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HR	SFO	NRSM	SHM	PLAN	

Moonies Hill Energy Pty Ltd

Moonies Hill Energy Pty Ltd.,
78 Pensioner Road, Kojonup,
Western Australia, 6395

T: +61 8 9831 1166
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Flat Rocks Wind Farm

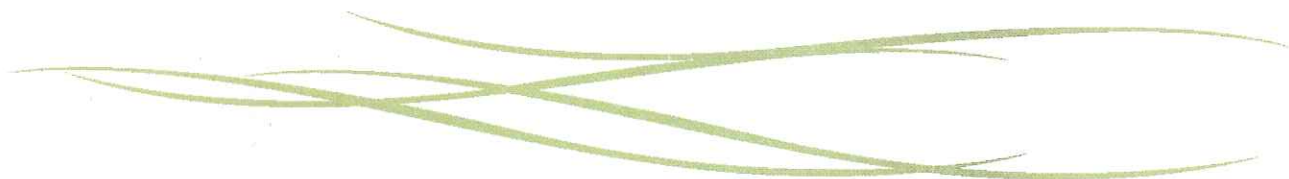
Development Application

Planning and Environmental Report

November 2010



Planning Application Form



Flat Rocks Wind Farm Planning Application

1. Owner of Land: Dovercourt Pty Ltd as Trustee for the Kingshurst Trust
- Directors: Benjamin Campbell-Wilson and Sarah Rankin
- Description of Land: The site is that described as "Intaba", 1240 Warrenup Road Broomehill, Western Australia 6318
- Certificate of Title: Volume 1726 Folio 664 (Kojonup Location 5979)
- Volume 1726 Folio 665 (Kojonup Location 2927)
- Volume 1726 Folio 666 (Kojonup Location 6854)
- Volume 1726 Folio 667 (Kojonup Locations 1851, 1852, 2826, 2928, 3382, 5713 and 6603)
- Volume 1726 Folio 668 (Kojonup Location 5614)
- Volume 2109 Folio 13 (Kojonup Locations 1877, 2274, 2275 and 3470)
- Description of Land: The site is that described as "Kingshurst", Palomar Road Broomehill Western Australia 6318
- Certificate of Title: Volume 2062 Folio 299 (Lot 2 on Diagram 88855)
- Volume 2062 Folio 369 (Lot 1 88855)
- Volume 2062 Folio 370 (Lot 33 on Plan 2851)
2. Owner of Land: The Yantecup Trust, John Maxwell Thorn Family Trust, Hillary May Thorn Family Trust
- Trustees: Hillary May Thorn and John Maxwell Thorn
- Description of Land: The site is that described as "The Meadows", 1073 Nookanallup South Road, Broomehill Western Australia
- Certificate of Title: Volume 1663 Folio 27 (Lot 10 on Plan 14464)
- Volume 2122 Folio 77 (Lot 6599 on Deposited Plan 79216)

Volume 2122 Folio 78 (Lot 6598 on Deposited Plan 79218)

Volume 2122 Folio 79 (Lot 1083 on Deposited Plan 101836)

Volume 2122 Folio 80 (Lot 1943 on Deposited Plan 110745)

Volume 2122 Folio 81 (Lot 1957 on Deposited Plan 110744)

Volume 2122 Folio 82 (Lots 28,29,30 & 31 on Plan 2851)

Volume 2122 Folio 83 (Lot 1082 on Deposited Plan 101826)

Description of Land: The site is that described as "Yantecup", Potts Road Kojonup Western Australia

Certificate of Title: Volume 1207 Folio 251 (Lot 6315 on Deposited Plan 79220)

(Lot 781 on Deposited Plan 100937)

(Lot 1016 on Deposited Plan 101604)

(Lot 1017 on Deposited Plan 101605)

(Lot 1158 on Deposited Plan 102671)

(Lot 1748 on Deposited Plan 107865)

(Lot 4747 on Deposited Plan 115014)

(Lot 4429 on Deposited Plan 126453)

(Lot 4787 on Deposited Plan 128148)

(Lot 96 on Deposited Plan 245672)

Volume 1112 Folio 404 (Kojonup Location 4168 and 4788)

Volume 2116 Folio 603 (Kojonup Location 6474)

3. Owner of the Land: Rocky Creek Pty Ltd

Directors: Michael and Shelley Bilney

Description of the Land: The site is that described as "Rocky Creek", Bilney Road Kojonup,
Western Australia 6395

Certificate of Title: Volume 1251 Folio 510 (Kojonup Location 7362)

Volume 1270 Folio 083 (Kojonup Locations 6855, 7725, 6085, 1028, 6932, 1111, 1107, 1085, 1110, 1641, 4386, 725, 1697 and 1790)

4. Owner of the Land: Michael Bilney as trustee for the AJ Bilney Family Trust

Trustee: Michael Bilney

Description of the Land: The site is that described as "Rocky Creek", Bilney Road Kojonup,
Western Australia 6395

Certificate of Title: Volume 1107 Folio 507 (Kojonup Location 5187)

5. Owner of the Land: Alexander John Cant

Description of the Land: The site is that described as "Euvista", 2855 Kojonup-Broomehill Road,
Kojonup Western Australia 6395

Certificate of Title: Volume 1840, Folio 252 (Kojonup Location 8782, being Lot 1 on Plan 16813)

Volume 1765, Folio 927 (Kojonup Location 8783)

6. Owner of the Land: Cameron Clayton Cant

Description of the Land: The site is that described as "Euvista", 2855 Kojonup-Broomehill Road
Kojonup Western Australia 6395

Certificate of Title: Volume 1479 Folio 881 (Lot 1 on Diagram 50672)

