SHIRE OF VICTORIA PLAINS APPROVED DEVELOPMENT APPLICATION

This is a final complete copy of a development application approved by the Shire of Victoria Plains on 28 November 2024.

Sean Fletcher Chief Executive Officer 29 November 2024

METEOROLOGICAL MAST DEVELOPMENT APPLICATION

Grevillea Wind Farm



URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Director Megan Gammon
Consultant Luke Mifsud
Project Code P0050504

Report Number Amendment 1 – 16 September 2024

Urbis acknowledges the important contribution that Aboriginal and Torres Strait Islander people make in creating a strong and vibrant Australian society.

We acknowledge, in each of our offices, the Traditional Owners on whose land we stand.

All information supplied to Urbis in order to conduct this research has been treated in the strictest confidence. It shall only be used in this context and shall not be made available to third parties without client authorisation. Confidential information has been stored securely and data provided by respondents, as well as their identity, has been treated in the strictest confidence and all assurance given to respondents have been and shall be fulfilled.

© Urbis Ltd 50 105 256 228

All Rights Reserved. No material may be reproduced without prior permission.

You must read the important disclaimer appearing within the body of this report.

urbis.com.au

CONTENTS

1.	Intro	duction		1
2.	Site	Context		2
	2.1.		and Context	
	2.2.	Lot Partio	culars	3
3.	Pre-L	odgement C	Consultation	5
4.	Prop	osed Develo	ppment	6
	4.1.	Overviev	· N	6
	4.2.		al Considerations	
		4.2.1.	Environmental	
		4.2.2. 4.2.2.1.	HeritageAboriginal Cultural Heritage	
		4.2.2.1.		
		4.2.3.	Aviation Impact	
		4.2.4.	Landscape and Visual Impact	
		4.2.5.	Bushfire	12
5.	State	Planning Fr	ramework	13
6.			rameworks	
	6.1.	6.1.1.	Victoria Plains Local Planning Scheme No. 5 Land Use Permissibility	
		6.1.1.	General Development Requirements	
		6.1.2.1.	·	
		6.1.2.2.	, i	
		6.1.2.3.	Vehicle Access and Road Construction	18
		6.1.2.4.	0	
		6.1.2.5.	Servicing Requirements	
	6.2.	6.1.2.6.	Rural ZoneVictoria Plains Local Planning Strategy 2012	
	6.3.		Victoria Plains Local Planning Strategy 2012	
			· ·	
7.	Cond	lusion		22
8.	Discl	aimer		23
Appen	div A	Certificates	s of Title	
Appen			gical Mast Plans/Specifications	
Appen			npact Assessment	
Appen	dix D	View Shed	Images	
FIGUR				
FIGUR			Diam	0
_	_		Plan	
_				
-				
-			ole Imagery	
_		_	Plan	
-		_		
-			apping	
Figure 8	8 - Sche	eme Map Extr	ract	14

TABLES

Table 1 - Lot Particulars	3
Table 2 - Consultation Summary	5
Table 3 - Registered ACH within the Project Area	
Table 4 - Lodged ACH within the Project Area	
Table 5 - Historic Heritage	
Table 6 - LPS 5 Clause 31 Principles	. 15
Table 7 - LPS 5 Clause 35	. 17
Table 8 - LPS 5 Clause 36	. 18
Table 9 - LPS 5 Clause 44	. 19

1. INTRODUCTION

This report has been prepared by Urbis on behalf of Grevillea Wind Farm Pty Ltd to support a development application for the installation of a meteorological mast ('met mast') for the future Grevillea Wind Farm located within the Shire of Victoria Plains, approximately 20km south of the Moora townsite.

The Grevillea Wind Farm is being developed in partnership between Green Wind Renewables (**GWR**) and Aula Energy, a portfolio company of Macquarie Asset Management. This partnership is seeking to develop, finance and construct a portfolio of large-scale onshore wind farms in Western Australia that includes Grevillea Wind Farm, which encompasses rural land located within both the Shire of Moora, and the Shire of Victoria Plains.

This application seeks approval for the construction and installation of one met mast which will be a temporary structure in place for a period of 5-7 years, at which point the met mast will be deconstructed and removed. The proposed met mast will measure approximately 151.2 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.

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

2. SITE CONTEXT

2.1. LOCATION AND CONTEXT

The proposed met mast is located within the Shire of Victoria Plains (**Shire**), approximately 128km north of the Perth CBD, 91km northeast of Yanchep, 114km southeast of Jurien Bay, and 20km south of Moora. It is highlighted that the future wind farm will encompass areas both within the Shire of Moora and the Shire of Victoria Plains.

Locally, the proposed met mast is located on rural land. The area is characterised by its rural setting, surrounded by farmland and natural bushland. The site form part of land within the 'Central Midlands' area of the Wheatbelt region with agriculture and construction/manufacturing being significant industries in the region.

The regional context of the site is shown at Figure 1 below and the subject site is shown at Figure 2.

Figure 1 - Regional Context Plan

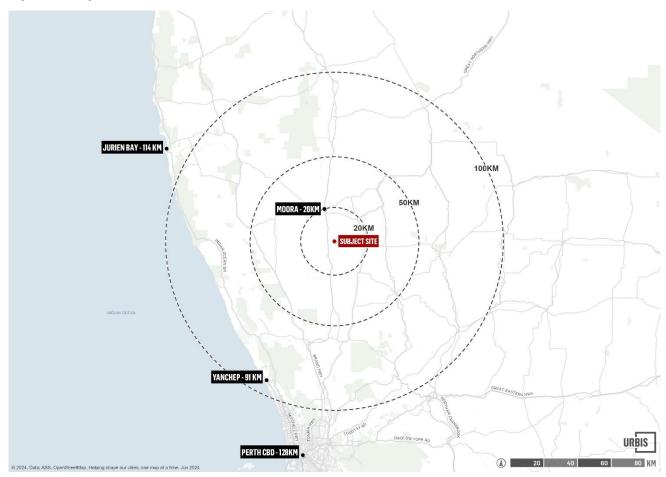


Figure 2 - Aerial Plan



2.2. LOT PARTICULARS

The met mast is proposed to be developed on a private landholding. **Table 1** presents the relevant lot subject to this development application, with **Figure 3** providing a cadastral plan of the subject site. While lot M1407 is where the proposed met mast is to be sited (**subject site**), access through lot M1421 from Scholz Road is necessary to facilitate development. Access through lot M1421 will be required for the life of the development (Refer to **Appendix B**).

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

Table 1 – Lot Particulars

Lot No.	Plan / Diagram	Volume	Folio	Street Address	Area (ha)	Proprietor(s)	Encumbrances / Other
M1407	D006129	1214	38	N/A	359.1079	Junex Nominees Pty Ltd	See Certificate of Title
M1421	D006179	1214	38	N/A	312.3161	Junex Nominees Pty Ltd	See Certificate of Title

Figure 3 - Cadastral Plan



3. PRE-LODGEMENT CONSULTATION

GWR on behalf of Grevillea Wind Farm Pty Ltd has undertaken consultation with nearby landholders and relevant government stakeholders over the past six months, informing this application and the broader wind farm development.

Importantly, GWR has maintained close engagement with the private 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 Summary

Stakeholder	Consultation Outcomes
Shire of Victoria Plains	The Shire has been consulted on the details of this met mast proposal as well as the broader wind farm project.
Subject Landowner:	The landowner is a signatory to and support this Development Application with the understanding that the meteorological mast is temporary, with the subject site to be remediated post-decommissioning.
Adjacent landowners	Consultation with key landowners surrounding the met mast (within 3km) has been undertaken) in addition to a broader engagement process for the wind farm. No issues have been raised in relation to the met mast.
Yued - Aboriginal Corporation (YAC)	Consultation has commenced with YAC regarding the execution of a Yued Heritage Protection Agreement (YHPA) with the Activity Notice for the met mast to be submitted once the YHPA is signed.
Civil Aviation Safety Authority (CASA)	Consultation was undertaken in relation to aviation safety. Notification of the proposal to CASA will be provided before construction commences.
Wider Community within Shire of Moora and Shire of Victoria Plains	Community Engagement has been ongoing for both the Met Mast and the Wind Farm with the current focus being on neighbours. A more detailed community engagement strategy is currently under preparation and will be implemented with the Shire of Moora and Victoria Plains communities regarding the broader wind farm proposal.

4. PROPOSED DEVELOPMENT

4.1. 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 approximately 151.2 metres tall. 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 delivered to site in sections on a flatbed truck. Installation of the met mast will take approximately 7 weeks which includes a period of 3 to 4 weeks for concrete to cure. A construction workforce of 5 to 7 people will be present for the installation, as well as an excavator and small crane.
- 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 Scholz Road via lot M1421 (under the same landownership).
- The erection of the mast only takes a few days depending on weather conditions. The crane is used only to erect the first few sections of the mast. Following a gin pole is used to continue building up to the desired height.
- The met mast is locked in place through a square tower foundation which comprises a concrete structure and measures approximately 60.0cm wide and 1.0 metre deep with provision of key anchor points which stabilise the met mast at the height proposed.
- 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.
- The met mast will be a temporary structure in place for a period of 5-7 years, 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**, with example imagery of the met mast provided at **Figure 4**.

Figures 4 - Met Mast Example Imagery







4.2. TECHNICAL CONSIDERATIONS

A number of technical considerations will inform the proposed layout of Grevillea Wind Farm – including ecology, heritage, bushfire, shadow flicker, aviation, landscape and visual assessment and other technical elements. These investigations have commenced and where relevant, have been utilised to inform this met mast development application.

A summary of the key relevant considerations is provided below, from an environmental, heritage, aviation, bushfire and landscape/visual impact perspective.

4.2.1. Environmental

Existing environmental studies for the Grevillea Wind Farm identify that there are no limiting environmental issues applicable to this development, with the sites not located near any major waterbodies.

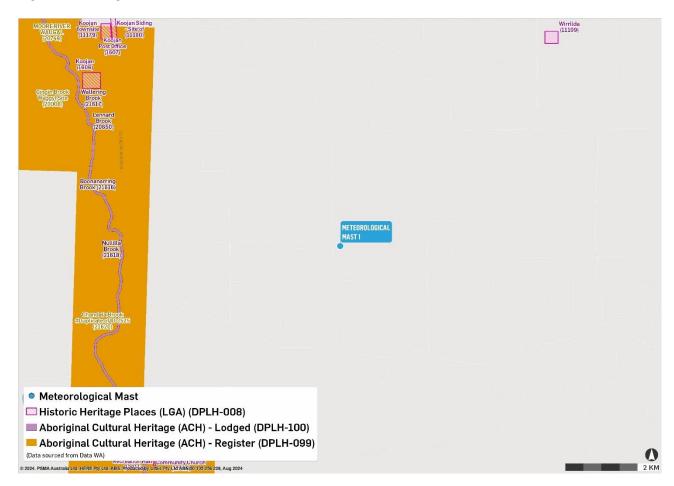
In addition, the subject site is located on land utilised for agrarian cropping and pasturing purposes and exist in a state that is cleared from remnant vegetation. Therefore, the clearing of native vegetation, and subsequent approvals under the *Environmental Protection Act 1986* is not required.

