From: Martina Gassner <martina@escopacific.com.au>
Sent: Wednesday, 20 March 2019 2:43 PM
To: Tim Stuckey <Tim.Stuckey@planning.nsw.gov.au>
Cc: Rhiannon Olle <Rhiannon@escopacific.com.au>; Allison Hawke <Allison@escopacific.com.au>
Subject: RE: Wyalong Solar (SSD 9564) - More Information Required

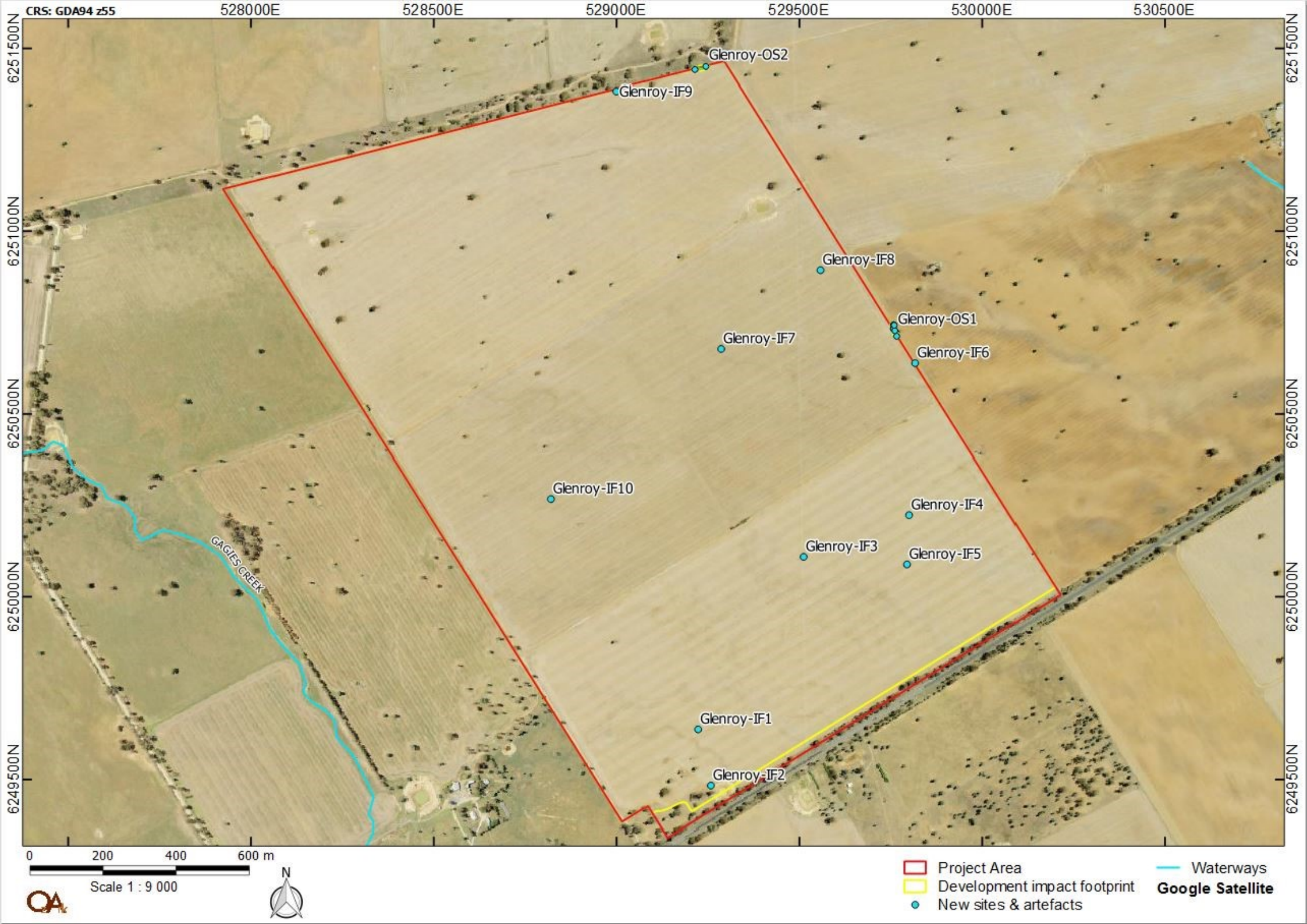
Hi Tim,

Thanks for your time over the last couple of days. Below is ESCO's response to the department's queries:

- battery storage – confirm the maximum number of battery units and inverters proposed; **ESCO Pacific proposes to install up to 300 Tesla Powerpack 2 lithium-ion battery units and 50 associated inverters. This will provide a total capacity of 25 MW and 50 MWh.**
- Aboriginal heritage items – of the 12 items identified on the site, confirm the number of items that will definitely be avoided (and identify location and name of these items); **ESCO Pacific can confirm that 2 items (out of 12) will definitely be avoided (see attached ACHAR response). A description of Table 5-8 of the ACHAR report is provided below:**
  - **The sites that will definitely be avoided by the development: AHIMS #43-4-0070 (Glenroy-OS1) and #43-4-0063 (Glenroy-IF6) (2) – see attached figure showing location of these sites and including all other sites recorded.**
  - **The sites that will be definitely impacted by the development: AHIMS #43-4-0068, #43-4-0066, #43-4-0065, #43-4-0064, #43-4-0062, #43-4-0061, and #43-4-0059 (7).**
  - **The sites that have been provisionally determined that they can be avoided by the development, although still have a status as to be either 'avoided or salvaged' pending detailed solar farm design, include: AHIMS #43-4-0069, #43-4-0067, and #43-4-0060 (3).**
- visual impact – provide a revised landscaping and vegetation screening design, and confirm how this design will mitigate visual impacts to road users of the Newell Highway; **The Project Layout (Figure 3.1) has been revised to include the comments from DPE below. Supplementary screening has also been proposed along the southern boundary to mitigate the potential impacts (distraction/glare) for road users as raised by RMS and Bland Shire Council during the EIS Exhibition.**
- traffic – confirm the maximum number of over-dimensional vehicle movements proposed during construction, upgrading and decommissioning; **ESCO Pacific confirms the maximum number of oversized vehicles movements during construction, upgrading or decommissioning will be 10.**
- noise – confirm the maximum duration of noise exceedances experienced at R3, R4 and R5; **The noise assessment undertaken in the EIS has been refined and now shows a lower potential impact to the sensitive receivers than the worst case previously outlined (see Noise response and sensitive receivers figure). The occasional exceedance of the 45 dB(A) RBL may occur at the sensitive receiver R3 during the four months of earthworks. Exceedances are not anticipated at R4 and R5.**
- mapping – revise Figure 3.1 (Project Layout). **The Project Layout has been revised in line with DPE comments (please Wyalong Project Layout attached).**

Kind regards,

Martina Gassner
Development Manager
ESCO Pacific
M: 0409 482 824 | E: martina@escopacific.com.au
Level 4, 13 Cremorne St, Richmond, Vic 3121
www.escopacific.com.au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GAGIES CREEK
0
200
400
600 m
Scale 1 : 9 000
N
Project Area
Development impact footprint
New sites & artefacts
Waterways
Google Satellite

Martina Gassner

Subject: Wyalong Solar (SSD 9564) - ACHAR
Attachments: All new sites.JPG

From: philippa <Philippa@ozarkehm.com.au>
Sent: Wednesday, 20 March 2019 9:33 AM
To: Martina Gassner <martina@escopacific.com.au>
Subject: RE: Wyalong Solar (SSD 9564) - More Information Required

Hi Martina,

Please see below the extract from the ACHAR report which is in reference to **Table 5-8** of the report.

- The sites that will definitely be avoided by the development: AHIMS #43-4-0070 (Glenroy-OS1) and #43-4-0063 (Glenroy-IF6) (2) – see attached figure showing location of these sites and including all other sites recorded.

- The sites that will be definitely impacted by the development: AHIMS #43-4-0068, #43-4-0066, #43-4-0065, #43-4-0064, #43-4-0062, #43-4-0061, and #43-4-0059 (7).

- The sites that have been provisionally determined that they can be avoided by the development, although still have a status as to be either 'avoided or salvaged' pending specific project impacts, include: AHIMS #43-4-0069, #43-4-0067, and #43-4-0060 (3).

Please let me know if you require more specific information.

Kind regards,
Philippa

5.10 Likely Impacts to Aboriginal Heritage from The Proposal

The proposed solar farm will utilise the majority of Lot 160 DP750615, except for a small native vegetation pocket in the southwest corner, encompassing 260ha. The exact location of the poles to support the solar panels is not yet known. Every effort will be made to avoid Aboriginal sites were practicable. A total of 12 Aboriginal sites were identified within the development impact footprint (**Table 5-8**). The assessment of impact to each site is assessed in **Table 5-8**, as well as the sites determined likely to be avoided by the proposal.

Sites highlighted in orange have been provisionally determined that they can be avoided by the proposal. ESCO Pacific indicated that three sites can be either 'avoided or salvaged'. The management actions ESCO Pacific should take if these sites are to be 'avoided' or 'impacted' are outlined as management recommendations in **Table 6-1** and further managed in **Section 6.3.1.** Glenroy-OS1 and Glenroy-IF6 are highlighted blue which indicates that they will be avoided by the proposal. The cumulative impact on the seven remaining sites is further discussed below (**Section 5.10.1**).

Table 5-8: Impact assessment.

Site ID	Type of Harm (Direct/Indirect / None)	Degree of Harm (Total/Partial / None)	Consequence of Harm (Total/Partial/No Loss of Value)
43-4-0070	None	None	No loss of value
43-4-0069	None	None	No loss of value
43-4-0068	Direct	Total	Total loss of value
43-4-0067	None	None	No loss of value
43-4-0066	Direct	Total	Total loss of value

43-4-0065	Direct	Total	Total loss of value
43-4-0064	Direct	Total	Total loss of value
43-4-0063	None	None	No loss of value
43-4-0062	Direct	Total	Total loss of value
43-4-0061	Direct	Total	Total loss of value
43-4-0060	None	None	No loss of value
43-4-0059	Direct	Total	Total loss of value

…….

Philippa Sokol
OzArk Environment & Heritage
Project Archaeologist
02 6882 0118

From: Tim Stuckey <Tim.Stuckey@planning.nsw.gov.au>
Sent: Monday, 18 March 2019 4:50 PM
To: Martina Gassner <martina@escopacific.com.au>
Cc: Iwan Davies <iwan.davies@planning.nsw.gov.au>
Subject: Wyalong Solar (SSD 9564) - More Information Required

Afternoon Martina,

As mentioned in our conversation earlier today, the Department requires further information to continue its assessment of the Wyalong Solar proposal.

Can you please respond to the following:

- battery storage – confirm the maximum number of battery units and inverters proposed;
- Aboriginal heritage items – of the 12 items identified on the site, confirm the number of items that will definitely be avoided (and identify location and name of these items);
- visual impact – provide a revised landscaping and vegetation screening design, and confirm how this design will mitigate visual impacts to road users of the Newell Highway;
- traffic – confirm the maximum number of over-dimensional vehicle movements proposed during construction, upgrading and decommissioning;
- noise – confirm the maximum duration of noise exceedances experienced at R3, R4 and R5;
- mapping – revise Figure 3.1 (Project Layout) to comprise the following:
    - rename “Sensitive Receivers associated with the project” to *Associated Receiver;*
    - rename “Sensitive Receivers” to *Non-associated Receiver;*
    - re-colour symbols for *Associated Receiver* and *Non-associated Receiver* to ensure they contrast against other symbols in the figure; and
    - update figure to include vegetation screening design.

Any queries please don’t hesitate to call.

Regards

Tim Stuckey
Senior Environmental Assessment Officer
Resource and Energy Assessments
Department of Planning and Environment
320 Pitt Street | GPO Box 39 SYDNEY NSW 2001
Phone: 02 9274 6319
Email: tim.stuckey@planning.nsw.gov.au

Figure 2.2

Sensitive Receivers
Wyalong Solar Farm

Client: Esco Pacific
Project No: AE1091.0

Legend

- Development Site
- Lot Boundary
- 1 km Offset Buffer
- 2 km Offset Buffer
- Watercourse
- Highway
- Main Road
- Local Road
- Host Landholder
- Sensitive Receivers

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ACCENT ENVIRONMENTAL

Accent Environmental Pty Ltd
Level 1, 105-115 Dover Street,
Cremorne, 3121 VIC, Australia
ABN: 97 104 528 924

20 March 2019

Martina Glassner
ESCO Pacific Pty Ltd
Level 4, 13 Cremorne Street,
Richmond VIC 3121

Dear Martina,

Re: Wyalong Solar Farm - Response to request for further information regarding noise assessment

In response to the email from Tim Stuckey - NSW Department of Planning and Environment to Martina Glassner - ESCO Pacific Pty Ltd, dated 18 March 2019 (*Wyalong Solar (SSD 9564) - More Information Required*) and following further discussions with ESCO Pacific Pty Ltd, we provide the following update.

The NSW Department of Planning and Environment email *Wyalong Solar (SSD 9564) - More Information Required*, included the request:

> *Can you please respond to the following:*
>
> - *noise – confirm the maximum duration of noise exceedances experienced at R3, R4 and R5.*

The Construction Noise Guideline referred to in the EIS includes the following words:

> *The level of effort and sophistication needed to assess impacts and identify ways to minimise noise will be guided by factors such as the duration of works and the extent of the noise…*
>
> *…*
>
> *The parameters for predicting noise impacts need to be clearly identified for noise impacts to be predicted adequately. These parameters are:*
>
> - *proposed construction hours and the percentage of time the equipment operates.*

In response to the DPE query, the noise assessment undertaken in the EIS has been refined and now shows a lower potential impact to the sensitive receivers than the worst case previously outlined. The refinement of the noise assessment has been undertaken by:

- considering specific construction activities/phases (based on information from comparable projects)
- considering the expected duration of activities (based on information from comparable projects)
- assuming % times for duration of equipment operation (based on information from comparable projects)
- recalculating the potential noise impacts.

The noise assessment has been refined as shown in Table 1:

- the work activities have been segregated into four phases of construction
- the plant which will operate within an area concurrently has been assumed for each phase of construction
- the expected duration of each phase has been considered.

The % time of operation of all plant has been assumed as shown in Table 1.

The noise levels at the three residences for each phase of construction have been re-calculated, as shown in Table 2, to:

- determine if the noise levels for the modified worst case scenario exceed the limit
- calculate the required separation distance (between the residence and work activities) where noise levels do not exceed the noise limit.

Table 1. Groupings of equipment and the construction phases and % time of operation

Equipment	Earthworks initial clearance	Earthworks final preparation	Piling	Installation	% time of operation
Duration (months)	**1**	**3**	**6**	**8**	
D6 dozer	x				40
24 tonne excavator	x				40
Loader	x				40
Truck and dog	x	x			40
Grader		x			50
Vibrating roller		x			40
Piling rig			x		80
Franna crane				x	50
Trenchers				x	50
Generator				x	100

Table 2. Potential noise level for each phase of construction

Sensitive receiver	All Equipment (worst case used in EIS)	Earthworks initial clearance	Earthworks final preparation	Piling	Installation
	Noise levels dB(A) (note RBL is 45 dB(A))				
R3 (600 m)	**52**	48	48	43	44
R4 (800 m)	**49**	45	45	41	41
R5 (1000 m)	**47**	43	43	39	39
Buffer distance of 790m	**50**	45	45	41	41

Separating the phases of construction into the four phases presented in Table 1 and reviewing the estimated noise levels of equipment in Table 2, we see:

- exposure to noise levels above the RBL of 45 dB(A) potentially occurs when activities are undertaken within 800 m of the sensitive receivers (note: R4 is 800 m & R5 is 1000 m from the project boundary)
- sensitive receiver R3 will potentially be exposed to noise levels above the RBL of 45 dB(A) during the two phases of earthworks.

Considering the percentage time of operation presented in Table 1, sensitive receiver R3 will potentially be exposed to noise levels above the RBL of 45 dB(A) during the earthworks phases for 40% of the time, but only when all plant is operating within 800 m of the sensitive receiver.

Although the earthwork phases of the project construction are expected to last for the first four months of the project, the area of the site that falls within 800 m of the residences occupies less than 2% of the overall project site. The potential for higher noise levels is reduced as construction moves away from the residences and exceedances are not expected for activities outside of this <2% area of the site.

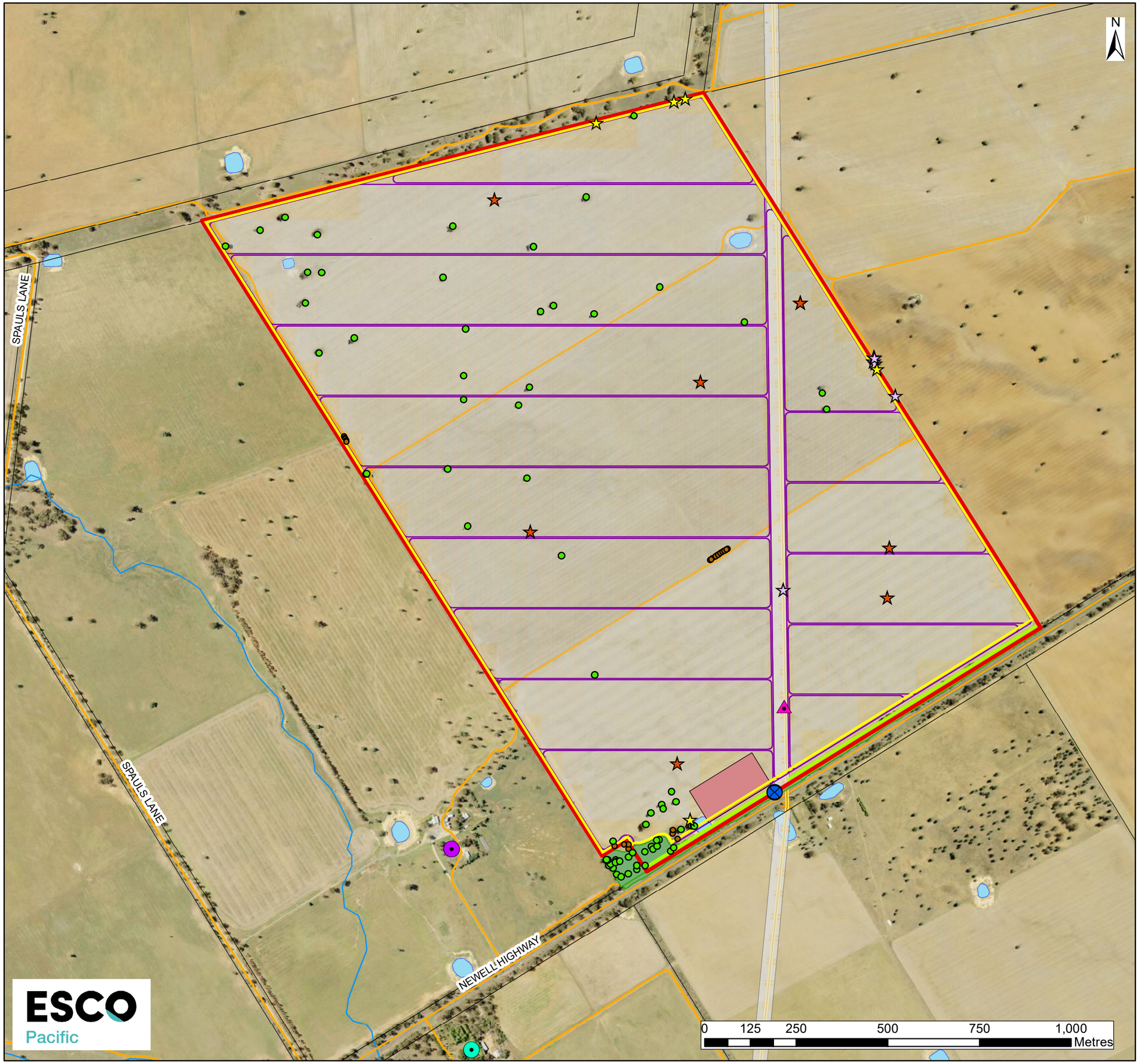
In summary, if the assumptions regarding equipment use, construction phases and percentage times of operation area correct, then occasional exceedances of the 45 dB(A) RBL may occur at sensitive receiver R3 during the four months of earthworks. Exceedances are not anticipated at R4 and R5.

Please do not hesitate to contact us if you require additional information or clarification.

Yours sincerely

Michael Cramer (Director)
michael.cramer@accentenvironmental.com.au

+61 (0)417 013 078



PROJECT
Wyalong Solar Farm

MAP TITLE
Project Layout - 130MW(DC)

Title Info
Lot 160 on Plan 750615

LEGEND

Wyalong Solar Farm

- Project Boundary (Lot Boundary - 259 hectares)
- Development Footprint (256 hectares)
- Site Office, Maintenance Shed, Switchyard and Battery Storage
- Proposed Access Point
- Indicative Connection Point (along Transmission line)
- Internal Access Tracks
- PV Solar Array
- Associated Receiver
- Non-associated Receiver

Ecological Value

- Native Vegetation
- Scattered Trees
- Non Indigenous Trees
- Supplementary Screening

Aboriginal Heritage

- Aboriginal Artefacts to be avoided
- Aboriginal Artefacts to be avoided or salvaged
- Aboriginal Artefacts to be salvaged

Hydrology

- Watercourses
- Dams

Others

- Cadastral Boundary
- Transmission Lines
- Essential Energy Easement
- Roads / Tracks

DATE	SCALE	Page Size
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STATUS	PRODUCED	APPROVED
Final	R. Olle	A. Hawke
MAP No.		REV
WWY_LAY_004_03_Project_Layout		01

ESCO Pacific

From:	Martina Gassner
To:	Michael Themis
Cc:	Iwan Davies; Rhiannon Olle
Subject:	Wyalong Solar Farm - ESCO commitment to providing vegetation screening to R5
Date:	Friday, 1 March 2019 2:46:15 PM
Attachments:	image001.png

Hi Michael,

As per our discussion on the 26 February 2019 I can confirm that ESCO Pacific is committed to providing vegetation screening along the boundary of the R5 property, which will have views of the proposed Wyalong Solar Farm.

The visual assessment identified R5 as the receiver with the highest visual impact rating (moderate) to the north of the solar farm, off Spauls Lane. The moderate rating is due primarily to the sensitivity of the location, with the front of the property facing directly towards the solar farm (although the distance to the solar farm is 1 km and the eastern half of the solar farm is largely screened by trees). A photomontage simulating the view of the solar farm from the R5 property was sent to the land owner on the 11 October 2018 and subsequently discussed in detail over the phone.

Screening options (vegetation types and extent) will be further explored with the R5 land owner following development consent.

Kind regards,

Martina Gassner
Development Manager

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Level 4, 13 Cremorne St, Richmond, Vic 3121
www.escopacific.com.au