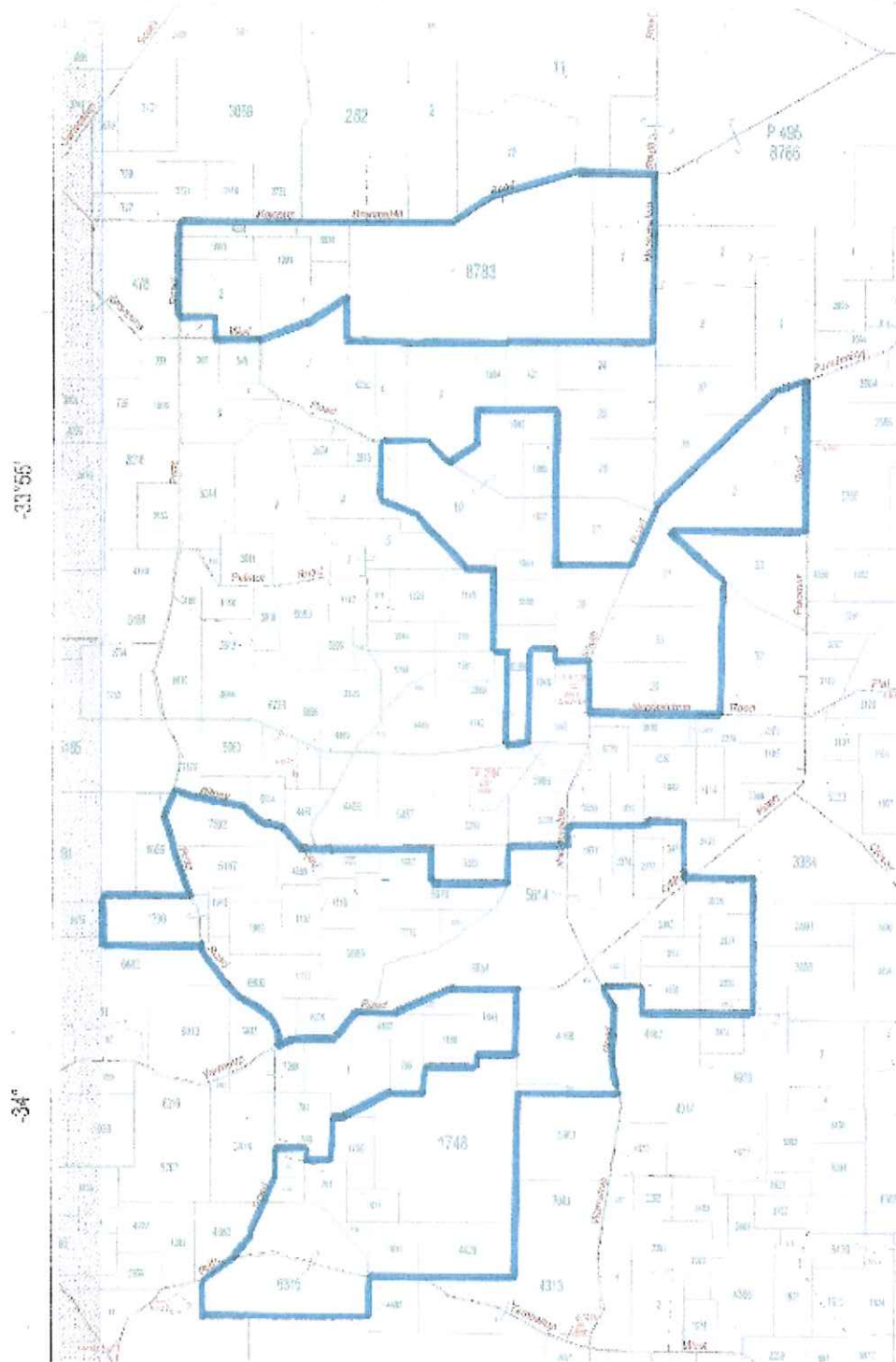
Volume 1604 Folio 758 (Lot 2 on Diagram 61953)

Volume 1611 Folio 9424 (Kojonup Location 1000 and 4224)

Volume 927 Folio 191 (Lot 3936 on Deposited Plan 124135)

Volume 1015 Folio 111 (Lot 1001 on Deposited Plan 101263)

Refer to attached cadastral map



- Development Envelope
- Cadastral Boundaries

Flat Rocks Wind Farm

SCHEDULE III(A)
FORM 1

APPLICATION FOR PLANNING CONSENT

SHIRE OF KOJONUP
TOWN PLANNING SCHEME NO. 3

APPLICATION FOR PLANNING CONSENT

Name of Owner of Land) **Dovercourt Pty Ltd**
on which development) Directors Names: **Benjamin Robert Campbell-Wilson**

Address in Full: 1240 Warrenup Road, Broomehill, WA 6318

Submitted by: **Moonies Hill Energy Pty Ltd**

Address for Correspondence: 78 Pensioner Road, Kojonup WA, 6395

Locality of Development: Flat Rocks (Approximately 35km south east of Kojonup, Between the Kojonup-Broomehill Road and the Tambellup West Road)

Titles Office Description of Land:

The site is that described as "Intaba", 1240 Warrenup Road Broomehill Western Australia 6318, more particularly described as:

a) all of the land comprising Kojonup Location 5979, Certificate of Title Vol 1726, Folio 664 and

b) all of the land comprising Kojonup Location 2927, Certificate of Title Vol 1726, Folio 665, and

c) all of the land comprising Kojonup Location 6854, Certificate of Title Vol 1726, Folio 666, and

d) all of the land comprising Kojonup Locations 1851, 1852, 2826, 2928, 3382, 5713 and 6603, Certificate of Title Vol 1726, Folio 667, and

e) all of the land comprising Kojonup Location 5614, Certificate of Title Vol 1726, Folio 668, and

f) all of the land comprising Kojonup Locations 1877, 2274, 2275 and 3470, Certificate of Title Vol 2109, Folio 13 and

The site is that described as "Kingshurst", Palomar Road Broomehill Western Australia 6318, more particularly described as:

g) all of the land comprising Lot 2 on Diagram 88855, Certificate of Title Vol 2062, Folio 299 and

h) all of the land comprising Lot 1 88855, Certificate of Title Vol 2062, Folio 369 and

i) all of the land comprising Lot 33 on Plan 2851, Certificate of Title Vol 2062, Folio 370.

The type of development and the nature of the proposed buildings are as follows:
approximately 74 wind turbines. And associated infrastructure

The approximate cost of proposed development is: approximately \$400M

The estimated time of completion is: 24 months after commencement

The approximate number of persons to be employed when the development is completed is:
expected to be in 10-15 full time employees.

Three copies of the Site Plan and other necessary plans of the proposals are submitted with this application.

Signed by the Owner of the Land :



Signed by the Applicant:



NOTE: A separate application is required to be submitted to the Council for a building licence (where applicable).