4.2.2. Heritage

An Aboriginal and Historical Due Diligence Assessment is being prepared by Urbis to inform the broader wind farm proposal including the proposed met mast. This assessment considers the potential impact of the subject area, including 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. The heritage context of the site and surrounds is shown at **Figure 5**.

Figure 5 - Heritage Context Plan



4.2.2.1. Aboriginal Cultural Heritage

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

The Aboriginal Cultural Heritage Inquiry System (**ACHIS**) identifies three Registered, and five Lodged ACH sites intersected by the subject site. However, none of them are impacted by the proposed met mast location.

The sites are presented in the **Tables 3** and **4** below:

Table 3 - Registered ACH within the Project Area

ID	Place Name	Site Type	Location	Status
20008	Gingin Brook Waggyl Site	Camp Creation / Dreaming Narrative Historical Hunting Place Plant Resource Water Source	Within Project Area	Registered Site
20749	Moore River Waugal	Creation / Dreaming Narrative	Within Project Area	Registered Site
21620	Chandala Brook #Duplicate of ID 3525	Creation / Dreaming Narrative	Within Project Area	Registered Site

Table 4 – Lodged ACH within the Project Area.

ID	Place Name	Site Type	Location	Status
21616	Boonanarring Brook	Creation / Dreaming Narrative	Within Project Area	Lodged
21617	Wallering Brook	Creation / Dreaming Narrative	Within Project Area	Lodged
21618	Nullilla Brook	Creation / Dreaming Narrative	Within Project Area	Lodged
21619	Breera Brook	Creation / Dreaming Narrative	Within Project Area	Lodged
20650	Lennard Brook	Creation / Dreaming Narrative; Landscape / Seascape Feature; Other; Water Source	Within Project Area	Lodged

The registered and lodged ACH sites are mostly located on the western boundary of the proposed wind farm boundary, approximately 5km away from the met mast location, therefore the probabilities of impacting the values of those site by the proposed met mast is minimal. Most of these sites have a heavy ethnographic component (Creation / Dreaming Narrative) that is related to the Moore River and its associated brooks and creeklets. This means that there are intangible values associated with waterways and the general landscape. It should be noted that the ACH boundaries available through ACHIS are not exhaustive of all possible ACH in Western Australia do not include sites that have not previously been identified, recorded, and registered. A detailed survey will be undertaken to inform the broader wind farm application.

There are no previous heritage surveys over the Subject area or five kilometres of its boundary according to ACHIS database. As such, an archaeological and ethnographic site inspection will be undertaken prior to construction to confirm the potential impact on the intangible values of the Registered and Lodged sites by the proposed met mast. On August 28th, Yued Aboriginal Corporation provided a copy of the Yued Heritage Protection Agreement (YHPA) to Green Wind Renewables for their review on behalf of Grevillea Wind Farm Pty Ltd. This document effectively replaces the Noongar Standard Heritage Agreement (NSHA). Once an agreement is executed by both parties, an Activity Notice for the proposed works associated to the installation of the met mast will be submitted and the site inspections completed in compliance with the YHPA.

At this point, it is anticipated that no impacts on the cultural values of any of the mentioned sites, therefore, a Section 18 consent under the Aboriginal Heritage Act 1972 will not be required.

4.2.2.2. Historic Heritage

There is only one historic heritage place listed under the Shire of Moora Local Heritage Survey also exist within and in proximity to the subject site. As these are not Heritage Listed (registered) places on the Shire's Municipal Heritage Inventory, there are no statutory requirements that apply. This place has been assigned a level 3 or 4 of significance and a category 5 (a site with built features), and it is recommended that the site is recognised by a plaque, place name, or similar. The places which are included within the subject site include:

Site of Koojan Siding (11180)

A summary of the key heritage place and a broad assessment of impact of the proposed met mast is provided in Table 5 below.

Table 5 - Historic Heritage

Heritage Place	Statement of Significance	Potential for Impact
11180 Site of Koojan Siding	The site represents an association with the railway.	This place is located a minimum of 8 km from the proposed met mast location. This is sufficient distance from the proposed location of works that the met mast will not impact the construction typology or ability to interpret the age of this heritage place.

4.2.3. Aviation Impact

An Aviation Impact Assessment has been prepared by Aviation Projects for the proposed met mast. The assessment concludes that the proposed location will have little notable impact to aviation operations in the area, specifically noting that:

- It will provide adequate clearance into the lowest safe altitude;
- Is not within controlled airspace;
- There are no verified uncertified aerodromes (aircraft landing areas) located within 3 nautical miles of the proposed met mast site and there will be no impact to any verified aeroplane landing areas caused by the met mast.

- While located laterally within restricted airspace (controlled by RAAF Base Pearce), it is within vertical limits and will not affect the function of the restricted area; and
- It will not affect communication, navigation, or surveillance facilities.

However, the Assessment notes that there may be some low-level aircraft operations in the area related to the associated activities in the area (e.g. relating to surrounding rural uses) and Danger Area D193 (Lowflying military aircraft). On this note, the assessment recommended several actions to be undertaken:

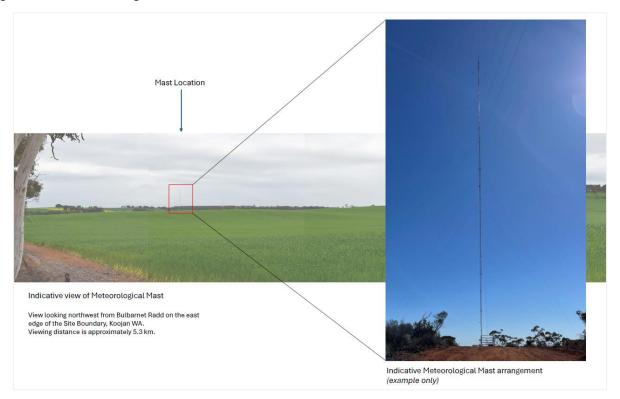
- While not mandatory, the assessment recommends marking the meteorological towers with:
 - Contrasting flags or balls on the guy wires;
 - Alternating contrasting bands painted to the upper third of the mast frame; and
 - Relative to the surrounding vegetation, contrasting guy wire attachment points.
- Obstacle lighting is not a regulatory requirement on the met mast however may be considered as additional mitigation. CASA will review the WMT and provided a recommendation for obstacle lighting if they determine the met mast will be hazardous to aircraft operations. At 151.2 m AGL, it is possible that CASA may recommend the met mast be lit, however this would not be mandatory.
- Report the construction details of the metrological mast as soon as reasonably possible to the CASA after development approval is achieved and the location of the mast is confirmed. This is required under the Civil Aviation Safety Regulations 1998; and
- Details and location of the mast should be provided to Air Services Australia. This will be done concurrently with the reporting to CASA.

Refer to **Appendix C** for a copy of the Aviation Impact Assessment.

4.2.4. 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 6 (full copies and location plan included at Appendix D). The view is taken looking north-west from Bulbarnet Road, with an approximate viewing distance of 5.3km. Figure 6 demonstrates that the proposed met mast will not be a dominant feature in the rural landscape. A more detailed landscape and visual impact assessment will be undertaken in the future to support the broader wind farm application.

Figure 6 - Viewshed Image



4.2.5. Bushfire

A large portion of the broader area is designated bushfire prone under the Department of Fire Emergency Service mapping, as shown at Figure 7. State Planning Policy 3.7 – Planning in Bushfire Prone Areas (SPP 3.7) directs how land use should address bushfire risk management in Western Australia. It applies to all land which has been designated as bushfire prone by the Fire and Emergency Services (FES) Commissioner. However, the subject site where the met mast is being erected is not identified as being bushfire prone.

Given the proposed met mast is non-habitable and not within a bushfire prone area, an assessment was not considered warranted to support this application.

Figure 7 - Bushfire Prone Mapping



STATE PLANNING FRAMEWORK 5.

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

Table 4 – State Planning Assessment

State Planning Policy

State Planning Policy 2.5 - Rural Planning

The key objectives set out by SPP 2.5 is to protect and preserve Western Australia's rural land assets for their economic, ecological, and landscape values. Thus, requiring broad compatibility between land uses in the delivery of this policy.

State Planning Policy 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.

State Planning Policy 3.7 - Planning in **Bushfire Prone Areas**

The key objective of SPP 3.7 is to implement effective, risk-based land use planning and development to preserve life and reduce the impact of bushfire on property and infrastructure.

Position Statement - Renewable Energy **Facilities**

This position statement outlines the WA Planning Commissions requirements to support the consistent consideration and provision of renewable energy facilities within WA.

Comment

The subject site is located on lands zoned 'Rural' under the Shire of Victoria Plains Planning Scheme and therefore SPP 2.5 is applicable for consideration. The construction of the proposed met mast will not result in a land use conflict with the rural uses of the site, impact on environmental or water assets, or result in a notable reduction of usable rural land, and therefore the proposal meets the requirements of this policy.

An Aboriginal and Historical Due Diligence Assessment has been prepared by Urbis to inform the broader wind farm proposal including the proposed met mast. The assessment concludes that the proposed location and design of the met mast will have limited to no impact on sites of heritage significance, as detailed in Section 4.2.2 of this report.

Given the proposal for the met mast is minor in scale and is located in an area not identified as being bushfire prone, this level of assessment under SPP 3.7 was not considered warranted. A detailed Bushfire Attack Level Assessment/Bushfire Management Plan will be prepared to accompany the broader wind farm application.

Consistent with this Position Statement, the proposed met mast have been informed by considerable technical inputs, from an ecological, heritage, bushfire, landscape and aviation perspective.

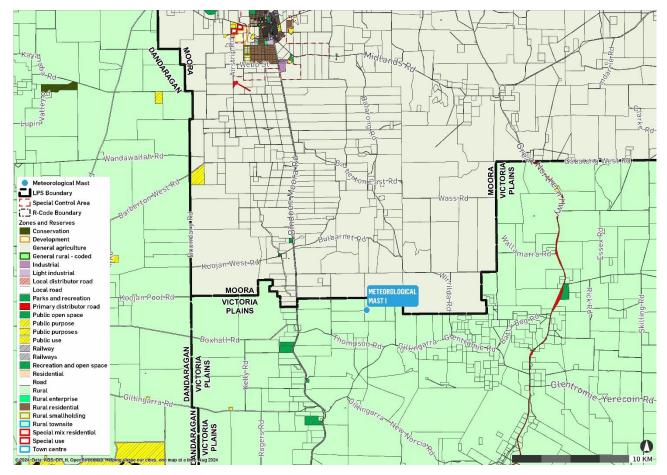
LOCAL PLANNING FRAMEWORKS 6.

