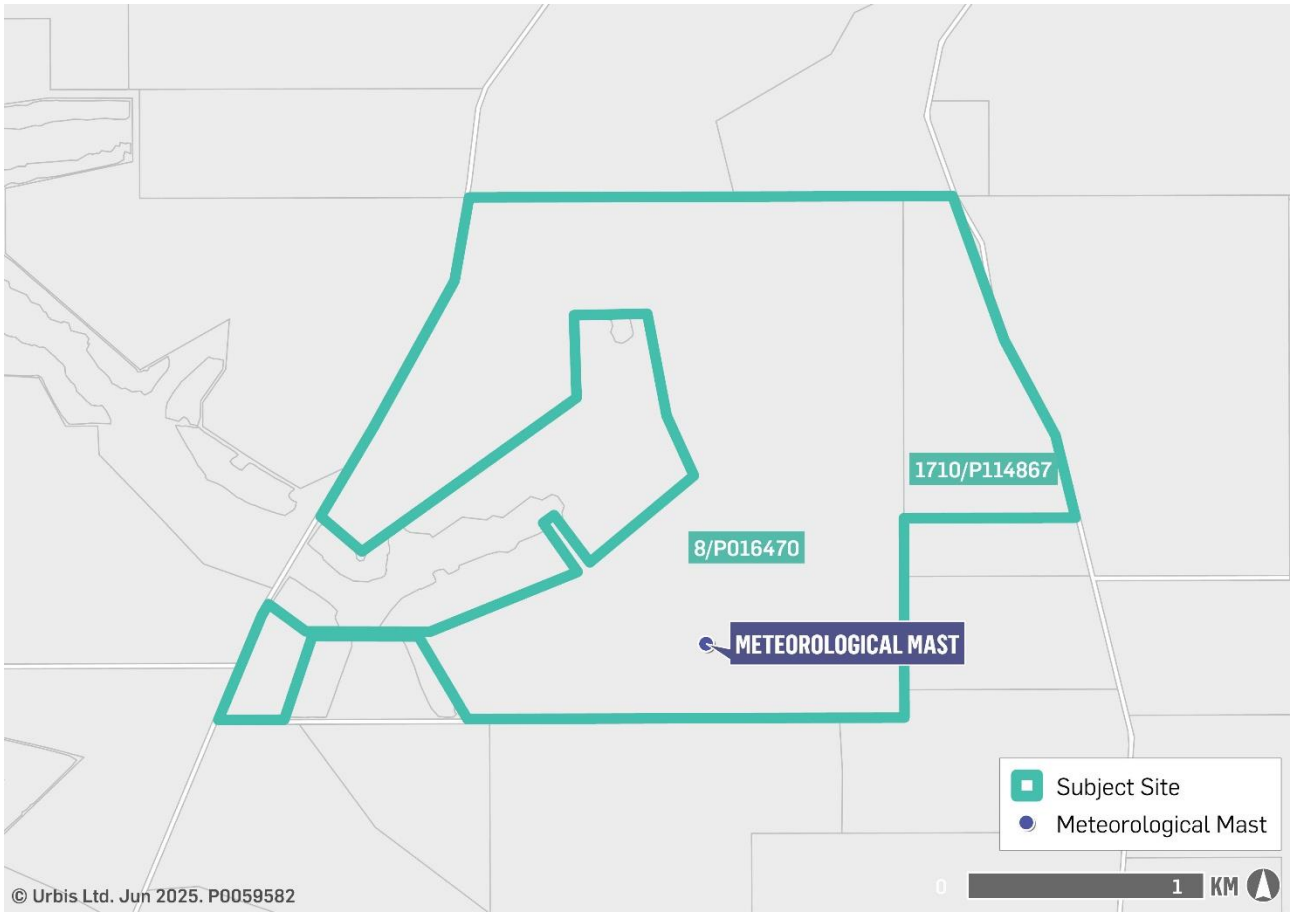
The met mast is proposed to be developed on Lot 8 on Deposit Plan 16470 with access to Lot 8 will be via Lot 1710 on Deposited Plan 114867. **Table 1** presents the relevant lots subject to this development application, with **Figure 4** providing a cadastral plan of the subject site. All two affected lots are under the same landownership. While the met mast is proposed to be located within the central east boundary of Lot 8, Lot 1710 (to the east) provides access and therefore forms part of the development application.

Certificates of Title for the affected lots are provided in **Appendix A**.

Table 1 – Lot Particulars

Lot No.	Plan / Diagram	Volume	Folio	Area (ha)	Proprietor	Encumbrances / other
8	16470	1842	477	393.6926 ha	Wunnenberg Nominees Pty Ltd Care Of C.L.B. Mcwhirter & Co	See Certificate of Title
1710	114867	1842	478	64.8548ha	Wunnenberg Nominees Pty Ltd Care Of C.L.B. Mcwhirter & Co	See Certificate of Title

Figure 4 - Cadastral Plan



2. PRE-LODGEMENT CONSULTATION

The Client has undertaken consultation with nearby landholders and relevant government stakeholders, informing this application and the broader wind farm development.

Importantly, the Client has maintained close engagement with the landowner hosting the met mast to ensure a detailed understanding of the proposal and programme, and level of support (evidenced by being a signatory to this application).

Refer to **Table 2** below for a summary of the consultation undertaken to date.

Table 2 – Consultation Outcomes

Stakeholder	**Consultation Outcomes**
Shire of West Arthur	The Shire of West Arthur has been consulted on the details of this met mast proposal as well as the broader project.
Subject Landowners	The landowner is a signatory to and has supported this development application
Adjacent landowners	Consultation with neighbouring landowners has not been undertaken for the met mast application. More targeted engagement will occur through the development of the West Arthur Wind Farm application. The nearest landowner to the met mast is not currently in discussions with the Client is over 3km away. It is understood that neighbouring landowners will be engaged by the Shire as part of its assessment of the met mast application.
Gnaala Karla Booja Aboriginal Corporation (**GKB**)	A Noongar Standard Heritage Agreement with the Gnaala Karla Booja Aboriginal Corporation has been to entered into to consult on development activities and manage any potential impact on aboriginal heritage. An activity notice associated with the installation of this met-mast has been submitted in-line with this agreement.
Civil Aviation Safety Authority (**CASA**)	Notification of the proposal to CASA will be provided before construction commences. As part of the Aviation Impact Assessment. Aviation Projects are consulting with Air Services Australia and Defence. Airservices Australia advise they will provide their comments to Aviation Projects and CASA.
Wider Community within Shire of West Arthur	The Client has been working in the community since 2022, presenting at the Shire organised Darkan Wind Energy forums in mid 2023 and late 2024. There is a dedicated website set up for the project westerarthurwindfarm.com.au to provide information on the possible wind farm over time. The client commenced consultation on the wind farm, including this mast in June 2025. The event was advertised in the Bleat and on the website. The Community information sessions were held at the Darkan CRC on June 16th and 17th 2025.

3. PROPOSED DEVELOPMENT

3.1. OVERVIEW

This application seeks development approval for the development of a met mast, the key elements of which can be summarised as follows:

- The met mast will be 160 metres tall and will have a ground elevation of approximately 338m Australian Height Datum. It will be designed to measure wind speeds at various heights, which will be crucial to understand the wind conditions of the site and assist in determining the final layout of the turbines.
- The met mast will be locked in place through one tower foundation and nine guy wire foundations. Each foundation will be fenced off to restrict access from livestock and reduce the risk for accidental impact from farming activities on site. The fenced area for each foundation and the central tower is approximately $10m^2$ which equates to a development footprint of approximately $100m^2$. The overall footprint including guy wires is approximately 3.38 hectares based on a 110-metre radius.
- The specifications of these elements are as follows:
    - Tower Base – Concrete base approximately, 2m width by 2m length by 1m deep
    - Inner Guy Anchor (x3) – Buried 3000mm anchor beans buried around 1600mm deep Square,
    - Middle Guy Anchor (X3) - Buried 3000mm anchor beans buried around 2200mm deep
    - Outer Guy Anchor (x3) – Buried 3000mm anchor beans buried around 2200mm deep
- At various height intervals on the mast, there are devices that measure wind speed and direction, as well as temperature and other climate variables.
- There is potential for micro siting of the met mast and guy wire anchor points following geotechnical and heritage investigations.
- Installation of the met mast will take approximately 2 weeks of on-site works. A construction workforce of 5 to 7 people will be present for the installation, as well as an excavator and small crane (Hiab truck). Post-construction, it is expected maintenance will occur annually with a crew of approximately 2-3 people.
- The largest vehicle size (height, width, length) is expected to be a 35-tonne, 6-axle, semi-trailer which will connect to the Hiab truck to facilitate delivery of the met mast structure. During construction, the crew will attend the site on a daily basis as above once a day over 14 days, however this is dependent on weather conditions.
- Additional vehicle movements and equipment include two 4WD LV, crew truck (MV) and tool trailer. With construction supported by winches and derrick pole equipment and machinery. The crane (Hiab truck) is used only to erect the first few sections of the met mast with a derrick pole used to build up the following sections to the desired height.
- Parking for construction workers will occur on private property most likely adjacent to the met mast construction in the cropped area. Given the short-term nature of the construction period, formalised carparking is not required. Access to the proposed location is to be from Cordering Road North via Lot 1710 (under the same landownership).
- The met mast will be a temporary structure, after which it will be decommissioned and completely removed from site. This will involve removing all foundations related to the proposed met mast, including guy wires, and remediating the subject site.

The proposed location of the met mast has been selected to maximise wind speeds, while avoiding any sensitive areas from an environmental or heritage perspective. The met mast location is readily accessible to nearby unsealed internal roads, minimising the need for significant infrastructure and/road upgrades.

Plans and specifications of the proposed met mast are provided at **Appendix B.**

3.2. TECHNICAL CONSIDERATIONS

A summary of the key relevant technical considerations applicable to a met mast is provided below, from an environmental, heritage, aviation and landscape/visual impact perspective.

3.2.1. Environmental

Urbis has assessed the surrounding area of the subject site and has identified that there are no limiting environmental issues applicable to this development. The subject site is located on rural land that is cleared of remnant vegetation. Therefore, the clearing of native vegetation, and subsequent approvals under the *Environmental Protection Act 1986* is not required.

Notwithstanding the above, any future wind farm application will encompass a broader area and will provide an extensive overview of the environmental context, including a comprehensive desktop review to identify significant environmental values likely to be present in the survey area, which will be informed by an ecological survey assessment.

3.2.2. Heritage

An Aboriginal and Historical Due Diligence Assessment has been prepared by Urbis for the proposed Wind Farm. This assessment considers the potential impact on Aboriginal Cultural Heritage (**ACH**), registered sites and lodged places, historic (non-Aboriginal heritage) places located within the site, and potential archaeological constraints in view of relevant heritage controls.

A summary of the key findings of this assessment in the context of the met mast location is provided below.

3.2.2.1. Aboriginal Cultural Heritage

The met mast location is located on the traditional lands of the Wiilman People.

The Aboriginal Cultural Heritage Inquiry System (**ACHIS**) identifies there is one registered Aboriginal site approximately 1.7 km southeast of the mast location. The listing is described below in Table 3.

Table 3 - Aboriginal Cultural Heritage Listings

ID.	Place Name	Site Type	Location	Notes/ description
Aboriginal Cultural Heritage Inquiry System (ACHIS).				
4051	Black Wattle	Lodged Aboriginal Heritage Site	Approximately 1.7 km southeast of the mast	This site is lodged as an artefact scatter.

3.2.2.2. Historic Heritage

It has been assessed that there are no Heritage Areas and Local Heritage Listed places located within the Project Area. Additionally, there are no State Registered Heritage Places identified within the Project Area.

3.2.3. Aviation Impact Assessment

An Aviation Impact Assessment (**Assessment**) has been prepared by Aviation Projects to support the proposed met mast. The Assessment concludes that the proposed location of the met mast will not have an identifiable impact in respect of aviation impacts, specifically noting that:

- There are no certified aerodromes located within 30 nm (55.6 km) of the Wind Monitoring Tower (WMT)
- The closest certified aerodrome is Bunbury Airport (YBUN), approximately 85 km/46 nm west of the Project Site.
- There are no uncertified aerodromes identified within 3 nm of the WMT's site.
- Shire of West Arthur prepared the draft of planning policy No. 5, which included a 7 nm (13 km) buffer for RAAF transport aircraft operations and a 5 nm (9 km) buffer for military paratroopers at

Hillman Farm Airstrip. Based on public information, WMT is outside the RAAF operation buffer area. However, liaison with Defence will provide the exact protection or recommendations for military operations.
- The WMT will not affect any Grid or airway route segment low safe altitude.
- The WMT will not have an impact on controlled or designated airspace.

The Aviation Impact Assessment details that marking the WMT 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. However, the following markings are recommended to be implemented in consideration of potential day visual flight rule aerial work operations in accordance with NASF Guideline D, as shown in Figure 8 (Source: Part 139 MOS 2019):

- Obstacle marking for at least the top 1/3 of the mast and be painted in alternating contrasting bands of colour.
- Marker balls or high visibility flags or high visibility sleeves placed on the outside guy wires.
- Guy wire ground attachment points in contrasting colours to the surrounding ground/vegetation.

The Aviation Impact Assessment details there is no regulatory requirement to provide obstacle lighting on the proposed WMT that is not within the vicinity of an aerodrome. Generally, the voluntary provision of obstacle lighting should be considered to ensure visibility in low light and deteriorating atmospheric conditions. CASA will review the proposed WMT for potential hazards to aircraft operations and may recommend lighting the proposed WMT.

The Client is planning the voluntary provision of 200 to 2000 candela obstacle lighting and will be guided by any lighting recommendations from CASA.

A full copy of the Assessment is provided in **Appendix C.**

3.2.4. Landscape and Visual Impact

To illustrate the potential impact of the met mast location, an indicative viewshed has been prepared and is shown below at **Figure 5** (full copies and location plan included at **Appendix D**).

Figure 5 - View looking east from Gibbs Road North

Publicly accessible roads within proximity to the site include Cordering Road North which is 1.7 kilometres to the east of the site, and Gibbs Road North which is approximately 1.5 kilometres to the west of the site. The view is taken from Gibbs Road North, and is taken looking east, with an approximate viewing distance of approximately 1.7km.

This viewshed demonstrates the proposed met mast will not be a dominant feature in the rural landscape.

4. STATE PLANNING FRAMEWORK

Table 4 below highlights the relevant state planning documents that may apply to the proposed met mast.

Table 4 - Planning Framework Assessment

State Planning Policy	Comment
State Planning Policy 2.5 – Rural Planning *The key objectives set out by SPP 2.5 is to protect and preserve Western Australian's rural land assets for their economic, ecological, and landscape values. Thus, requiring broad compatibility between land uses in the delivery of this policy.*	The construction of the proposed met mast will not result in land use conflict or undermine the capacity to undertake farming activity on site and is therefore considered compatible with the 'rural' zone of the site. The met mast will be located on cleared land and will not impact the ecological or landscape values of the site.
SPP 3.5. – Historic Heritage Conservation *The key objectives set out SPP 3.5 is to ensure the preservation and conservation of historic places and areas of significance in Western Australia, as well as provide greater levels of certainty for landowners and communities.*	A Noongar Standard Heritage Agreement has been entered into with the Gnaala Karla Booja. Historical Due Diligence Assessment has been prepared by Urbis for the proposed met mast location. The assessment concludes that the proposed location and design of the met mast will have no impact on sites of heritage significance, as detailed in **Section 3.2.2** of this report.
State Planning Policy 3.7 – Bushfire *They key objective of SPP 3.7 is to implement risk-based planning that will avoid and/or mitigate the risk of bushfires through resilience in order to retain native vegetation, biodiversity conservation, and landscape amenity.*	The subject site is located within a bushfire prone area. The proposed met mast is not considered a habitable building and will not adversely impact or increase the bushfire risk to the subject or surrounding site. Therefore, State Planning Policy 3.7 Bushfire and its associated Planning for Bushfire Guidelines do not apply.
Position Statement – Renewable Energy Facilities This position statement outlines the WA Planning Commission requirements to support the consistent consideration and provision of renewable energy facilities within WA.	Consistent with this Position Statement, the proposed met mast has been informed by heritage, landscape, and aviation studies.