SCHEDULE III(A)
FORM 1

APPLICATION FOR PLANNING CONSENT

SHIRE OF KOJONUP
TOWN PLANNING SCHEME NO. 3

APPLICATION FOR PLANNING CONSENT

Name of Owner of Land) Surname: **Thorn**
on which development) Christian Names: **Hillary May** and **John Maxwell** as trustees for
proposed) the Yantecup Trust, the John Maxwell Thorn Family Trust and the
 Hillary May Thorn Family Trust
Address in Full: 123 Hare Street, Albany Western Australia 6330

Submitted by: **Moonies Hill Energy Pty Ltd**

Address for Correspondence: 78 Pensioner Road, Kojonup WA, 6395

Locality of Development: Flat Rocks (Approximately 35km south east of Kojonup, Between the Kojonup-Broomehill Road and the Tambellup West Road)

Titles Office Description of Land:

The site is that described as "The Meadows", 1073 Nookanallup South Road Broomehill Western Australia, more particularly described as:

- a) all of the land comprising Lot 10 on Plan 14464, Certificate of Title Vol 1663, Folio 27; and
- b) all of the land comprising Lot 6599 on Deposited Plan 79216, Certificate of Title Vol 2122, Folio 77; and
- c) all of the land comprising Lot 6598 on Deposited Plan 79218, Certificate of Title Vol 2122, Folio 78; and
- d) all of the land comprising Lot 1083 on Deposited Plan 101836, Certificate of Title Vol 2122, Folio 79; and
- e) all of the land comprising Lot 1943 on Deposited Plan 110745, Certificate of Title Vol 2122, Folio 80; and
- f) all of the land comprising Lot 1957 on Deposited Plan 110744, Certificate of Title Vol 2122, Folio 81; and
- g) all of the land comprising Lots 28,29,30 & 31 on Plan 2851, Certificate of Title Vol 2122, Folio 82; and
- h) all of the land comprising Lot 1082 on Deposited Plan 101826, Certificate of Title Vol 2122, Folio 83 and

The site is that described as "Yantecup", Potts Road Kojonup Western Australia as shown in the maps forming Schedule 3 of this Agreement, more particularly described as:

i) all of the land comprising Lot 6315 on Deposited Plan 79220, Lot 781 on Deposited Plan 100937, Lot 1016 on Deposited Plan 101604, Lot 1017 on Deposited Plan 101605, Lot 1158 on Deposited Plan 102671, Lot 1748 on Deposited Plan 107865, Lot 4747 on Deposited Plan 115014, Lot 4429 on Deposited Plan 126453, Lot 4787 on Deposited Plan 128148, Lot 96 on Deposited Plan 245672, Certificate of Title Vol 1207, Folio 251 and.

j) all of the land comprising Kojonup Location 4168 and 4788, Certificate of Title Vol 1112, Folio 404 and

k) all of the land comprising Kojonup Location 6474, Certificate of Title Vol 2116, Folio 603.

The type of development and the nature of the proposed buildings are as follows:
approximately 74 wind turbines. And associated infrastructure

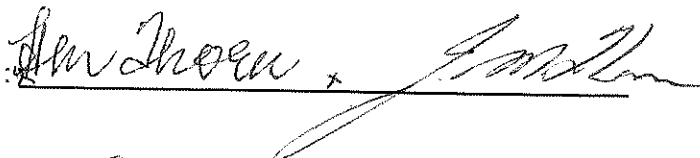
The approximate cost of proposed development is: approximately \$400M

The estimated time of completion is: 24 months after commencement

The approximate number of persons to be employed when the development is completed is:
expected to be in 10-15 full time employees.

Three copies of the Site Plan and other necessary plans of the proposals are submitted with this application.

Signed by the Owner of the Land:



Signed by the Applicant:



NOTE: A separate application is required to be submitted to the Council for a building licence (where applicable).

SCHEDULE III(A)
FORM 1

APPLICATION FOR PLANNING CONSENT

SHIRE OF KOJONUP
TOWN PLANNING SCHEME NO. 3

APPLICATION FOR PLANNING CONSENT

Name of Owner of Land) **Rocky Creek Pty Ltd**
on which development) Directors Names: **Michael and Shelley Bilney**
Address in Full: "Rocky Creek" Bilney Road, Kojonup, Western Australia, 6395

Submitted by: **Moonies Hill Energy Pty Ltd**
Address for Correspondence: 78 Pensioner Road, Kojonup WA, 6395

Locality of Development: Flat Rocks (Approximately 35km south east of Kojonup, Between the Kojonup-Broomehill Road and the Tambellup West Road)

Titles Office Description of Land:

The site is that described as "Rocky Creek", Bilney Road Kojonup Western Australia 6395
more particularly described as:

- a) all of the land comprising Kojonup Location 7362, Certificate of Title Vol 1251, Folio 510.
- b) all of the land comprising Kojonup Locations 6855, 7725, 6085, 1028, 6932, 1111, 1107, 1085, 1110, 1641, 4386, 725, 1697 and 1790, Certificate of Title Vol 1270, Folio 083.

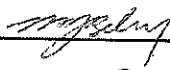
The type of development and the nature of the proposed buildings are as follows:
approximately 74 wind turbines. And associated infrastructure


The approximate cost of proposed development is: approximately \$400M

The estimated time of completion is: 24 months after commencement

The approximate number of persons to be employed when the development is completed is:
expected to be in 10-15 full time employees.

Three copies of the Site Plan and other necessary plans of the proposals are submitted with
this application.

Signed by the Owner of the Land : 

Signed by the Applicant: 

NOTE: A separate application is required to be submitted to the Council for a building licence (where applicable).

SCHEDULE III(A)
FORM 1

APPLICATION FOR PLANNING CONSENT

SHIRE OF KOJONUP
TOWN PLANNING SCHEME NO. 3

APPLICATION FOR PLANNING CONSENT

Name of Owner of Land) Surname: **Cant**
on which development) Christian Names: **Alexander John**

Address in Full: **2855 Broomehill-Kojonup Road, Kojonup, Western Australia, 6395**

Submitted by: **Moonies Hill Energy Pty Ltd**

Address for Correspondence: **78 Pensioner Road, Kojonup WA, 6395**

Locality of Development: **Flat Rocks (Approximately 35km south east of Kojonup, Between the Kojonup-Broomehill Road and the Tambellup West Road)**

Titles Office Description of Land:

The site is that described as "Euvista", 2855 Kojonup-Broomehill Road, more particularly described as:

a) all of the land comprising Kojonup Location 8782, being Lot 1 on Plan 16813, Certificate of Title Vol 1840, Folio 252; and

b) all of the land comprising Kojonup Location 8783, Certificate of Title Vol 1765, Folio 927.

The type of development and the nature of the proposed buildings are as follows:
approximately 74 wind turbines. And associated infrastructure

The approximate cost of proposed development is: approximately \$400M

The estimated time of completion is: 24 months after commencement

The approximate number of persons to be employed when the development is completed is: expected to be in 10-15 full time employees.

Three copies of the Site Plan and other necessary plans of the proposals are submitted with this application.

Signed by the Owner of the Land :

A. J. Cant

Signed by the Applicant:

[Signature]

NOTE: A separate application is required to be submitted to the Council for a building licence (where applicable).

