27 April 2020

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Dear Rob Beckett

Re: Walla Walla Solar Farm RTS Supplementary Information

I refer to your email dated 17 April 2020 requesting further clarification on several items relating to the assessment of Walla Walla Solar Farm (SSD 9874). Responses to these items are provided in the appendices to this letter below:

- Noise – Appendix A.
- Land capability – Appendix B.
- Traffic and transport – Appendix C.
- Additional general items:
    - area of the amended development footprint (hectares) – Appendix C.
    - number of residences within 2 km of the project site – Appendix C.
    - distance between nearby receivers and the project site and development footprint – Appendix C.
    - the maximum height of on-site operation and maintenance buildings – Appendix C.

I trust the information provided will enable you to complete the assessment of this proposal, however, should you require any additional clarification please do not hesitate to contact me.

Yours sincerely,

Bridgette Poulton
Environmental Consultant
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NGH

Appendix A Cumulative Noise Assessment

Culcairn Solar Farm located within 2 km south of the proposed Walla Walla Solar Farm ('the proposal') has the potential to cause cumulative noise impacts should its construction occur concurrently with proposal.

One residence (R2) shown in Figure 1 could be affected by cumulative noise impacts from both solar farms. R1a and R1b are within 500 m of infrastructure of the proposed Walla Walla Solar Farm but are located over 2 km from Culcairn Solar Farm.