5. LOCAL PLANNING FRAMEWORK

5.1. WEST ARTHUR LOCAL PLANNING STRATEGY

The Shire of West Arthur Local Planning Strategy (**Strategy**) sets out the Shire's aims and intentions for future long-term growth and change. The main objectives of the Strategy are to provide guidance for future pattern of settlement, identify priority agricultural land, minerals and water resources that require protection and highlight other land with special management needs such as wetlands, areas prone to erosion or salinity and areas of landscape, heritage and amenity value. The strategy outlines guidelines for development including a proposed land use and development of rural industries.

The subject site is identified as Rural Land within the Strategy which is consistent with the zoning in LPS 2. Part 5.0 of the Strategy sets out the expectations for Rural Land, and whilst there are no specific provisions mentioned around renewable/energy projects (or associated infrastructure such as met masts), it is identified that the Shire supports the diversification of agricultural production that has the potential to expand both the economic base and the population of the district. It also states that it supports other rural uses that complement and do not have the potential to constrain established farming practices on rural land.

5.2. DRAFT SHIRES OF WAGIN, WEST ARTHUR AND WILLIAMS JOINT LOCAL PLANNING STRATEGY NOVEMBER 2024

The Shires of Wagin, West Arthur and Williams Joint Local Planning Strategy (Draft Strategy) sets out the 15-year vision for land use change to ensure sustainable community and economic growth and environmental management within the Shires of Wagin, West Arthur and Williams. The Draft Strategy includes a range of provisions to support the development of renewable energy infrastructure to ensure long term economic growth of the region while ensuring its historic rural character and environmental assets are managed and protected. A key short term action opportunity identified in the strategy relates to the economic and employment growth and recommends future planning framework will:

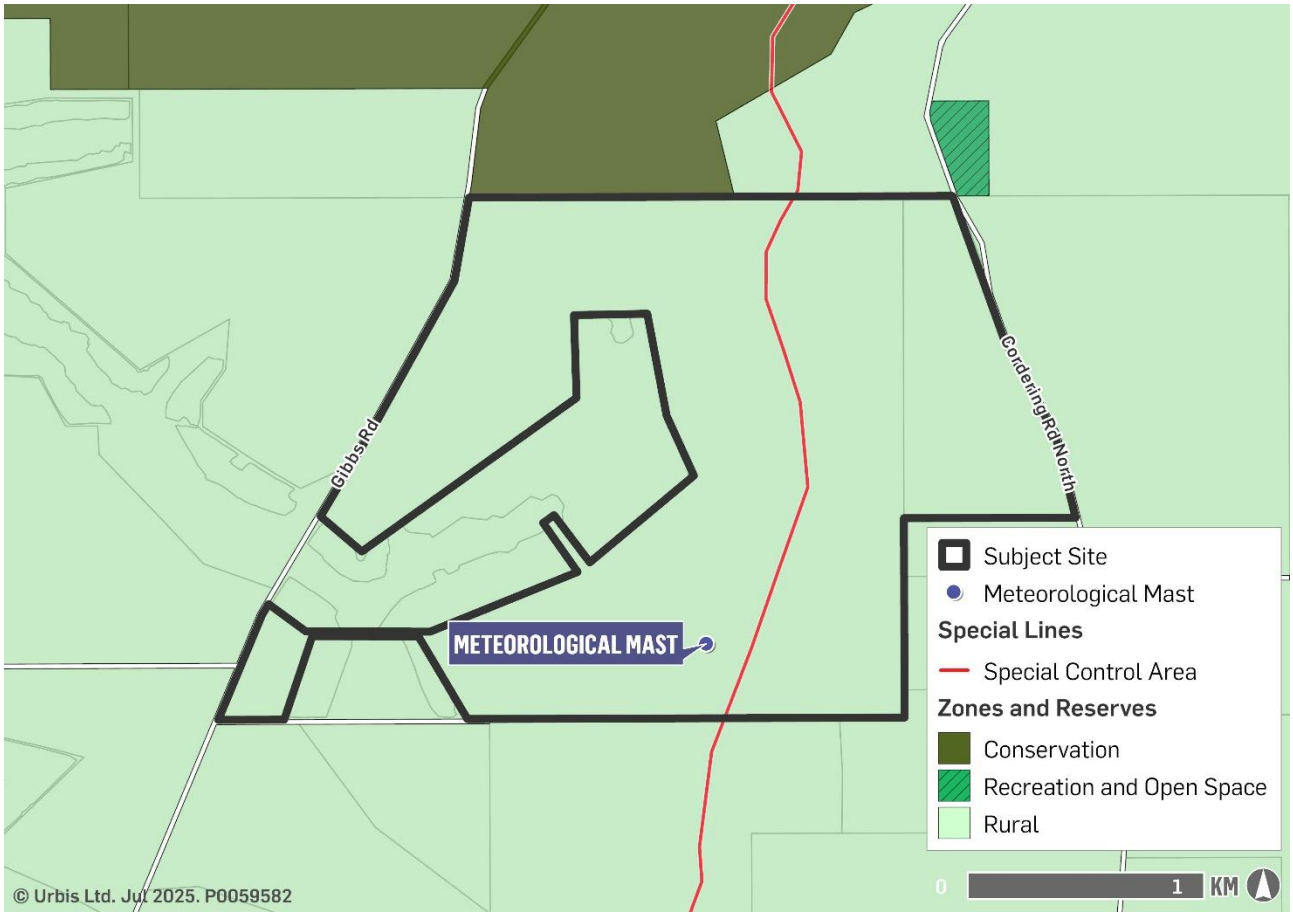
- *Prioritise rural land for agricultural use, while providing flexibility for alternative uses which do not undermine existing primary production on surrounding land.*
- *Identify and enable the attraction of businesses which value add to the Strategy Area's agricultural base while ensuring a suitable supply of land for primary production is maintained.*
- *Support a diverse range of land uses in appropriate locations contributing to economic output.*
- *Encourage the accommodation of the 'permanent and temporary workforce' in the primary settlements, providing the opportunity for flow-on economic and development benefits in settlement areas.*
- *Enhance infrastructure and services to support the growth of the tourism economy.*

The proposed met mast is a precursor to the proposed West Arthur Wind Farm which will significantly contribute to the economy and employment objectives of the Shire of West Arthur by promoting development that strengthens the local economy and supports agricultural resilience and growth. By prioritising rural land for agricultural use while allowing for alternative uses like wind energy, the wind farm can coexist without undermining primary production.

5.3. SHIRE OF WEST ARTHUR LOCAL PLANNING SCHEME NO. 2

The met mast is located within a Rural zone of the Shire of West Arthur Local Planning Scheme No. 2 (**LPS 2**) and is within Special Control Area - Public Drinking Water Source Area. The LPS map can be seen in **Figure 6** below.

Figure 6 - Shire of West Arthur Local Planning Scheme No. 2 Map



The objectives of the 'Rural' zone are as follows:

- 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.
- To provide for intensive agricultural uses and diversified farming which retain the rural character and amenity of the locality, and which are consistent with land suitability.
- To help protect rural land from land degradation and further loss of biodiversity by:
  - minimising clearing of remnant vegetation.
  - encouraging retention and protection of remnant vegetation
  - encouraging development and protection of vegetation corridors
  - encouraging development of sustainable surface and sub-surface drainage works
  - encouraging rehabilitation of salt-affected land
  - encouraging soil conservation through land management measures
  - encouraging identification and protection of wetlands
- 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.
- To allow for facilities for tourists and travellers, and for recreation uses.
- To have regard to use of adjoining land at the interface of the rural zone with other zones to avoid adverse effects on local amenities.

Consistent with the above objectives, the proposed met mast is being installed for the primary purpose of measuring wind speeds to assist in determining the future layout of the turbines of the West Arthur wind farm. It will not impact surrounding agricultural uses, present or future, or the associated rural amenity and character.

As demonstrated in **Section 3.2.4,** the met mast will have minimal visual impact to the surrounding rural character of the area. The met mast will avoid impacts on areas of sensitivity such as biodiverse areas (including areas of remnant vegetation) and water courses/bodies and would not have any impacts to soils of the area.

The proposed met mast (in facilitating a future large-scale renewable proposal) is considered to 'be of benefit to the district and not detrimental to the natural resources or the environment'. The proposal therefore aligns with the objectives of LPS 2 by facilitating positive impacts for the district and wider region and State.

Wellington Reservoir Catchment Special Control Area

The proposed development is located within the Wellington Reservoir Catchment Special Control Area (SCA). The purpose of the SCA is to 'avoid development that could cause surface water pollution' and 'to maintain or restore water quality of potable water'. The proposed development is not considered to have an impact on surface or subsurface water quality due to the static nature of the structure. The Shire will refer the application to the Department of Water and Environmental Regulation in accordance with clause 6.4.2 of LPS2. The applicant will address any concerns raised by DWER as required.

5.3.1. Land Use Permissibility

Under the zoning table of LPS 2, a 'meteorological mast' is not specified and therefore is considered a 'use not listed'. In accordance with Clause 4.4.2 of LPS 2, where a person proposes to carry out a use that is not specified 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 local government may:

a) *Determine that the use is consistent with the objectives of the particular zone and is therefore permitted; or*
b) *Determine that the use may be consistent with the objectives of the particular zone and thereafter follow the advertising procedures of Clause 9.4 in considering an application for development approval;*
c) *Determine that the use is not consistent with the objectives of the particular zone and is therefore not permitted.*

As outlined in section 5.1 above, the proposal is in alignment with the objectives of the Rural zone, as it will 'be of benefit to the district' and will inform a future wind farm application (which will be subject to a separate planning process). It is the applicant's expectation that the development application will be advertised in accordance with Clause 9 of LPS 2, before the Shire determines the application.

5.3.2. General Development Requirements

5.3.2.1. Rural Development

Table 5 below provides an assessment of the proposed against Clause 5.18 (Rural Development) requirements of LPS2.

Table 5 - Rural Development Requirements

Principle	Comment	Compliance
Buildings within the Rural zone shall comply with the following minimum building setbacks: • Front: 20.0 metres • Rear: 20.0 metres • Side: 5.0 metres	The met mast complies with the setback requirements, being in excess of 50m (up to 1,000m) from relevant lot boundaries.	✓
Development applications of Agroforestry and Plantations are to be determined by the Shire by having regard to the Code of Practice for Timber Plantations in Western Australia 1997 and can impose conditions relating to the Guidelines for Plantation Fire Protection 1998.	Agroforestry and Plantations are not proposed.	✓
When considering an application, the Shire will have due regard for incompatible used that require buffer from proposed use, evidence water supply doesn't rely on catchment outside lot, how the proposal will address site conditions and effluent disposal systems can be setback at least 50m from streams.	The met mast does not impact farming operations and does not require water or sewer services to operate. The development is considered compatible and will not impact ongoing rural activities on the site.	✓
The Shire will only support subdivision of existing lots in the Rural zone in certain circumstances (specified in Clause 5.18.4 of LPS 2)	Subdivision of lots is not proposed.	✓

5.4. WEST ARTHUR LOCAL POLICIES AND LAWS

5.4.1. Local Planning Policy No.5 Wind Farms

Local Planning Policy No.5 – Wind Farms (**LPP 5**) outlines the measures to assess proposals for wind farms including advertising criteria, referral requirements, and clarifies the level of information to be provided to the Shire to accompany the application.

LPP 5 outlines the expectations of the Shire in terms of technical information informing applications for wind farms. LPP 5 generally aligns with the State Guidance Statement regarding the requirement for applications to consider acoustics, visual and landscape impact assessments, and transportation details. This LPP applies to all zones and reserves in the LPS2.

Table 6 - Local Planning Policy No. 5 – Wind Farms

LPP No 5.0 Provisions	Proposal's Response
Sitting and Design: Wind farms should be located on cleared farmland near the power grid to minimise clearing. Wind turbines should be setback a min. of 1.5km to the nearest existing dwelling or approved building envelope. Wind turbines should be setback min. 200m between centre of tower and neighbouring property boundary or public road.	Provisions relate to Wind Turbines. The met mast is a static structure that is located away from key roads and neighbouring boundaries. The met mast is 215m from the southern lot boundary which is the closest site boundary to the structure.
Consultation: Early consultation with community and stakeholder is encouraged, an Engagement Strategy and Engagement Outcomes Report is required to accompany the application, and applications will be advertised for a minimum period 42 days.	While early consultation is encouraged for wind farms, the met mast is not considered to warrant pre-lodgement consultation. The project team will address any matters raised during the public consultation period as part of the assessment of the development application.
Environmental Impact: Applications should include an environmental survey of the site addressing type, location and significance of flora and fauna, any threatened ecological communities, existing remnant vegetation proposed to be retained or removed, potential impact on birds or bats and any impact on the heritage of the site or adjoining places.	The Client has prepared spring surveys associated with the broader wind farm development. An environmental impact assessment has not been undertaken for the met mast as it will be located on already cleared land and will not require additional clearing for road access, wire stays or the met mast foundation structure.
Noise Impact: Applications should be accompanied by a Noise Impact Assessment which is to have due regard to future land uses.	Noise Impact Assessment not necessary, development is a met mast, not a wind farm with turbines
Visual Impact:	Visual and Landscape Impact Assessment Provided

LPP No 5.0 Provisions	Proposal's Response
Applications should be accompanied by a Visual and Landscape Impact Assessment which is to determine the potential impact of a wind farm on the landscape character of the area.	
Aviation: Applications should include an Aviation Impact Assessment prepared by a suitably qualified person.	Aviation Impact Assessment included at **Appendix C** and is discussed in section 3.2.3 of this report.
Site Access and Traffic Management: No works can occur within a State Road Reserve controlled by MRWA with their authorisation. Applications are to identify the proposed site access with unconstructed roads for site access is unlikely to by supported by the Shire. The Shire may require a Traffic Impact Assessment prepared by a suitable qualified traffic engineer. The Shire may place conditions on any development approval to ensure any costs associated with road damage, widening or upgrading are met by the developer.	The development will gain access via an existing crossover to Lot 1710 on Cordering Road North. Access to the met mast will be via the access track to the existing shed located on the eastern edge of Lot 8. From this point a temporary access track will be constructed to provide access for construction vehicles and maintenance vehicles thereafter.

6. CONCLUSION

The proposed met mast will be installed to monitor wind speeds to inform the turbine layout of a possible future West Arthur Wind Farm. This application seeks approval for the construction and installation of one met mast which will be a temporary structure, at which point the met mast will be deconstructed and removed.