SCHEDULE III(A)
FORM 1

APPLICATION FOR PLANNING CONSENT

SHIRE OF KOJONUP
TOWN PLANNING SCHEME NO. 3

APPLICATION FOR PLANNING CONSENT

Name of Owner of Land) Surname: **Bilney**
on which development) Christian Names: **Michael** as trustee for the **AJ Bilney**
Family Trust

Address in Full: "Rocky Creek" Bilney Road, Kojonup, Western Australia, 6395

Submitted by: **Moonies Hill Energy Pty Ltd**

Address for Correspondence: 78 Pensioner Road, Kojonup WA, 6395

Locality of Development: Flat Rocks (Approximately 35km south east of Kojonup, Between the Kojonup-Broomehill Road and the Tambellup West Road)

Titles Office Description of Land:

The site is that described as "Rocky Creek", Bilney Road Kojonup Western Australia 6395
more particularly described as:

a) all of the land comprising Kojonup Location 5187,
Certificate of Title Vol 1107, Folio 507.

The type of development and the nature of the proposed buildings are as follows:
approximately 74 wind turbines. And associated infrastructure

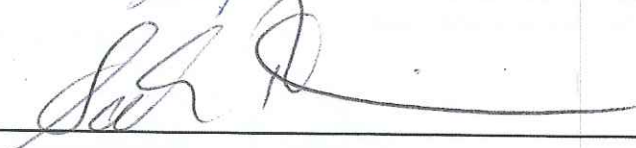
The approximate cost of proposed development is: approximately \$400M

The estimated time of completion is: 24 months after commencement

The approximate number of persons to be employed when the development is completed is:
expected to be in 10-15 full time employees.

Three copies of the Site Plan and other necessary plans of the proposals are submitted with
this application.

Signed by the Owner of the Land :  _____

Signed by the Applicant:  _____

NOTE: A separate application is required to be submitted to the Council for a building licence (where applicable).

SCHEDULE III(A)
FORM 1

APPLICATION FOR PLANNING CONSENT

SHIRE OF KOJONUP
TOWN PLANNING SCHEME NO. 3

APPLICATION FOR PLANNING CONSENT

Name of Owner of Land) Surname: **Cant**
on which development) Christian Names: **Cameron Clayton**

Address in Full: **2855 Broomehill-Kojonup Road, Kojonup, Western Australia, 6395**

Submitted by: **Moonies Hill Energy Pty Ltd**

Address for Correspondence: **78 Pensioner Road, Kojonup WA, 6395**

Locality of Development: **Flat Rocks (Approximately 35km south east of Kojonup, Between the Kojonup-Broomehill Road and the Tambellup West Road)**

Titles Office Description of Land:

The site is that described as "Euvista", 2855 Kojonup-Broomehill Road Kojonup Western Australia 6395, more particularly described as:

a) all of the land comprising Lot 1 on Diagram 50672, Certificate of Title Vol 1479, Folio 881; and

b) all of the land comprising Lot 2 on Diagram 61953, Certificate of Title Vol 1604, Folio 758; and

c) all of the land comprising Kojonup Location 1000 and 4224, Certificate of Title Vol 1611, Folio 9424.

d) all of the land comprising Lot 3936 on Deposited Plan 124135, Certificate of Title Vol 927, Folio 191.

e) all of the land comprising Lot 1001 on Deposited Plan 101263, Certificate of Title Vol 1015, Folio 111.

The type of development and the nature of the proposed buildings are as follows:
approximately 74 wind turbines. And associated infrastructure

The approximate cost of proposed development is: approximately \$400M

The estimated time of completion is: 24 months after commencement

The approximate number of persons to be employed when the development is completed is: expected to be in 10-15 full time employees.

Three copies of the Site Plan and other necessary plans of the proposals are submitted with this application.

Signed by the Owner of the Land :

C.C. Carr

Signed by the Applicant:

[Signature]

NOTE: A separate application is required to be submitted to the Council for a building licence (where applicable).

Executive Summary

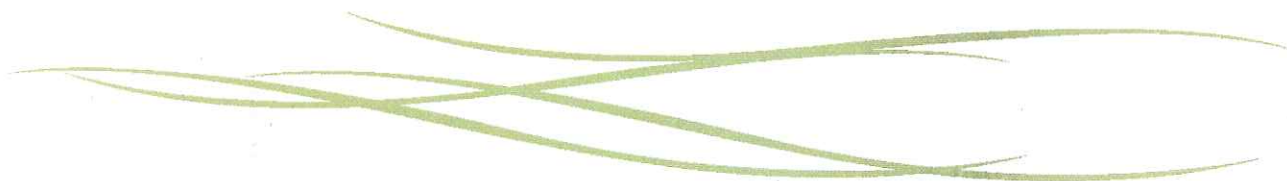


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Executive Summary

1 Introduction

Moonies Hill Energy Pty Ltd has submitted a Planning Application for approval by the Shire of Kojonup, for the construction and operation of a Wind Farm at the Flat Rocks locality approximately 35km south east of Kojonup, 35km north west of Tambellup, 35km west of Broomehill and 45km south west of Katanning. The location of the proposed development site is shown in Figure 1 and the proposed turbine layouts in Figure 2. The wind farm will consist of up to 74 wind turbines and associated infrastructure. MHE will submit the *Flat Rocks Wind Farm Planning and Environmental Report* to support this planning application.

The proposed Flat Rocks Wind Farm (FRWF) will generate renewable electricity from a clean renewable resource for a period of 20 years after which time, subject to further planning approval, it may be refurbished and the life extended, or decommissioned and removed.

This Executive Summary provides an outline of the design investigations, proposed development, environmental assessment and community and agency consultations MHE has undertaken or plans to undertake in relation to the proposed Flat Rocks Wind Farm Project.

2 Proponent - Moonies Hill Energy Pty Ltd

The proponent of the Flat Rocks Wind Farm project is Moonies Hill Energy Pty Ltd (MHE), a locally owned renewable energy development company. MHE has been involved with the Flat Rocks Wind Farm since the projects inception in June 2008. As a locally owned company MHE is committed to the Great Southern Region and has a "shop local" policy in regards to goods and services.

3 Government Policy

Climate change has been described as one of the greatest economic, social and environmental challenges of our time. There is ever mounting scientific evidence confirming that human activity is altering the climate resulting in changing rainfall patterns, reducing water availability in Australia and increasing the frequency of severe weather events such as bushfires and storms.

In 2001 The Australian Government introduced a Mandatory Renewable Energy Target (MRET) scheme which aimed to increase the uptake of renewable energy in Australia's electricity supply by 2%. In 2007 the Government increased this commitment ensuring that by 2020, 20% of Australia's electricity supply comes from renewable energy sources. To deliver on this commitment, the Government is working to expand the national Renewable Energy Target (RET) that will bring the MRET and existing and proposed state and territory targets into a single national RET scheme.