This section assesses the development application against the relevant local planning framework.

6.1. SHIRE OF VICTORIA PLAINS LOCAL PLANNING SCHEME NO. 5

The met mast location is located within a Rural zone under the Shire of Victoria Plains Local Planning Scheme No.5 (LPS 5) as shown in Figure 8 below.

Figure 8 - Scheme Map Extract



As set out in Clause 16 of LPS 5, the objectives of the Rural Zone are as follows:

- To provide for the maintenance or enhancement of specific local rural character;
- To protect broad acre agricultural activities such as cropping and grazing and intensive uses such as horticulture as primary uses, with other rural pursuits and rural industries as secondary uses in circumstances where they demonstrate compatibility with the primary use;
- To maintain and enhance the environmental qualities of the landscape, vegetation, soils and water bodies, to protect sensitive areas especially the natural valley and watercourse systems from damage;
- To provide for the operation and development of existing, future and potential rural land uses by limiting the introduction of sensitive land uses in the Rural zone; and
- To provide for a range of non-rural land uses where they have demonstrated benefit and are compatible with surrounding rural uses.

Consistent with the above objectives, and mentioned prior, the proposed met mast is being installed for the primary purpose of measuring wind speed to assist in determining the wind conditions and future layout of the turbines. It will not impede on surrounding rural pursuits, or the associated rural amenity and character.

As demonstrated in **Section 4.2.4**, the met mast will have minimal visual impact to the surrounding residential developments or the overall rural character. Further, the met mast will avoid impacts on areas of sensitivity such as ecological areas (including areas of remnant vegetation) and water courses/bodies and would not have any impacts to soils of the area.

As stated, the proposed met mast (in facilitating a future large scale renewable proposal) is considered to have 'demonstrated benefit' to the Shire of Victoria Plains, Shire of Moora, Wheatbelt region and the broader State while being compatible with surrounding rural uses.

6.1.1. Land Use Permissibility

Under the 'Zoning Table' of the LPS 5, a 'meteorological mast' is not specified. While the closest use would be 'telecommunications infrastructure', by virtue of the proposed design, given the purpose of the met mast is for wind monitoring purposes (and not telecommunication), this use class is not considered suitable.

On this basis, the proposed met mast is considered a use not listed. In accordance with Clause 18(4) of LPS 5, where a use is caried out that is not specifically mentioned in the Zoning Table and cannot reasonably be determined as falling within the type or class of activity of any other land use the local government may:

determine that the use is consistent with the objectives of a particular zone and is therefore a use that may be permitted in the zone subject to conditions imposed by the local government; or

determine that the use may be consistent with the objectives of a particular zone and advertise under clause 64 of the deemed provisions before considering an application for development approval for the use of the land; or

determine that the use is not consistent with the objectives of a particular zone and is therefore not permitted in the zone.

For the reasons articulated in **Section 6.1** above, given the alignment with the Rural zone objectives and its purpose in informing a future wind farm application (which will be subject to a separate planning process), it is considered that the proposed use shall be permitted, consistent with objective (a) above.

6.1.2. General Development Requirements

This section provides an assessment against relevant general development requirements dictated by LPS 5.

6.1.2.1. Amenity Of Non-Residential Development

Table 6 provides comment against the relevant provisions of Clause 31 of LPS 5:

The amenity of non-residential development shall be determined in the context of each proposed development and site conditions, but shall generally be in accordance with these principles:

Table 6 – LPS 5 Clause 31 Principles

Pri	nciple	Comment	Compliance
1.	the form and scale of the development is to be compatible with surrounding land uses	The view shed and amenity impacts have been considered. It has been determined that due to the slender form, the scale of the development will not adversely affect the visual amenity of the surrounding land uses.	√
2.	the impacts of the development are to be contained on site and/or suitably managed off-site	There are no relevant external impacts (other than visual) and minor impacts associated with construction.	√

Pri	nciple	Comment	Compliance
3.	the impact of the development on the	Only minor impacts associated with the	√
	road network and traffic management is to be consistent with the road function and hierarchy	delivery of the met mast structure to the subject site is expected. The met mast is a non-habitable structure with visitation to the development only to be for maintenance purposes. In future, the met mast will be deconstructed to enable construction of the wind farm.	
		It is anticipated that a construction traffic management plan will be prepared as a condition of development approval.	
4.	adequate provision is to be made for parking for staff and visitors, with separation between staff / visitor parking and service / haulage vehicles	N/A – As the development is to be unattended, the provision of permanent parking is not deemed warranted.	√
5.	buildings are to have screening of services and areas for waste management and essential services	As the development is to be unattended and unvisited (other than for construction and maintenance purposes), the provision of waste facilities is unnecessary. The screening of services is not deemed necessary as the nearest habitable structure/sensitive land-use is located over 2.5km from the met mast, with services not visible at a distance.	√
6.	visual impacts to be minimised by the use of vegetation screening, tree retention and building orientation	Due to the nature of the development being a met mast, it is crucial that screening does not occur so the sensitive instruments can conduct measurements. The slender form of the met mast minimises external visual impacts as demonstrated by the viewshed analysis.	√
7.	minimise the use of front fencing, and where required, fencing to be set back to the building line and behind the landscaped area where feasible	Fencing immediately surrounding the metmast tower will be utilised. The fencing will not be visually obtrusive or notable due to it being setback from sensitive land uses and roads. While subject to detailed design, the construction of fences will be in accordance with the Shires Fencing Local Law 2018. It is requested that this is placed as a condition of development approval.	√

Pri	inciple	Comment	Compliance
8.	external lighting designed to minimise light spill and glare on adjoining properties	N/A – No lighting is proposed However, subject to discussions with CASA post-approval, aviation lighting may be recommended (not mandatory). If aviation lighting is included in the final design, such lighting is not expected to cause light spill or glare.	√
9.	storage of plant and equipment to be screened or remote from public areas, particularly from the street, and provision made on site for a loading bay where the land use requires it	N/A – Plant equipment not proposed.	✓
10	use of 'on building' signage where the building addresses the street, and where 'freestanding' signage is necessary it should either be affixed to a front fence, or located adjacent to it at a height that is compatible with the setting	N/A – No signage proposed.	✓

6.1.2.2. Environmental Protection

The following **Table 7** provides comment against the relevant provisions of Clause 35 of LPS 5:

Table 7 - LPS 5 Clause 35

Principle	Comment	Compliance
1. Development shall ensure that potential impacts on environmental values will be addressed including potential impact on land degradation (e.g. salinity) and waterway protection (and their buffers) to the satisfaction of the responsible authority and relevant public agency.	The proposed met mast will not result or notably contribute to, the degradation of soils or waterways.	√
2. The responsible authority may impose conditions on any development approval requiring the retention and protection of existing vegetation (e.g. through fencing) and/or the planting of additional vegetation.	The siting of the proposed met mast will not result in any significant (local or regional) vegetation being removed. Fencing or planting is not necessary.	✓
3. If, in the opinion of the local government, over-grazing by livestock on any land classified 'Rural' zone is causing degradation to the landscape or land degradation that may lead to soil erosion, the local government may issue an order to the property owner requiring a reduction in the number, or total removal, of the	N/A – no livestock proposed.	√

Principle	Comment	Compliance
livestock. Prior to forming an opinion and issuing an order pursuant to this clause the local government shall seek and obtain advice from the Department of Primary Industries and Regional Development and any other government agency with a potential interest in the matter		

6.1.2.3. Vehicle Access and Road Construction

The following **Table 8** provides comment against the relevant provisions of Clause 36 of LPS 5:

Table 8 - LPS 5 Clause 36

Principle		Comment	Compliance	
1.	The responsible authority shall be satisfied arrangements for vehicle access are acceptable including the location of access points and construction, with regard to the impact of the proposed land use and expected traffic volume and composition on traffic flow and safety, the character and function of the road, the volume and the width of the carriageway and visibility; and the ultimate volume and type of traffic generated by the development.	The primary road access point during the construction phase of the development will be from Scholz Road, through an existing gate access point between lots M1421 and M1417. Access for the duration of the met mast's lifespan will be required through lot M1421. Refer to the location plan located in Appendix B.		
2.	The responsible authority may not allow more than one vehicular entrance or exit to or from any lot or may require separate entrances and exits, and/or require that entrances and exits be placed in positions nominated by it, to avoid or to reduce traffic hazards.	Access to the proposed met mast will be facilitated via the existing road and access network and will only be utilised for construction and maintenance purposes.	√	
3.	Development shall have direct access to a constructed road or arrangements shall be put in place to the satisfaction of the responsibility authority to provide permanent access to a constructed road which may include conditions to require an application to construct and maintain or contribute towards road construction, pay a sum of money to the local government towards road construction, and/or place a notification on title that alternative access arrangements must be maintained legally and physically.	As the proposed met mast is a primarily unattended structure, there is a lack of nexus between any condition emplaced to construct road(s), maintain road(s), or contribute toward road(s).		

Principle		Comment	Compliance
4.	The responsible authority may require the forming, sealing and draining of any unconstructed public road, public right-of-way, private right-of-way, laneway or private road servicing a development for which development approval is given at the cost of the developer in proportion to the extent of the use of the public road, public right-of-way, private right-of-way, laneway or private road by the development in respect to other users as assessed by the responsible authority.		√

6.1.2.4. Parking

As stated in LPS 5 Clause 38(1):

Land and buildings shall not be used or developed for any use mentioned in Table 7 unless off street parking is provided in accordance with the requirements set out therein; or for any use not mentioned in Table 7 unless off street parking is provided, as determined by the responsible authority.

As the met mast will be typically unattended or visited, the need to provide formalised parking is not deemed warranted. It is requested that the Shire not place any condition on requiring carparking.

6.1.2.5. Servicing Requirements

As stated in LPS 5 Clause 39(1):

Development is to be serviced with power, water supply, wastewater and effluent disposal to a level commensurate with the intended land use, with arrangements in place to the satisfaction of the responsible authority and relevant agencies and in accordance with subclauses 40-42 and any other clauses for servicing requirements in this Scheme.

The proposed met mast is serviced with power through a singular photovoltaic solar panel and will not require a water supply or disposal point. Therefore, servicing arrangements for water, wastewater and effluent disposal are not warranted.