This proposal illustrates the proposals alignment with the ‘Rural’ zone objectives and its general consistency with the broader planning framework and relevant technical requirements. Therefore, we respectfully request the approval of this application, subject to any conditions. It is anticipated that such conditions would primarily involve the preparation of a management plan (covering construction and traffic) to ensure appropriate management practices are followed during the construction phase.

DISCLAIMER

This report is dated 08 August 2025 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Ltd **(Urbis)** opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of West Arthur Energy Pty Ltd **(Instructing Party)** for the purpose of Development Application **(Purpose)** and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

In preparing this report, Urbis was required to make judgements which may be affected by unforeseen future events, the likelihood and effects of which are not capable of precise assessment.

All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

In preparing this report, Urbis may rely on or refer to documents in a language other than English, which Urbis may arrange to be translated. Urbis is not responsible for the accuracy or completeness of such translations and disclaims any liability for any statement or opinion made in this report being inaccurate or incomplete arising from such translations.

Whilst Urbis has made all reasonable inquiries it believes necessary in preparing this report, it is not responsible for determining the completeness or accuracy of information provided to it. Urbis (including its officers and personnel) is not liable for any errors or omissions, including in information provided by the Instructing Party or another person or upon which Urbis relies, provided that such errors or omissions are not made by Urbis recklessly or in bad faith.

This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

APPENDIX A CERTIFICATE OF TITLE

APPENDIX B DEVELOPMENT PLAN AND SPECIFICATIONS

APPENDIX C AVIATION IMPACT ASSESSMENT

APPENDIX D VIEWSHED IMAGES

WESTERN AUSTRALIA

TITLE NUMBER	
Volume	Folio
1842	**477**

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 8 ON PLAN 16470

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

WUNNENBERG NOMINEES PTY LTD OF CARE OF C.L.B. MCWHIRTER & CO., 57 FORTUNE STREET, NARROGIN
(A E136587) REGISTERED 28/6/1989

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. D218699 MORTGAGE TO NATIONAL AUSTRALIA BANK LTD REGISTERED 21/3/1986.
2. Q226169 CAVEAT BY WEST ARTHUR ENERGY PTY LTD LODGED 26/11/2024.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	1842-477 (8/P16470)
PREVIOUS TITLE:	1365-232
PROPERTY STREET ADDRESS:	NO STREET ADDRESS INFORMATION AVAILABLE.
LOCAL GOVERNMENT AUTHORITY:	SHIRE OF WEST ARTHUR

WESTERN AUSTRALIA

TITLE NUMBER	
Volume	Folio
1842	**478**

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 1710 ON DEPOSITED PLAN 114867

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

WUNNENBERG NOMINEES PTY LTD OF CARE OF C.L.B. MCWHIRTER & CO., 57 FORTUNE STREET, NARROGIN
(A E136590) REGISTERED 28/6/1989

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. D218699 MORTGAGE TO NATIONAL AUSTRALIA BANK LTD REGISTERED 21/3/1986.
2. Q226169 CAVEAT BY WEST ARTHUR ENERGY PTY LTD LODGED 26/11/2024.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	1842-478 (1710/DP114867)
PREVIOUS TITLE:	1365-232
PROPERTY STREET ADDRESS:	NO STREET ADDRESS INFORMATION AVAILABLE.
LOCAL GOVERNMENT AUTHORITY:	SHIRE OF WEST ARTHUR

LEGEND

- Indicative Met Mast Location
- Indicative Guy Wire (120m)
- Accessway via Cordering Road North
- Land Boundary
- Native Vegetation

N

0 140 280 m

MET MAST LOCATION

West Arthur Wind Farm Project

Coordinate System: GDA2020 MGA Zone 50
Reference: 2025_017_met_mast_r1
Date: 24/07/2025

Author: WEST GIS
Scale: 1:11,000
Size: A4L

LACOUR

CLIENT:

SITE:

MAST NAME:

COORDINATES:

DESCRIPTION:

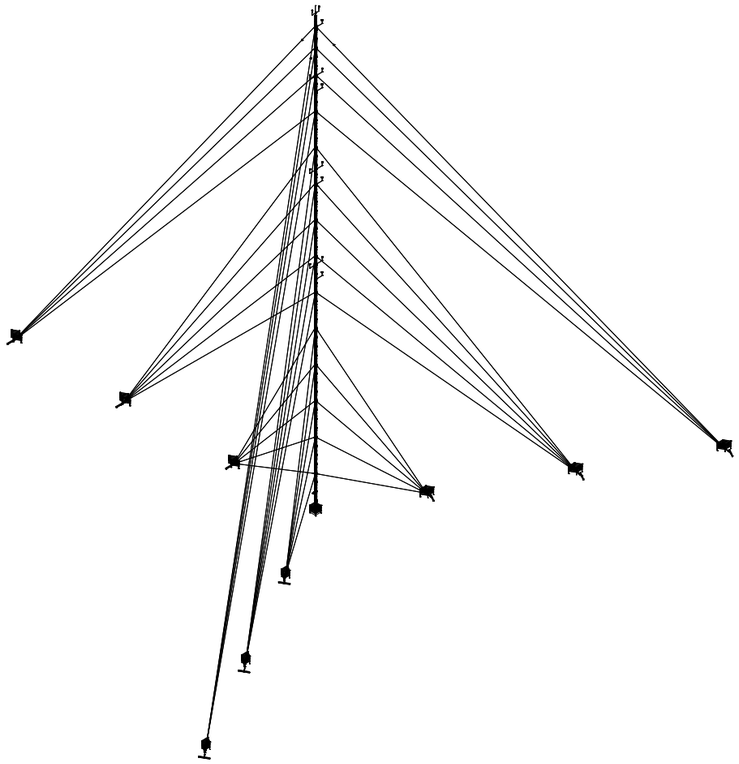
WIND REGION:

TERRAIN CATEGORY:

STRUCTURAL IMPORTANCE: LEVEL 1

AS3995-1994 & AS1170.2:2021

DRAWING REGISTER	
SHEET TITLE	**SHEET No.**
TITLE SHEET & DRAWING REGISTER	1/10
GENERAL NOTES	2/10
MAST PLAN	3/10
MAST ELEVATION	4/10
MAST ANCILLARY DETAILS	5/10
MAST FOOTING DETAILS - BURIED ANCHOR	6/10
EARTHING DETAILS	7/10
FENCING DETAILS	8/10
FALL ARREST DETAILS	9/10
BAT MIC DETAILS	10/10



1 / S-01 ISOMETRIC VIEW

NOTES

DATE

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

CLIENT

PROJECT

SHEET TITLE
TITLE SHEET & DRAWING REGISTER

STATUS

SCALE PLOTTED AT A3
N.T.S.

THIRD ANGLE PROJECTION

DRAWN	CHECKED	APPROVED	CO-ORDINATED
VG	HY	AT	AT

DRAWING NUMBER	SHEET	ISSUE
ART-22599-DRG-0002	1 / 10	01

GENERAL NOTES

1. ALL MAST STEELWORK COMPONENTS, ASSEMBLIES AND PARTS CALLED OUT ON DETAILS, SECTIONS AND BILL OF MATERIALS ARE THE PROPRIETARY PRODUCTS OF ART GROUP UNLESS NOTED OTHERWISE (U.N.O). COMPLETE DETAILS AND INFORMATION OF ART GROUP PRODUCTS SHOWN ON PRODUCTION SHOP DRAWINGS.
2. ALL DIMENSIONS TO BE CHECKED ON-SITE PRIOR TO CONSTRUCTION.
3. ALL DIMENSIONS ON SHOWN ARE IN MILLIMETERS U.N.O.
4. DO NOT GET DIMENSIONS BY SCALING DRAWINGS.
5. ALL WORKMANSHIP PREFORMED AND MATERIALS USED SHALL BE AS PER THE CURRENT AUSTRALIAN STANDARDS, THE BY-LAWS, AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITY.
6. ALL BOLTS ARE GRADE 8.8 STRUCTURAL ASSEMBLIES SUPPLIED WITH NUT AND WASHER U.N.O.
7. ALL BOLTS TO BE SNUG TIGHTENED U.N.O.
8. MAINTAIN STABLE CONDITIONS OF STRUCTURE DURING CONSTRUCTION AND DO NOT OVER STRESS ANY PART DURING CONSTRUCTION.
9. PROVIDE "HELICOIL GRIP": OR "FAN WRAP" AT TERMINATION OF ALL GUY WIRES.
10. INSTALL LAD-SAF FALL ARREST SYSTEM AS PER MANUFACTURES SPECIFICATIONS.

LOCATION

1. THE MAST LOCATION AND PROXIMITY TO PUBLIC ROADS, BUILDINGS AND OTHER INFRASTRUCTURE IS THE RESPONSIBILITY OF THE CLIENT AND RELEVANT LOCAL COUNCIL, STATE AND FEDERAL AUTHORITIES. UNLESS OTHERWISE STATED, ART IS NOT RESPONSIBLE FOR THE FINAL LOCATION IN REGARD TO COMPLIANCE WITH RELEVANT LOCAL COUNCIL, STATE AND FEDERAL AUTHORITIES.

EARTHING

1. UNLESS OTHERWISE SPECIFIED ART IS NOT RESPONSIBLE FOR THE SITE EARTHING SYSTEM COMPLIANCE TO AS/NZS 1768-2021 Cl 3.5.3 (EARTHING RESISTANCE RECOMMENDED VALUES) AS WELL AS THE PROVISION OF GEOTECHNICAL AND SOIL RESISTIVITY SURVEY DATA.
2. THE METAL GUY WIRES ARE CONSIDERED ADEQUATELY EARTHED AS THEY ARE ATTACHED TO BURIED STEEL ANCHOR RODS SET IN EARTH (REFER TO AS/NZS 1768-2021 Appendix I.5.1)
3. THE TOWER METALLIC STRUCTURE IS CONSIDERED A NATURAL DOWN CONDUCTOR AND REQUIRES NO ADDITIONAL DOWNCONDUCTOR (REFER TO AS/NZS 1768-2021 CI 3.3.3)

STEEL ERECTION

1. MAST INSTALLATION DESIGNED FOR GIN-POLE OR CRANE ERECTION.
2. FOR CRANE LIFTS ASSEMBLED SECTIONS MUST NOT EXCEED 40m IN A SINGLE LIFT UNLESS TWO CRANES ARE USED IN A DUAL LIFT CONFIGURATION.
3. FOR GIN-POLE LIFTS ONLY ONE SECTION AT A TIME TO BE RAISED WITH GIN-POLE.

FOOTINGS & FOUNDATIONS

1. REMOVE ALL TOPSOIL AND UPPER STRATA CONTAINING ORGANIC MATTER FOR ALL FOOTINGS.
2. IF MATERIAL ON-SITE IS NOT SUITABLE FOR STANDARD COMPACTION SPECIFICATION, THEN IMPORTED FILL OR BACKFILL SHALL CONSIST OF APPROVED MATERIAL INSTALLED AS PER COMPACTION SPECIFICATIONS.

GUY ANCHOR COMPACTION SPECIFICATIONS

1. THE LEVEL OF TOLERANCE OF GUY ANCHOR FOOTINGS MAY VARY (HIGHER/LOWER) WITHOUT ENGINEERING REVIEW MAINTAINING NOMINATED GUY ANCHOR ANGLES AS SPECIFIED BY THE STRUCTURAL ENGINEER.
   - INNER FOOTING: 3.0m
   - INTERMEDIATE FOOTING: 6.0m
   - OUTER FOOTING: 6.0m
2. EXCAVATE ANCHOR PIT AND INSTALL STEEL ANCHOR BEAM, ANCHOR ROD AND ATTACHMENTS AS SPECIFIED IN DETAILS AND INFORMATION PROVIDED ON STRUCTURAL DRAWINGS.
3. CLAYS OR SILTS (BASED ON Φ=20° AND Cu=20kPa) OR SANDS (BASED ON Φ=32° MIN.) CAN BE USED AS FILL MATERIAL. MINIMUM SOIL PROPERTIES ARE AS STATED ABOVE UNLESS A GEOTECHNICAL REPORT IS PROVIDED IN WHICH CASE SPECIFIC SELECT FILL PARTICLES SIZE AND SHAPE IS TO SUIT COMPACTED LAYER THICKNESS AS PER THE GEOTECHNICAL REPORT SPECIFICATIONS.
4. ACHIEVE ADEQUATE COMPACTION BY PROVIDING A COMPACTED DENSITY EQUAL TO A CONTROLLED FILL CLASSIFICATION AS DEFINED IN AS2870. PLACE FILL IN LAYERS NO GREATER THAN 150mm WHEN COMPACTED. ACHIEVE REQUIRED COMPACTION BY MECHANICAL TAMPING SUCH AS COMPACTION BY RODDING, VIBRATING PLATE, SMOOTH DRUM ROLLER ATTACHED TO A BACKHOE/EXCAVATOR, OR WALK BEHIND WHACKER PACKER.
5. ANGLE OF ANCHOR ROD SHOWN ON GUY ANCHOR FOOTING SCHEDULE REFERS TO PRETENSION FORCE BEING APPLIED TO GUY-WIRES AND RE-COMPACTION OF LOOSE SOIL FOLLOWING PRETENSION.

CONCRETE

1. ALL WORKMANSHIP PREFORMED AND MATERIALS USED ARE AS PER AS3600.
2. PLACE CONCRETE WITH COMPRESSIVE STRENGTH F'C 32MPa AS DEFINED IN AS1379.
3. MAST BASE FOUNDATION: CONCRETE COVER OF 75mm MIN. TOP, BOTTOM AND SIDES.
4. GUY ANCHOR FOUNDATION: MIN. 50mm CONCRETE COVER AROUND THE STEEL ANCHOR BEAM; FOR TOTAL CONCRETE DEPTH REFER TO GUY ANCHOR FOOTING SCHEDULE.
5. NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS MADE IN CONCRETE MEMBERS WITHOUT THE WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.
6. REINFORCEMENT SYMBOLS:
   N - GRADE 500 NORMAL DUCTILITY DEFORMED BAR. THE NUMBER FOLLOWING THESE SYMBOLS INDICATES BAR DIAMETER IN MILLIMETRES U.N.O.
   REINFORCEMENT TO COMPLY WITH AS4671.