The Western Australian Government is also committed to the development of renewable energy sources in this state. The 2007 Premier's climate change action statement entitled, *"Making Decisions for the Future"*, established a local Renewable Energy Target (RET) that aims to increase energy generation from renewable sources in WA's South West Interconnected System (SWIS) to 6% by 2010, 15% by 2020 and 20% by 2025.

4 Flat Rocks Wind Farm Benefits

The FRWF will generate significant environmental, economic and social benefits including:

- Up to 660,000 tonnes of CO₂ (global warming pollution) avoided each year, equivalent to removing 130,000 cars from the road annually;
- Enough electricity to supply up to 100,000 homes every year;
- An opportunity for local farms to diversify;
- The permanent works will take up approximately 1% of the landowner's properties, ensuring current farming practices can continue and a minimal environmental footprint for the project;
- Direct and indirect employment opportunities for the local and broader regional community – approximately 200 construction jobs and up to 10 ongoing permanent jobs;
- Injection of \$30 million into the local community;
- Establishment of a Sustainable Communities Fund from a portion of FRWF revenue to support local community groups and organisations.

5 Site Location

The proposed FRWF development site is located in open farmland approximately 35km south east of Kojonup and 17km east of Albany highway from the Yarranup Road intersection. The site runs approximately 20km south from the Kojonup-Broomehill road (at the intersection of the Kojonup-Broomehill and Nookanellup South Road) to just north of the Tambellup West Road in the south. The total development envelope covers a total area of approximately 6,840 Ha of which around 30 hectares will be used in the final FRWF development. The site is currently used for broadacre cropping and livestock production.

6 Site Selection and Iterative Design Process

MHE has been investigating the FRWF site since early 2008. An 80m wind monitoring mast was installed on the site in May 2009. Wind data has since been analysed and shown the site has an economic wind resource and suitable surrounding landscapes to support a 150MW wind farm.

The final layout of the wind farm will be determined after the completion and consideration of the environmental impact assessment, selection of a wind turbine model and planning and development approval conditions.

The wind turbine layouts presented in this application represent the preferred locations based on two turbine models being considered, a 74 x 2.05 MW turbine and a 46 x 3.3 MW turbine. On selection of the preferred model and during the detailed design phase the wind turbines will be micro-sited to maximise energy output, minimise environmental impacts and adhere to any planning or developmental constraints.

It should be noted that while the wind turbine positions may be adjusted through this process, the final layout for construction will generally be in accordance with the layouts submitted in this application.

7 The Project

A description of the project components is provided in the following sections.

7.1. Infrastructure

The proposed Flat Rocks Wind Farm will consist of approximately 74 wind turbine generators with a preferred installed capacity of 150MW. Several turbine models are currently under

consideration ranging from 1.8MW up to 3.3MW. Each turbine is made up of the following components:

- Tower – up to 90m high tubular towers
- Blades – three blades up to 56m in length
- Rotor diameter – up to 112m
- Tip height – up to 146m
- Nacelle – located on top of the tower and houses the gearbox and generator
- Foundation – reinforced concrete base foundation 15m diameter x 1.5m high
- Hardstand – Crane hardstand measuring approximately 22m x 40m located directly adjacent to the foundation

The main infrastructure of the wind farm development will comprise of the following components:

- On-site tracks – approximately 40km
- Cabling – approximately 96km of predominantly below ground cabling
- Operation and maintenance building
- Substation
- Meteorological masts – up to two permanent 80m masts
- Temporary construction compounds and laydown areas
- Temporary concrete batching plant

7.2 Aviation Obstruction Lights

In relation to air craft safety, the turbines may be lit in accordance with CASA requirements in Advisory Circular AC 139-18(0) if still required after CASA's current review. To meet the requirements that all structures over 110 meters be lit with aviation safety lights at intervals of 900m¹, it is likely that approximately 14 of the 74 turbines will be lit with medium intensity, flashing red lights. MHE will continue to consult with CASA in order to establish any new requirements that may apply.

¹ AC 139-18(0) Obstacle Marking and Lighting of Wind Farms CASA Advisory Circular

7.3. Traffic and Route to Site

MHE has consulted with Main Roads and the Shires of Kojonup and Broomehill-Tambellup regarding the most suitable routes for heavy vehicle deliveries and daily traffic to the FRWF site. Communication will continue to ensure the most appropriate traffic routes are utilised. The final preferred route to the FRWF site will be identified by the turbine suppliers and agreed with Main Roads and the Shires of Kojonup and Broomehill-Tambellup.

Traffic Management Plans will be developed to manage traffic movements throughout construction to minimise disruption. School bus times, local freight companies and users, farm vehicles, the locations of hospitals, schools and aged care facilities will all be taken into account within the plan.

7.4. Grid Connection

All electricity generated by the FRWF will be fed into the local electricity grid known as the SWIS. MHE is considering two connection options for the FRWF which will be discussed with Western Power over the next few months. One option is to connect to the proposed Muja-Southdown 220kV overhead transmission line required for the Grange Resources Southdown Magnetite Mine, as this line passes through the northern end of the proposed development site. The other option is for MHE to fund the construction of a 132kV transmission line from the proposed FRWF site to terminate at the Kojonup Substation. This line would utilise the same corridor as the proposed 220kV line. The on-site substation will be located in close proximity to the transmission line in the northern section of the proposed FRWF development site.

8. Consultation

MHE has consulted with a range of agencies, government departments and community groups regarding the development of the FRWF project.

Information sessions have been held for immediate neighbours on two occasions – 6th August 2008 at “Intaba” and Friday 17th September 2010 at the Kojonup Lessor Hall. These sessions provided surrounding landowners, within a 10km radius of the development site, an opportunity to view information about the proposed project, ask questions of MHE staff, and raise suggestions and concerns.

Broader community meetings are planned when all environmental impact studies have been completed later this year (December 2010). Information will be displayed in Kojonup, Broomehill and Tambellup.

9. Environmental Assessment

MHE has engaged several specialist consultants to undertake detailed environmental assessments of the proposed FRWF project. Assessments will be carried out to determine the current state of the environment within the site and to identify potential impacts. The environmental assessments are summarised in the following section with the name of the consultant engaged provided in the sub-headings.

9.1. **Landscape and Visual Effects** – *Green Bean Design Landscape Architects*

A Landscape and Visual Impact Assessment (LVIA) consisting of both desktop assessment and field surveys will be undertaken to determine landscape impacts by the proposed FRWF on the surrounding landscape and nearby residents. Landscape impacts relate to the effects of the proposed wind farm on the physical and environmental characteristics of the landscape and its resulting character and quality. Visual impacts refer to the effects on views experienced by visual receptors (e.g. residents, tourists or motorists) and on the visual amenity experienced by those people.