6.1.2.6. Rural Zone

The following **Table 9** provides comment against the relevant rural zone provisions of Clause 44 of LPS 5:

Table 9 - LPS 5 Clause 44

Principle	Comment	Compliance
Within the Rural zone all dwellings and associated outbuildings, external fixtures, patios, pergolas, verandas, garages, carports or swimming pools as well as all non-residential developments such as farm outbuildings and dams shall have a minimum setback of 20 metres from the	The proposed met mast is setback approximately 190 metres from the nearest property boundary.	√

Principle	Comment	Compliance
land's primary street frontage and 10 metres from all side and rear boundaries.		
Tourist and workforce accommodation proposals in the Rural zone shall comply with clauses (a) and (b):	N/A – tourist or workforce accommodation is not proposed.	√
Development in the Rural zone shall address both on-site and off-site impacts and, where deemed necessary by the responsible authority, such proposals shall be accompanied by information to address and identify: A) environmental values and any environmental risks; B) the potential for land use conflict including impacts and restrictions on approved uses on adjacent or nearby locations; and C) the separation distances and/or buffers relating to a potentially incompatible land use which need to be provided onsite.	There are no proposed environmental risks associated with the met mast. The met mast is setback approximately 2.5km from the nearest residence and will not result in land use conflict. A viewshed analysis has also be undertaken to demonstrate that the met mast will have minimal impact on the visual amenity of surrounding properties and rural character. The proposed met mast is appropriately separated from nearby sensitive uses.	
Where an industrial type or other use is permissible in the 'Rural' zone and requires a buffer as prescribed in the Environmental Protection Authority's Buffer Distance Guidelines, the buffer area is not to impact upon existing or proposed residential development.	N/A – a buffer prescribed by the Environmental Protection Authority is not required.	√
An ancillary dwelling in the Rural zone must be no greater than 100m2, be co-located with the single house, must allow for the continued use of the lot for rural purposes and shall be constructed to a standard that ensures the visual amenity of the area is not adversely impacted.	N/A – no dwelling proposed.	✓

6.2. SHIRE OF VICTORIA PLAINS LOCAL PLANNING STRATEGY 2012

The Local Planning Strategy 2012 (the Strategy) sets out the Shires general aims and intentions for future long-term growth and change. The Strategy recognises the need to diversify rural activities to ensure nonreliance on a single output and acknowledges the social and economic importance of its local agrarian industries. The proposal for the met mast, to facilitate delivery of a broader renewable energy proposal, aligns with this intent.

6.3. SHIRE OF VICTORIA PLAINS LOCAL PLANNING POLICES

There are no relevant local planning policies which are applicable to the proposed met mast.

7. **CONCLUSION**

The proposed met mast will be installed to monitor wind speeds to inform the turbine layout of the future Grevillea Wind Farm. This application seeks approval for the construction and installation of one met mast which will be a temporary structure in place for a period of 5-7 years, at which point the met mast will be deconstructed and removed.

This report demonstrates the proposal is consistent with the Rural zone objectives and is generally aligned with the broader planning framework as well as relevant technical requirements. On the basis, it is respectfully requested this application be approved, subject to any suitable conditions. In this regard, it is anticipated that conditions should be limited to the preparation of a management plan (addressing construction and traffic) to ensure suitable management practices are implemented during the construction phase.

8. DISCLAIMER

This report is dated 16 September 2024 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 Green Wind Renewables (**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 **CERTIFICATES OF TITLE**

28119|58 19002|63

Transfer 7655/1958 (51454) From Vol. Fol.



REGISTER BOOK.

INDEXED. IN Q.

Vol. 1214

NO

038

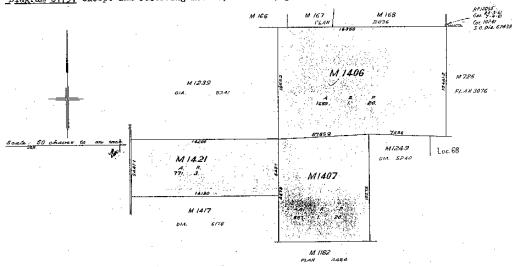
WESTERN AUSTRALIA.

Certificate of Title



under "The Transfer of Band Act, 1893" (36 vic., 14, Sai, 5)

Dallas Vernon Waters of Yericoin, Farmer, is now the proprietor of an estate in fee simple subject to the easements and encumbrances notified hereunder in all those pieces of land delineated and coloured green on the map hereon containing in the aggregate three thousand three hundred and forty-eight acres and two roods or thereabouts, being portion of Melbourne Location 934 and being Lot M1406 the subject of Diagram 6128. Lot M1407 the subject of Diagram 6129 and Lot M 1421 the subject of Diagram 6179, except and reserving metals, minerals, gems and mineral all specified in Transfer 7655/1958.



Dated the twenty-third day of May One thousand nine hundred and fifty-eight.

Transfer 12212 / 1958 to York Pastoral to Sty. Ita. of 42 Nextor direct, Osborne Park. Registered 12 of August 1958 at 9:500'c.

Transfer 6334/66 to Christopher Frank Chopping, Famer and Value Margaret Chopping Married Woman hoth of 22 Lawler Road, attache as joint tenants. Registered 2 February 1966 at 9:3640 per liver from the Standard of Standard St

333919187-24,492-1114

For encumbrances and other matters affecting the land see back.



EASEMENTS AND ENCUMBRANCES REFERRED TO

Mortgage 20692163 your Pastolit to Pay Red to Bank of New South Wales	Registered 180	Lafril 1963
at Gasso oc.	N Blacker	
Vischare 6383/66 of mortgage 20693/63 Registered 2 tebruary 1966 at	9 36 8600	d page
0	Aut	Registrar of Titles
Mostgage 47840/66 to III consisting 1904 AND MAKENETS BUSK OF STERRY ALLERSAM. Registere	cal 15th July	A
1966 at 9 31 occ Mountain	FAL Dorder	2
	ASSISTANT REGISTRAR Q	ETITLES
Mortgage A101560 to THE COMMISSIONERS OF AND ENDISTRIES MAINS OF WESTERN AUSTRALIA Registered 11°	the Novelmber	1968 ac
14.140.05 MDfm.		TOTO AND THE
Mortgage A101561 to bomme Will Development Bank of australi	a Registere	a u
Noveliber 1968 at 4.19 0 19	<i>Ki</i>	RESIDUAL OF TITLES
	AMINAN	REGISTRAN OF THUM
Great 1528503. Lodged 18 - 1972 at 11.49 oc.		
discharge 8516 75 7 of Mortgages 4 740/06 & A10/560. Agrictized 4 th May 178 at 9.404.		9 2
discharge 8316 13 1 g - Mortgages 41140100 4 1101300. 12gants-0-7		
Discharge 8516758 of Mortgage A101561. Registered 4th May 1978 at 9.44 of		6 7
decenarge outers of managements		
Willsowal \$576759 of aveat A528503 dodged 4-5-1978 at 914 de		CA S
		To AVE
Mortgage 8516762 to Bank of New South Walks Registered 4th May 1978 at 918 o'c.		
Mortgage 8316 162 to Bank of This news and ragion to		
- I to the terminal of the second	1078 at 915 No	7
Mortgage 8516763 to Commonwealth Sevelaporent Bank of Australia Cogistered 4th May 1	MACHAREFN	
1000 at 0.56 ole	Digotations	OF 7
Discharge D981767 of Mortgage B516763 Registered 4th January, 1989 at 9.56 o'c.		(ore)
Dup. C/T not prod.		AND ADDRESS OF THE PARTY OF THE
Mortgage E872041 to Westpac Banking Corporation. Registered 4th May, 1992 at 9.24 hrs.	•	STAL OF MILE
		Landon a sorting



CERTIFICATE OF TITLE

Vol. 1214 Fol.

28119|58 19002|63

Transfer 7655/1958 (51454) From Vol. Fol.



WESTERN

REGISTER BOOK.

INDEXED IN Q

Vol. 1214 Fol. 1

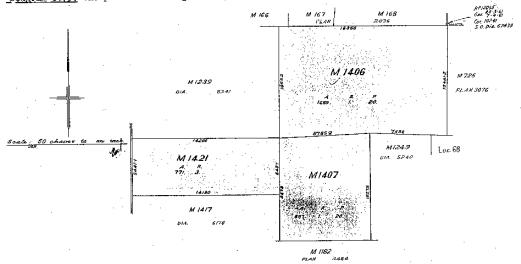
038

Certificate of Title



under "The Cransfer of Land Act, 1893" (36 Vic. 14, Sch. 5).

Dallas Vernon Waters of Yericoin, Farmer, is now the proprietor of an estate in fee simple subject to the easements and encumbrances notified hereunder in all those pieces of land delineated and coloured green on the map hereon containing in the aggregate three thousand three hundred and forty-eight acres and two roods or thereabouts, being portion of Melbourne Location 934 and being Lot M1406 the subject of Diagram 6128. Lot M1407 the subject of Diagram 6129 and Lot M 1421 the subject of Diagram 6179, except and reserving metals, minerals, gems and mineral oil specified in Transfer 7655/1958.



Dated the twenty-third day of May One thousand nine hundred and fifty-eight.

5339/9/57-24,492--†1/c

For encumbrances and other matters affecting the land see back.



EASEMENTS AND ENCUMBRANCES REFERRED TO

Intrument stamped to 15 10 ft. Per to Bank of New South Wales	Pagistered 1	8th april 1963
Antiment stamped & signoff & Diggs and to Bank of New York Wales at 19120 oc.	MBlack	morela
	ASSE	TART REGISTRAL OF THE
Vischerge 6383/66 of Mortgage 20693/63 Registered 2 debruary 1966 at	936 Hard	ling
		est Registrar of Titles
Mostgage 47840/66 to IN COCHESIONE 1986 WILLIAM MUNICIPES BUK OF TREASURE AUSTRALIA. Registere	ac 15 for	Leg .
1966 at \$ 30 occ Mount	Alberta	62
	ASSISTANT RECHETRAL	OF TITLESS.
Mortgage A101560 to THE COMMISSIONESS OF THE COMMIS	7071 31070	KI AGGAT
Alla os	a Registe	STANT SCRISTON OF THE
Mortgage A 101561 to Commandelle Development Bank of Musloale	a regione.	ien "
	arrid	No Activities Times
Great A 578503. Lodged 18 - 1972 at 11.49 oc.	2015	A A
Great A 5728503. Lodged 186- 1972 At 11.49 DC.		(Control of the control of the contr
Discharge 8516 75 7 of Montgages 4 1840/06 4 A 10/560. Algestered 4th May 1978 at 9.401.		9-3
discharge 8316 15 1 of Mortgages 41140100 4 11/11300, regularior 4 11		
15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Discharge 8516758 of Mortgage A101561. Registered 4th May 1878 at 944 of		
1 0 0000 1 1 1 1 1 E 1000 A QUI d		
Willsowal 8516759 of aveal A528503 dodged 4-5-1978 at 944 o'c		
1 Hillard : 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Mortgage 8516762 to Bank of Now South Wales Registered 4th May 1978 at 915 o'c.		S. Aug
the state of the s	1078 at 915 de	
Mortgage 8516763 to Commonwealth Sevelaporant Bank of Australia Construed 4th May 1	MACHARGEN	
7 1000 at 9 56 o'c	Bloommarn	Orn And
Discharge D981767 of Mortgage B516763 Registered 4th January, 1989 at 9.56 o'c.		(me one
Dup. C/T not prod. Mortgage E872041 to Westpac Banking Corporation. Registered 4th May, 1992 at 9.24 hrs.	·	ALCO ALCO ALCO ALCO ALCO ALCO ALCO ALCO
Mortgage E8/2041 to Westpac Danking Corporation: Mag 300		(The state of the
		En x 100



CERTIFICATE OF TITLE

Vol. 1214 Fol.