STEEL WORK

1. ALL WORKMANSHIP PREFORMED AND MATERIALS USED ARE AS PER AS4100 AND AS1554. EXCEPTION MAY BE PERMITTED ONLY WHERE AS VARIED BY APPROVED CONTRACT DOCUMENTS.
2. UNLESS NOTED OTHERWISE, THE FOLLOWING STEEL GRADES APPLY TO MAST SECTIONS:
   - MAST CORD (LEGS) 500 MPa
   - MAST WEBBING 300 MPa
   - PLATES 250 MPa
3. WELDED CONNECTIONS BETWEEN STRUCTURAL MEMBERS ARE 6mm CONTINUOUS FILLET WELD (OR SIZE EQUIVALENT TO THE MINIMUM THICKNESS OF CONNECTION MEMBERS IF LESS THAN 6mm) U.N.O. WELDED CONNECTIONS BETWEEN LATTICE & CHORDS ARE 6mm MIN. COMPLETE AND INCOMPLETE PENETRATION BUTT WELDS CLASS SP U.N.O.
4. BOLT TYPES AND DESIGNATIONS WHERE USED ARE AS FOLLOWS:
   4.6/S COMMERCIAL BOLTS TO AS1111 SNUG TIGHTENED 8.8/S HIGH STRENGTH STRUCTURAL ASSEMBLY (BOLTS, NUTS AND HARDENED WASHERS) TO AS1252 SNUG TIGHTENED ONLY FOR ALL MAST SECTIONS U.N.O.
5. M16 HIGH STRENGTH (8.8/S) BOLTS USED TYPICALLY IN ALL CONNECTIONS U.N.O. NOTWITHSTANDING THIS, NO STEEL-TO-STEEL CONNECTIONS ASSEMBLED WITH LESS THAN 2/ M16 (8.8/S) BOLTS U.N.O. U-BOLTS (4.6/S) USED FOR ANCILLARIES INSTALLATION U.N.O.
6. BOLT HOLES IN STEEL-TO-STEEL AND STEEL-TO-CONCRETE CONNECTIONS WITH BOLT DIAMETER +2mm AND +3mm RESPECTIVELY. BASE PLATES MUST HAVE A BOLT DIAMETER +6mm U.N.O.
7. ALL NUTS, BOLTS AND WASHERS ARE GALVANIZED U.N.O.
8. WELD MATERIAL REQUIRES A NOMINAL TENSILE STRENGTH OF 490MPa AS PER AS4100 AMENDMENT 1, 2012, TABLE 9.7.3.10(1).
9. ALL WELDS REQUIRE CATEGORY SP AS PER AS1554 PART 1 U.N.O.
10. PROTECTIVE SURFACE TREATMENT APPLIED TO STRUCTURAL STEELWORK AS FOLLOWS:

    GENERAL MAST FINISH:
    HOT-DIP GALVANIZE "HDG600" (AS2312).

    GUY ANCHOR BEAMS & ANCHOR RODS FINISH:
    HOT-DIP GALVANIZE "HDG600" (AS2312).
    BLACK STEEL MAY BE USED WHERE ANCHOR BEAM IS ENCASED IN CONCRETE.

MAST GUY WIRE SPECIFICATIONS

GUY WIRES: AS APPLICABLE

- Ø8.25 (7/2.75) G1320
  TENSILE STRENGTH 1320 MPa
  PRE-TENSION 3.5 kN

MAST DESIGN LOADS	
WIND PARAMETERS (AS1170.2:2021)	
WIND REGION	A3
TERRAIN CATEGORY	2
IMPORTANCE LEVEL (AS1170.0:2011)	1
TOPOGRAPHIC MULTIPLIER Mt	1
DIRECTIONAL MULTIPLIER Md	1
CLIMATE CHANGE MULTIPLIER Mc	1
REGIONAL WIND SPEED Vr (m/s) (2)	38
SERVICE WIND Vs (m/s) (3)	27
DEPLOYMENT TYPE (4)	TEMPORARY
STRUCTURE SERVICE LIFE (5)	5 YEARS
MAST STEELWORK INFORMATION	
MAST HUB HEIGHT	160000
MAST HEIGHT	157700
STANDARD MAST SECTION HEIGHT (GL55)	2880
MAST BASE HEIGHT (GL55)	565
MAST BASE RL.	100
MAST FOOTING & SOIL PROPERTIES	
SOIL ALLOWABLE BEARING CAPACITY (kPa)	100 kPa
DENSITY OF SOIL (kN/m³)	17 kN/m³
INTERNAL ANGLE OF FRICTION (DEGREES°)	30°
MAST FOUNDATION	CONCRETE IN SITU
FOUNDATION DIMENSIONS (WxLxD)	1800x1800x700

NOTES: (Δ)

1. REGIONAL WIND SPEED FOR AS1170.2:2021 CALCULATIONS OF WIND PRESSURE DETERMINED VIA AS1170.0:2011 ANNEX F TAKING INTO ACCOUNT THE DESIGN WORKING LIFE OF THE DEPLOYMENT TYPE AND ANNUAL PROBABILITY OF WIND EVENT EXCEEDANCE IN ACCORDANCE WITH THE IMPORTANCE LEVEL. THE DESIGN WORKING LIFE IS CONSIDERED AS 5 YEARS FOR TEMPORARY MASTS AND 25 YEARS FOR PERMANENT MASTS.
2. SERVICE WIND SPEED BASED ON CRITERION OF SERVICEABILITY OF COMMUNICATION LATTICE TOWERS WHICH TAKES INTO CONSIDERATION OUTAGES IN BROADCASTING OR LOSS OF SIGNAL IN MICROWAVE RADIO LINKS. A 27 m/s WIND SPEED IS THE REFERENCE SPEED ANNOTATED IN AS3995-1994 ANNEX A AND OTHER INTERNATIONAL STANDARDS THAT REGULATES THIS TYPE OF STRUCTURAL DESIGN.
3. AS DEFINED IN THE PROJECT SCOPE OF WORKS.
4. MINIMUM SERVICE LIFE EXPECTED FOR STEEL MEMBERS, PROTECTIVE COATINGS AND CONCRETE ELEMENTS WITHOUT COMPROMISED TO STRUCTURAL INTEGRITY WITH STANDARD LEVEL OF MAINTENANCE.
5. MAINTENANCE LOAD CONSIDERED AS 2 PERSONNEL AT A TIME OR EQUIVALENT.
6. THE ULTIMATE SOIL CAPACITY IS TAKEN AS AT LEAST 1.5 TIMES THE REFERRED ALLOWABLE CAPACITY.

NOTES

		DATE

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

CLIENT

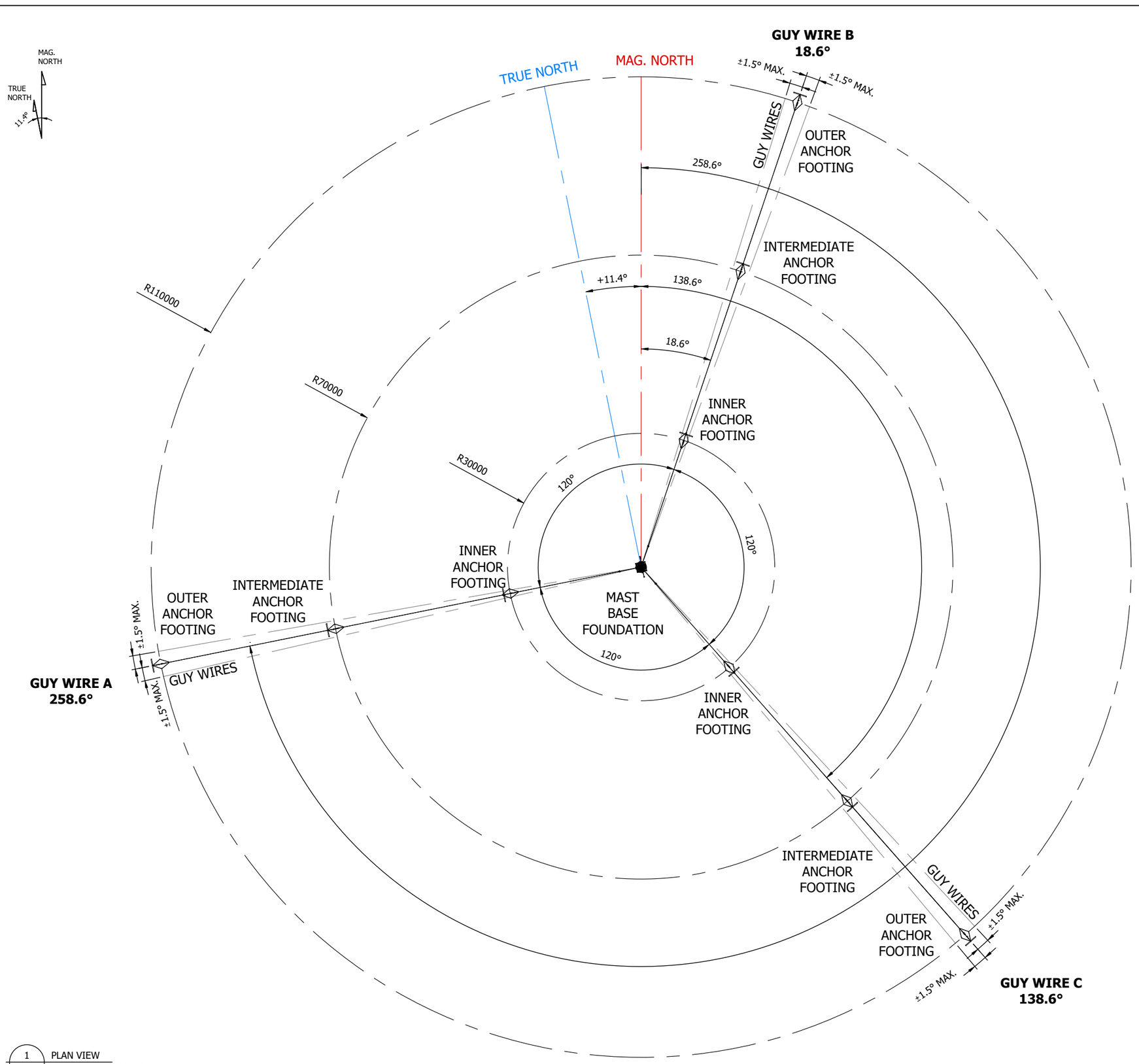
PROJECT

SHEET TITLE
GENERAL NOTES

STATUS

SCALE PLOTTED AT A3	THIRD ANGLE PROJECTION		
N/A			
DRAWN	CHECKED	APPROVED	CO-ORDINATED
VG	HY	AT	AT

DRAWING NUMBER	SHEET	ISSUE
ART-22599-DRG-0002	2 / 10	01



1 / S-03 PLAN VIEW MAST ARRANGEMENT

NOTES

		DATE

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

CLIENT

PROJECT

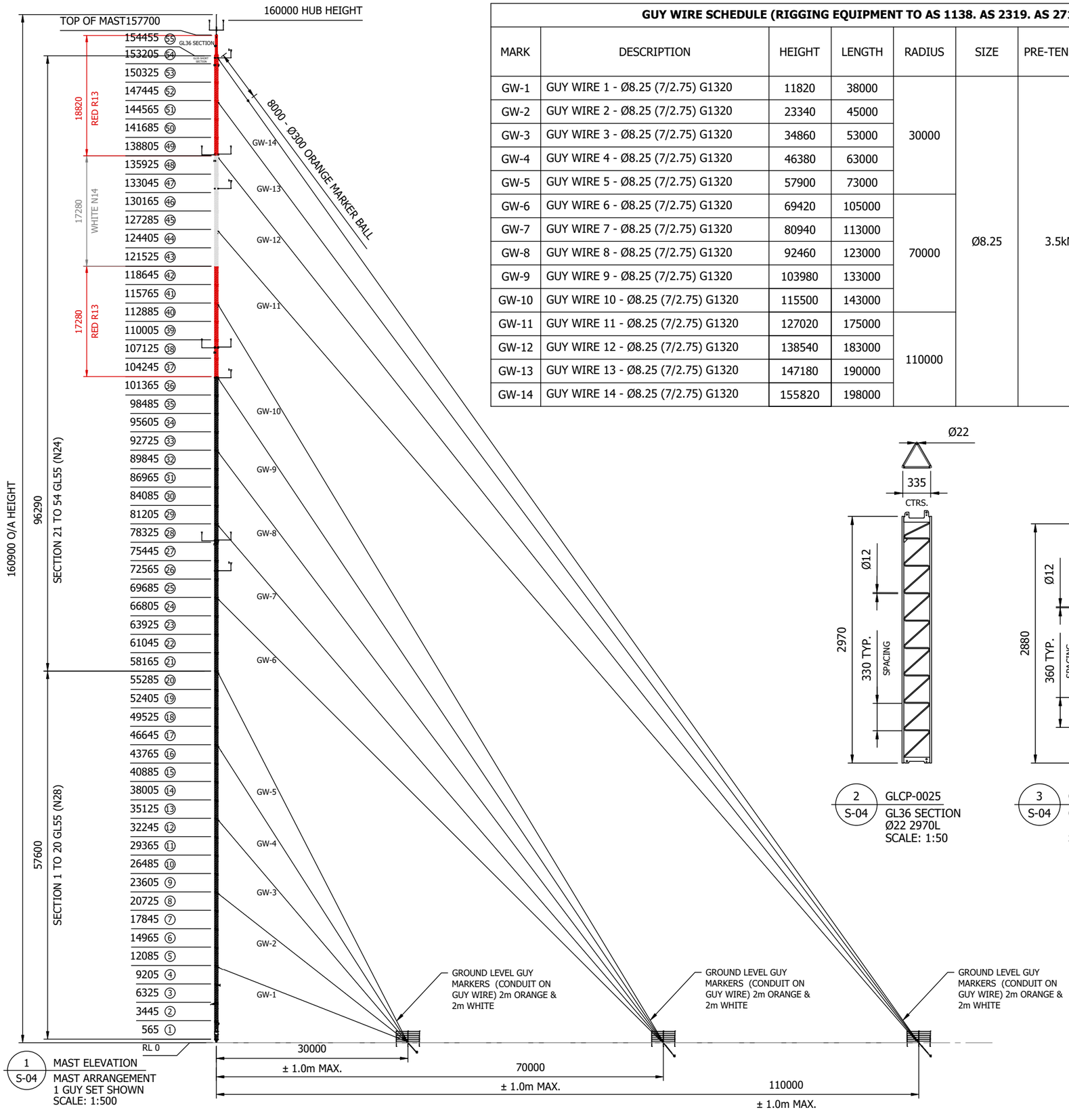
SHEET TITLE
MAST PLAN

STATUS

SCALE PLOTTED AT A3	THIRD ANGLE PROJECTION
1:900	

DRAWN	CHECKED	APPROVED	CO-ORDINATED
VG	HY	AT	AT

DRAWING NUMBER	SHEET	ISSUE
ART-22599-DRG-0002	3 / 10	01

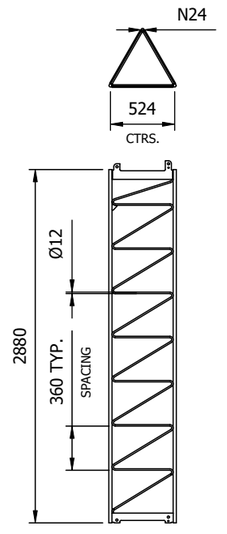


1 / S-04 MAST ELEVATION
MAST ARRANGEMENT
1 GUY SET SHOWN
SCALE: 1:500

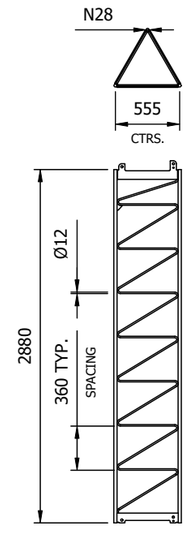
GUY WIRE SCHEDULE (RIGGING EQUIPMENT TO AS 1138. AS 2319. AS 2714. AS 2759. AS 4991.)