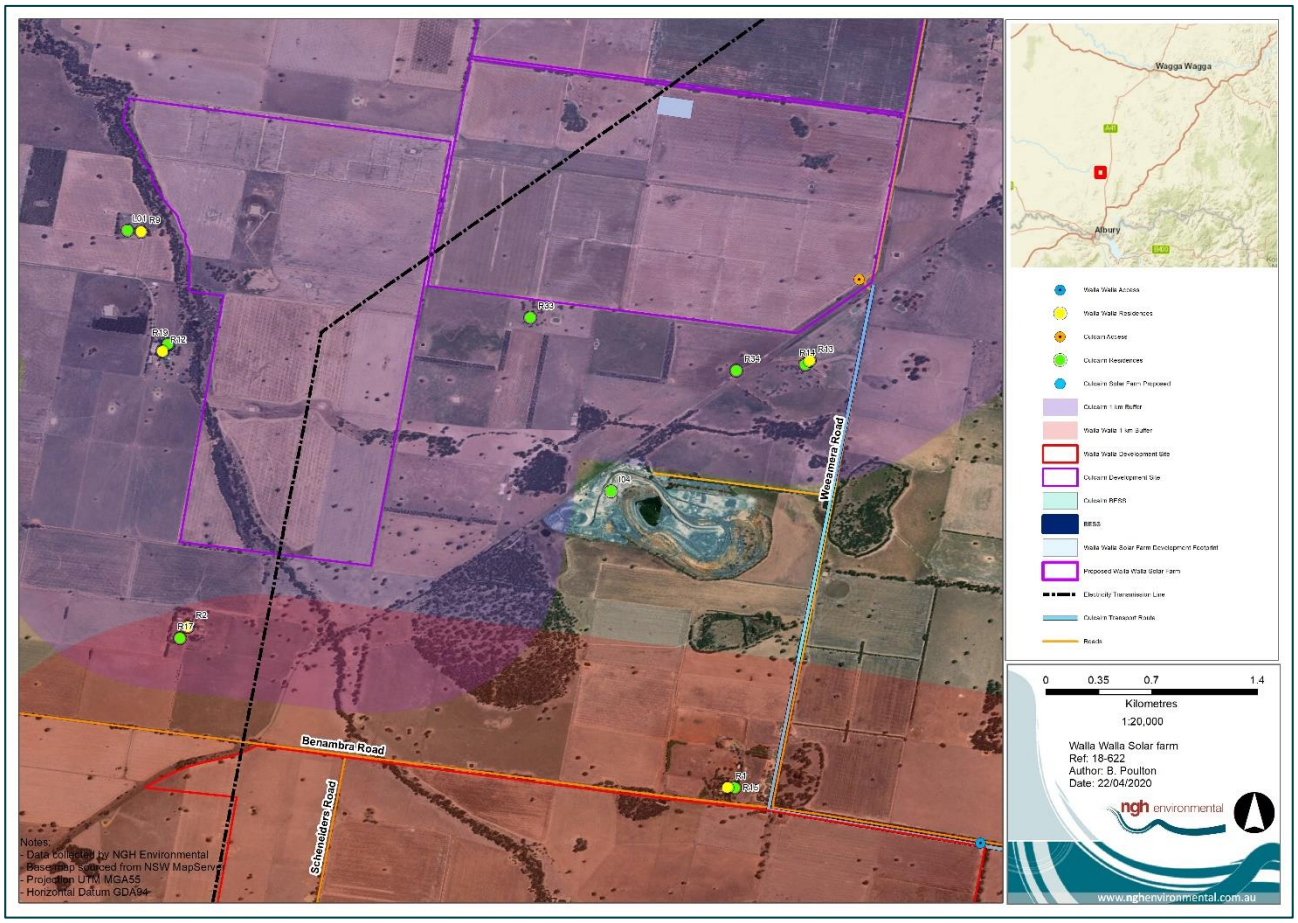


Figure 1 Common residences within 1 km of both solar farms

Construction

The planned construction period for Culcairn Solar Farm is from the second half of 2020 for 16 to 18 months with a peak construction period of 8 to 12 months. If both proposals were to be successful, the timing of construction could be concurrent. Due to the relative proximity of both proposals there is potential for cumulative noise impacts to occur during construction and operation.

The distance of R1a, R1 b & R2 from Culcairn Solar Farm is shown in Table 1. Based on the assumption that Culcairn Solar Farm would utilise the same types of plant and equipment as the proposal, cumulative impacts resulting in NML exceedances are estimated.

Table 1 Cumulative construction noise impacts

Residence ID	Address	Distance (m) to Culcairn SF boundary	Distance (m) to Walla Walla SF infrastructure	Above NML Culcarin SF?	Above NML Walla Walla SF?
R1a	634 Benambra Road, Walla Walla	3030	210	No	No
R1b	634 Benambra Road, Walla Walla	2890	485	No	No
R2	932 Benambra Road, Walla Walla	1150	920	No	No

Operation

Noise from the operation of both Culcairn Solar Farm and the proposal would be generated at each site by:

1. The onsite substation.
2. Maintenance activities.
3. Tracking motors and movement of the solar panels.

Additional noise impacts would be generated intermittently by Culcairn's battery storage facility, adjacent to its substation. The following scenarios have calculated the potential cumulative noise impacts for common sensitive residences.

SCENARIO 1 – OPERATION OF TRACKERS, ONSITE SUBSTATION, INVERTER STATIONS AND BESS

An operation noise assessment was conducted to provide a worst case scenario for noise generated from the site during the operation of both solar farms simultaneously. The assessment considers residence R2 located in close proximity to the infrastructure of both proposed solar farms (Figure 1).

This scenario considers the continuous operation of the internal substation, invertor station tracking motors and BESS, and predicts the typical noise levels that may be experienced during the operation of the solar farm infrastructure only (no maintenance activities occurring) (Table 2). This scenario accounts for the actual distance between the residence and the nearest invertor.

Table 2 Operational equipment for Scenario 1.

Equipment	No.	Sound power level (dB(A)) at 7 m (per item)
Internal substation - transformers	2	72
Tracking motor	10	60
Invertor station	1	73.9
Battery storage (Culcairn only)	1	103.5

Table 3 Predicted noise level for residences located within 1 km during operation of the solar farm.