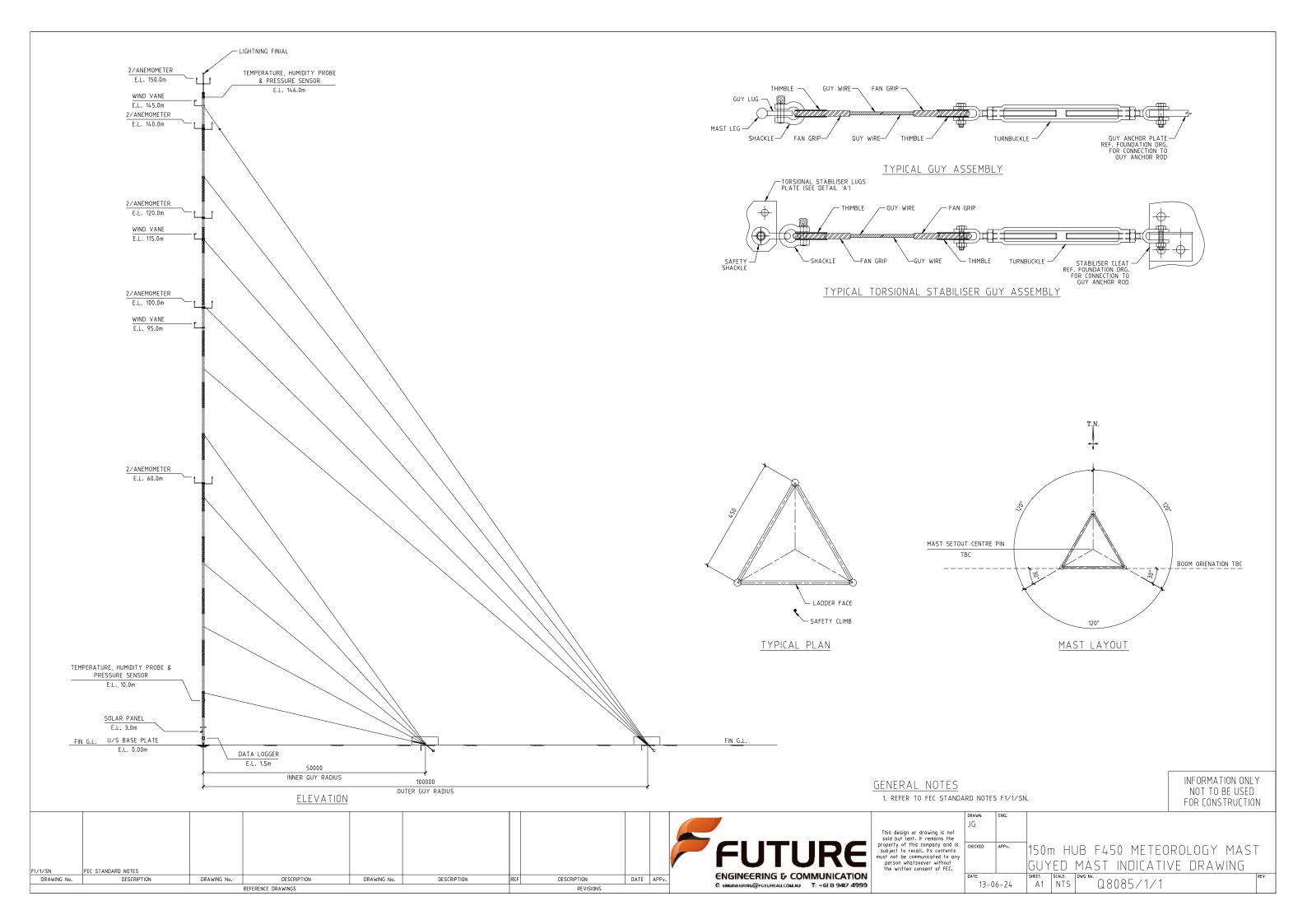
Town or District	Sumber of Let. or Location.	0n	Survegor	Book Scale		11 - 4 - 27 -	
Melbourna	M 1406 Port of Loc:934	Han 23.23 Drug Index 50/3/	EManning	7887 1:15840	į.	Prisse (
		•					
M 166	M 167		M	/68		Be sty.	
	PLAN FB's	3	3863 3863 3867 3	38 68 , 38 70 \$ 4 9 (3	2830	2,1	
9.55 ⁵							
							M 72
239 Z 5241 ZZ		683·665	i8 ha. 123	1 <i>4</i> 5		2100-4	FLANT
7113						ļ	
			•				
27,18	1767.3		of Alis Office	15 <u>2</u> 6·	06	9216	
	DIA.	5'29		DIA	5240	68	i
I	M 140	7		M	249		
	F.B. 75	87	•	5.3.	7194		
			Å	DIE C400			
		·		DIA 6128 Iniiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii		(0	
		<u></u>			 •	6.K	<u></u>
	g. all a second		NPL.			612	ර ග
							h

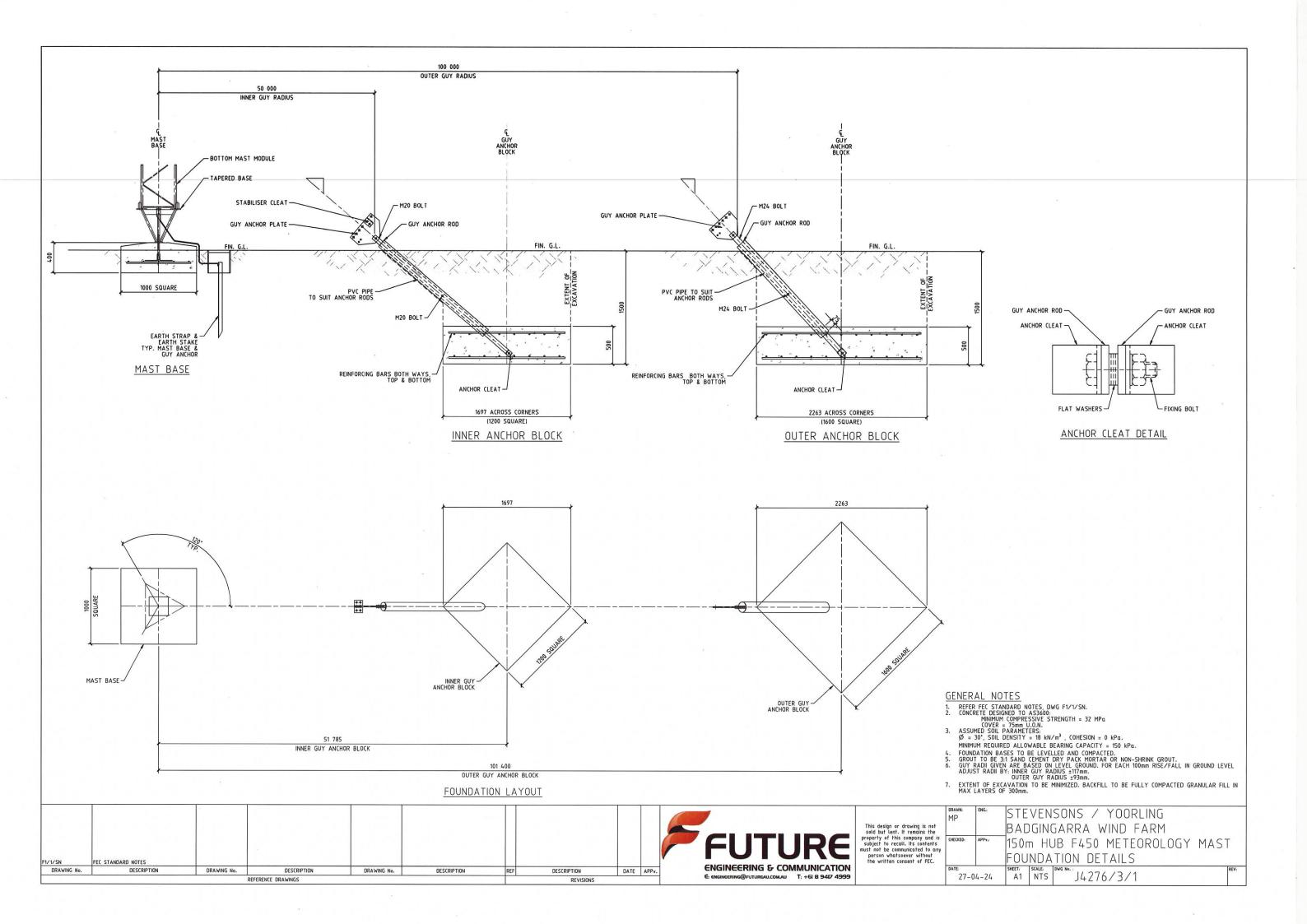
Diagram 6128

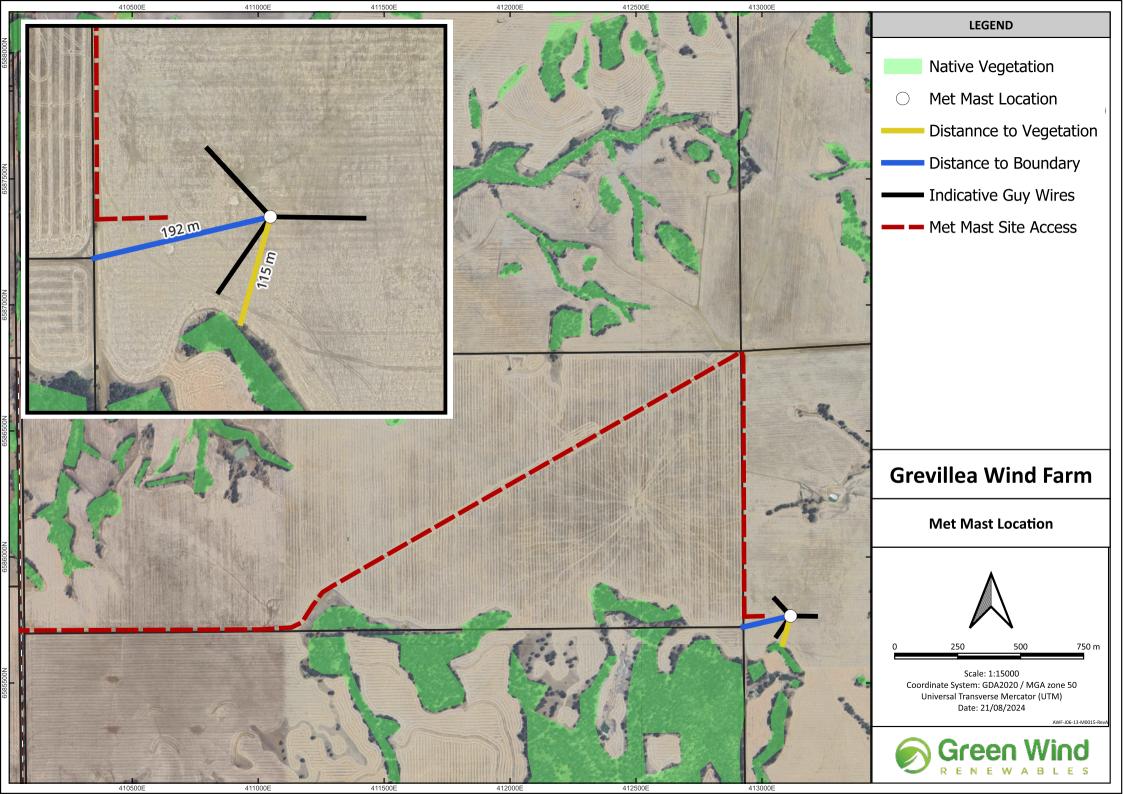
Lot	Certificate of Title	Lot Status	Part Lot
1406	1214/38	Registered	