MARK	DESCRIPTION	HEIGHT	LENGTH	RADIUS	SIZE	PRE-TENSION	BOW & 'D' SHACKLE GALV.	FAN-WRAP GALV.	THIMBLE GALV.
GW-1	GUY WIRE 1 - Ø8.25 (7/2.75) G1320	11820	38000	30000	Ø8.25	3.5kN	19mm	8.25mm	11mm
GW-2	GUY WIRE 2 - Ø8.25 (7/2.75) G1320	23340	45000						
GW-3	GUY WIRE 3 - Ø8.25 (7/2.75) G1320	34860	53000						
GW-4	GUY WIRE 4 - Ø8.25 (7/2.75) G1320	46380	63000						
GW-5	GUY WIRE 5 - Ø8.25 (7/2.75) G1320	57900	73000						
GW-6	GUY WIRE 6 - Ø8.25 (7/2.75) G1320	69420	105000	70000			16mm		
GW-7	GUY WIRE 7 - Ø8.25 (7/2.75) G1320	80940	113000						
GW-8	GUY WIRE 8 - Ø8.25 (7/2.75) G1320	92460	123000						
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	143000						
GW-11	GUY WIRE 11 - Ø8.25 (7/2.75) G1320	127020	175000	110000					
GW-12	GUY WIRE 12 - Ø8.25 (7/2.75) G1320	138540	183000						
GW-13	GUY WIRE 13 - Ø8.25 (7/2.75) G1320	147180	190000						
GW-14	GUY WIRE 14 - Ø8.25 (7/2.75) G1320	155820	198000						

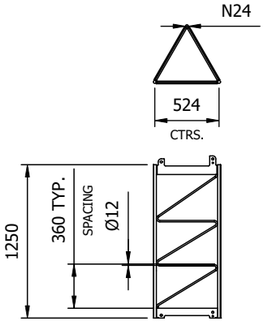
2 / S-04 GLCP-0025
GL36 SECTION
Ø22 2970L
SCALE: 1:50



3 / S-04 GLCP-0029
GL55 SECTION
N24 2880L
SCALE: 1:50



4 / S-04 GLCP-0034
GL55 SECTION
N28 2880L
SCALE: 1:50



5 / S-04 GLCP-0041
GL55 SECTION
N24 1250L
SCALE: 1:50

NOTES

1. REFER TO GENERAL NOTES (SHEET 2) FOR MAST SPECIFICATIONS AND ART PROPRIETARY PRODUCT DISCLOSURE.
2. REFER TO MAST ANCILLARY DETAILS (SHEET 5) FOR ANCILLARY DETAILS AND INFORMATION.
3. REFER TO MAST FOOTING DETAILS (SHEET 6) FOR FOOTING DETAILS AND INFORMATION.
4. GW-10, GW-, : FROM THE CENTER OF THE INSTRUMENT TO GUY WIRE, CLEARANCE IS GW10, 1553 mm
   GW12, 1270 mm

REV	DESCRIPTION	DATE
01	NEW CLIENT DETAILS & SHEET 1, 6 & 9	19/06/23
00	ISSUED FOR CONSTRUCTION	18/04/23

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

CLIENT

PROJECT

SHEET TITLE
MAST ELEVATION

STATUS

SCALE PLOTTED AT A3
1:650

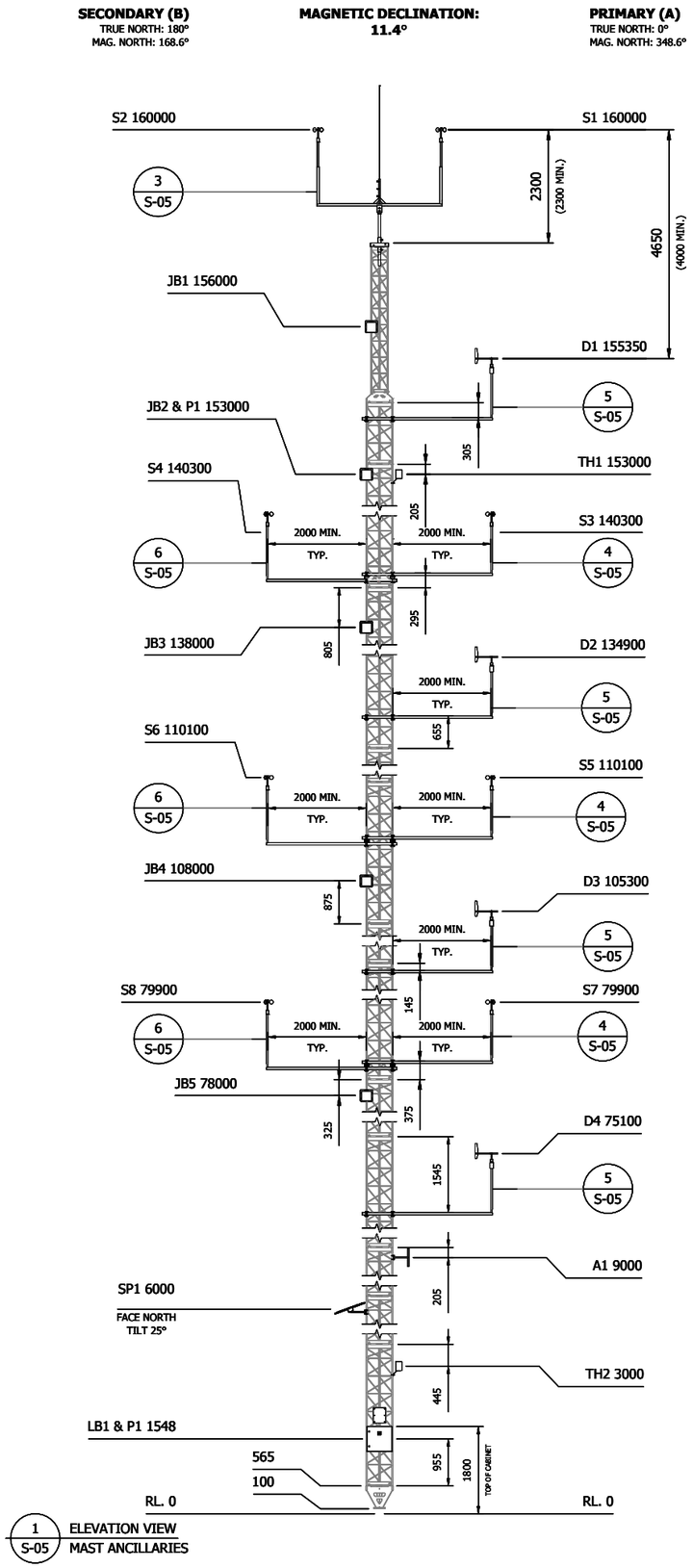
THIRD ANGLE PROJECTION

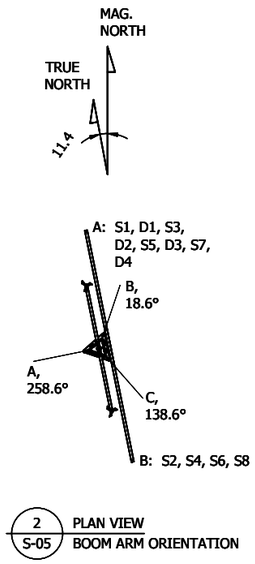
DRAWN	CHECKED	APPROVED	CO-ORDINATED
VG	HY	AT	AT

DRAWING NUMBER
ART-22599-DRG-0002

SHEET 4 / 10

ISSUE 01

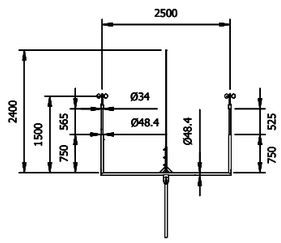




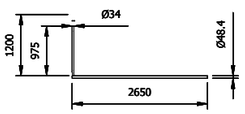
MAST ANCILLARY LOADING

MARK	DESCRIPTION	HEIGHT	SECTION	ESA m²
LR1	LIGHTNING ROD	160900	TOP	0.56
S1	ANEMOMETER FCA2	160000		
S2	ANEMOMETER FCA2			
JB1	JUNCTION BOX	156000	55	0.06
D1	WIND VANE THIES FIRST CLASS	155350		0.2
TH1	TEMP. & HUMIDITY GALTEC MELA KPC	153000	53	0.02
JB2	JUNCTION BOX		53	0.06
P1	PRESSURE VAISALA PTB 110		53	
S3	ANEMOMETER FCA2	140300	49	0.2
S4	ANEMOMETER FCA2			0.2
JB3	JUNCTION BOX	138000	48	0.06
D2	WIND VANE THIES FIRST CLASS	134900	47	0.2
S5	ANEMOMETER FCA2	110100	39	0.2
S6	ANEMOMETER FCA2			0.2
JB4	JUNCTION BOX	108000	38	0.06
D3	WIND VANE THIES FIRST CLASS	105300	37	0.2
S7	ANEMOMETER FCA2	79900	28	0.2
S8	ANEMOMETER FCA2			0.2
JB5	JUNCTION BOX	78000	27	0.06
D4	WIND VANE THIES FIRST CLASS	75100	26	0.2
A1	ANTENNA OMNI COL7195	9000	3	0.02
SP1	SOLAR PANEL SOLAWAT 50w	6000	2	0.33
TH2	TEMP. & HUMIDITY GALTEC MELA KPC	3000	1	0.02
LB1	CAMPBELL SCIENTIFIC DATA LOGGER CR1000X	1500		0.27
		TOTAL ESA m²		3.52

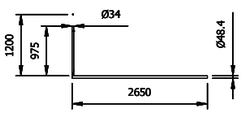
NOTES:
1. STRUCTURAL ALLOWANCE FOR BUNDLED CABLES DOWN MAST LEG(S).
2. ESA VALUES INCLUDE BOOM ARMS, BRACKETS AND INSTRUMENTS.



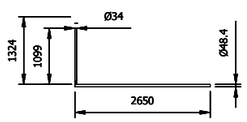
3 S-05 BAAS-0002
TOP GOAL-POST
2x THIES FCA2/X



4 S-05 BA-040
BOOM ARM
ANEMOMETER
THIES FCA2/X



5 S-05 BA-069
BOOM ARM
WIND VANE
THIES FIRST CLASS



6 S-05 BA-043
BOOM ARM
ANEMOMETER
THIES FCA2/X

NOTES

		DATE

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

CLIENT

PROJECT

SHEET TITLE
MAST ANCILLARY DETAILS

STATUS

SCALE PLOTTED AT A3	THIRD ANGLE PROJECTION		
1:100			
DRAWN	CHECKED	APPROVED	CO-ORDINATED
VG	PFB	AT	AT

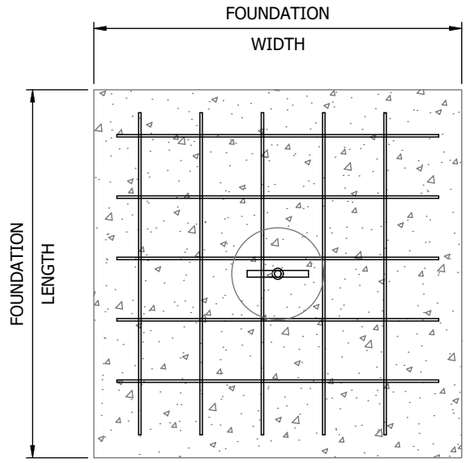
DRAWING NUMBER	SHEET	ISSUE
ART-22599-DRG-0002	5 / 10	01

MAST BASE FOUNDATION			
WIDTH	LENGTH	DEPTH	VOL. OF CONCRETE
1800	1800	700	2.268m³

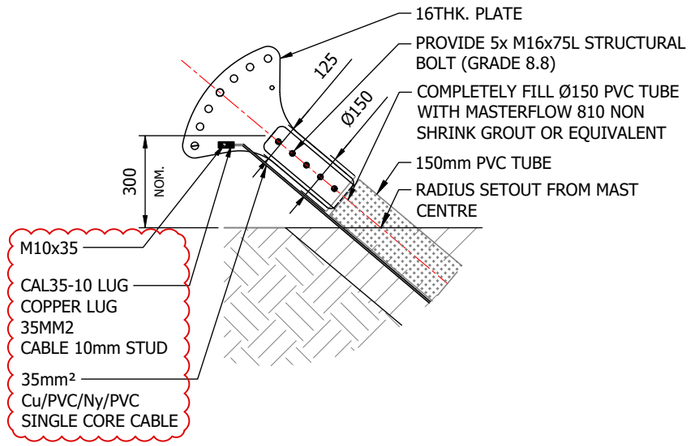
GUY ANCHOR FOOTING SCHEDULE

FOOTING	RADIUS	No. GUYS	EXCAV. WIDTH	EXCAV. LENGTH	EXCAV. DEPTH	ANCHOR BEAM	ANCHOR TYPE	ANGLE	DIM A	DIM B	DIM C	GROUT WEIGHT (kg)	PIPE LENGTH	ANCHOR HEAD	TURNBUCKLE GALV.
INNER	30000	5	800	3400	1600	3000	BURIED	48°	1454	400	2380	56	2000	7 HOLE	5/8"
INTERMEDIATE	70000	5	800	3400	2200	3000	BURIED	51°	1762	400	3026	75	2700	7 HOLE	5/8"
OUTER	110000	4	800	3400	2200	3000	BURIED	49°	1884	400	3111	77	2700	7 HOLE	5/8"

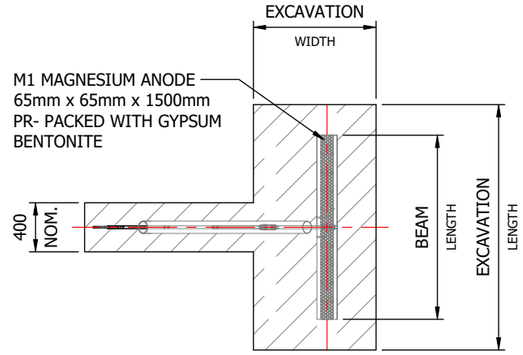
NOTES
1. REFER TO GENERAL NOTES (SHEET 2) GUY ANCHOR COMPACTION SPECIFICATIONS.