The LVIA will assess both the permanent impacts relating to the operational lifetime of the wind farm and also the short-term impacts associated with the construction of the wind farm. Potential mitigation measures will be identified as part of the visual impact assessment. It will also consider any residual impacts if the wind farm was to be decommissioned.

The LVIA will assess direct and indirect impacts. It will not only assess the impacts associated with the turbines but also any related impacts resulting from any electrical infrastructure including control rooms, site access tracks and site entrances.

Key viewpoints will be identified based on the extent of visibility of the FRWF and using the results from consultation and natural and cultural values. Several viewpoints have been identified by the CEO's from the Shire of Kojonup and Broomehill-Tambellup for inclusion in the visual impact study.

9.2. **Noise** – *Herring Storer Acoustics and GL Garrad Hassan*

A Noise Impact Assessment will be performed to assess the impact of the proposed wind farm on surrounding residences and those located within the develop site. Initial noise modeling has recommended background monitoring at several properties within or adjacent to the FRWF development site. The results of the background monitoring will be used to determine the level of noise permitted at local residences in the noise predictions, and as a benchmark to allow a comparison of the noise levels before and after construction of the FRWF. The noise

predictions will be used to determine the wind farm layout and the location of the turbines in relation to nearby properties.

This process will ensure that the noise generated from the FRWF will not exceed the maximum noise levels allowed at nearby residential properties, which are set by the Environmental Protection Agency and the Western Australian Planning Commission (WAPC). Of particular reference is the WAPC Planning Bulletin Number 67 which refers to the Wind Farm Environmental Noise Guidelines for Wind Farms issued by the South Australian (SA) Environmental Protection Authority in 2003. These guidelines stipulate a limit on the predicted equivalent noise levels ($L_{Aeq, 10min}$) of 35dBA or 5dBA above the background noise level ($L_{A90, 10min}$), whichever is greater, at dwellings that do not have an agreement with the developers of the wind farm.

The final wind farm layout will be designed in order to meet the above guidelines.

9.3. Terrestrial Flora and Vegetation – *Mattiske Consulting*

MHE has reviewed the Department of Environment and Conservation (DEC) website for Declared Rare Flora in the South West Catchment Council Inland NRM zone which identified no Declared Rare Flora or Priority Flora within the development site. In addition to this search MHE has reviewed a clearing permit submitted in 2007 by a landowner located in the center of the development site which described the site as:

- Beard Vegetation Associated 4: Medium woodland; Marri and Wandoo
- Vegetation comprising scattered paddock trees and almost completely degraded (Keighery 1994)
- No known Threatened Ecological Communities (TECs) or Protected Ecological Communities (PECs) recorded within a 30km radius of the site
- and the nearest known location of Declared Rare Flora (DRF) to be approximately 11km away.

A flora and vegetation survey was undertaken in September 2010 by Mattiske Consulting, concentrating on areas where disturbance of native vegetation was likely to occur. The aim of the survey was to identify the types of vegetation which exists in the proposed FRWF site and whether any species or habitats need to be protected or avoided. Identifying areas of native vegetation or suitable habitat on site means the FRWF can be designed to avoid, wherever possible, areas of native vegetation and minimise disturbance to any protected or endangered species.

The site consists mainly of cleared annual pasture and broad acre cropping with small isolated areas of vegetation of varying conditions, the majority of which is described as degraded. Efforts will be made to avoid vegetation clearance during the construction of the FRWF thereby minimising the impact on native vegetation.

9.4. Fauna - Matiske Consulting

Matiske Consulting have been engaged to conduct a fauna assessment of the FRWF site. It is expected that due to the poor state of vegetation around the site the investigation will involve a 'desktop' search and combined with observations recorded during the flora and vegetation field survey. The general fauna of the development area is expected to be depauperate due to the heavy clearing and fragmentation of the remaining native vegetation.

As this stage of the review it should be noted that the proposed FRWF is not situated in any significant fauna movement corridors, nor is it adjacent to a significant wetland or other concentration of fauna. In addition, review of Declared, Threatened and Priority Fauna in the South West Catchment Council Inland NRM zone showed the development site contains no threatened species are likely to be at significant risk as a result of the FRWF development.

As part of the final wind farm design process the results of the fauna survey will be considered in order to identify any species of significance (environmental sensitivity) relevant to the final wind farm footprint so management strategies can be established or areas avoided.

9.5. Aboriginal Cultural Heritage

An ethnographic and archaeological survey of the development site was undertaken in September 2010 by R. & E. O'Connor Pty Ltd and John Cecchi Heritage Management Consultancy, respectively. The surveys included searches of the Department of Indigenous Affairs online Register of Aboriginal Sites Database, consultation and site visits in conjunction with representatives of the local indigenous community, and detailed searches of the development area.

9.5.1 Ethnography - R. & E. O'Connor Pty Ltd

The DIA Online Register of Aboriginal Sites shows no Aboriginal ethnographic sites listed in the proposed development site. Two registered sites were found in close proximity to the development site, but will have no effect on the proposed FRWF;

Site Number 5354, "Tambellup Gnamma", a water source site listed on the Permanent Register under Open Access. Location 237640/6236647 and

Site Number 5738, "Tambellup", an artifact scatter site recorded on the Permanent Register under open access. Location 541640/6236647.

The development site is covered by two applications for determination of native title, namely the Wagyl Kaip claim, Number WC98/70 (Federal Court File Number WAD6286/98) and the Southern Noogar claim WC96/109 (Federal Court File Number WAD6134/98). There is also an active Aboriginal Progress Association in Kojonup, whose members were also consulted regarding the heritage of the development site. All of the consulted parties claimed to have both authority to speak for the development area and also to have traditional knowledge of the area. During visits to the proposed development site on the 4th and 5th of September 2010, the indigenous representatives were satisfied that the FRWF project area contains no sacred or significant Aboriginal heritage sites. Accordingly they signed a form approving the Project.

9.5.2 Archaeology - *John Cecchi Heritage Management Consultancy*

The DIA Online Register of Aboriginal Sites shows no additional Aboriginal archaeological sites listed in the proposed development site, other than the two mentioned above.

A site survey consisting of walked and vehicular traverses of the development site found no signs of any archaeological sites or material. The archaeological report recommends that there is no impediment to the FRWF project on archaeological grounds.

In the unlikely event that any archaeological material is discovered during the project construction or operation, MHE will comply with the requirements of the *Aboriginal Heritage Act 1972*.

9.6 Electromagnetic Interference - *Moonies Hill Energy Pty Ltd*

The EMI report details the findings of a detailed desktop review of licensed telecommunications services in and around the proposed FRWF area.