Residence	Distance from Culcairn Solar Farm infrastructure (m)	Distance (m) from Invertor station	Distance from Culcairn Solar Farm BESS (m)	Distance from Walla Walla Solar Farm Subject Land (m)	Predicted Noise Level dB (A) Green = no exceedance Yellow = Minor exceedance Orange = Substantial exceedance Red = highly noise affected	Description Clearly audible = < 10 dB (A) above NML Moderately intrusive = >10 dB (A) above NML Highly intrusive = > 75 dB (A)
R2	1157	1308	4106	820	22	Not noticeable

No exceedance above the NML is predicted to occur during the operation of the both solar farms at R2 (Table 3).

SCENARIO 2 – GRASS SLASHING AND PANEL CLEANING

The slashing of grass or panel cleaning using a tractor was adopted for this scenario, as this was identified as the noisiest operational activity. The scenario (Table 4) also includes the continuous noise generated by both substations, Culcairn's battery storage facility, inverter stations and intermittent noise associated with the tracking motors rotating the panels. The scenario also accounts for the actual distance between the residence and the nearest inverter.

Table 4 Sound power level of a tractor grass slashing.

Equipment	No.	Sound power level (dB (A)) at 7 m (per item)
Tractor – slashing grass or panel cleaning	1	92
Internal substation - transformers	2	72
Tracking motor	10	60
Invertor station	1	73.9
Battery storage (Culcairn only)	1	103

Table 5 Predicted noise level for residences located within 1 km during grass slashing.

Residence	Distance from Culcairn Solar Farm infrastructure (m)	Distance (m) from Invertor station	Distance from Culcairn Solar Farm BESS (m)	Distance from Walla Walla Solar Farm Subject Land (m)	Predicted Noise Level dB (A) Green = no exceedance Yellow = Minor exceedance Orange = Substantial exceedance Red = highly noise affected	Description Clearly audible = < 10 dB (A) above NML Moderately intrusive = >10 dB (A) above NML Highly intrusive = > 75 dB (A)
R2	1157	1308	4106	820	39	Not noticeable

No exceedance above the NML is predicted to occur during grass slashing at R2 (Table 5). This assumes a worst-case scenario of grass slashing occurring simultaneously on both solar farms. Grass slashing would

occur about twice a year, and the equipment would move progressively across the site. In the worst case slashing noise typically would last for 0.5 - 1 hour at R2.

Given the proposal occurs in a rural environment surrounded by agricultural properties, tractors, headers, quad bikes, light vehicles and heavy vehicles are common noise generating activities. In comparison to the operation of a tractor grass slashing on a solar farm, a header operates at a sound power level 3 dB (A) higher (Table 6).

Table 6 Sound power level of a header.

Equipment	No.	Sound power level (dB (A)) at 7 m
Header	1	95

Table 7 Predicted noise levels for residences located within 1 km of a header operating.

Residence	Distance from Culcairn Solar Farm infrastructure (m)	Distance (m) from Invertor station	Distance from Culcairn Solar Farm BESS (m)	Distance from Walla Walla Solar Farm Subject Land (m)	Predicted Noise Level dB (A) Green = no exceedance Yellow = Minor exceedance Orange = Substantial exceedance Red = highly noise affected	Description Clearly audible = < 10 dB (A) above NML Moderately intrusive = >10 dB (A) above NML Highly intrusive = > 75 dB (A)
R2	1157	1308	4106	820	42	Not Noticeable

No exceedance above the NML is predicted to occur during operation of a header at R2 (Table 7). This assumes a worst-case scenario of 2 headers operating simultaneously within 1 km of R2.

Grass slashing would occur about twice a year or as required. The potential for both projects to conduct grass slashing within the same location at the same time is considered highly unlikely. Therefore, no operational cumulative noise impacts are considered likely to occur.