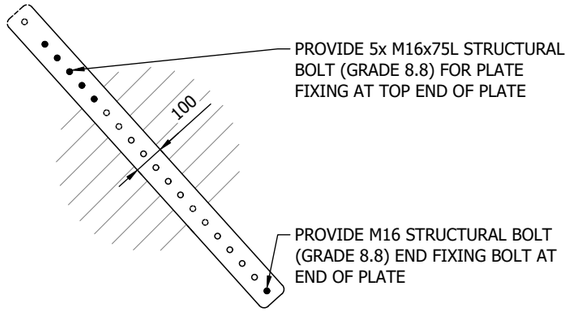
1 / S-06 PLAN VIEW
CONCRETE IN-SITU MAST BASE
TYPICAL DETAIL



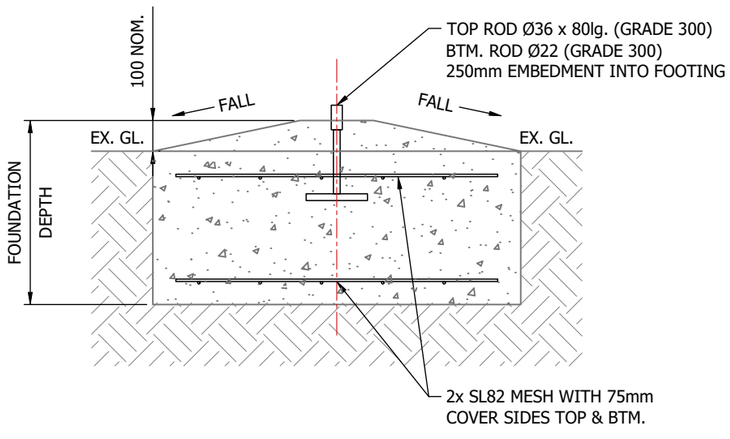
A / S-06 DETAIL VIEW
ANCHOR HEAD ASSEMBLY
TYPICAL DETAIL



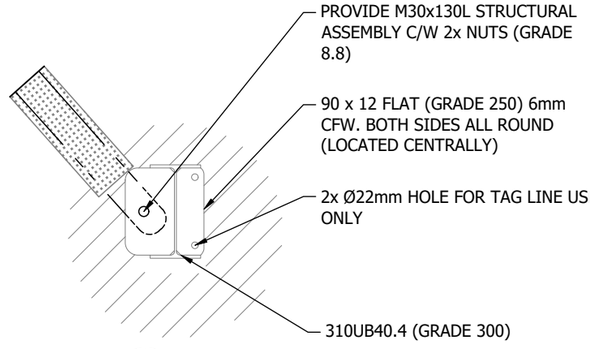
3 / S-06 PLAN VIEW
GUY ANCHOR FOOTING
TYPICAL DETAIL



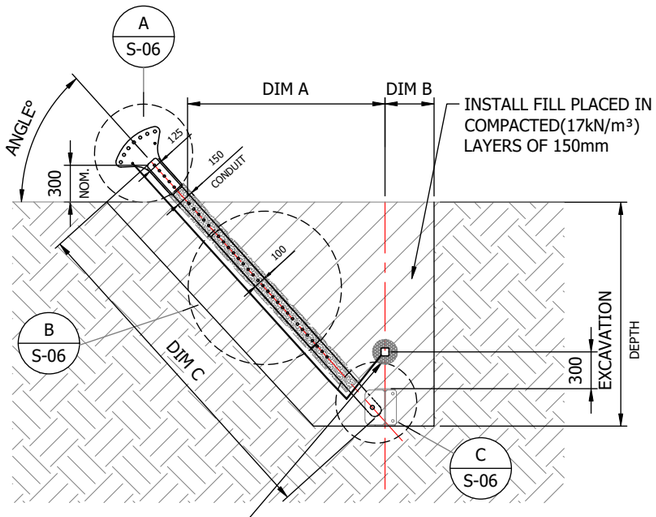
B / S-06 DETAIL VIEW
ANCHOR ROD CONNECTION
PVC TUBE & EARTH NOT SHOWN FOR CLARITY
TYPICAL DETAIL



2 / S-06 SECTION VIEW
CONCRETE IN-SITU MAST BASE
TYPICAL DETAIL



C / S-06 DETAIL VIEW
ANCHOR BEAM ASSEMBLY
TYPICAL DETAIL



4 / S-06 SECTION VIEW
GUY ANCHOR FOOTING
TYPICAL DETAIL

REV	DESCRIPTION	DATE

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

CLIENT

PROJECT

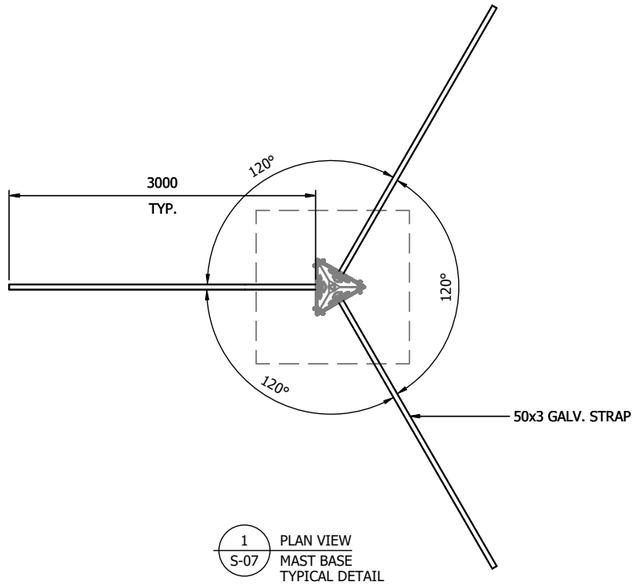
SHEET TITLE
MAST FOOTING DETAILS

STATUS

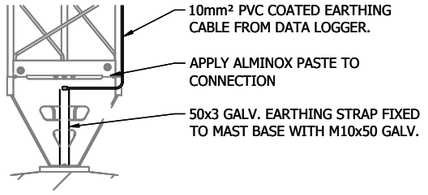
SCALE PLOTTED AT A3	THIRD ANGLE PROJECTION
N.T.S.	

DRAWN	CHECKED	APPROVED	CO-ORDINATED
VG	HY	AT	AT

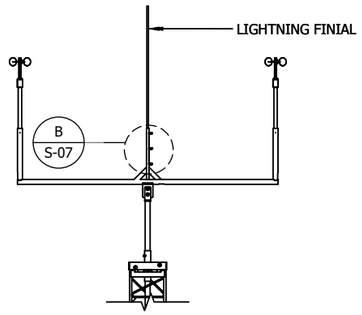
DRAWING NUMBER	SHEET	ISSUE
ART-22599-DRG-0002	6 / 10	01

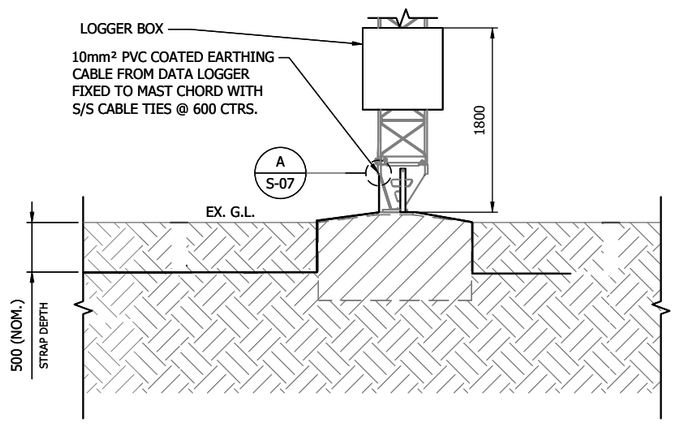


1 / S-07 PLAN VIEW
MAST BASE
TYPICAL DETAIL

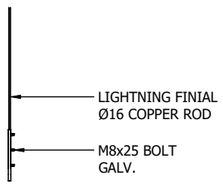


A / S-07 DETAIL VIEW
MAST BASE
EARTHING CONNECTION
TYPICAL DETAIL





2 / S-07 SECTION VIEW
MAST BASE
TYPICAL DETAIL



B / S-07 DETAIL VIEW
GOAL POST / LIGHTNING FINIAL
TYPICAL DETAIL

NOTES

1. REFER TO GENERAL NOTES (SHEET 2) FOR EARTHING SPECIFICATIONS.

		DATE

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

CLIENT

PROJECT

SHEET TITLE

STATUS FOR CONSTRUCTION

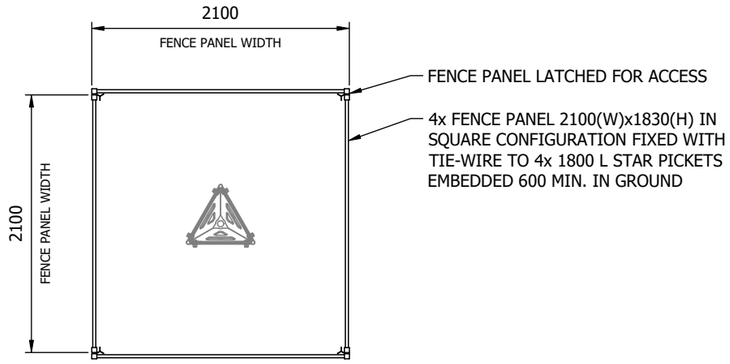
SCALE PLOTTED AT A3	THIRD ANGLE PROJECTION
N.T.S.	

DRAWN	CHECKED	APPROVED	CO-ORDINATED
VG	HY	AT	AT

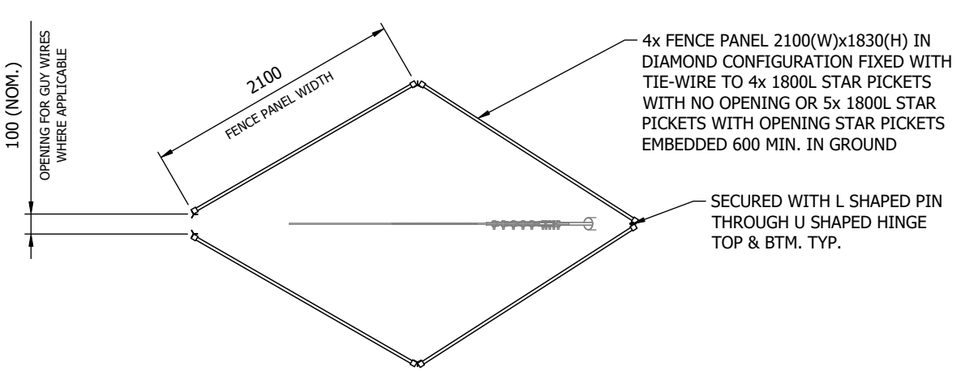
DRAWING NUMBER	SHEET	ISSUE
ART-22599-DRG-0002	7 / 10	01

NOTES:

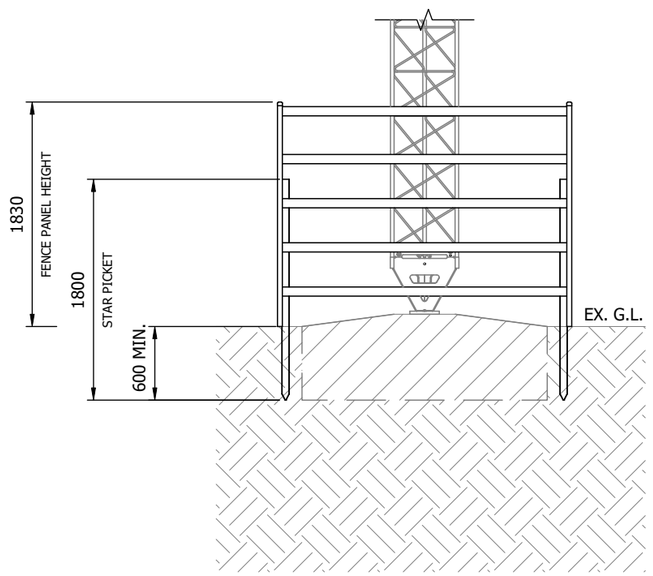
1. POSITION STAR PICKETS BEHIND FENCE PANELS.
2. NO SHARP EDGES ON THE OUTSIDE OF FENCE PANELS.
3. INNER ANCHOR - 4 PANELS & 5 STAR PICKETS (OPENING).
4. OTHER ANCHOR(S) - 4 PANELS & 4 STAR PICKETS.
5. FOOTINGS SHOWN FOR INDICATIVE PURPOSE ONLY REFER TO MAST FOOTING AND FOUNDATION DETAILS (SHEET 6).



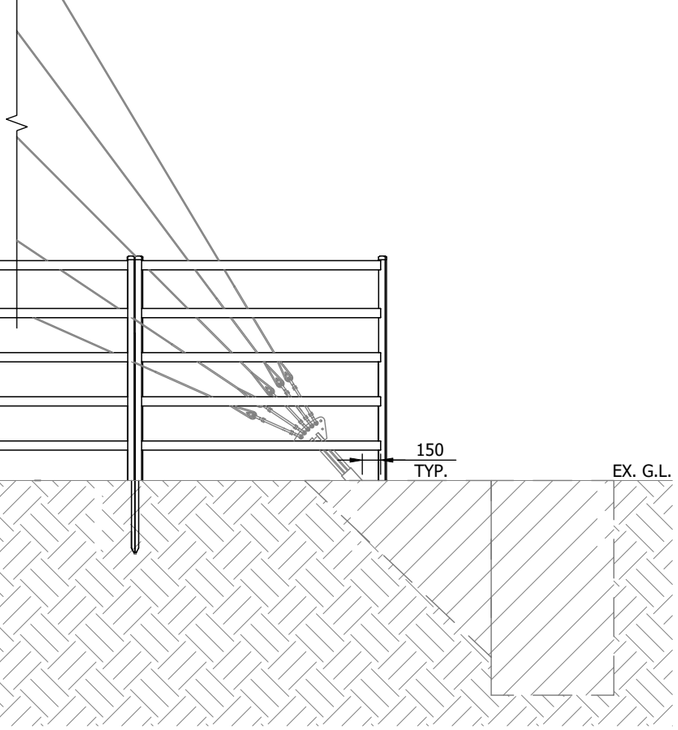
1 / S-08 PLAN VIEW
MAST BASE FENCING TYPICAL DETAIL



3 / S-08 PLAN VIEW
GUY ANCHOR FENCING TYPICAL DETAIL



2 / S-08 SECTION VIEW
MAST BASE FENCING TYPICAL DETAIL



4 / S-08 SECTION VIEW
GUY ANCHOR FENCING TYPICAL DETAIL

NOTES

		DATE

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

CLIENT

PROJECT

SHEET TITLE
FENCING DETAILS

STATUS

SCALE PLOTTED AT A3	THIRD ANGLE PROJECTION
N.T.S.	

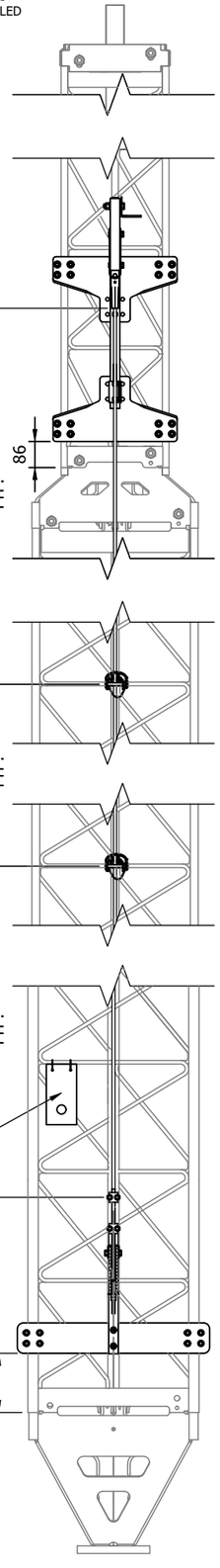
DRAWN	CHECKED	APPROVED	CO-ORDINATED
VG	HY	AT	AT

DRAWING NUMBER	SHEET	ISSUE
ART-22599-DRG-0002	8 / 10	01

LAD-SAF FALL ARREST SYSTEM INSTALLATION NOTES:

INSTALL LAD-SAF FALL ARREST SYSTEM AS PER MANUFACTURES SPECIFICATIONS. GENERALLY, THE LAD-SAF SYSTEM IS INSTALLED FROM THE TOP DOWN WITH THE FOLLOWING PROCEDURE:

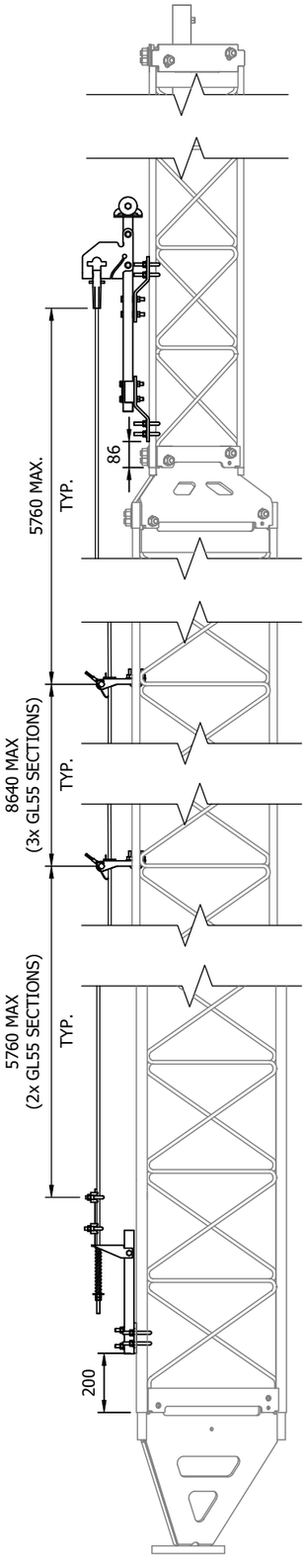
1. INSTALL THE TOP BRACKETS
2. INSTALL THE TOP COMPONENT TO BRACKETS
3. INSTALL THE CABLE TO THE TOP COMPONENT
4. INSTALL THE CABLE GUIDES
5. INSTALL THE BOTTOM BRACKET
6. INSTALL THE BOTTOM COMPONENT TO BRACKET
7. TENSION THE CABLE
8. INSPECT THE INSTALLATION
9. INSTALL THE i-SAFE RFID TAG AT BOTTOM OF MAST



1 / S-09 FRONT VIEW
LAD-SAF FALL ARREST
TOP ASSEMBLY
GL55/36 MAST
TYPICAL DETAIL

2 / S-09 FRONT VIEW
LAD-SAF FALL ARREST
CABLE GUIDE
GL55/36 MAST
TYPICAL DETAIL

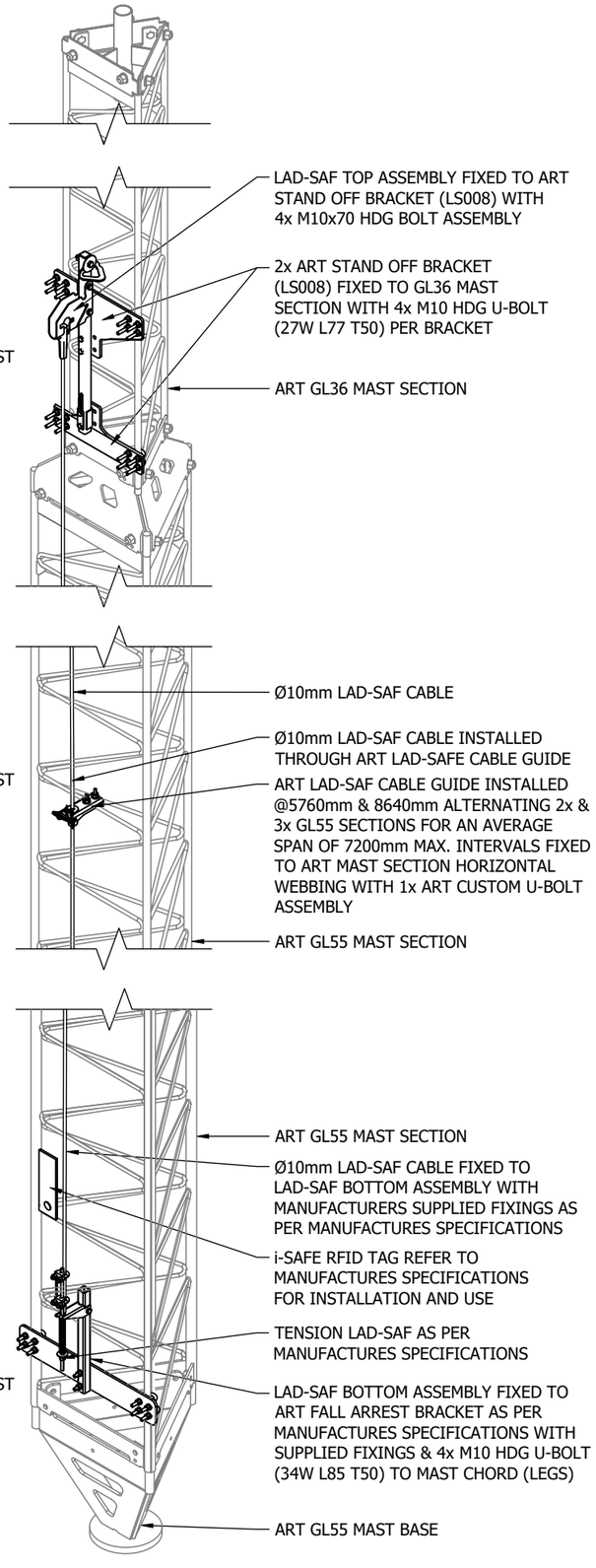
3 / S-09 FRONT VIEW
LAD-SAF FALL ARREST
BOTTOM ASSEMBLY
GL55/36 MAST
TYPICAL DETAIL



4 / S-09 SIDE VIEW
LAD-SAF FALL ARREST
TOP ASSEMBLY
GL55/36 MAST
TYPICAL DETAIL

5 / S-09 SIDE VIEW
LAD-SAF FALL ARREST
CABLE GUIDE
GL55/36 MAST
TYPICAL DETAIL

6 / S-09 SIDE VIEW
LAD-SAF FALL ARREST
BOTTOM ASSEMBLY
GL55/36 MAST
TYPICAL DETAIL



7 / S-09 ISOMETRIC VIEW
LAD-SAF FALL ARREST
TOP ASSEMBLY
GL55/36 MAST
TYPICAL DETAIL

8 / S-09 ISOMETRIC VIEW
LAD-SAF FALL ARREST
CABLE GUIDE
GL55/36 MAST
TYPICAL DETAIL

9 / S-09 ISOMETRIC VIEW
LAD-SAF FALL ARREST
BOTTOM ASSEMBLY
GL55/36 MAST
TYPICAL DETAIL

NOTES

REV	DESCRIPTION	DATE

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

CLIENT

PROJECT

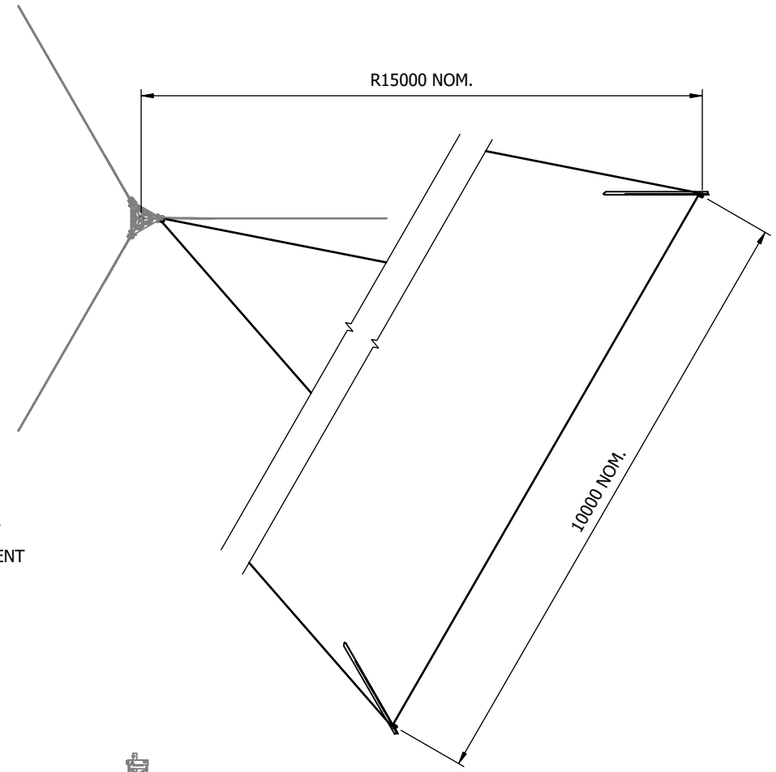
SHEET TITLE
FALL ARREST DETAILS

STATUS

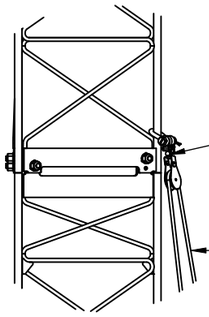
SCALE PLOTTED AT A3	THIRD ANGLE PROJECTION
N.T.S.	

DRAWN	CHECKED	APPROVED	CO-ORDINATED
VG	HY	AT	AT

DRAWING NUMBER	SHEET	ISSUE
ART-22599-DRG-0002	9 / 10	01



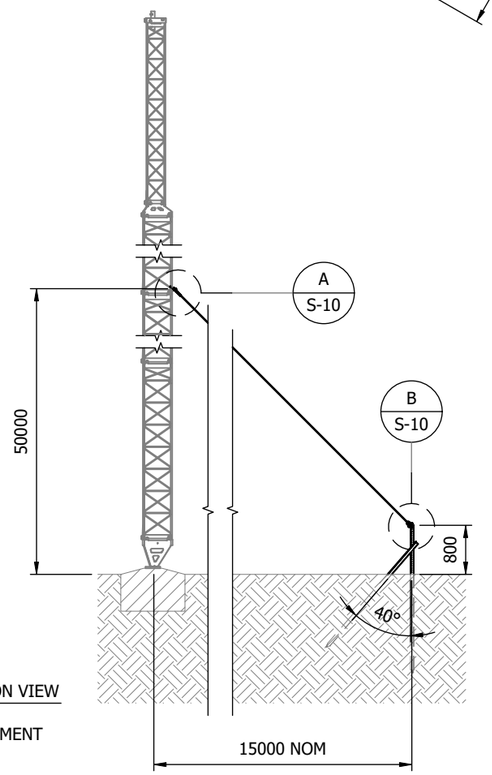
1 / S-10 PLAN VIEW
BAT MIC
ARRANGEMENT



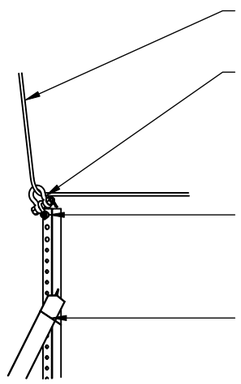
SINGLE BRACKET SWIVEL BLOCK FIXED TO 6mm BOW SHACKLE FIXED TO 16-22mm BOW SHACKLE FIXED TO MAST LEG

Ø5mm 16 PLAIT BRADED POLYESTER ROPE OR EQUIVALENT

A / S-10 DETAIL VIEW
BAT MIC
TOP MOUNT ARRANGEMENT
SCALE: 1:20



2 / S-10 ELEVATION VIEW
BAT MIC
ARRANGEMENT



ROPE JOINED WITH PRUSIK KNOT

BAT MIC ROPE FIXED THROUGH 16mm BOW SHACKLE FIXED TO 11mm BOW SHACKLE FIXED TO STAR PICKET

STAR PICKET HOLES ENLARGED TO SUIT 11mm BOW SHACKLE

STAR PICKETS FIXED WITH STAINLESS STEEL TIE WIRE

B / S-10 DETAIL VIEW
BAT MIC
BOTTOM MOUNT ARRANGEMENT
SCALE: 1:20

NOTES

REV	DESCRIPTION	DATE

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

CLIENT

PROJECT

SHEET TITLE
BAT MIC DETAILS

STATUS

SCALE PLOTTED AT A3
N.T.S.

THIRD ANGLE PROJECTION

DRAWN	CHECKED	APPROVED	CO-ORDINATED
VG	HY	AT	AT

DRAWING NUMBER
ART-22599-DRG-0002

SHEET
10 / 10

ISSUE
01

James Townsend
Director
Lacour Energy Developments Pty Ltd

By email: james@lacour.com.au

July 2025

Our reference: 101704-01

Dear James

Re: West Arthur Wind Farm Wind Monitoring Tower – Aviation Impact Assessment

Lacour Energy Developments Pty Ltd (Lacour) is developing the proposed West Arthur Wind Farm in the Shire of West Arthur Local Government Area (LGA), Western Australia. Lacour is pursuing up to one (1) Meteorological Mast installed within the Project Site.

Aviation Projects has prepared an Aviation Impact Assessment (AIA) for the WMT 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 04 September 2025.
    - Designated Airspace Handbook (DAH), effective 12 June 2025.
- 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 v1.3: *Operations in the vicinity of non-controlled aerodromes*, dated January 2025.
    - 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,* F2024C00161 registered 16/02/2024.
    - 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 July 2025.
- Planning Position Statement – Renewable energy facilities (14 Dec 2022).
- Shire of West Arthur's draft Planning Policy No 5 – Wind Farms.
- Other references as noted.

1.2. Project description

The proposed WMT is within the Shire of West Arthur LGA. The WMT's height is 161.5 m (530 ft) above ground level (AGL), and the ground elevation of the WMT is approximately 338 m Australian Height Datum (AHD) (Based on data provided by Lacour, who used Google Earth data). Considering the accuracy of the Google Earth database, a 5 m buffer error has been applied to the ground elevation. This results in a maximum height of approximately 504.5 m AHD (1655.2 ft above mean sea level (AMSL)).

Figure 1 Shows the location of the proposed WMT (Source: Lacour, Google Earth).

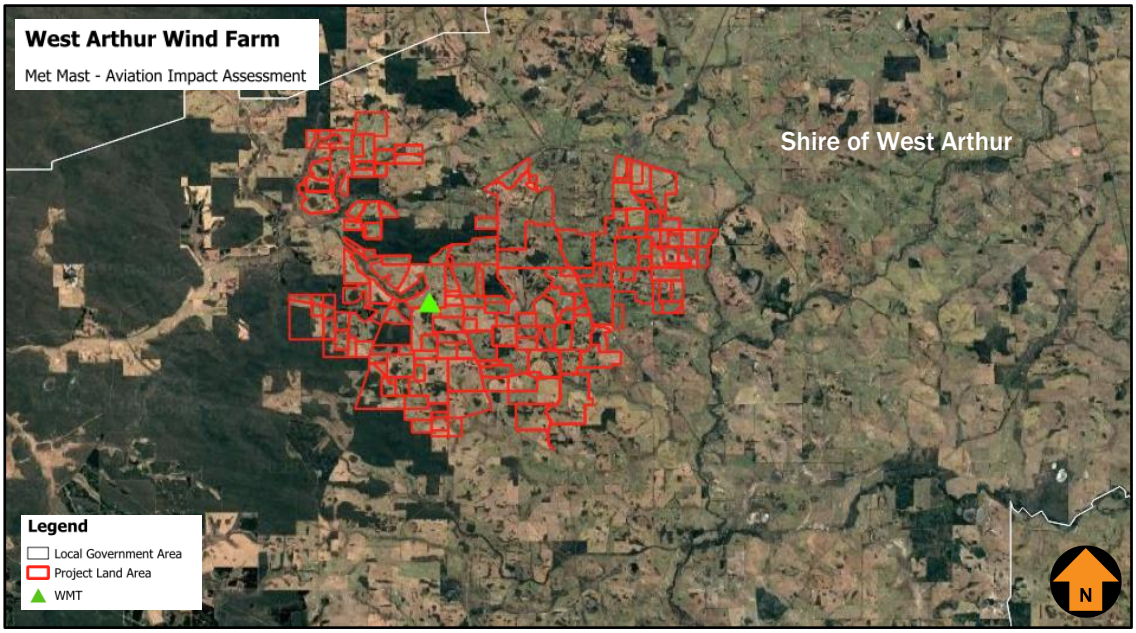


Figure 1 WMT's location

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

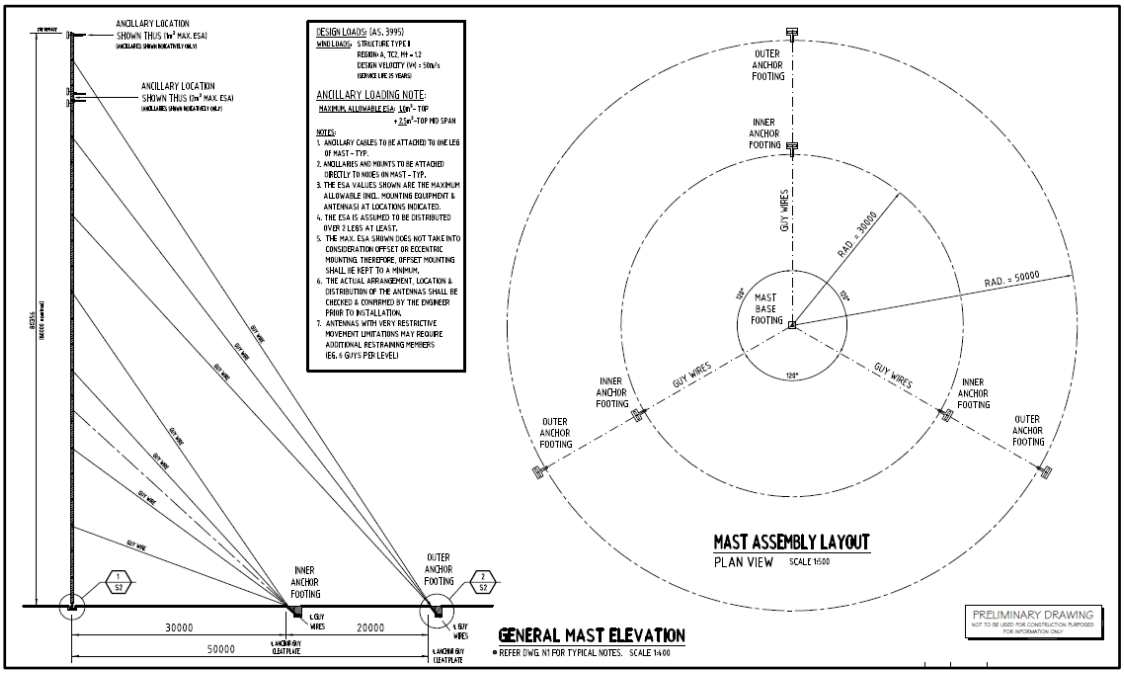


Figure 2 Typical Guyed Lattice Mast - general elevation

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*

- *Australian Wind Alliance*
- *Civil Aviation Safety Authority*

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 Statemen

1.4. Shire of West Arthur

The Shire of West Arthur prepared the Shire of West Arthur's draft Planning Policy No 5 – Wind Farms, which included:

Hillman Airfield

Multiple submissions object to references that must not be located within the vicinity of Hillman Airfield as being too vague. Several of these recommend that an Aviation Impact Assessment should be required.

There are two distinct issues associated with of Hillman Airfield being the potential impact on:

- *The aircraft landing and take-off operations; and*
- *The sky diving and parachute training activities.*

Both of these issues have a greater impact because of the RAAF operations noting that:

- *RAAF transport aircraft require a 7nm (13km) buffer along the North / South axis of Hillman Farm airfield for approaches and take-offs, both in day and night.*
- *The military paratroopers require a min distance of 5nm (9kms) East / West of the axis of Hillman Farm airfield, due to long transit's, under canopy, from height both day and night.*

This area is shown below, and again, it is emphasised that this is not a prohibition, but any development in this area will have to consider the potential impacts on these operations.

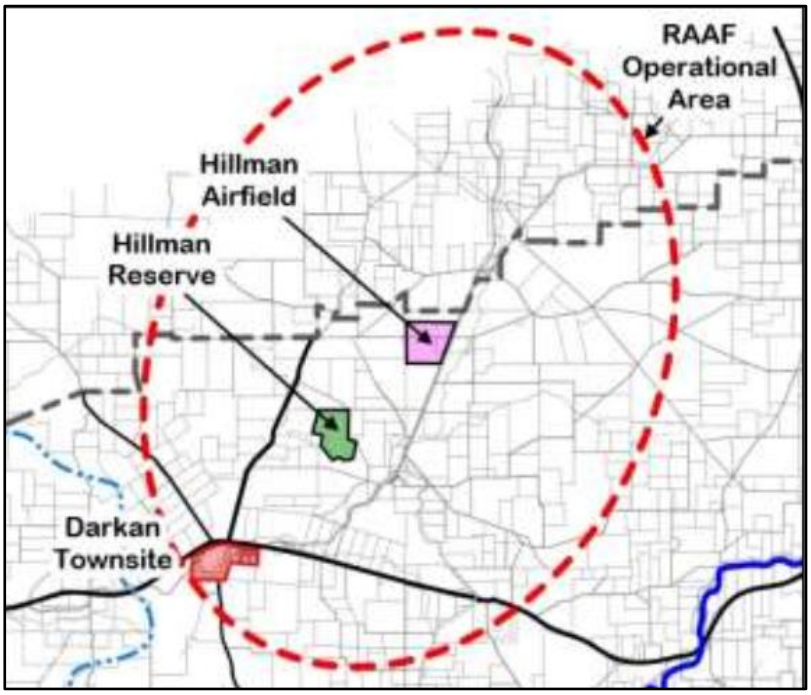


Figure 3 RAAF Operational Area

1.5. 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.

Figure 4 Location of certified airport in relation to the proposed WMT

There are no certified aerodromes located within 30 nm of the proposed site. The closest certified aerodrome is Bunbury Airport (YBUN), approximately 85 km/46 nm west of the Project Site.

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 WMT's site relative to Bunbury Airport (YBUN), Busselton Airport (YBLN) and Katanning Airport (YKNG) is shown in Figure 4 (Source: Lacour, Google Earth). The orange circle represents a 30 nm radius from the airport's aerodrome reference point (ARP).

1.6. 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 12 June 2025
- 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.

Figure 5 Aerodromes in the vicinity of the WMT' site.

Figure 5 Shows the location of nearby aerodromes relative to the WMT's site and a nominal 3 nm buffer from the closer aerodromes (source: Lacour, Google Earth).

Hillman Farm Airstrip (YHLM) is the closest to the Project. The Project is located outside a radius of 3 nm of the YHLM.

1.6.1. Shire of West Arthur's draft Planning Policy No 5 – Wind Farms

As detailed in Section 1.4, Shire of West Arthur prepared the draft of planning policy No. 5, which included a 7 nm (13 km) buffer for RAAF transport aircraft operations and a 5 nm (9 km) buffer for military paratroopers. The buffer area in relation to the project area is shown in Figure 6 (Source: Lacour, Google Earth, Shire of West Arthur draft panning policy No.5).

The WMT will not be within the buffer areas. The WMT will not create a hazard to any uncertified aerodromes.

There is no detailed information regarding the buffer, except the West Arthur draft planning policy No.5. Aviation Projects only traced the area based on the No 5 policy to identify the potential impact. Liaison with Defence will provide the exact protection that military operations of this kind require or are recommended.

Figure 6 The 5 nm and 7 nm buffer areas in relation to the project area

1.7. 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.

1.7.1. Grid LSALT

The proposed WMT is within the airspace grid LSALT of 2900 ft AMSL, which has a protection surface of 1900 ft AMSL.

Figure 7 shows the Grid LSALT in proximity to the WMT (source: ERC Low National, OzRunways, Google Earth).

The WMT's height is 504.5 m AHD (1655.2 ft AMSL), below the 1900 ft protection surface.

Therefore, the WMT will not impact the 2900 ft Grid LSALT.

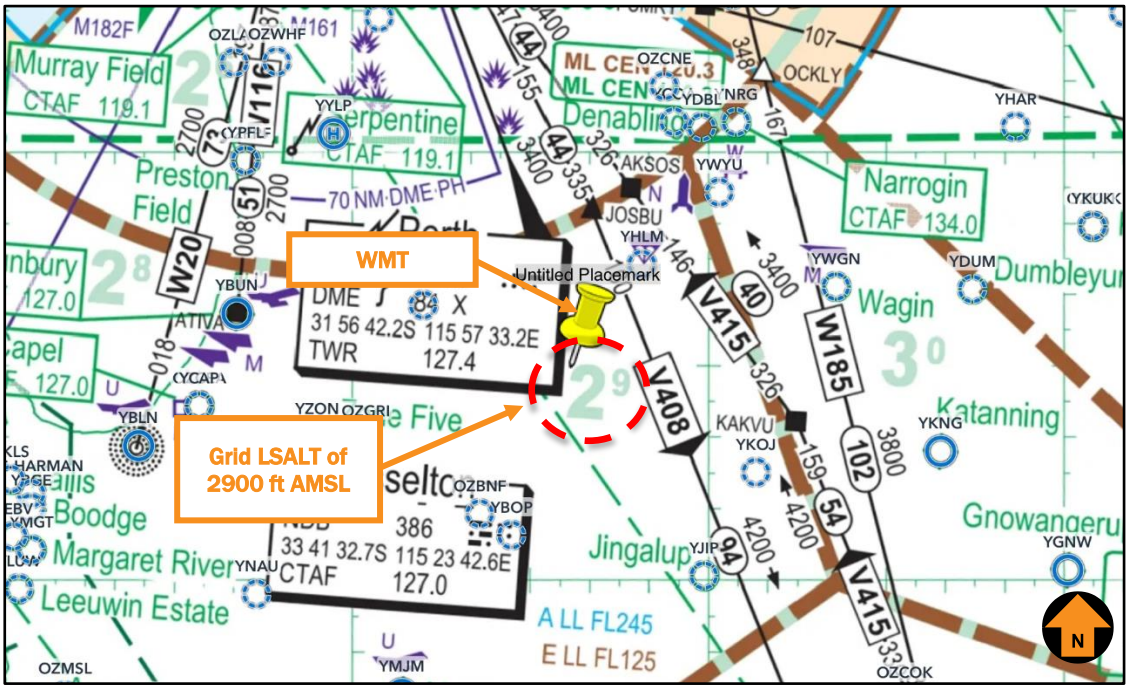


Figure 7 Grid LSALT in proximity to the WMT's site.

1.7.2. 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.

There is one (1) air route within the protection area of the Project Site. An impact analysis of the air routes is provided in Table 1.

The WMT is 504.5 m AHD (1655.2 ft AMSL), lower than the air route's protection surface. Therefore, the WMT will not impact any Air route LSALT.

Table 1 Air route impact analysis

Air route	*Waypoint pair*	*Route LSALT*	*Protection Surface*	*Impact on airspace design*	*Potential solution*	*Impact on aircraft ops*
V408	JOSBU and ARUMI	4200	3200	Nil	Nil	N/A

1.8. Airspace

The WMT is located outside of controlled airspace (wholly within Class G airspace) and is not located in any Prohibited, Restricted and Danger areas.

The WMT will not have an impact on controlled or designated airspace.

1.9. 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.

The WMT is located sufficient distance away from nearby certified aerodromes and aviation facilities and will not have an impact.

1.10. 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.

1.11. Civil Aviation Safety Authority - regulatory context

The 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.

1.11.1. 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 WMT is required to report the WMT 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.*

The notification should be provided to CASA via email to Aerodromes@casa.gov.au and Airspace.Protection@casa.gov.au.

1.11.2. 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:*
>
> *o 100 m or more above ground level*
>
> *or*

o 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/

1.11.3.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.

There is no regulatory requirement to provide obstacle lighting on the proposed WMT that is not within the vicinity of an aerodrome. Generally, the voluntary provision of obstacle lighting should be considered to ensure visibility in low light and deteriorating atmospheric conditions. CASA will review the proposed WMT for potential hazards to aircraft operations and may recommend lighting the proposed WMT.

1.12. 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.*

1.13. Consultation

The following list of stakeholders was identified as requiring consultation:

- Airservices Australia

- Department of Defence

Details and results of the consultation activities will be provided in Table 2 once received feedback.

Table 2 Stakeholder consultation details

Agency/Contact	*Activity/ Date*	*Response/ Date*	*Issues Raised During Consultation*	*Action Proposed*
Airservices Australia				
Department of Defence				

1.14. Summary

The following list of findings summarises the outcome of this assessment, based on the maximum height of the 161.5 m AGL WMT of 504.5 m AHD (1655.2 ft AMSL):

- There are no certified aerodromes located within 30 nm (55.6 km) of the WMT
- There are no uncertified aerodromes identified within 3 nm of the WMT's site.
- Shire of West Arthur prepared the draft of planning policy No. 5, which included a 7 nm (13 km) buffer for RAAF transport aircraft operations and a 5 nm (9 km) buffer for military paratroopers at Hillman Farm Airstrip. Based on public information, WMT is outside the RAAF operation buffer area. However, liaison with Defence will provide the exact protection or recommendations for military operations
- The WMT will not affect any Grid or airway route segment LSALT
- The WMT will not have an impact on controlled or designated airspace.
- Marking the WMT 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. However, the following markings are recommended to be implemented in consideration of potential day VFR aerial work operations in accordance with NASF Guideline D, as shown in Figure 8 (Source: Part 139 MOS 2019):
    - Obstacle marking for at least the top 1/3 of the mast and be painted in alternating contrasting bands of colour
    - Marker balls or high visibility flags or high visibility sleeves placed on the outside guy wires
    - Guy wire ground attachment points in contrasting colours to the surrounding ground/vegetation.

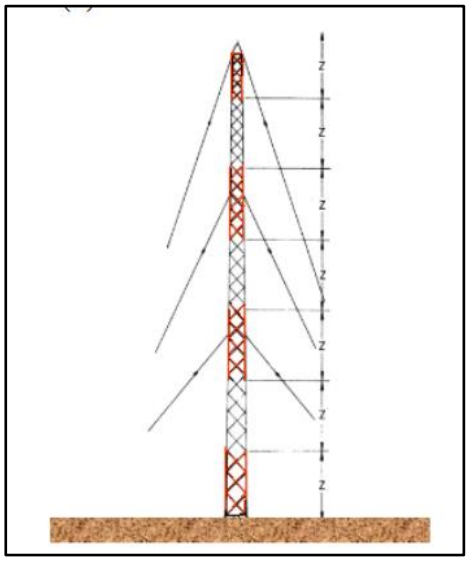


Figure 8 CASA Figure 8.110 (5) Markings

- There is no regulatory requirement to provide obstacle lighting on the proposed WMT that is not within the vicinity of an aerodrome. Generally, the voluntary provision of obstacle lighting should be considered to ensure visibility in low light and deteriorating atmospheric conditions. CASA will review the proposed WMT for potential hazards to aircraft operations and may recommend lighting the proposed WMT.
- Due to exceeding 100 m AGL, details of the WMT must be reported to CASA as soon as practicable after forming the intention to construct or erect the proposed object or structure in accordance with CASR Part 139.165(1)(2).
- 'As constructed' details of the proposed WMT coordinates and elevation should be provided to Airservices Australia at least two weeks before the installation, 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 0433 747 835.

Kind regards

Lyn Wang

Aviation Specialist Consultant

31 July 2025

Indicative view of Meteorological Mast

View looking South East from Gibbs Road - Viewing distance is around 1.7 km

Plan showing photo location on Gibbs Road and Mast Location

Indicative Meteorological Mast Arrangement

(photo of similar mast located in WA)