As with all tall structures, wind farms can cause interference to electromagnetic signals including;

- Television Reception
- Radio Reception
- Differential Geographical Positioning System (GPS)
- Microwave links

An analysis of the wind turbine layout of the proposed FRWF was undertaken to determine

whether the wind turbine locations would cause interference to any electromagnetic signals. The analysis determined that no turbines within the proposed layouts are likely to cause unacceptable interference to fixed radio links operating in the vicinity of the proposed FRWF. Television reception at some residences may be affected. In the event that interference to local resident's television reception occurs MHE will investigate and employ a range of measures to rectify any interference.

All licensed microwave links occurring within the vicinity of the FRWF site have been mapped and none were found to pass through the site. Consultation with registered licensed communication operators has been carried out and no issues have been identified.

9.7. Aviation Safety Issues - Moonies Hill Energy Pty Ltd

Consultation has been carried out with Department of Defense, The Civil Aviation Safety Authority and Airservices Australia in order to identify any issues or concerns relating to aircraft safety. No issues have been identified.

As outlined in Section 7.2 of this Executive Summary, some turbines may need to be lit in accordance with CASA aviation safety guidance (Guidance currently under review).

9.8. Shadow Flicker – GL Garrad Hassan

Shadow flicker results from the position of the sun in relation to the blades of the wind generator as they rotate. This can cause the shadow of the generator blades to be cast onto a building, which appears to flick on and off as the blades rotate. When this flicking shadow is viewed through a narrow opening, such as a window, it is known as shadow flicker.

Shadow flicker effects can be predicted in advance and appropriate siting and design is used to avoid this effect. Modelling predictions will be undertaken during the final layout design to ensure that the maximum hours of shadow flicker experienced at all properties around the FRWF, will be less than 30 hours per year, criteria applied in other Australian States and countries around the world.

9.9. Socio-economics

MHE is committed to maximising local involvement in the FRWF project from construction to operation. Local employment opportunities will be created during the construction phase of the project as local firms will be invited to bid for a significant portion of the construction work on roads, foundations and electrical requirements. Based on historical data, MHE estimates that the construction stage may involve up to 200 individuals and 50 businesses. Once operational the FRWF will create around 10 full-time jobs.

As a company committed to sustainability, MHE will establish a Sustainable Communities Fund (SCF) to provide a portion of annual revenue from the sale of electricity, back into the community. This fund will operate for the operational life of the FRWF (typically 20 years). The fund aims to support surrounding community programs, sporting clubs and activities that encourage a sustainable and cohesive community.

MHE has had preliminary discussions with a landowner about the possible collaboration of a control building, viewing platform and wool harvesting and memorabilia museum. The landowner in question already has a substantial collection of equipment and plans to continue to grow his collection. As there is already some interest from tourists to view the collection a combined facility would enable the collection to be better presented and persevered. Located at the northern, elevated end of the FRWF, this joint facility would have views of the FRWF to the south and the Stirling Ranges to the south east. It should be noted that the concept is still in the early planning stages.

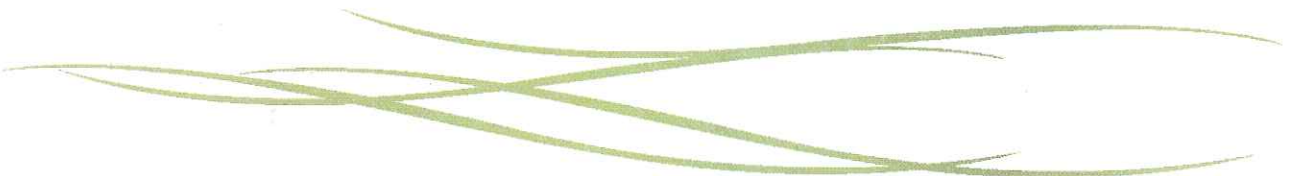
10. Conclusion

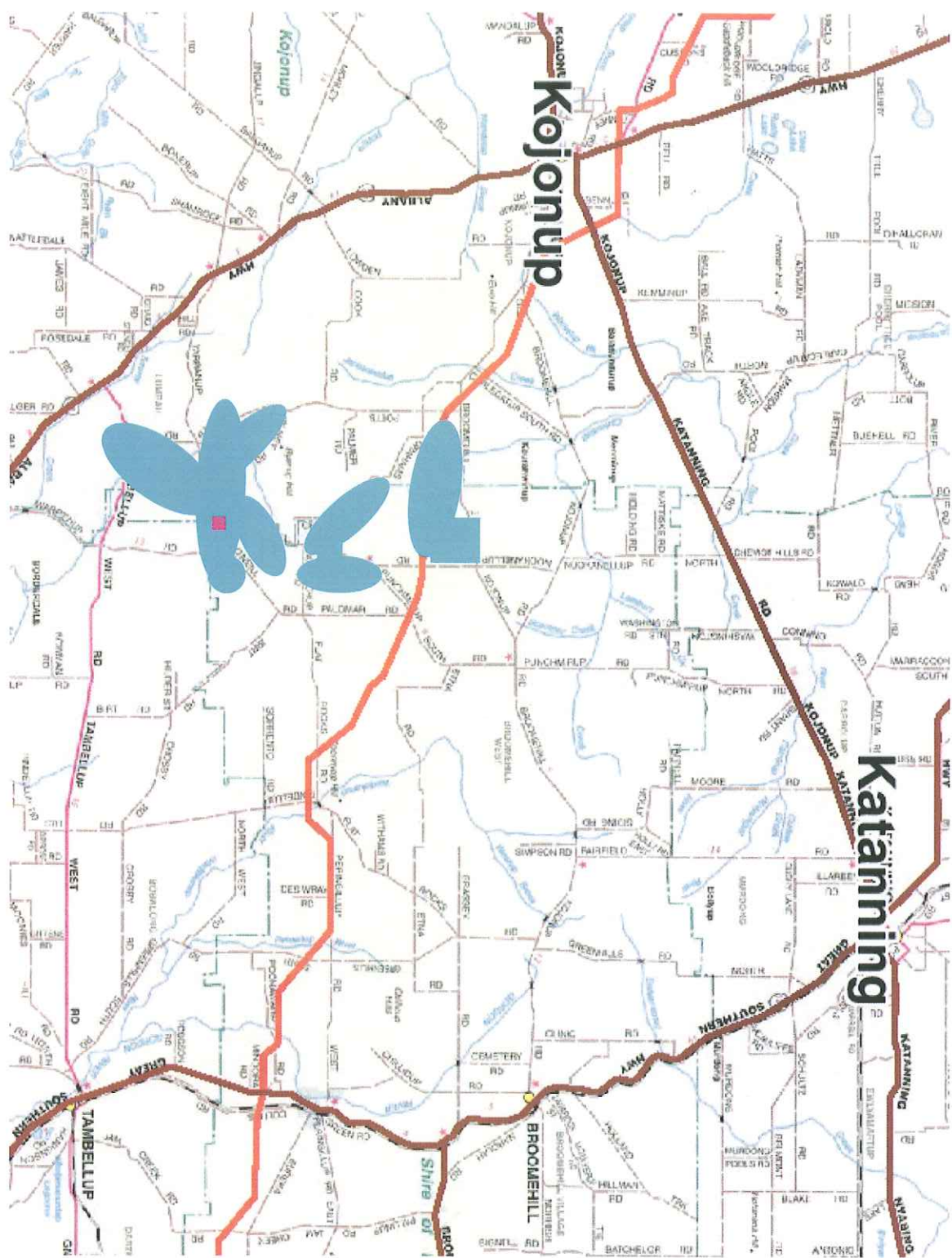
This Executive Summary demonstrates that approval for the development of the Flat Rocks Wind Farm is warranted subject to reasonable and relevant conditions.