APPENDIX B

METEOROLOGICAL MAST PLANS/SPECIFICATIONS







APPENDIX C AVIATION IMPACT ASSESSMENT



Alix Chinnery
Associate Director - Project Management, Environment WA
AECOM

August 2024

By email: alix.chinnery@aecom.com

Our reference: 101605-01

Dear Alix

Re: Grevillea Wind Farm Wind Monitoring Tower - Aviation Impact Assessment

Please find in this correspondence a summary overview of the Aviation Impact Assessment (AIA) of possible constraints to developing a wind monitoring tower (WMT) for the purposes of obtaining meteorological data to support the proposed Grevillea wind farm.

1.1. Project Background

Macquarie Asset Management Green Investments (MAM Green Investments) and Green Wind Renewables (GWR) have agreed to partner to deliver a portfolio of large-scale wind farm projects in Western Australia. AECOM has been engaged by the proponent to prepare project development plans for each project, including a separate development plan for the installation of a WMT to be installed in each wind farm project area.

The proposed Grevillea wind farm WMT is located approximately 26 km (14 nm) south-southeast of the town of Moora, 17 km (9 nm) northwest of the town of New Norcia, and 57 km (31 nm) northeast of the town of Gingin, in the Shire of Victoria Plains local government area (LGA). The maximum height of the WMT will be up to 151.2 m AGL.

AECOM wishes to understand the potential aviation impacts and the need for aviation hazard marking and lighting of the WMT and has engaged Aviation Projects to undertake an aviation impact assessment to support the development application for the installation of a WMT.

1.2. References

References used or consulted in the preparation of this report included:

- Airservices Australia, Aeronautical Information Package; including AIP Book, Departure and Approach Procedures and En Route Supplement Australia, dated 13 June 2024
- Airservices Australia, Designated Airspace Handbook, effective 13 June 2024
- Civil Aviation Safety Authority, Civil Aviation Safety Regulations 1998 (CASR)
- Civil Aviation Safety Authority, Part 139 (Aerodromes) Manual of Standards 2019, F2024C00161 registered 16/02/2024
- Civil Aviation Safety Authority, Advisory Circular (AC) 139.E-05 v1.1 Obstacles (including wind farms) outside the vicinity of a CASA certified aerodrome (October 2022)
- Civil Aviation Safety Authority, Advisory Circular (AC) 139.E-01v1.0 Reporting of tall structures, December 2021

AUDITION PROJECTS

- Department of Infrastructure, Transport, Regional Development, Communications and the Arts, Australian Government, National Airport Safeguarding Framework, Guideline D Managing the Risk of Wind Turbine Farms as Physical Obstacles to Air Navigation, dated June 2013
- International Civil Aviation Organization (ICAO), Doc 8168 Procedures for Air Navigation Services— Aircraft Operations (PANS-OPS)
- ICAO Standards and Recommended Practices, Annex 14—Aerodromes
- Shire of Victoria Plains planning scheme No. 5

1.3. Client material

AECOM provided the following material for the purposes of this analysis in the SharePoint project material library:

- WMT specification, Indicative 150m Mast.pdf, received 24 July 2024
- Project layout, AECOM GWF.2.kml, received 06 June 2024

Figure 1 shows the proposed location of the WMT site relative to the nearby towns and roads (source: AECOM , Google Earth).



Figure 1 WMT site overview



1.4. Wind monitoring tower description

The proposed wind monitoring tower will be of steel lattice construction and a maximum of 151.2 m in height above ground level (AGL) and will be guyed in 3 directions.

For the purpose of this assessment, the maximum WMT height applied for the aviation analysis is based on the maximum elevation observed in Google Earth within 100 m of the WMT site, plus a 5 m error margin.

Table 1 provides the details of the WMT height applied for this assessment.

Table 1 WMT details

Parameter	WM1
Error budget (m)	5 m
Location	30°51'29.03"S 116° 5'28.47"E
Ground elevation (within 100 m of WMT site)	309 m AHD
Height of tower AGL	151.2 m (496.1 ft)
WMT tip height (with 5 m buffer)	460.2 m AHD (1509.9 ft AMSL)

1.5. Aviation Impact Assessment

This analysis considers the aeronautical impact of the WMT on the following:

- The operation of nearby certified aerodromes
- The operation of nearby aircraft landing areas (uncertified aerodromes)
- Grid and air route Lowest Safe Altitudes (LSALTs)
- Airspace protection
- Aviation facilities
- Radar installations
- Local aircraft operations.



1.6. Shire of Victoria Plains

Development of the WMT will be subject to Shire of Victoria Plains' planning scheme No. 5, amended 01/04/2022. Section 1.8 of the scheme provides the purpose of the scheme, including to:

- (a) set out the local government's planning aims and intentions for the Scheme area; and
- (b) set aside land as local reserves for public purposes; and
- (c) zone land within the Scheme area for the purposes defined in this Scheme; and
- (d) control and guide development including processes for the preparation of structure plans, and
- (e) set out procedures for the assessment and determination of planning applications; and
- (f) set out procedures for contributions to be made for the costs of providing infrastructure in connection with development through development contribution plans; and
- (g) make provision for the administration and enforcement of this Scheme; and (h) address other matters referred to in Schedule 7 of the Act.

There is no specific aerodrome safeguarding policy or framework established in the planning scheme or strategy. There is no certified aerodrome located within the LGA. This assessment considers that the development of the WMT is not specifically affected by the Shire of Victoria Plains planning framework in relation to aviation impacts.

1.7. Nearby certified aerodromes

There are no certified aerodromes located within 30 nm of the proposed WMT location.

A certified aerodrome means 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 2 shows a 30 nm radius from the WMT location in relation to the nearest certified aerodromes (source: AECOM, Airservices Australia, Google Earth).

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

AUDITION PROJECTS



Figure 2 WMT relative to the closest certified aerodromes

The WMT will not affect any certified aerodrome.

1.8. Nearby aeroplane landing areas (uncertified aerodrome)

As a guide, an area of interest within a 3 nm radius of an aeroplane landing area (ALA) is used to assess the potential impacts of proposed developments on aircraft operations at or near the ALA. There are no formal airspace safeguarding specifications established for ALAs.

A search on OzRunways, which sources its data from Airservices Australia (AIP), did not identify any uncertified aerodromes within 3 nm of the WMT site. The aeronautical data provided by OzRunways is approved under CASA CASR Part 175.

A review of NationalMap (an online map-based tool allowing access to spatial data from Australian government agencies) was also undertaken. No ALAs were identified within 3 nm of the proposed WMT site.

AUDITION PROJECTS

1.9. Air routes and grid LSALT

MOS 173 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.

The proposed WMT will be in a grid identified in the EnRoute Chart – Low. (ERCL 8) The grid LSALT applicable to the proposed WMT location is 2900 ft AMSL, with a minimum obstacle clearance surface of 1900 ft AMSL.

The WMT is not located laterally within 7 nm of any low-level air route.

Figure 3 shows the air routes and grid LSALT in proximity to the proposed WMT location (source: AECOM, ERC Low 8).



Figure 3 WMT in relation to LSALT

An impact analysis of the LSALT for the grid and surrounding air routes is provided in

Table 2 based on the maximum WMT height of 460.2 m AHD (1509.9 ft AMSL).



Table 2 Air route and grid LSALT impact analysis

Air route	Waypoint pair	LSALT ft AMSL	Minimum Obstacle Clearance height ft AMSL	Impact on airspace design WMT	Potential solution	Impact on aircraft ops
Grid	N/A	2900	1900	No impact – below protection surface by 390 ft	N/A	N/A

The WMT will not impact the grid LSALT or LSALT of the nearest air routes.

1.10. Airspace

The WMT will be located outside of controlled airspace (wholly within Class G airspace).

The WMT will be located laterally within Restricted Area R156, which is associated with military flying, and controlled by the Flight Commander of 453 Squadron Pearce. R156 has a minimum vertical limit of 4,000 ft AMSL.

Development of the WMT anywhere within the Project Area will not affect the function of the restricted area.

The Project Area is also located laterally within Danger Area D193, which is associated with military flying. The vertical limits of D193 are from the surface to 4,000 ft AMSL, meaning the WMT would be located within the limits of the Danger Area. The Danger Area does not specifically limit the development of the WMT, however consideration should be given to the likelihood of low-level military flying that may be conducted in the vicinity of the WMT.

Refer to the reporting and notifications section later in the report for further information relating to the tall object database maintained by Airservices Australia for the RAAF.

1.11. Aviation facilities

Part 139 MOS 2019 specifies the protection of Communication, Navigation and Surveillance Systems (CNS) from development which may affect the function of these systems.

The WMT sites are not within the prescribed clearance zones or areas of interest for any CNS facilities as specified in Part 139 MOS 2019 Chapter 19.

1.12. ATC Surveillance Radar Systems

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

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

1.13. Aircraft Operations in the vicinity of the WMT

There is likely to be aerial application operations conducted in the vicinity of the WMT associated with broad acre cropping operations. These operations would be conducted in Day visual flight rules (VFR) conditions. Operations conducted under the VFR must remain in visual meteorological conditions (VMC) and clear of the highest point of the terrain by 500 ft vertical distance and 300 m horizontal distance, except as otherwise approved for operators with low-level approvals.



There may also be private and recreational aircraft operations in the vicinity of the WMT, which would normally be conducted under the VFR.

Military flying training is likely to occur in the vicinity of the Project Area, associated with the use of Danger Area D193 and Restricted Area R156 for military training aircraft operations.