Appendix B Land Capability

Soil and Land Capability Assessment Scheme

According to the Soil and Land Capability Assessment Scheme (OEH 2012), the majority of the development site is Class 4 land capability, with a small portion of the southwestern corner identified as Class 6 land capability. Areas are provided in Table 8 and Figure 2.

Table 8 Area of each land capability class according to the Soil and Land Capability Assessment Scheme

Soil Capability Class	Development site (ha)	Development footprint (ha)
Class 4	587	477
Class 6	18	18

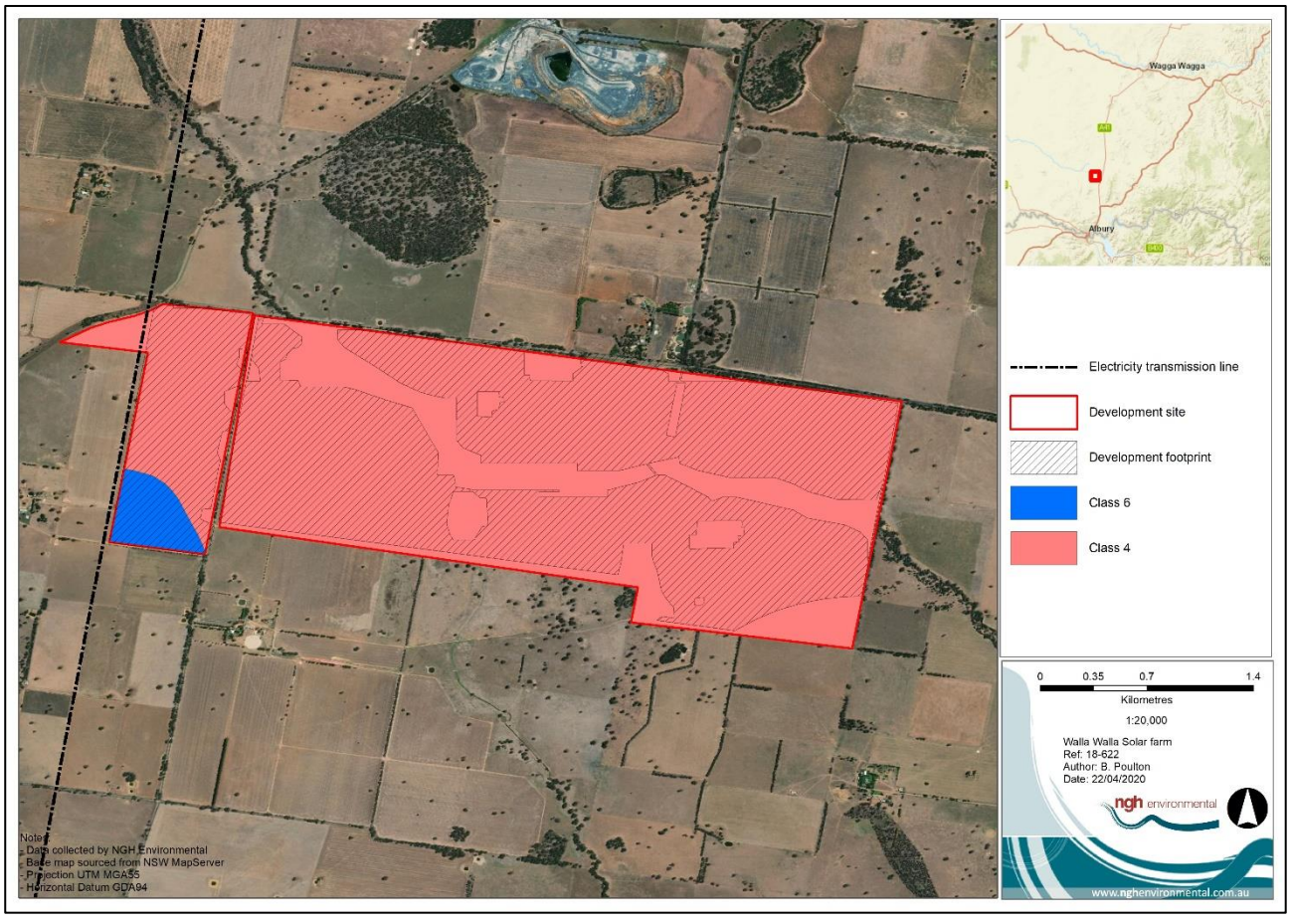


Figure 2 Soil and Land Capability Assessment Scheme (source: OEH 2012)

Landowner Capability Assessment

Both landowners have supplied qualitative information regarding the agricultural capability of the land they propose to lease to FRV for the proposed Walla Walla Solar Farm. Three cropping paddocks with a total combined area of 143 ha occur within the development site. While other paddocks have been cropped

intermittently in the past, they have produced yields too low to merit regular cropping and are currently used exclusively for sheep and cattle grazing. Actual land use areas, which reflect soil capability are provided in Table 9 and Figure 3.

Table 9 Area of land suitable for regular cropping based on landowner information

Suitability for cropping	Development site	Development footprint
Cropped	143	122
Not-cropped	462	373

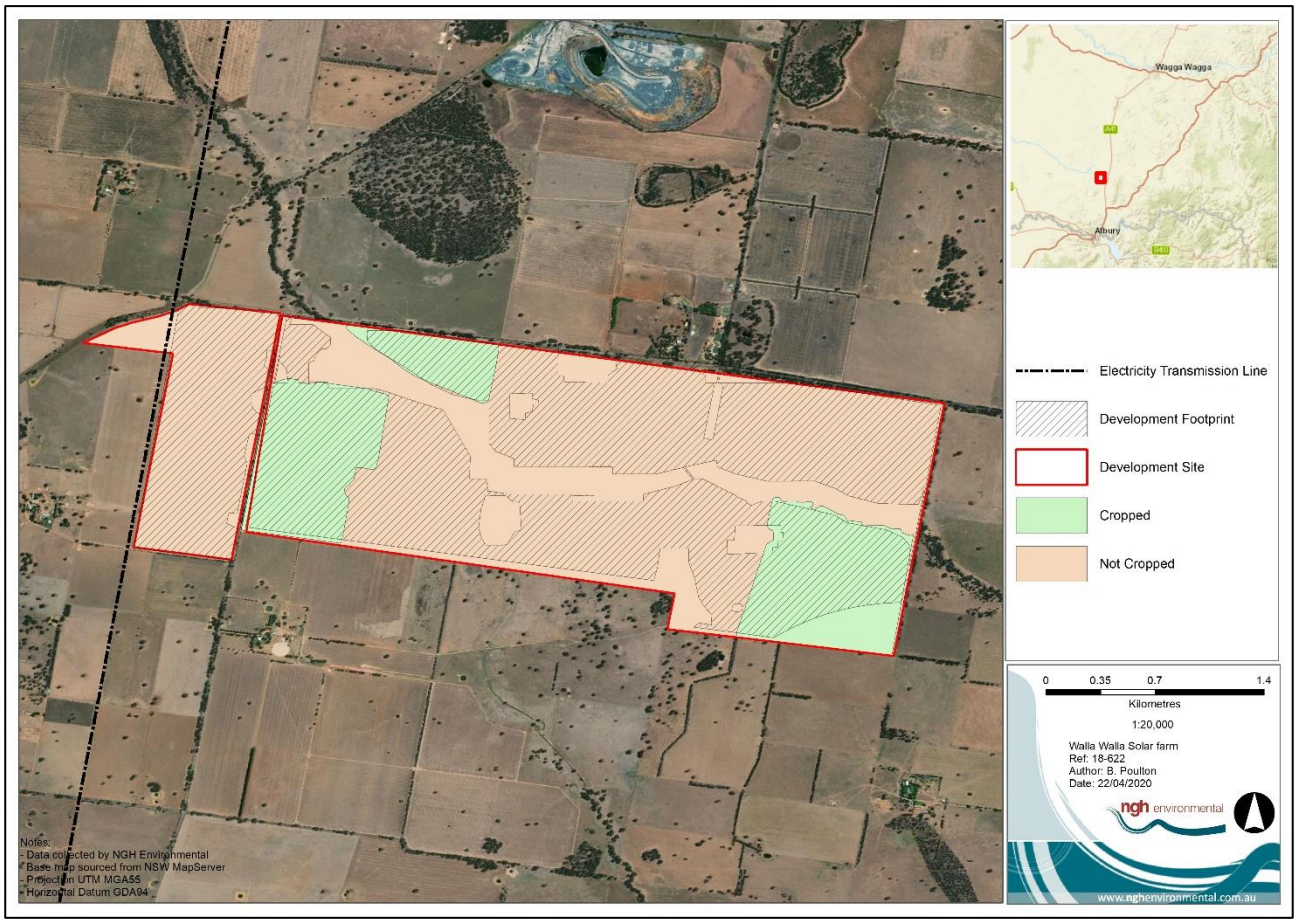


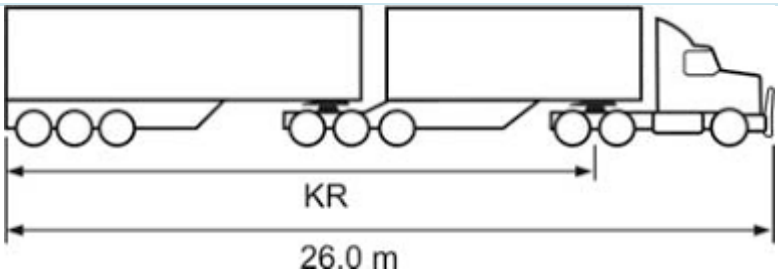
Figure 3 Land capability according to the landowners based on previous land use and cropping experience

Appendix C Additional General Items

Matter for clarification	Client response
Traffic and Transport: **confirm the maximum and the assessed:** • **length of any vehicles that would be used for the**	• The maximum length of oversized vehicles used would be 26 m B-double semi-trailers. The Benambra Road/Olympic Highway intersection is already capable of supporting movements of vehicles of this size.

development (excluding over-dimensional vehicles).

- **number of over-dimensional vehicles that would be required during construction, upgrading and decommissioning of the project.**
- **daily traffic volumes that would likely be generated during the project's operational phase (light and heavy vehicles).**



- The number of over-dimensional vehicles required during construction and decommissioning each include:
  - Substation components – 5(transformers and switch building pre-fabricated components).
  - Solar farm – 4 (pre-fabricated building sections).
- Over-dimensional vehicles required during operations may include two vehicles, should a large transformer be faulty and need to be replaced.

- Daily traffic volumes during operation would be limited to approximately 16 light vehicles for operational staff moving to and from work. The use of heavy vehicles during operation would be sporadic and not expected to exceed one or two vehicles on any given day.

In addition, could you please clarify the following:

- **area of the amended development footprint (hectares).**
- **number of residences within 2 km of the project site.**
- **distance between nearby residences and the project site and development footprint.**
- **the maximum height of on-site operation and maintenance buildings.**

The development footprint would be approximately 495 ha. The 2 ha discrepancy between the EIS and RTS is accounted for by realigning the development site boundary to align more closely with the existing fence line. Direct impacts on areas of native vegetation have not changed since EIS lodgement.

Residence number	Distance from development site boundary (m)	Distance from development footprint (m)
R1a	80	210
R1b	350	485
R2	820	920
R3 (landowner)	550	560
R4 (landowner	700	710
R5a	880	1200
R5b	1960	2335

	The operation and maintenance building would be a single storey building with a maximum height of 6 m (as shown in Appendix D.1.2 of the EIS).