This following report, *"Flat Rocks Wind Farm Planning and Environmental Report"*, illustrates the Flat Rocks Wind Farm proposal is acceptable under Local and State planning requirements, has strong community and landowner support for the development, that economic and social benefits in the form of job creation and the use of local goods and services will be derived from its implementation, and that environmental and other impacts are not significant and are capable of being managed.

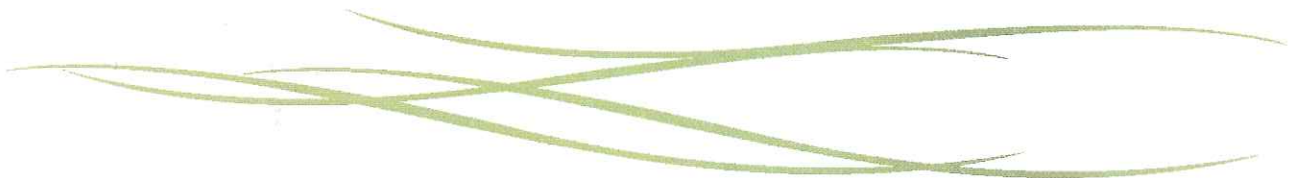
On this basis, and lodgment in accordance with the provisions of the Shire of Kojonup Town Planning Scheme No. 3 (District Scheme), it is requested that the Shire of Kojonup, after consultation with the appropriate Referral Agencies grant Planning Consent and Development Approval for the proposal Flat Rocks Wind Farm.

Appendix I – Proposed Development Location





Appendix II – Proposed Turbine Layout



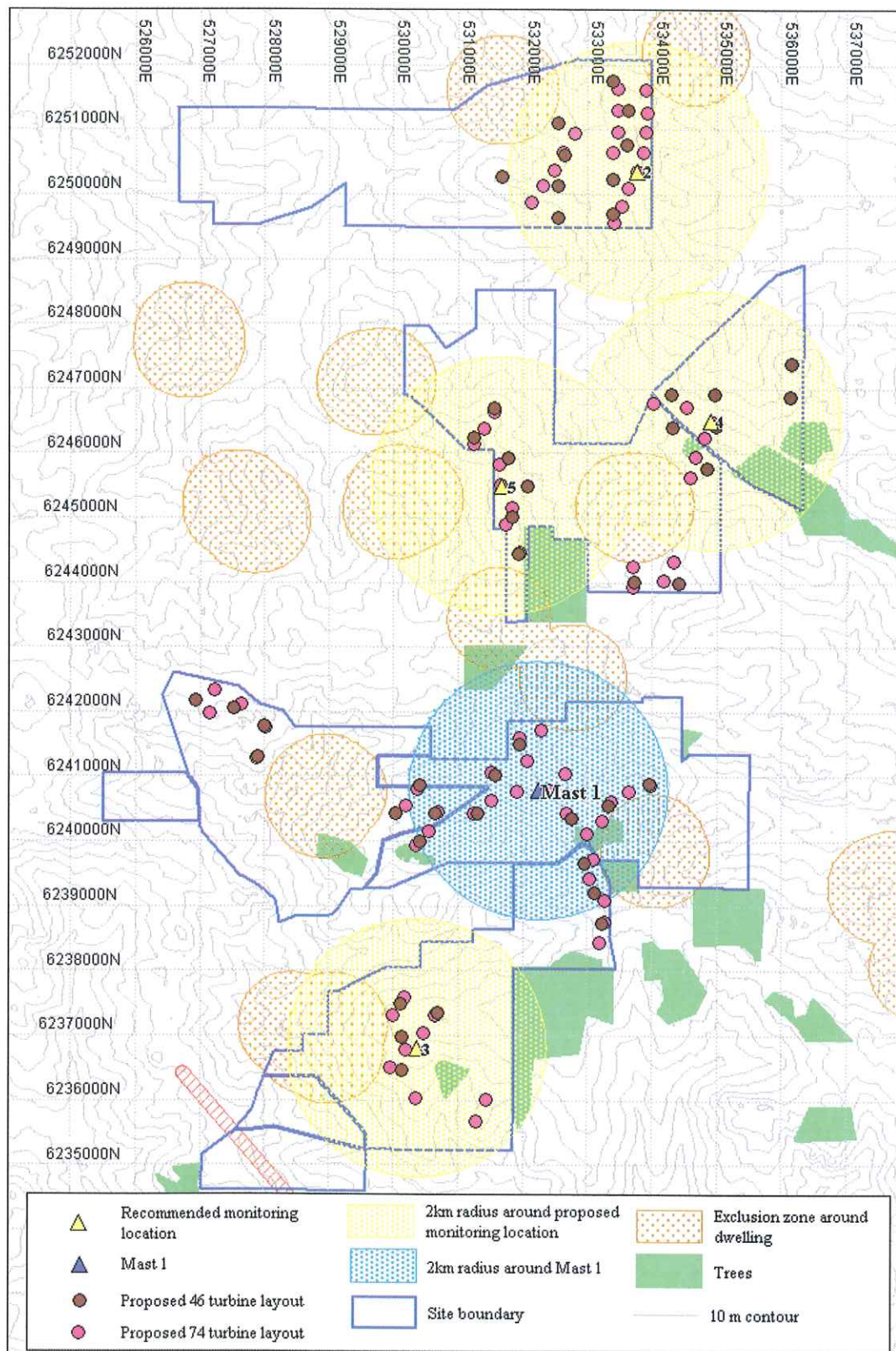


Figure 4 Recommended locations for additional wind speed monitoring

Appendix III – Development Site