1.14. Civil Aviation Safety Authority - regulatory context

The Civil Aviation Safety Authority (CASA) regulates aviation activities in Australia. Applicable requirements include the Civil Aviation Regulations 1988 (CAR), Civil Aviation Safety Regulations 1998 (CASR) and associated Manual of Standards (MOS) and other guidance material. Standards for Certified Aerodromes are established in Part 139 MOS 2019.

A certified aerodrome means an aerodrome certified under Part 139 (Aerodromes) Civil Aviation Safety Regulations 1998. An aerodrome must be certified if there is a terminal instrument flight procedure implemented at the aerodrome, except for specialised helicopter operations. The standards for the operation and maintenance of a certified aerodrome are provided in Part 139 Manual of Standards 2019 (Part 139 MOS 2019).

Standards relevant to developing WMT's in proximity to a certified aerodrome include the control of tall and hazardous objects (as defined) located in the vicinity of an aerodrome and terminal instrument flight procedures and specifications for lighting and marking obstacles.

Civil Aviation Safety Regulations 1998, 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, even if the object is not in the vicinity of a certified aerodrome. 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. This would generally be regarded as when the final location of the WMT sites have been confirmed, prior to construction, noting that CASA may recommend lighting or marking of the WMTs which should be considered during the fabrication of the WMTs.

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

This notification to CASA is a requirement irrespective of whether the object is infringing an aerodrome's obstacle limitation surface or not.

Manual of Standards Part 139-Aerodromes

Part 139 MOS 2019 Chapter 8.109 specifies when obstacles must be marked:

- (1) The following objects or structures at an aerodrome are obstacles and must be marked in accordance with this Division unless CASA determines otherwise under subsections (3) and (5):
 - a) any fixed object or structure, whether temporary or permanent in nature, extending above the obstacle limitation surfaces;
 - o Note An ILS building is an example of a fixed object.



 a) (b) any object or structure on or above the movement area that is removable and is not immediately removed.

Chapter 8.110 sets the requirement for marking hazardous obstacles:

As illustrated in Figure 8.110 (5), long, narrow structures like masts, poles and towers which are hazardous obstacles must be marked in contrasting colour bands so that:

- a) the darker colour is at the top; and (b) the bands:
 - i. are, as far as physically possible, marked at right angles along the length of the long, narrow structure; and
 - ii. have a length ("z" in Figure 8.110 (5)) that is, approximately, the lesser of:
 - (A) 1/7 of the height of the structure; or
 - (B) 30 m.

Figure 4 provides a diagram of the marking specification for masts, poles and towers as specified by CASA in Part 139 MOS 2019 figure 8.110 (5).

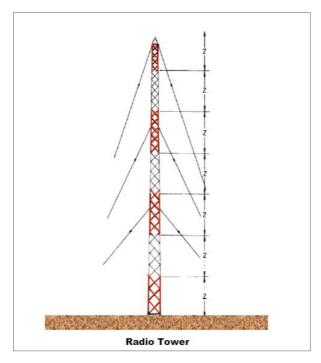


Figure 4 Part 139 MOS 2019 8.110 marking specification

The Part 139 MOS 2019 requirements relating to obstacle marking do not strictly apply to the proposed WMTs because they are not located within the OLS of any certified aerodrome or above an aircraft movement area.

Part 139 MOS 2019 Chapter 8.110 (7) specifies markers for hazardous obstacles in the form of wires or cables:

(7) Hazardous obstacles in the form of wires or cables must be marked using 3-dimensional coloured objects attached to the wire or cables.



Note Spheres and pyramids are examples of 3-dimensional objects.

- (8) The objects mentioned in subsection (7) must:
 - (a) be approximately equivalent in size to a cube with 600 mm sides; and
 - (b) be spaced 30 m apart along the length of the wire or cable.

The proponent should consider marking the WMT in accordance with the specifications provided, noting there is no regulatory requirement to do so. Marking the WMT in accordance with these specifications will increase the visibility of the WMT during the day and may reduce the risk of a collision by an aircraft, particularly any low-level aerial application or military aircraft operations which may occur in the vicinity. (**Note** – refer to guidance contained within the National Airports Safeguarding Framework (NASF) Guideline D, provided later in this report.)

Obstacle Lighting

Part 139 MOS 2019 specifies when obstacle lights are required in Chapter 9.27(1):

- (1) Subject to subsection (2), for a runway intended to be used at night, the following artificial objects or structures are hazardous obstacles and must be provided with obstacle lighting:
 - a) an object or structure that extends above the take-off climb surface within 3 000 m of the inner edge of the take-off climb surface;
 - b) an object or structure that extends above the approach or transitional surface within 3 000 m of the inner edge of the approach surface;
 - an object or structure that extends above the applicable inner, conical or outer horizontal surfaces;
 - an object or structure that extends above the obstacle assessment surface of a T-VASIS or PAPI;
 - e) an object or structure in the vicinity of a taxiway, an apron taxiway or a taxilane, that is a hazard to aircraft using the taxiway, apron taxiway or taxilane, except that obstacle lights must not be installed on elevated ground lights or MAGS.

Part 139 MOS 2019 Chapter 9.27(4) specifies that:

- (4) Despite subsection (1), CASA may determine in writing, following an assessment:
 - a) that an object or structure on, or within the immediate vicinity of, the aerodrome is a hazardous obstacle; and
 - b) what, if any, lighting is required for that hazardous obstacle.

The requirements for obstacle lighting do not strictly apply to the proposed WMT locations as they will not infringe on any certified aerodrome's OLS or other surfaces as specified. CASA will review the WMT for potential hazards to aircraft operations and may recommend lighting the WMT.

At $151.2 \, \text{m}$ (496.1 ft) AGL the WMT is just below what is considered as normally navigable airspace (500 ft AGL), and it would normally be considered that obstacle lighting should not be required. CASA may provide a recommendation for the WMT to be lit, noting they can't mandate lighting in this case.



1.15. National Airports Safeguarding Framework

The National Airports Safeguarding Advisory Group (NASAG) was established by Commonwealth Department of Infrastructure, Transport, Regional Development, Communications and the Arts to develop a national land use planning framework called the National Airports Safeguarding Framework (NASF).

NASF Guideline D: Managing the Risk to Aviation Safety of Wind Turbine Installations (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 WMTs.

Section 39 of NASF Guideline D provides guidance for the marking and lighting of WMTs, with consideration of the risks associated with WMTs for aircraft in the vicinity due to their slender construction and guy wires, primarily for aerial agriculture and aerial firefighting operations.

NASF Guideline D recommends the following markings for WMTs:

- a) 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;
- b) marker balls or high visibility flags or high visibility sleeves placed on the outside guy wires;
- c) ensuring the guy wire ground attachment points have contrasting colours to the surrounding ground/vegetation; or
- d) a flashing strobe light during daylight hours.

The NASF guidelines differ slightly from the specifications of Part 139 MOS 2019 (which are only strictly applicable to objects infringing the OLS of a certified aerodrome, or otherwise directed by CASA).

1.16. Summary

The following list of findings summarises the outcomes of this assessment, based on the installation of a WMT at 151.2 m AGL in the proposed Grevillea wind farm project area with a maximum height of 460.2 m AHD (1509.9 ft AMSL):

- There are no certified aerodromes located within 30 nm of the proposed WMT site, and the WMT(s) will not affect any certified aerodrome's obstacle limitation surface or terminal instrument flight procedures.
- There are no verified uncertified aerodromes (aircraft landing areas) located within 3 nm of the WMT site and there will be no impact to any verified ALA caused by the WMT.
- The WMT will not impact the grid LSALT of 2900 ft AMSL.
- The WMT will not impact the LSALT of low-level air routes.
- The WMT will be located outside of controlled airspace (wholly within Class G airspace). The WMT is located within the lateral limits but below the vertical limit of Restricted Area R156, and within the lateral and vertical limits of Danger Area D193. The location of the Project Area within D193 does not specifically affect the development of the WMT, however consideration for reporting, lighting and marking of the WMT is required in relation to the possibility of low-flying military aircraft in the vicinity of the WMT.

AVIATION PROJECTS

- The WMT will not impact any communication, navigation or surveillance facilities.
- Some low-level aircraft operations related to aerial application activities and military flying training are likely within the vicinity of the WMT site.
- It is not mandatory to mark the WMT, however, the following markings are recommended to be implemented in consideration of potential low-level day VFR aerial work operations in the vicinity:
 - Marker balls or high visibility flags or sleeves should be placed on the outside guy wires (noting NASF guidelines don't specify the size or number of markers)
 - Guy wire ground attachment points should be in contrasting colours to the surrounding ground/vegetation and
 - Paint markings should be applied in alternating contrasting bands of colour to at least the top 1/3 of the mast, with the darker colour at the top and the widths of the bands of approximately 1/7 of the longest dimension.
- Obstacle lighting is not a regulatory requirement on the WMT however may be considered as
 additional mitigation. CASA will review the WMT and provided a recommendation for obstacle lighting
 if they determine the WMT will be hazardous to aircraft operations. At 151.2 m AGL, it is possible that
 CASA may recommend the WMT be lit, however this would not be mandatory.
- 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 WMT coordinates and elevation should be provided to Airservices
 Australia, 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: airport.developments@airservicesaustralia.com

The development of the WMT in the proposed location is feasible in respect to aviation impacts.

If you wish to clarify or discuss the contents of this correspondence, please contact me on 0419 666 733

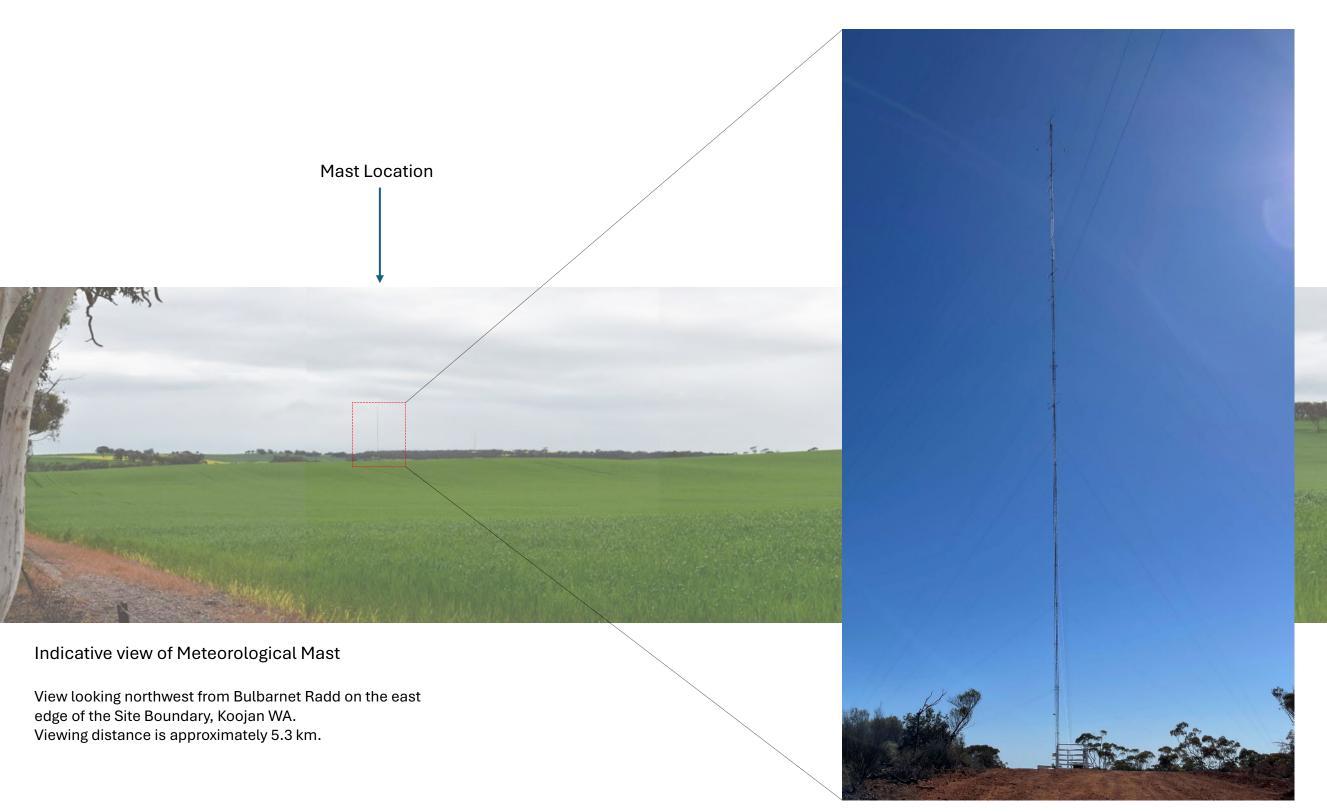
Kind regards

Brad O'Connor

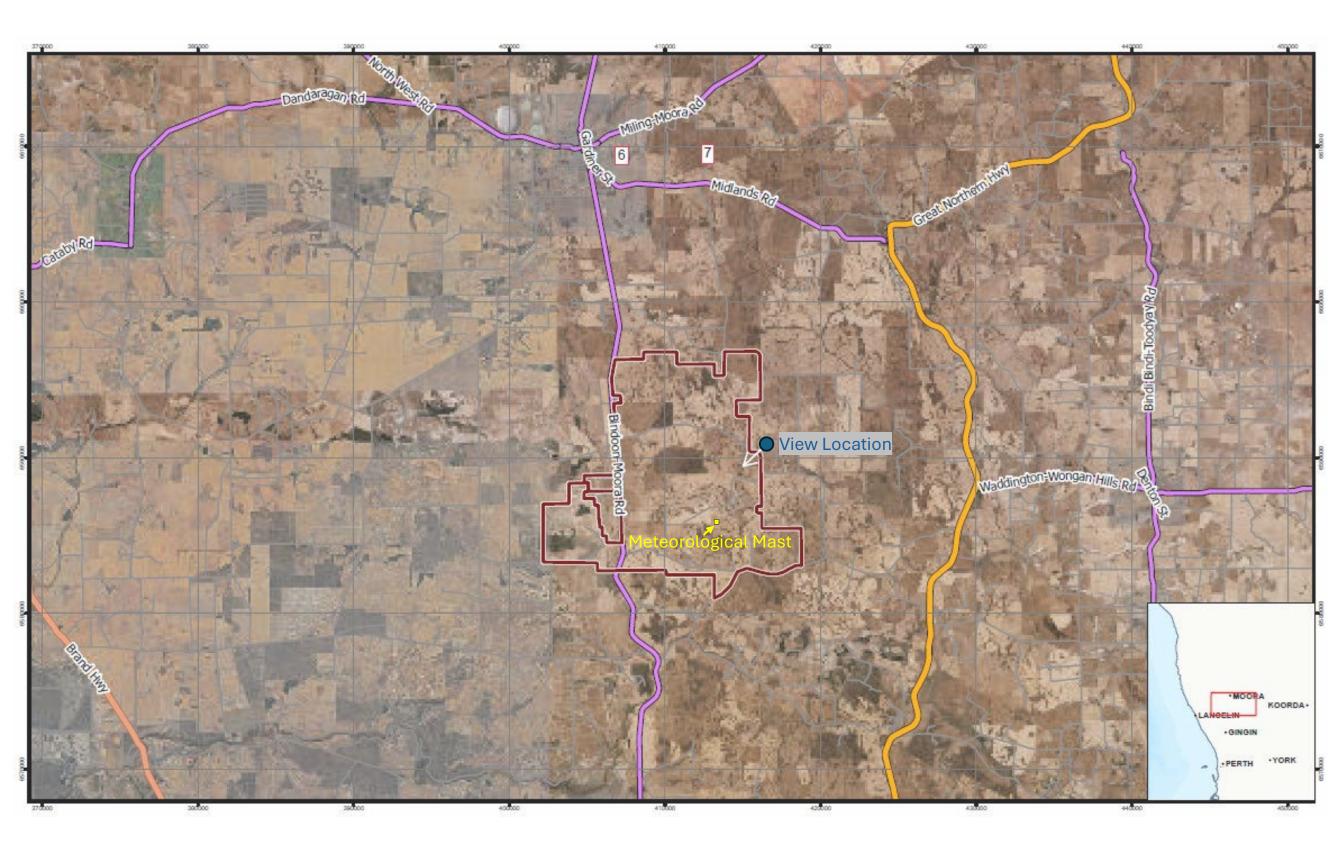
Specialist Consultant - Aviation Safeguarding

22 August 2024

APPENDIX D VIEW SHED IMAGES



Indicative Meteorological Mast arrangement *(example only)*



SHIRE OF VICTORIA PLAINS LOCAL PLANNING SCHEME NO.5



FORM 1 - APPLICATION FOR DEVELOPMENT APPROVAL

Owner Details		
Name/s: Junex Nominees Pty Ltd		
JADEN OWEN COCKING	OWEN	CHARLES COCKING
ABN (if applicable): ACN: 008	851 447	
Postal Address: PO BOX 1202	2, CLOVERDA	Postcode: WA 6985
Work Phone: Home Phone:	Fax:	E-mail: annadalefarm@bigpond.com
Mobile Phone: 0400 200 715 Contact Person for Corresponder	nce:	
Signature: JADEN OWEN COCKING	erbil	Date: 10 - 9 - 24
Signature: OWEN CHARLES COCKING	Corlin	Date: 7 - 10 - 24
ii) The signature/s of all registere application cannot proceed with owner includes the persons re Regulations 2015 Schedule 2 cl. signed by: - 1 director of the company, acc 2 directors of the company; or - 1 director and 1 secretary of the 1 director if a sole proprietors. Print the full names and position iii) A copy of the Certificate of Titl purchased through Landgate dir iv) Development Applications relat management order to the Shi reserve's purpose, or is used for Land Administration Act 1997 Lands and Heritage for consider	and owner(s) as list out the required significance of the ause 62(2). Land of the companied by the companied by the company, or the company significance of company significance of Victoria Player commercial purponeed to be referred and signing.	natories underneath the signatures. subject of this application must be provided and can be d Crown Land, Unmanaged Crown Reserves, land under ains where the development is not consistent with the loses, or land which is subject to a lease issued under the led to the Lands Division of the Department of Planning,
Applicant Details (if different	rrom owner)	
Name/s: Grevillea Wind Farm Pty Ltd	d c/o Urbis Ltd	
Address: Level 8, 1 William Str.	eet, Perth	Postcode: 6000

Work Phone: 8 9346 0517		Fax:	E-mail:		
Home Phone:			mgam	mon@urbis.com.au	
	e Phone: 0401 342 750				
Contact P	erson for Corre	espondence	e: Megan Gammon		
Signature	ignature: Date: 27/08/2024				7/08/2024
NOTES:					
Title, s	Failure to provide a suitably completed development application form, a copy of the relevant Certificate/s of Title, sufficient plans and other supporting information and/or the correct application fee may result in the application being returned or placed on hold.				
			confirmed by the local t commence until the fee		ent following receipt of the application. in full.
2015 t	As per Schedule 2 clause 64 of the Planning and Development (Local Planning Schemes) Regulations 2015 the information and plans provided with this application may be made available by the local government for public viewing in connection with the application.				
with the	If public advertising of the application is required by the local government an additional fee in accordance with the local government's adopted schedule of fees and charges will be payable by the applicant. Further processing of the application following completion of public advertising will not proceed until the additional fee is paid in full.				
	e original of this application and supporting information and plans will be retained by the local vernment for its records and will not be returned to the applicant/landowner following final determination.				
Property	Details				
NOTE: The	e details provided	d must matcl	h those shown on the re	levant Ce	ertificate/s of Title.
Lot No:	M1407		House/Street No: N/A	١	Location No: N/A
	an No:		e of Title Volume No: Certification 1214		ertificate of Title Folio No:
Plan No:					38
Title encumbrances (e.g. easements, restrictive covenants etc. as listed on the Second Schedule of the relevant Certificate/s of Title):					
Refer to	Certificate of Ti	tle			
Street nar	ne:		Suburb:		
Not state	lot stated on Title Not Stated on Title. Located within the locality of GILLINGARRA				
Nearest s	treet intersection	n:	1		
Thompso	n Road x Schol	z Road			
Proposed	l Developmen	t:			
Nature of	ما می دما می می می می	□ Works	(New construction w	orks wit	n no change of land use)
	development:		`		i no change of land use)
Works and Use					,
	·	Use (C	Change of use of land and Use	l with no	construction works)
	the proposal inv	□ Use (0 X Works olves advert	Change of use of land and Use	l with no	construction works) ormation for Development Approval for ith this application.
Advertisen	the proposal invo ments form (i.e. a	Use (0 Works olves advert Form 2) mus	Change of use of land and use and Use signage the Additional signature si	l with no tional Info bmitted w	construction works) ormation for Development Approval for ith this application.
Advertisen Is an exer	the proposal invo ments form (i.e. a	Use (0 Works olves advert Form 2) must velopment 0	Change of use of land sand Use sand Use signage the Additional state of the completed and substitute of the claimed for part of the	l with no tional Info bmitted w	construction works) ormation for Development Approval for ith this application.

Description of proposed works and/or land use:
150 metre meterologcial mast
Description of exemption claimed (if relevant):
Nature of any existing buildings and/or land use:
Rural agricultural land
Approximate cost of proposed development (excluding GST):
\$350,000
OFFICE USE ONLY
Date application received:
Received by:
Application reference number:
Application fee payable: \$
Date of receipt of application fee from applicant:
Receipt number for application fee: