

Cottam Solar Project

Environmental Statement ES Addendum 21.2: Blyton Park Driving Centre

Prepared by: Lanpro Services
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Issue Sheet

**Report Prepared for: Cottam Solar Project Ltd.
Examination Deadline 4**

Environmental Statement ES Addendum 21.2: Blyton Park Driving Centre

Prepared by:

Name: Stephen Flynn

Title: Senior Planner

Approved by:

Name: Beccy Rejzek

Title: Associate Director MRTPI

Revision	Date	Prepared by:	Approved by:
original	30 January 2024	SF	BR

1 Introduction

1.1 Purpose of Document

1.1.1 This document is an addendum to the Environmental Statement [**APP-036 to APP-058, REP-010, REP-012, REP-014, REP2-008, and REP2-010**] for the Cottam Solar Project DCO Application.

1.1.2 This addendum report provides information on the environmental effects on the Blyton Park Driving Centre, and should be read alongside the following submitted technical ES chapters to which these effects pertain:

- **C6.2.14 ES Chapter 14: Transport and Access [APP-049];**
- **C6.2.15 ES Chapter 15: Noise and Vibration [APP-050];**
- **C6.2.16 ES Chapter 16: Glint and Glare [APP-052];**
- **C8.4.16.1 ES Addendum Appendix 16.1: Solar Photovoltaic Glint and Glare Study [REP-077];**
- **C6.2.21 ES Chapter 21: Other Environmental Matters [APP-056]** – Section 21.2 Electromagnetic Fields.
- **C6.2.8_A ES Chapter 8: Landscape and Visual Impact Revision A [REP2-008];**
- **C6.2.18 ES Chapter 18: Socio Economics Tourism and Recreation [APP-053];**
and

1.1.3 This report provides supplementary information to the ES chapters and does not replace them.

1.1.4 This report is furthermore supported by the following technical appendices:

- **Appendix A: Noise Impact Assessment of Reflection of Noise from Blyton Park Driving Centre due to Proposed Solar Panels;** and
- **Appendix B: Summary of Blyton Park Driving Centre Results (Glint and Glare).**

1.1.5 In response to comments raised by LNT Group on behalf of the Blyton Park Driving Centre, and a request made by the Examining Authority in Issue Specific Hearing 3, as documented at Agenda Item 3A (pg.5) of **C8.1.22 Written Summary of Applicant's Oral Submissions and Responses at Issue Specific Hearing 3 [REP3-034]**, this addendum has been prepared to collate the matters raised and to consider the potential for conflicts of use between the driving centre and solar array areas, and to document the discussion and ongoing correspondence between the Applicant and the operators of the driving centre.

1.1.6 The objective of this addendum is to demonstrate that the Applicant has suitably and comprehensively considered and assessed the potential effects of the Scheme on the ongoing and future proposed operations of the Blyton Park Driving Centre.

1.1.7 Those issues raised by LNT Group and how they have been addressed by the Applicant are as follows:

- Ensuring means of access to Blyton Park Driving Centre are not interrupted by construction traffic accessing the Cottam 3A Site has been addressed through the inclusion of specific mitigation for the racetrack in the Outline Construction Traffic Management Plan **[EN010133/EX4/C6.3.14.2_E]** (see paragraph 3.11);
- Demonstrating that neighbouring residential amenity is not adversely affected by focussing or reflecting of vehicle noise off the solar panels has been addressed through the provision of acoustic modelling to demonstrate that the Scheme does not materially alter noise conditions for nearby residential receptors;
- Ensuring users of the racetrack are not affected by glint and glare has been addressed by providing specific glint and glare modelling assessments and summaries to define which areas of the racetrack may be affected, and resultantly where opaque fencing and screening planting are to be installed as mitigation measures. Specific mitigation to address the potential for glint and glare effects to users of the racetrack is set out in Table 3.5 of the Outline Operational Environmental Management Plan **[EN010133/EX4/ C7.16_C]**;
- Ensuring electromagnetic fields do not cause adverse effects to the health of users, nor to electrical equipment or electric cars at the facility, by demonstrating the low level of EMF emanating from the Scheme in context with international guidance, and the projected EMF from the proposed operations at the Research & Development Centre within the Blyton Park Driving Centre complex;
- Ensuring the racetrack operators are able to monitor the racetrack during events by providing reasonable alternatives to maintaining line of sight with the entirety of the racetrack from their existing control tower; and
- Ensuring racetrack safety and suitable run-off areas for cars are maintained around the perimeter of the racetrack has been considered. The Applicant is committed to meeting with Motorsport UK to agree on suitable run-off areas and, if necessary, provision of safety barriers.

2 Consultation and Communications during Examination

2.1 Correspondence between The Applicant and LNT Group

Pre-Examination

- 2.1.1 The Cottam Solar Project received a returned Land Ownership Questionnaire (LOQ) from LNT Aviation on the 13 October 2021 confirming that LNT Aviation Ltd are the leaseholders of the land and that they also Occupy the land.
- 2.1.2 Blyton Park Driving Centre is within the consultation zone for the Scheme, and the following was sent to the Blyton Park Driving Centre's postal address: community consultation materials for phase one (non-statutory) consultation on 03 November 2021; community consultation materials for phase two (statutory) consultation on 14 June 2022; and consultation summary reports for both phases (14 April 2022 and 30 September 2022).
- 2.1.3 Prior to commencement of the examination, the Applicant notes that LNT Aviation (as the relevant part of LNT Group who are the owners of Blyton Park Driving Centre) were contacted on 15 February 2023 regarding the Scheme prior to communication of Section 56, in compliance with Section 42 and Section 48 of the Planning Act 2008. LNT Aviation were contacted on 14 June 2022 and provided a link to a copy of the PEIR for consultation and a copy of the notice publicising the application under Section 48 of the 2008 Act (including details of the public consultation events and the locations where the consultation documents could be inspected free of charge).
- 2.1.4 The list of land interests consulted is included in **Appendix 5.8 Section 42 Consultation Materials [APP-031]** and confirms that LNT Aviation were contacted regarding the Scheme ahead of statutory consultation. The Applicant notes that LNT Aviation were also included within the Book of Reference. This is set out in **C4.3_F Book of Reference Revision F [EN010133/EX4/C4.3_F]**.

Representations made to Examination

- 2.1.5 LNT Group, including the companies LNT Aviation and Blyton Park Driving Centre are registered as Affected Persons and Interested Parties (as applicable) for the Scheme, and have been active in both written and oral representations made to the Examination.
- 2.1.6 As of January 2024, LNT Group has made four sets of representations to the examination:
- Relevant Representations **[RR-033]**;
 - Written representations at Deadline 2 **[REP2-085]**;
 - Oral representations at Issue Specific Hearing 3 on 5 December 2023;
 - Written summaries of their oral representations at ISH3 **[REP3-076]**; and
 - Oral representations at Compulsory Acquisition Hearing 1 on 7 December 2023.

- 2.1.7 The Applicant has responded respectively to these representations directly in the following documents:
- Responses LNT-01 to LNT-12, pg.322-330, in **C8.1.2 The Applicant's Responses to Relevant Representations [REP-049]**;
 - Responses to LNT Group / LNT Aviation / Blyton Park Driving Centre, pg. 152-158, in **C8.1.27 Applicant Response to Deadline 2 Submissions [REP3-039]**;
 - Action point 4, pg.8-9, in **C8.1.24 Written Summary of Applicant's Oral Submissions and Responses to Action Points at Compulsory Acquisition Hearing 1 [REP3-036]**;
 - Action point 3A, pg.5, in **C8.1.22 Written Summary of Applicant's Oral Submissions and Responses to Action Points at Issue Specific Hearing 3 [REP3-034]**; and
 - Responses BPDC-01 to BPDC-06, pg.113-122, in **C8.1.29 Applicant Response to Deadline 3 Submissions [EN010133/EX4/C8.1.29]**.

Additional correspondence during the Examination

- 2.1.8 The Applicant confirms that meetings and correspondence have been ongoing during the Examination to progress discussions on the matters raised by LNT Group in relation to the Scheme and any potential effects on the operations at Blyton Park Driving Centre.
- 2.1.9 A meeting took place at Blyton Park Driving Centre between Island Green Power and representatives from LNT Group on 6 September 2023. During that meeting concerns were raised about noise generated by the racetrack being affected by the solar panels, glint and glare impacts from the Scheme, and health and safety in relation to the operation of the racetrack.
- 2.1.10 On 16 October 2023 LNT Group provided by email a plan showing areas where LNT Group stated that the Scheme conflicted with the Driving Centre's operation, 'run-off' areas that they considered needed to be kept free of any Scheme infrastructure in order to maintain safe operation of their business.
- 2.1.11 A further onsite meeting to discuss the concerns of LNT Group was held on 19 December 2023, after which it was summarised in an email of 3 January 2024 that the Applicant would:
- Assess the impacts upon the Driving Centre of noise reflection caused by the solar panels;
 - Summarise the glint and glare report **[REP-077]** previously produced to make it easier for the Driving Centre to interpret; and
 - Analyse the height of the Driving Centre race control room to understand whether lines of sight to the racetrack would be restricted by the installation

of solar panels, and therefore whether any alternative solution may be required in order for the Driving Centre to operate safely.

2.1.12 Blyton Park Driving Centre agreed this summary of actions was correct on 8 January 2024. Regular emails are now being exchanged in order to move these actions forward, as discussed in more detail in the below sections.

2.2 Issues Raised

2.2.1 In their written and oral submissions to the Examination, and as discussed in direct communications with the Applicant, LNT Group have raised a number of issues in relation to the Scheme. These primarily revolve around potential or perceived impacts on the continuing operation of the Blyton Park Driving Centre, and future limitations on their ability to operate a proposed Research & Development facility (West Lindsey District Council [ref: 142855]).

2.2.2 The issues raised by LNT Group include, but are not limited to:

- Ensuring means of access to Blyton Park Driving Centre are not interrupted by construction traffic accessing the Cottam 3A Site;
- Ensuring neighbouring residential amenity is not adversely affected by focussing or reflecting of vehicle noise off the solar panels;
- Ensuring users of the racetrack are not affected by glint and glare;
- Ensuring electromagnetic fields do not cause adverse effects to the health of users, nor to electrical equipment or electric cars at the facility;
- Ensuring the racetrack operators are able to monitor the racetrack during events;
- Ensuring racetrack safety and suitable run-off areas for cars are maintained around the perimeter of the racetrack;
- Assessment of the changes to landscape character and views from the racetrack negatively impacting on its desirability; and
- Ensuring that there are no residual adverse socio-economic effects as a result of limitations to existing operations and future proposals for facilities at the Blyton Park Driving Centre complex.

2.3 Applicant's Responses to Issues Raised

2.3.1 The Applicant has consistently provided responses to the issues raised by LNT Group in their written representations to the Examination and is continuing to work with LNT Group to resolve the outstanding issues to the satisfaction of both parties.

2.3.2 This has been done in writing through the Examination process by means of the response documents listed at paragraph 2.1.7, through provision of additional information pertaining to Blyton Park Driving Centre in relation to key issue areas

such as glint and glare, and finally through this specific document. Section 3 of this document responds to the issues that LNT Group consider to remain outstanding.

3 Considerations of Environmental Effects

3.1 Transport and Access

3.1.1 In specific response to comments raised by LNT Group [REP2-085] about the risk of conflicts between vehicle movements associated with the Scheme at the Cottam 3a Site, and the currently unrestricted access to the established Blyton Park Driving Centre complex for operatives and visitors, an update has been provided at Deadline 4 in the **C6.3.14.2_E ES Appendix 14.2 Construction Traffic Management Plan_Revision E [EN010133/EX4/C6.3.14.2_E]**.

3.1.2 Therein at paragraph 3.11, the Applicant commits to the following measures:

“At Access 15, which is shared with Blyton Park Driving Centre, specific management of the access during race days and other events will be put in place in consultation with the operators of Blyton Park Driving Centre, to ensure their operations are not significantly affected by the construction vehicle movements.”

3.1.3 Specifically, this refers to measures such as provision of extra banksmen, to support construction vehicle movements, and ensure the safety of other users of the access. Additionally, the consultation with the operators of Blyton Park Driving Centre can be utilised where practicable to reduce specific conflicts, such as reducing the number of HGV movements to and from the Site at the beginning and end of race events when participants and spectators are entering and egressing the Driving Centre complex.

3.1.4 The final provision of the measures set out in the **C6.3.14.2_E ES Appendix 14.2 Construction Traffic Management Plan_Revision E [EN010133/EX4/C6.3.14.2_E]**, will be secured through Requirement 15 of Schedule 2 of **C3.1_F Draft Development Consent Order Revision F [EN010133/EX4/C3.1_F]**.

3.2 Noise and Vibration

3.2.1 LNT Group, in each of their representations to the Examination [RR-033, REP2-085, and REP3-076], have raised concerns over the extent of the solar arrays adjacent to the racetrack acting as acoustic reflectors, thus potentially increasing perceived noise levels from the racetrack during racing events from nearby sensitive receptors.

3.2.2 The Applicant has therefore produced acoustic modelling of the likely changes in sound levels at sensitive (residential) receptors near to the racetrack based on fixed solar panels, and tracker panels set at three different pitches. The full report, undertaken by TetraTech, is appended to this document at **Appendix A**.

3.2.3 The technical report indicates that noise levels produced by activities at Blyton Park Driving Centre are likely to be influenced by the installation of solar panels nearby, however, the contributions are predicted to be no greater than +1.3 dB and in most cases less than +1 dB. A change of this magnitude is not expected to be noticeable subjectively by any receptors, and so is a negligible effect in EIA terms. For context, for a change (either an increase or decrease) to be noticed by a normal person with

good hearing would need to be at least 3dB. For a perceived doubling or halving of loudness to be perceived a 10dB increase or decrease would be needed.

3.3 Glint and Glare

- 3.3.1 Concerns over the impacts of glint and glare on the operations at Blyton Park Driving Centre have been raised by LNT Group in each of their representations to the Examination [**RR-033**, **REP2-085**, and **REP3-076**] and during their meeting with the Applicant on 6 September 2023. The concerns raised relate to the potential for glint and glare to cause detrimental effects to drivers, leading to unsafe driving conditions.
- 3.3.2 In response to these concerns, the Applicant subsequently produced a glint and glare report to establish the impacts of the panels on the Blyton Park Driving Centre. This concluded that with the screening (in the form of planting) already proposed within the ES and the option of opaque fencing to be installed up until screening was established, the impacts would be fully mitigated. The report was issued to Blyton Park Driving Centre on 8 September 2023. This was furthermore published for examination at Deadline 1 in **C8.4.16.1 ES Addendum Appendix 16.1 Solar Photovoltaic Glint and Glare Study [REP-077]**.
- 3.3.3 In response to further comments made by LNT Group stating difficulty in understanding the results of the published report, an updated, simplified, Blyton Park Driving Centre specific report has been provided to show the potential glint and glare impacts on operations at the racetrack. The simplified report, undertaken by Pager Power, is appended to this document at **Appendix B**.
- 3.3.4 The technical report indicates that glint and glare may be experienced on the racetrack between 05:51-06:09 GMT throughout March to September, and between 18:01-18:15 GMT throughout March to September for the fixed panel layout. This corresponds with when the sun is aligned with the orientation of the fixed panel rows (due east in mornings, and due west in evenings).
- 3.3.5 Solar reflections occur along the racetrack at times between 03:34-08:09 GMT from mid-late January, and early February until November, and between 15:39-17:28pm GMT throughout January to February and October to December for the tracking panel layout. These effects correspond with sunrise in the morning, and sunset in the evenings on these days.
- 3.3.6 In both instances, glint and glare will only be experienced in the same direction as the sun is. Given the racetrack's anti-clockwise layout, the relative position of the panelled area, and the understanding of the Applicant that the operational hours of the racetrack start from approximately 09:00, instances of glint and glare are not likely to be in the driver's main field of view at any point on the racetrack for either fixed or tracker panel arrays. Furthermore, the Applicant has committed to the provision of opaque screening along the edges of the solar arrays as interim mitigation measures until such a time as landscape planting is suitably mature to provide the same level of screening. This is secured through the measures set out

in Table 3.5 of **C7.16 Outline Operational Environmental Management Plan [EN010133/EX4/C7.16_C]**, which is itself secured by Requirements 14 of Schedule 2 of the **Draft Development Consent Order [EN010133/EX4/C3.1_F]**.

3.3.7 As a result of understanding the geometric relationship between the racetrack and solar array areas, the likely directions experiencing glint and glare effects, and the mitigation measures secured through the dDCO, there are no anticipated significant effects from the Scheme on the operations at Blyton Park Driving Centre as a result of glint and glare.

3.4 Electromagnetic Fields

3.4.1 Electromagnetic fields (EMF) have been raised as a concern by LNT Group due to harmful effects on users of the Driving Centre, and on the operations of the proposed Research & Development facility, granted planning permission by West Lindsey District Council in March 2022 [ref: 142855].

3.4.2 The Applicant's response to LNT Group's Relevant Representation **[RR-033]** responds directly to the matter of EMF generated by the Scheme and the level of impact on the operation of Blyton Park Driving Centre's existing and proposed facilities at response LNT-11 (pg. 328) of **C8.1.2 The Applicant's Responses to Relevant Representations [REP-049]**. The Applicant's response states:

"All objects carrying an electrical current will induce electric and magnetic fields. The electromagnetic fields generated by the Scheme are not anticipated to pose any significant risk to human health, nor detrimental impact to nearby infrastructure, as demonstrated by EMF impacts being scoped out of the Environmental Impact Assessment (see section 3.13 of C6.3.2.2 ES Appendix 2.2 EIA Scoping Opinion [APP-064]).

No part of the Scheme at the Cottam 3a Site is anticipated to generate electromagnetic fields above the ICNIRP reference level of 100µT for magnetic fields or 5kVm⁻¹ for electric fields (See section 21.2 of C6.2.21 ES Chapter 21 Other Environmental Matters [APP-056]). The greatest source of EMF from the Scheme at the Cottam 3a Site is from the substation, which is more than 800m from the proposed location of the R&D Centre. Low level EMF generated by the panels, cabling, and inverters is not likely to have any detrimental effect on the operations of the R&D centre."

3.4.3 To contextualise the level of EMF generated by the on-site infrastructure with ICNIRP guidance, and EMFs generated by electrical vehicles, the following tables have been produced based on data available from the National Grid's EMF Information website¹.

¹ EMFs.info National Grid (2011). Available at [REDACTED]

Table 3.1: Context of EMF at Blyton Park Driving Centre

Source	Maximum Magnetic Field Strength (μT (microtesla))	Estimated Magnetic Field Strength at 20m (μT)	Maximum Electric Field Strength (kVm^{-1})	Estimated Electric Field Strength at 20m (kVm^{-1})
ICNIRP Guidance levels	100	n/a	5	n/a
Above-ground 400V source (at solar PV panels)	1.2	0.1	0.001	<0.001
Buried 400V cables (from solar PV panels to inverters)	0.5	0.04	0	0
Above-ground 33kV source (at inverters)	25.7	3.1	0.9	0.04
Buried 33kV cables (from to inverters to substation)	1.0	0.07	0	0
Above-ground 132kV source (at substation)	30.4	7.0	3.6	0.3
Buried 132kV cables (from substation at Cottam 3a to substation at Cottam 1)	9.6	0.09	0	0

3.4.4 A distance of 20m has been selected as a reference distance from electrical infrastructure on site as this is the approximate distance between the area available for solar panels and inverters from the adjacent paddock area of Blyton Park Driving Centre, and from the racetrack at “Bunga Bunga” corner (at the southernmost point of the racetrack). 20m is also approximately the distance from the substation area to the nearest parking and mechanics’ area for the dirt oval track near the centre of the Cottam 3A Site. This demonstrates that the Scheme poses no adverse effect to the human health of current and future operators, visitors, or users of the facilities in the Blyton Park Driving Centre complex as a result of the placement of the solar panels and associated infrastructure.

3.4.5 With reference to the potential for EMF to impact upon the operations of the proposed Research & Development facility, and on electric cars at the facility, the following exposure levels have been documented in academic studies as reference on the National Grid's EMF information website:

- A. Vassilev et.al. (2015) Magnetic Field Exposure Assessment in Electric Vehicles. *IEEE Transactions on Electromagnetic Compatibility*, vol. 57, no. 1, pp. 35-43.
 - General exposure at electric vehicle batteries: ~20 μ T
 - Exposure near head-level for occupants: ~2 μ T
 - General exposure at internal combustion vehicle batteries: ~10 μ T
- Stankowski, S. et.al. (2006). Low frequency magnetic fields induced by car tire magnetization. *Health physics*, 90(2), 148-153.
 - Maximum measurement adjacent to tyre: ~100 μ T
 - Exposure for occupants: <10 μ T
- Tell, R. A. et.al. (2013). ELF magnetic fields in electric and gasoline-powered vehicles. *Bioelectromagnetics*, 34(2), 156-161.
 - Mean exposure for occupants while driving electric vehicles: 0.095 μ T
 - Mean exposure for occupants while driving internal combustion vehicles: 0.051 μ T

3.4.6 These demonstrate that the electromagnetic fields associated with car batteries are likely to be far greater than those emanating from the Scheme, and that the mean level of exposure for drivers is similar inside vehicles as experienced near to the Scheme infrastructure. As such, it is not considered that there will be any measurable impact upon the operations of the proposed Research & Development facility.

3.4.7 It is also worth noting that the proposed Research & Development facility permission [ref: 142855] includes for the provision of two wind turbines, ground mounted solar panels, and battery storage. These themselves, if constructed, would produce electromagnetic fields, and would be located between the Scheme and the proposed Research & Development facility's main building.

3.5 Operations – Lines of Sight

3.5.1 The ability for the operators of Blyton Park Driving Centre to maintain line of sight with all parts of the racetrack has been raised as a concern in the most recent representations made by LNT Group [REP3-076]. Concern has been raised that this could adversely affect racetrack safety as the control tower, located to the east of the racetrack at "Twickers" corner at the pit/paddock entry and exit, may lose direct visual contact with the southern end of the racetrack due to occlusion from solar panels located between the control tower and "Bunga Bunga" corner.

3.5.2 The Applicant notes that the Motorsport UK guidelines, as set out in their 2024 Yearbook, does not require a control tower to have line of sight for the full racetrack at any level of competitive racing operation of the racetrack, subject to sufficient surveillance of any occluded areas. Therefore, the Applicant considers that the operations at Blyton Park Driving Centre would not be adversely impacted by the Scheme if cameras were installed, or if a secondary manned control booth or marshal station was installed in the occluded area (between “Bishops” and “Port Froid”). The Applicant considers that these are reasonable mitigation measures that can be readily adopted by Blyton Park Driving Centre, at the Applicant’s cost, so that loss of direct line of sight does not impact upon racetrack safety.

3.5.3 Taking into account these potential mitigation measures, the Applicant does not anticipate that the operation of the racetrack will be adversely affected by the Scheme, however, LNT Group have confirmed that they do not agree with the Applicant’s position and so it is an additional topic for discussion in the ‘run-off’ meeting to be held with LNT Group and Motorsport UK detailed at paragraph 3.6.4 below.

Additional Consideration

3.5.4 Of note, but beyond the considerations made here is that the proposed Research & Development facility permission [ref: 142855] includes a control tower as part of its main building. This would be situated at rooftop level and as such it is estimated from application drawing BLY-03², that the approximate eye level for those monitoring conditions on the racetrack would be some 8.5m above ground level. This is a substantially higher vantage point than the current control tower (5.5-6.0m above ground level). Furthermore, the permitted location of the control tower is approximately 100m west of the existing tower location, and as such has a more central location to the racetrack. As a result of the increased height of the proposed control tower, and its proposed location, operators of the racetrack would be able to maintain line of sight with the entirety of the racetrack without any occlusion from the Scheme.

3.6 Operations - Run-Off Areas

3.6.1 LNT Group have raised concerns that the location of the Scheme adjacent to the racetrack at Blyton Park Driving Centre may have detrimental effects on their operations as a result of introducing means of enclosure along the Order Limits where previously there was an open boundary between the racetrack and adjacent fields. LNT Group have in their written representations at Deadlines 2 and 3 **[REP2-085 and REP3-076]** referred to the land subject to an option agreement for the Scheme being informally used as run-off areas for vehicles that leave the racetrack.

² LNT Construction (2021). Proposed Electric Vehicle Research & Development Centre: Elevations & Floor Plans – BLY-03.

As such, LNT Group have objected to the siting of the solar arrays on the basis that these may cause serious harm to drivers in the event of a high-speed crash.

- 3.6.2 The Applicant was only made aware of the use of the optioned land for vehicle run-off in the meeting with LNT Group representatives on 6 September 2023. The extent of these “run-off” areas was clarified by email on 16 October 2023. The Applicant has since then made efforts to understand the requirements of the racetrack and how these requirements can or cannot be accommodated within the areas demarcated by the lease agreement between LNT Group and the landowner. The Applicant has also been exploring what level of modification to the Scheme design may be needed to accommodate LNT Group’s requirements without adversely impacting upon both the existing and future use of the racetrack, and on the viability of the Scheme itself.
- 3.6.3 Blyton Park Driving Centre has also agreed to consider further the run-off areas required for them to operate safely (both with incorporating safety barrier measures and without), and to consult with Motorsport UK to agree what safety measures would be required or if no measures are used, what the safe setback distance would be.
- 3.6.4 A meeting between the Applicant, LNT Group and Motorsport UK to discuss appropriate safety measures to allow the Scheme and the Driving Centre to coexist safely is scheduled for 31 January 2024. The Applicant commits to update the Examining Authority as soon as is practicable after the meeting and prior to Deadline 5 in order inform them of the progress being made.

4 Conclusions on Impacts on Operations

- 4.1.1 The Applicant has set out in Section 3 of this document that LNT Group's concerns regarding the impact of the Scheme on the continuing operations at Blyton Park Driving Centre can be suitably mitigated. The Applicant is therefore confident in its conclusion that there are no significant adverse effects to the operation and future use of the racetrack, driving training facility, and proposed Research & Development facility.
- 4.1.2 The Applicant considers that there are no further in-combination effects on the socio-economic contributions of Blyton Park Driving Centre to the local employment market and economy. The Applicant is aware that the Centre provides a niche service that is advertised at a regional and national level, and as such, makes a notable contribution to the local and regional tourism and visitor economies as a result of visitor spending, and demand for accommodation services. The Applicant is confident that, subject to the implementation of the proposed mitigation measures set out in Section 3 above, there is not likely to be any secondary adverse effects as a result of reduced economic benefits to the wider tourism and visitor economy.

5 Protective Provisions

- 5.1.1 The Applicant is committed to ensuring that the development of the Scheme does not adversely impact upon the operational requirements of Blyton Park Driving Centre. To ensure this, the Applicant is committed to the drafting of suitable Protective Provisions in relation to Blyton Park Driving Centre, subject to the outcome of the meeting with LNT Group and Motorsport UK on 31 January 2024. These will be included in a revised Draft Development Consent Order to be submitted at Deadline 5. In the event that it is not possible to reach agreement with Blyton Park Driving Centre by the close of the Examination, these protective provisions would ensure that adequate mitigation measures in respect of lines of sight and run-off areas are secured. The Applicant will continue negotiations with LNT Group following the close of the Examination and, if agreement is reached, write to the Secretary of State to request the removal the protective provisions subject to the withdrawal of LNT Group's objection.

6 Conclusion

- 6.1.1 This document has been produced in response to comments raised by LNT Group on behalf of the Blyton Park Driving Centre, a request made by the Examining Authority in Issue Specific Hearing 3, as documented at Agenda Item 3A (pg.5) of **C8.1.22 Written Summary of Applicant's Oral Submissions and Responses at Issue Specific Hearing 3 [REP3-034]**. This addendum has been prepared to collate the matters raised and consider potential for conflicts of use between the driving centre and the Scheme.

- 6.1.2 This document demonstrates that the Applicant has suitably and comprehensively assessed the effects of the Scheme on the ongoing and future proposed operations of the Blyton Park Driving Centre.
- 6.1.3 The Applicant is committed to ensuring that the development of the Scheme does not adversely impact upon the operational requirements of Blyton Park Driving Centre.

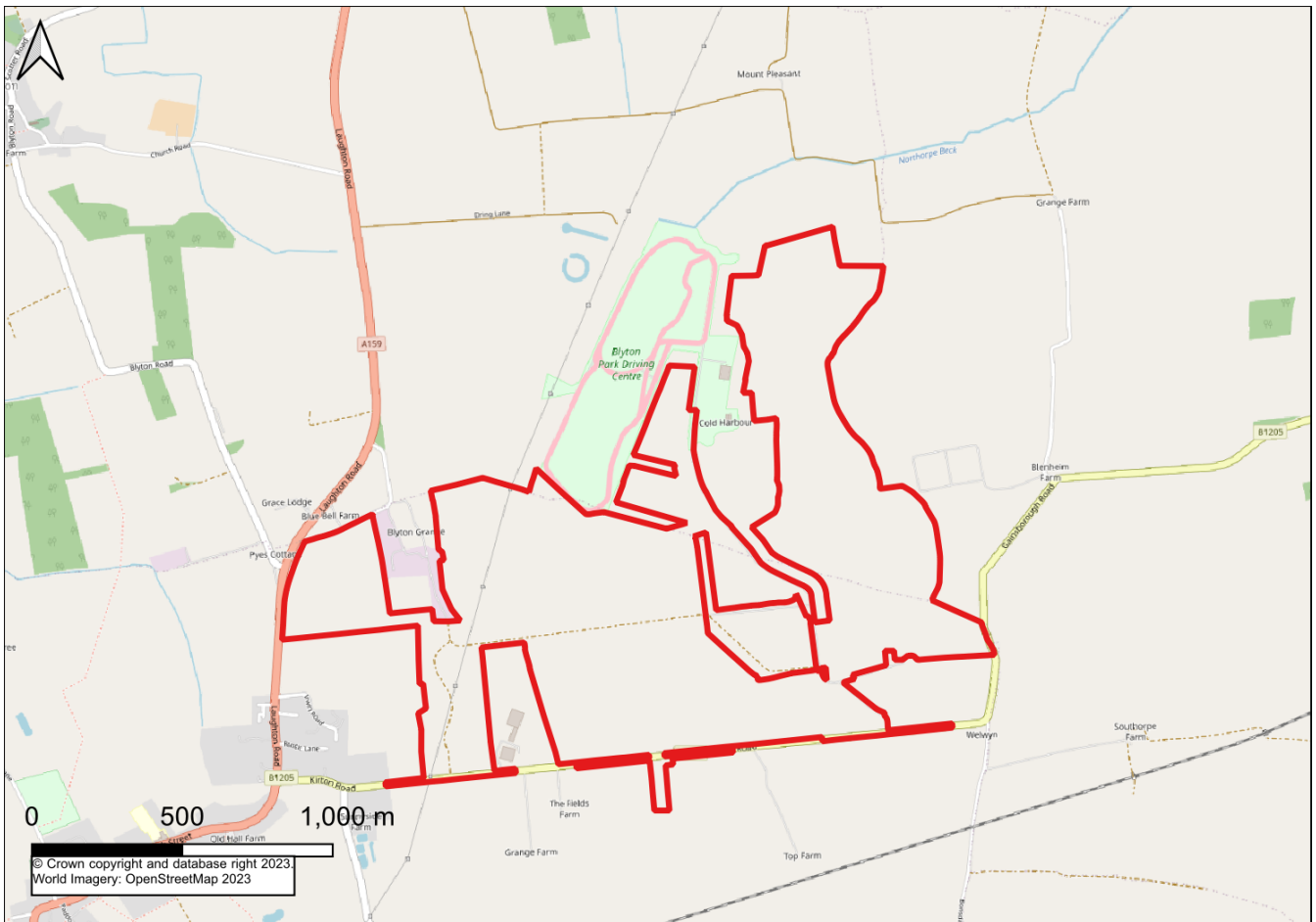


Appendix A: Noise Impact Assessment of Reflection of Noise from Blyton Park Driving Centre due to Proposed Solar Panels

Cottam Solar Project

Noise Impact Assessment of Reflection of Noise from Blyton Park Driving Centre due to Proposed Solar Panels

784-B031438



Island Green Power Limited

January 2024

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Appendix A: Glossary of Terminology

Appendix B: Noise Modelling Data

Appendix C: Report Conditions

1.0 INTRODUCTION

1.1 PURPOSE OF THIS REPORT

This report has been prepared in response to the representations raised by Blyton Park Driving Centre / LNT Group [REP3-076] in the examination of the Cottam Solar Project DCO application.

The noise related section of the representation is detailed below:

“Potential Noise Deflection

This is an issue that also has potentially very serious consequences for the Driving Centre’s operation, unless it can be offered suitable re-assurance and reliance on an assessment on the part of the Applicants. Noise from the activities on the Driving Circuit has been an on-going and very sensitive issue over the years, however, through positive monitoring and management in recent years, a relatively balanced and agreeable position has been reached with the local community and Authorities.

It is not addressed by the Applicants anywhere, as to whether the introduction of the extensive arrays of solar panels (effectively hard surfaces) in lieu of noise absorbent arable crop/land, will result in any reflection or deflection of noise, in a manner to the disadvantage of the Driving Centre and its operation, if this issue is not fully and properly addressed by the Applicants, which to date, as far as we aware, the attention given by the Applicants has been negligible.”

1.1.1 Summary of Blyton Park Driving Centre Noise Policy

A Certificate of Lawful Use governs the noise controls on site. There are no statutory controls that impose noise limits on the use of the circuit. The overarching control on noise is through the Environmental Protection Act 1990 *Section 79 Statutory nuisances and inspections therefore* and *Section 80 Summary proceedings for statutory nuisances*. Paragraph 8 of Section 80 introduces the defence from summary prosecution for a statutory nuisance of best practicable means (BPM). It is up to the person responsible for the nuisance or where this person cannot be found the owner or occupier of the land where the nuisance arises to prove best practicable means were used to prevent, or to counteract the effects of, the nuisance. In pursuit of the BPM the circuit operators have adopted a noise management plan and have implemented trackside noise restrictions to manage noise from events at the circuit.

1.2 STAKEHOLDER CONSULTATION

A telephone conversation was held on 26th September 2023 with David Garritt at S & D Garritt Ltd, the acoustic consultant representing Blyton Park Driving Centre. Concerns were raised around the deflection of noise produced from noise sources at the racetrack due to the proposed solar panels.

Tetra Tech informed Island Green Power (which Cottam Solar Project Limited (the Applicant) is part of) of the contact and their professional opinion that it would be unlikely that the deflection of noise from the solar panels would result in significant increases in noise levels at the nearby receptors.

Following the objection raised, further discussion was undertaken with representatives from the Driving Centre and the Applicant in a meeting held on 19th December 2023 at Blyton Park Driving Centre. It was

agreed that Tetra Tech would undertake an assessment of the impact of noise at the nearby residential receptors from the noise created at the racetrack deflecting off the proposed solar panels.

Various noise measurements were taken of typical track activities which have been used to inform the assessment.

This report presents the results of the investigation.

2.0 ASSESSMENT METHODOLOGY

2.1 NOISE MODELLING METHODOLOGY

Three-dimensional noise modelling has been undertaken to predict noise levels at a number of locations both horizontally and vertically. CadnaA noise modelling software has been used. This model is based on ISO 9613-2 noise propagation methodology and allows for detailed prediction of noise levels to be undertaken for large numbers of receptor points and different noise emission scenarios both horizontally and vertically. The modelling software calculates noise levels based on the emission parameters and spatial settings that are entered. Input data and model settings as given in the table below have been used.

Table 2.1: Modelling Parameters Sources and Input Data

Parameter	Source	Details
Horizontal distances – around site	Ordnance Survey	Ordnance Survey
Ground levels – around site	Ordnance Survey	LIDAR 1m DTM
Building heights – around site	Tetra Tech Observations	8 m height for two storey residential properties, and 4 m for Bungalows.
Receptor positions	Tetra Tech	1 m from façade, height of 1.5 m for ground floor, 4 m for first floor properties. 1.5 m height for model grid and monitoring locations for validation.
Proposed Plans	Island Green Power Limited	File name: Blyton_lines-coordinate-height v2.dwg dated 04/01/2024 Cottam 3A – Blyton – Facing East.dwg Cottam 3A – Blyton – Facing West.dwg
Modelling Methodology	CadnaA	3D noise propagation model ISO 9613-2
Ground Absorption	Tetra Tech	G = 0.8 (Soft ground)
Order of Reflections	Tetra Tech	3 no.

It is acknowledged that a number of the values of parameters chosen will affect the overall noise levels presented in this report. However, it should be noted that the values used, as identified above, are worst-case.

2.2 MODEL INPUT DATA

2.2.1 Track Activity – Vehicle Noise Data

Although the primary objective is to quantify the likely difference in sound levels at the nearby receptors before and after the proposed development rather than the absolute sound levels, measurements were taken of typical track activities as mentioned above.

Noise from cars using the circuit was measured at a track-side location, 10m from the back straight of the circuit of a Ford Fiesta have been used in the noise modelling to determine the influence of the reflection of solar panels in reflecting noise and changing noise levels at receptor locations. The noise data can be found in Appendix A below.

Maximum noise levels $L_{max,f}$ have been input as a linear spectrum and modelled as a line source following the track outline obtained from satellite aerial imagery. The noise source was modelled as a line source with the sound power set for each meter of the line.

2.2.2 Solar Panels

The solar panels are modelled utilising the 3D reflector object available in CadnaA. The reflecting surface is modelled with an absorption coefficient of 0.11 (reflecting barrier) with the non-reflecting surface set to 0.5. An absorption coefficient of zero would represent a perfectly reflecting surface.

There are two options for the orientation of the proposed solar panels: tracker and fixed.

2.2.2.1 Fixed Solar Panels

Fixed solar panels are orientated in rows aligned in the east to west direction at an angle of 25° to the horizontal, tilted towards the south. As shown in Figure 2.1 below.

Figure 2.1: Fixed Solar Panel Details

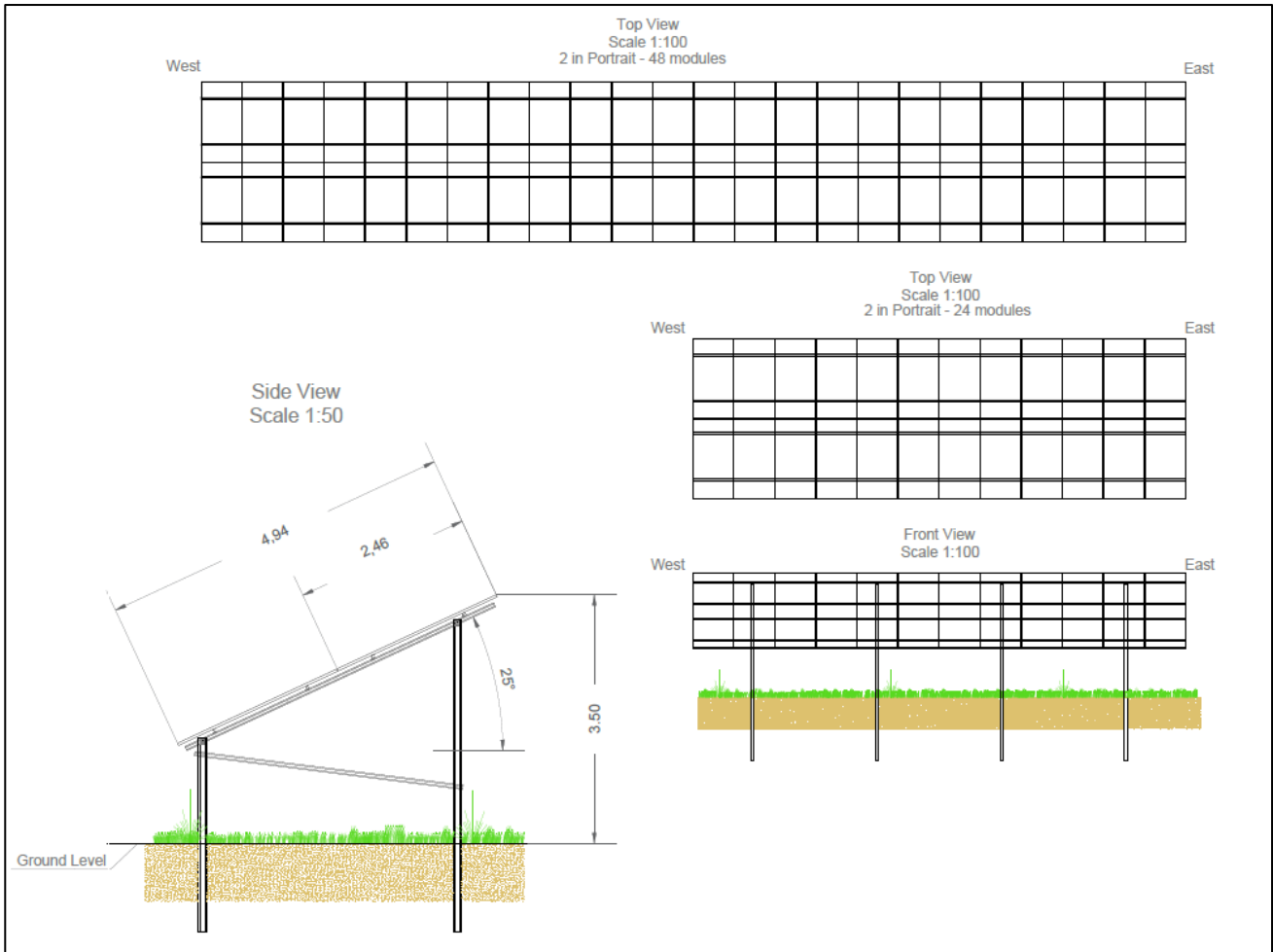
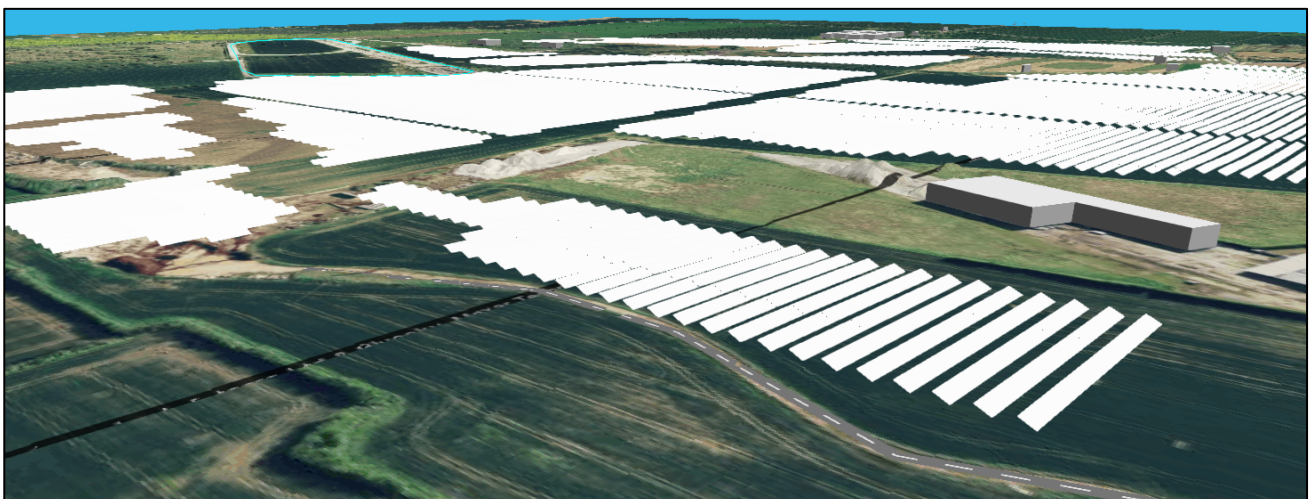


Figure 2.2 below shows the fixed solar panels in the 3D view from the CadnaA model.

Figure 2.2: Fixed Solar Panels – CadnaA Model



2.2.2.2 Tracker Solar Panels

The orientation of tracker solar panels is variable depending on the direction of the sun. Tracker solar panels are arranged in rows aligned in the north to south direction, at angles ranging from 55° to the horizontal

tilted towards the east to 55° tilted towards the west. As shown in Figure 2.3 below. Three different angles have been modelled to represent the extremes of the rotation.

Figure 2.3: Tracker Solar Panel Details

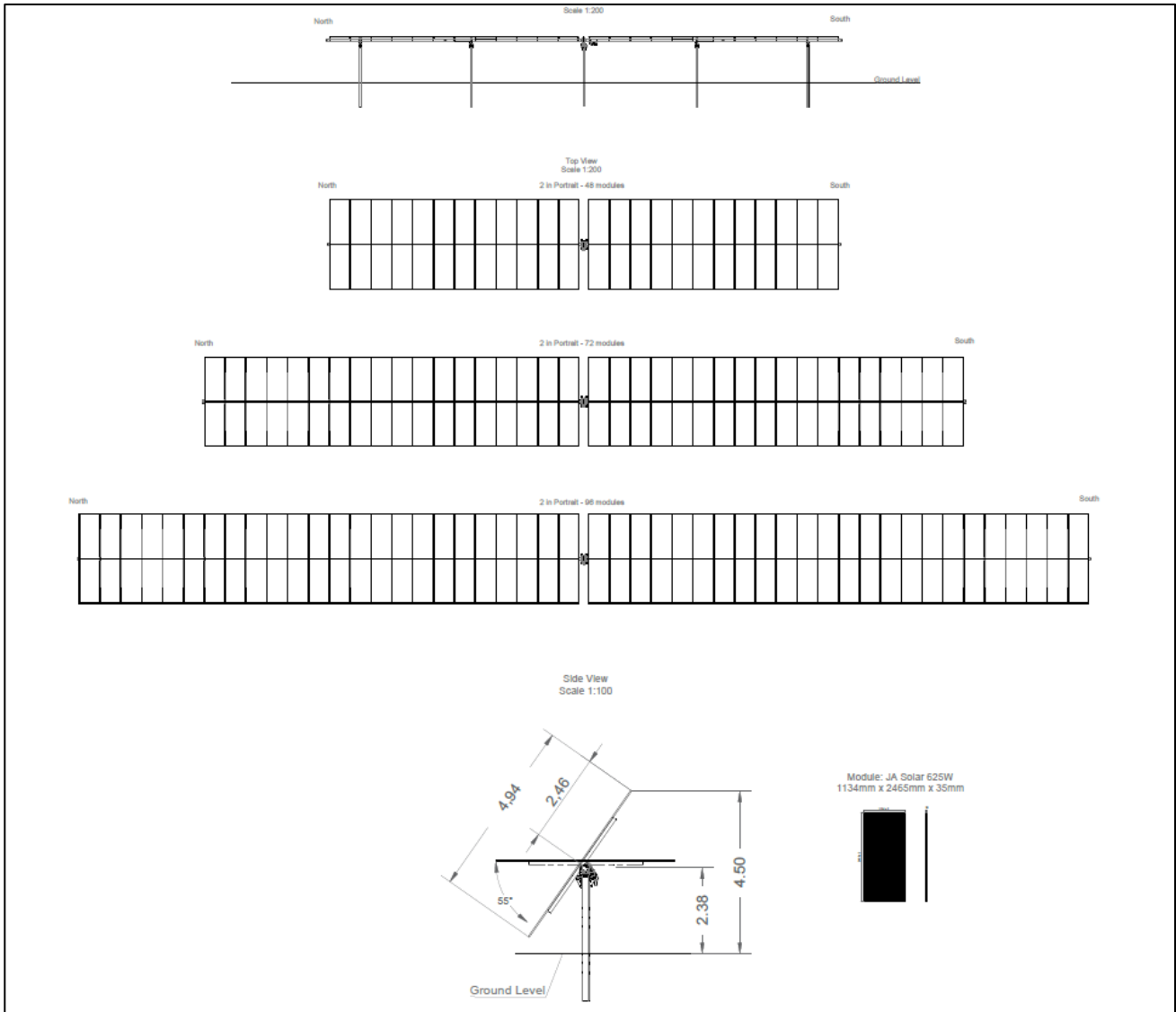


Figure 2.4 below shows the tracker solar panels facing east in the 3D view from the CadnaA model.

Figure 2.4: Tracker Solar Panels facing East – CadnaA Model

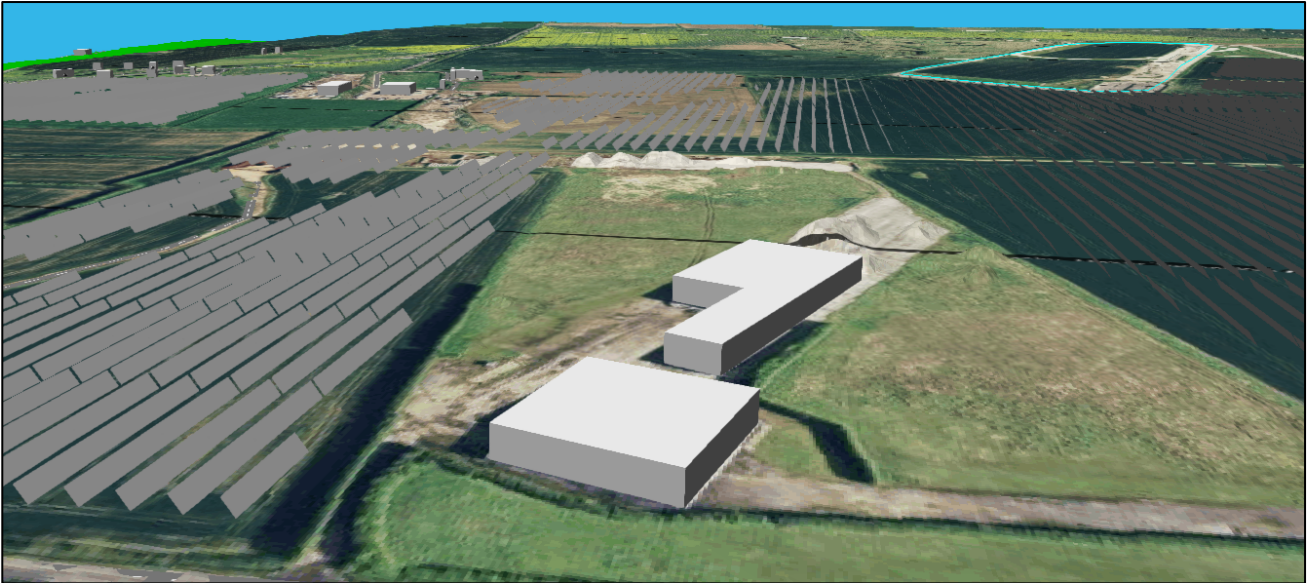


Figure 2.5 below shows the tracker solar panels facing west in the 3D view from the CadnaA model.

Figure 2.5: Tracker Solar Panels facing West – CadnaA Model

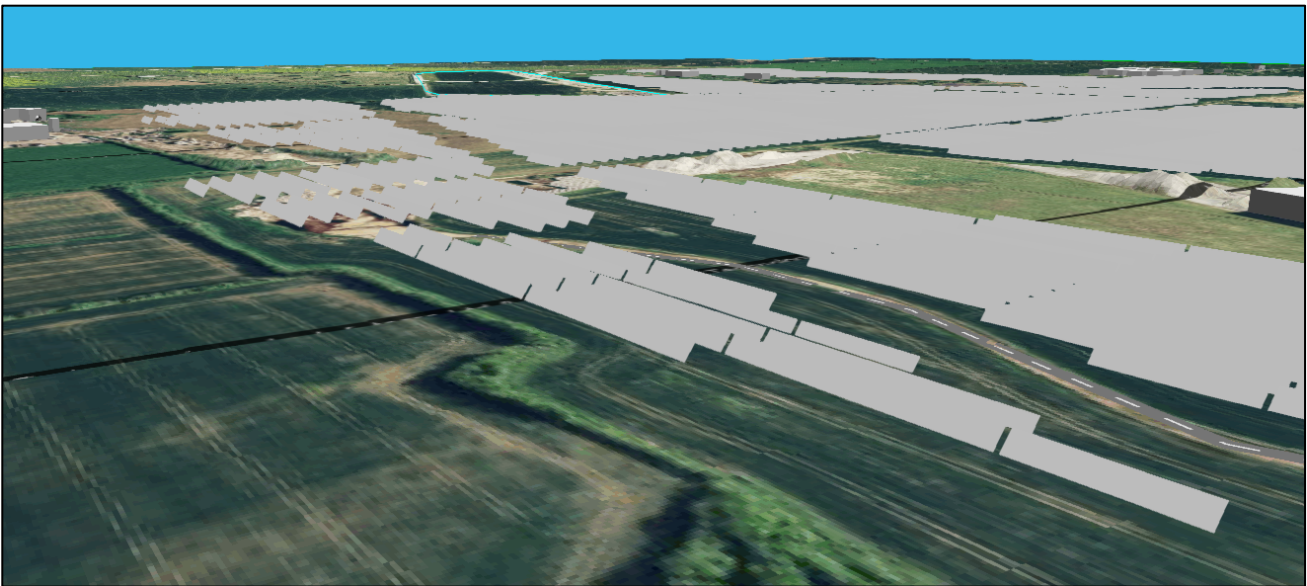
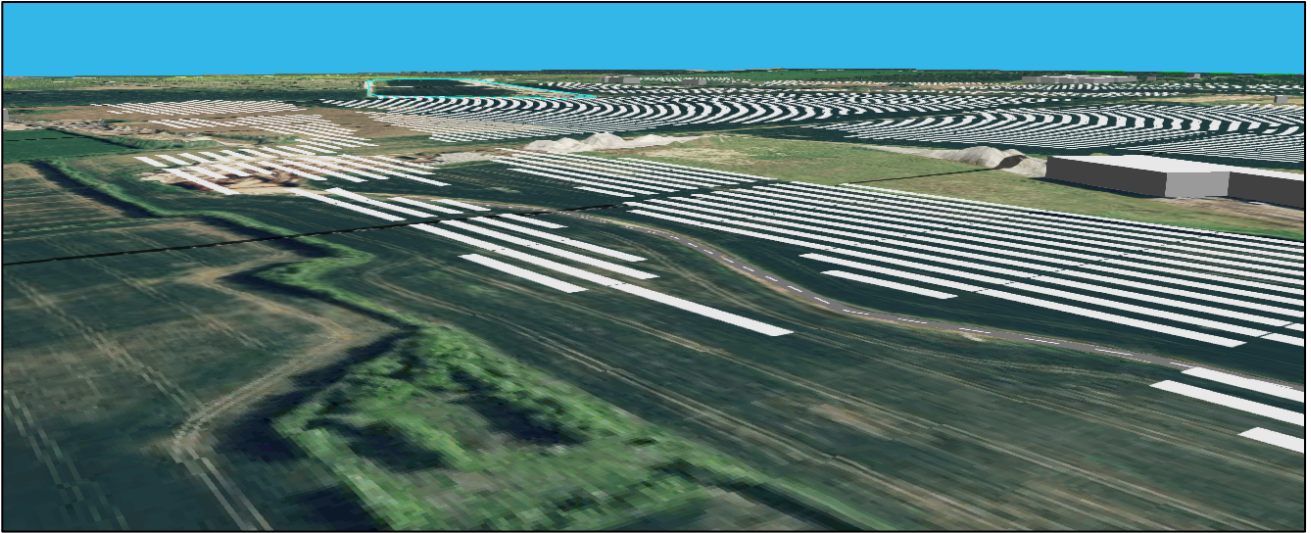


Figure 2.6 below shows the tracker solar panels in the horizontal position in the 3D view from the CadnaA model.

Figure 2.6: Tracker Solar Panels in the Horizontal Position – CadnaA Model



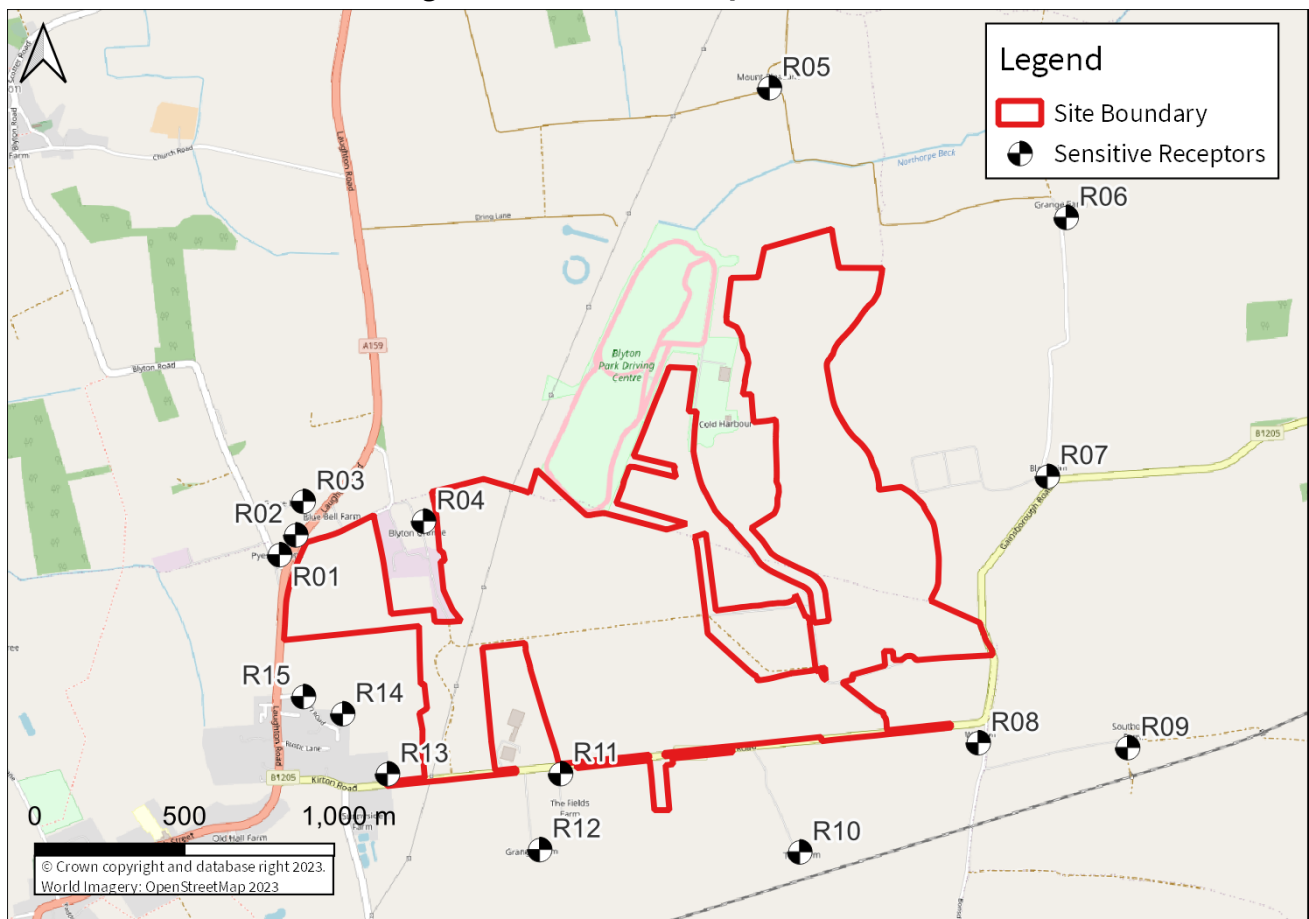
2.3 SENSITIVE RECEPTORS

Table 2.2 below summarises receptor locations that have been selected to represent worst-case sensitive receptors with respect to direct noise from the site. Façades of the nearest noise sensitive properties to the development site have been represented. The locations of the receptors are shown in Figure 2.7 below.

Table 2.2: Existing Receptor Locations

Ref.	Description	Type of Use	Height (m) Daytime
R01	Inglenook	Residential	1.5
R02	Grace Park Managers Residence	Residential	1.5
R03	Grace Park Caravan and Camping Site	Residential	1.5
R04	Blyton Grange	Residential	1.5
R05	Mount Pleasant Farm	Residential	1.5
R06	Grange Farm	Residential	1.5
R07	Blenheim Farm	Residential	1.5
R08	El-Bon	Residential	1.5
R09	Southorpe Farm	Residential	1.5
R10	Top Farm	Residential	1.5
R11	The Fields	Residential	1.5
R12	Grange Farm	Residential	1.5
R13	65 Kirton Road	Residential	1.5
R14	41 Irwin Road	Residential	1.5
R15	3 Irwin Road	Residential	1.5

Figure 2.7: Sensitive Receptor Locations



3.0 ASSESSMENT OF EFFECTS

Five separate scenarios were modelled as follows:

- Scenario A: Without proposed solar panels
- Scenario B: With proposed fixed solar panels, aligned in rows in the direction east to west, tilted at an angle of 25° to the horizontal.
- Scenario C: With proposed tracker solar panels, aligned in rows in the direction north to south, tilted at a full-rotation angle of 55° to the horizontal, with the panels facing east – representing the sunrise period.
- Scenario D: With proposed tracker solar panels, aligned in rows in the direction north to south, tilted at a full-rotation angle of 55° to the horizontal, with the panels facing west – representing the sunset period.
- Scenario E: With proposed tracker solar panels, aligned in rows in the direction north to south, panels are in the horizontal position – representing midday.

The main factors considered in this assessment are as follows:

- Ground between the source and receptor becoming reflective rather than mainly absorptive due to the surface of the solar panels.
- Barrier effect – additional screening provided by the proposed solar panels due to their cross-sectional area.
- Reflections from the solar panels – CadnaA 3D reflector objects used to model the panels.
- Variation in the angle of the tracker panels. Three different angles of tilt modelled for the panels representing the extremes of rotation.

Table 3.1 below, presents the noise levels predicted at each of the nearby sensitive receptors for the five scenarios detailed above. The last four columns in the table indicate the predicted contribution in noise level due to the intervening solar panels for each scenario. A positive value indicates an increase in noise level, a negative value indicates a potential decrease in noise level.

Table 3.1: Predicted Noise Levels at Receptors 'With' and 'Without' Solar Panels

Receptor	Scenario A: Predicted Sound Level L_{Aeq} (dB) without solar panels	Scenario B: Predicted Sound Level L_{Aeq} (dB) with fixed solar panels	Scenario C: Predicted Sound Level L_{Aeq} (dB) with tracker solar panels facing East	Scenario D: Predicted Sound Level L_{Aeq} (dB) with tracker solar panels facing West	Scenario E: Predicted Sound Level L_{Aeq} (dB) with tracker solar panels horizontal	Contribution due to fixed solar panels (dB) - Scenario B	Contribution due to tracker solar panels facing East (dB) - Scenario C	Contribution due to tracker solar panels facing West (dB) - Scenario D	Contribution due to tracker solar panels horizontal (dB) - Scenario E
R01	77.9	77.9	77.9	77.9	77.9	0.0	0.0	0.0	0.0
R02	80.7	80.7	80.2	80.2	80.9	0.0	-0.5	-0.5	0.2
R03	80.1	80.1	80.1	80.1	80.5	0.0	0.0	0.0	0.4
R04	84.6	84.6	84.0	84.0	85.7	0.0	-0.6	-0.6	1.1
R05	84.4	84.4	84.4	84.4	84.4	0.0	0.0	0.0	0.0
R06	77.1	77.6	77.3	77.4	77.1	0.5	0.2	0.3	0.0
R07	76.4	76.7	76.5	76.5	76.6	0.3	0.1	0.1	0.2
R08	72.4	72.4	72.9	72.9	72.4	0.0	0.5	0.5	0.0
R09	72.6	73.9	73.4	73.4	72.8	1.3	0.8	0.8	0.2
R10	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0
R11	80.4	80.4	80.9	81.0	80.9	0.0	0.5	0.6	0.5
R12	76.8	76.8	77.1	77.1	76.8	0.0	0.3	0.3	0.0
R13	77.3	77.3	77.3	77.3	77.3	0.0	0.0	0.0	0.0
R14	77.9	77.9	77.9	77.9	77.9	0.0	0.0	0.0	0.0
R15	77.5	77.5	77.5	77.5	77.5	0.0	0.0	0.0	0.0

As indicated above, noise levels are predicted to increase by up to +1.3 dB at the worst-affected receptor (R09 – fixed panel scenario). Most of the contributions for all scenarios are predicted to be below +1.0 dB, indicating that an increase in noise level will be indistinguishable at each of the receptors following the installation of the solar panels.

Figure 3.1 presents a noise contour plot of the noise level contribution of the deflection of noise from the proposed fixed solar panels, indicating that there is a slight increase of between 1 – 2 dB in certain areas to the east of the racetrack.

Figure 3.1: Contour Plot showing the Noise Level Contribution for the Fixed Panels

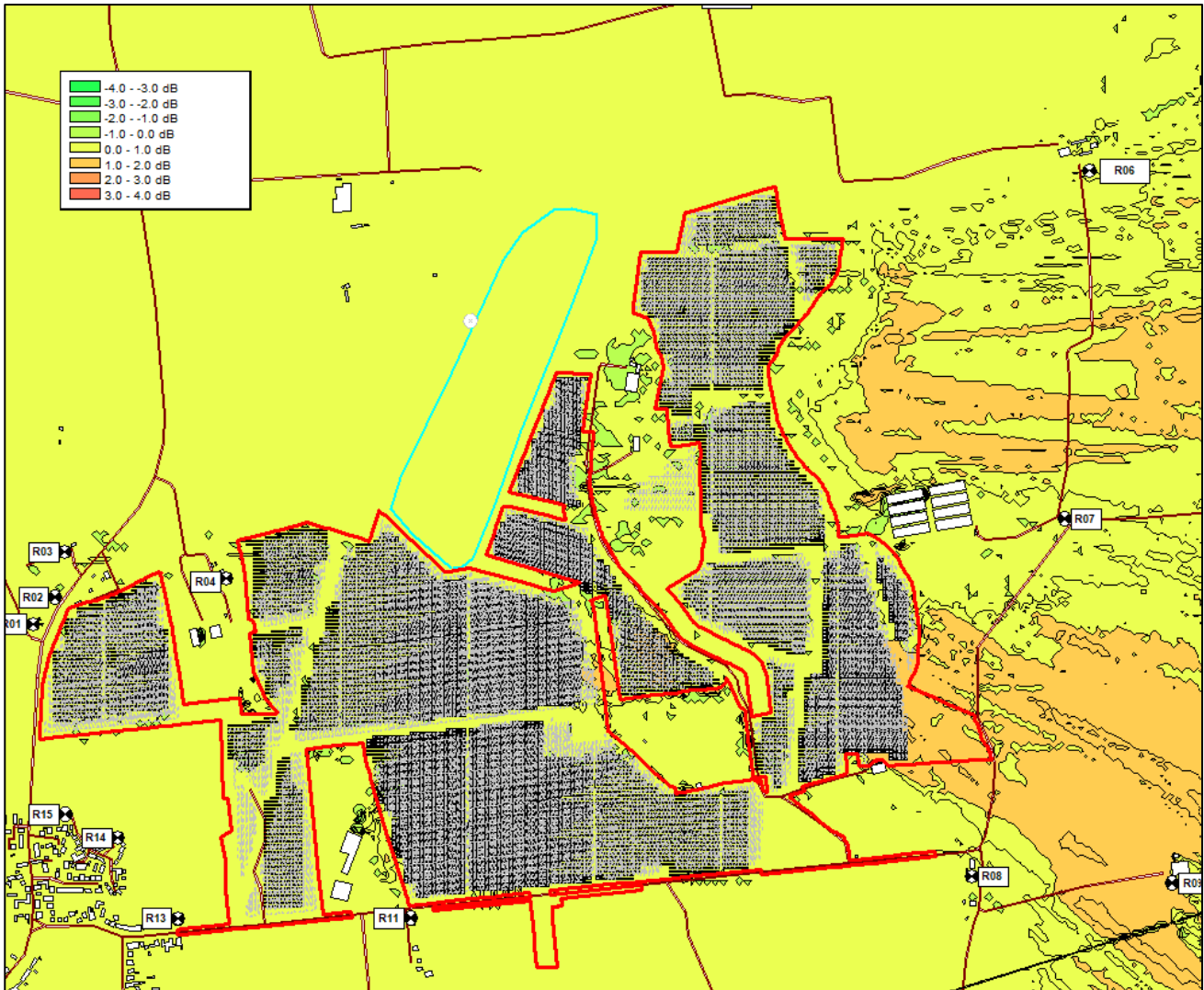


Figure 3.2 presents a noise contour plot of the noise level contribution of the deflection of noise from the proposed tracker solar panels at their maximum rotation position facing east. The figure indicates that there is a slight noise level reduction to the east of the racetrack likely due to the screening effect of the panels. A slight increase in noise levels to the southeast and southwest of the racetrack is also shown.

Figure 3.2: Contour Plot showing the Noise Level Contribution for the Tracker Panels Facing East

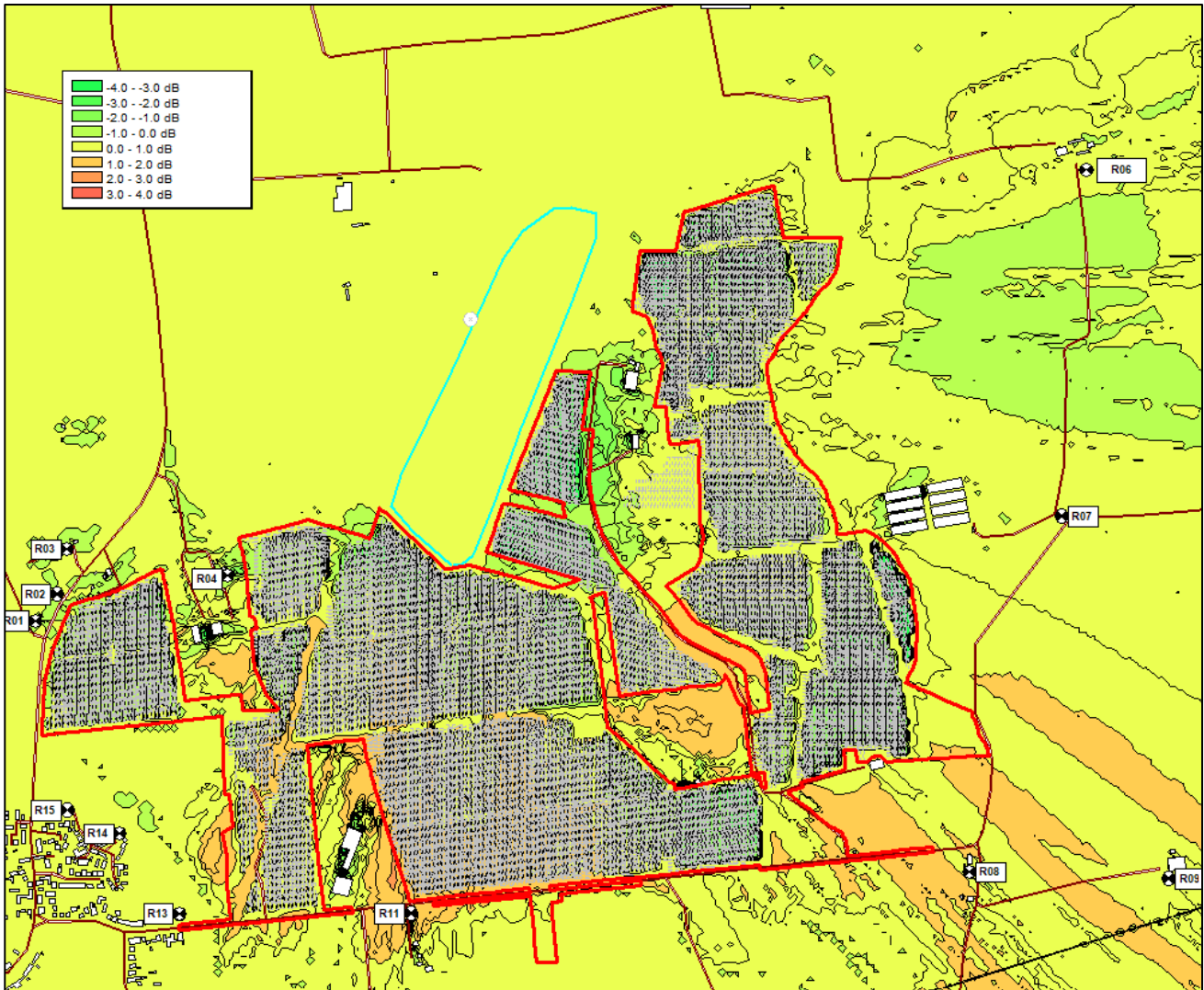


Figure 3.3 presents a noise contour plot of the noise level contribution of the deflection of noise from the proposed tracker panels at their maximum rotation position facing west. Again, the figure indicates a slight improvement in noise levels to the east of the racetrack, likely due to screening and a slight increase in noise levels to the southeast and southwest of the racetrack.

Figure 3.3: Contour Plot showing the Noise Level Contribution for the Tracker Panels Facing West

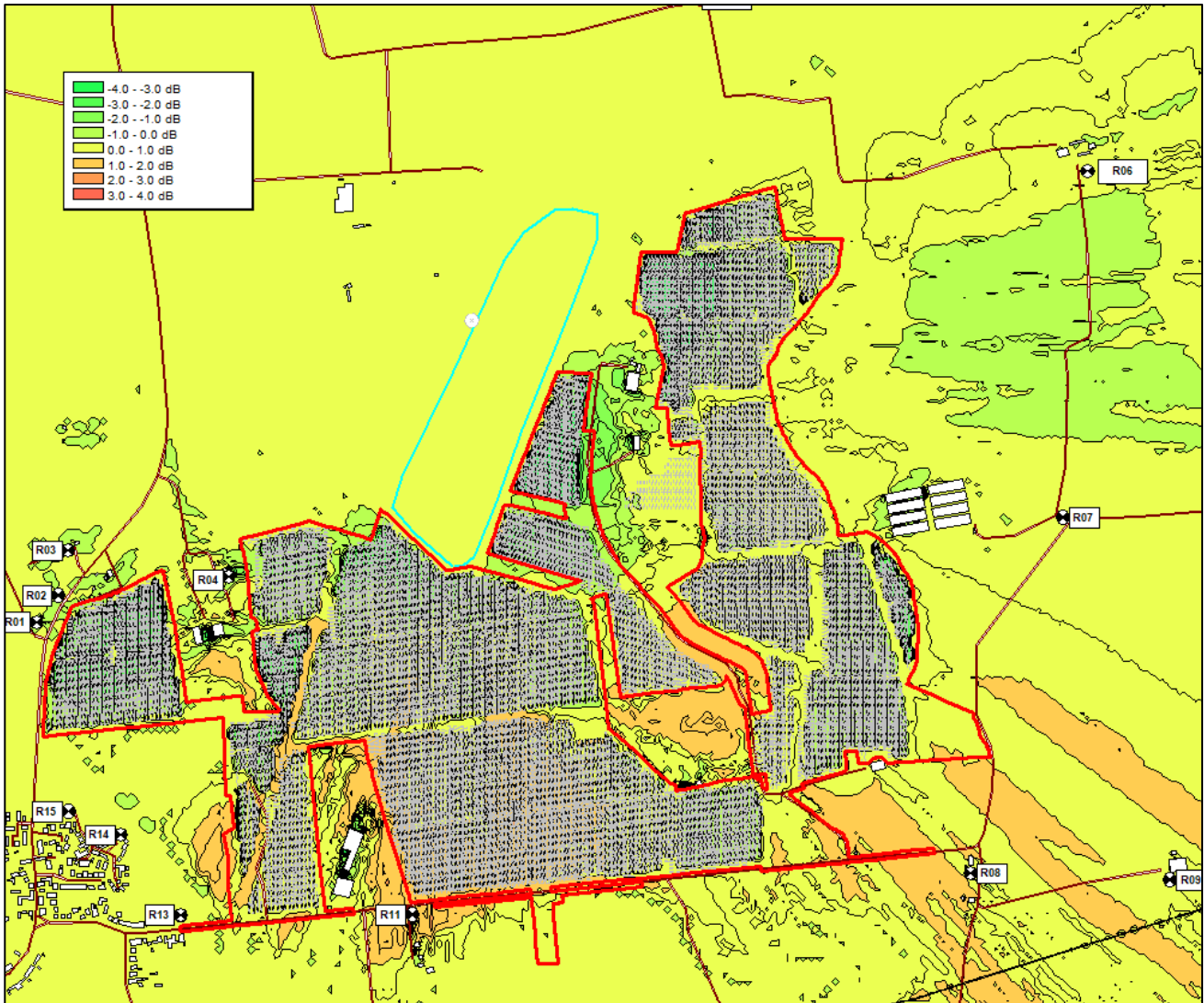
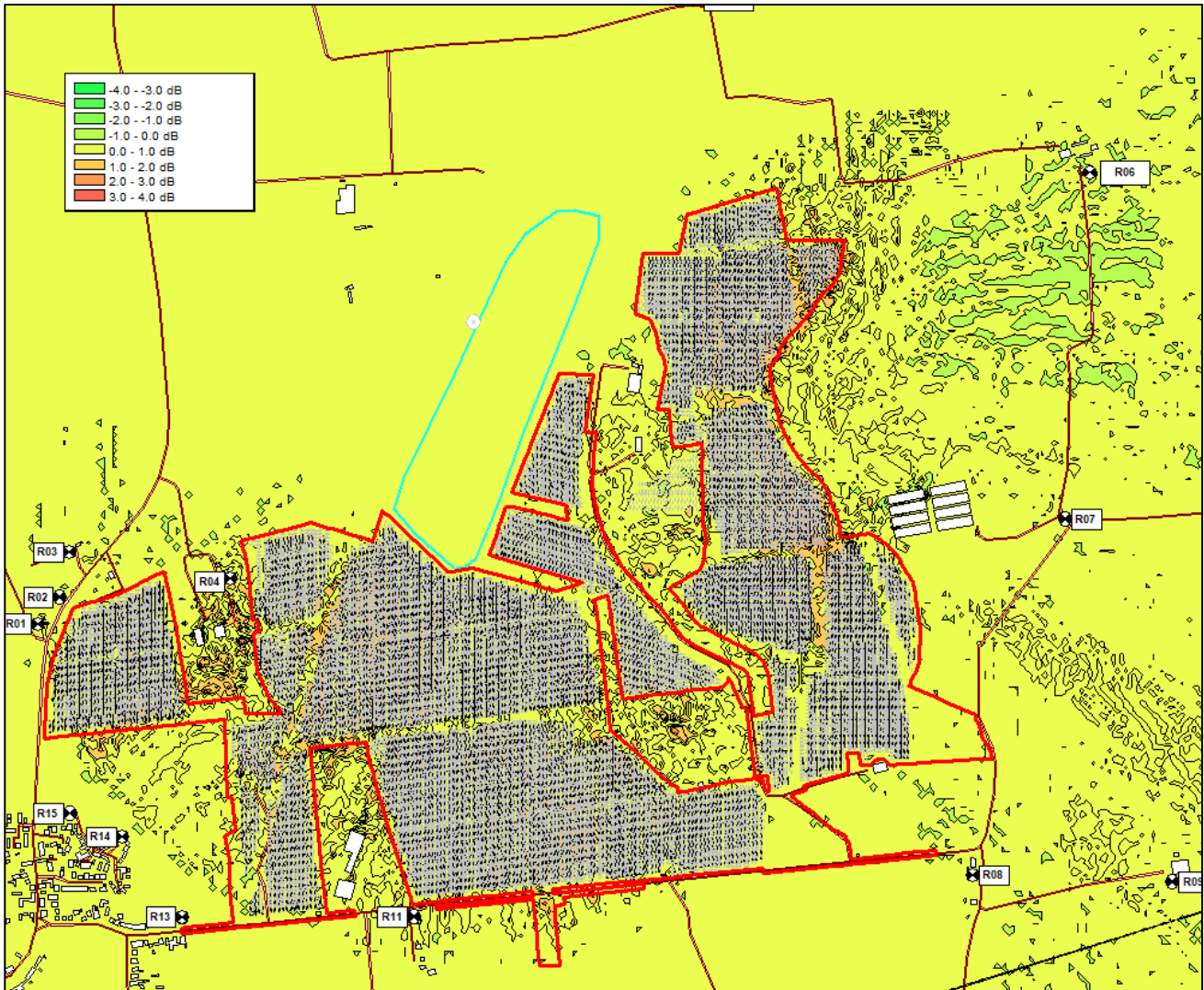


Figure 3.4 presents a noise contour plot of the noise level contribution of the deflection of noise from the proposed tracker panels in their horizontal position. A similar, less pronounced pattern is produced to that for the tilted tracker panels shown in figures 3.2 and 3.3 above.

Figure 3.4: Contour Plot showing the Noise Level Contribution for the Horizontal Tracker Panels



4.0 CONCLUSIONS

Concerns have been raised by the owners of Blyton Park Driving Centre over the potential noise impact of noise produced by activities at Blyton Park Driving Centre being reflected and scattered from the proposed solar panels adjacent to the driving centre and the subsequent potential changes in noise levels at the nearby sensitive receptors.

The report above presents the results of noise assessments undertaken for various solar panel arrangements to determine the changes in the noise levels associated with the solar panel arrangements at at nearby sensitive receptors.

The report indicates that noise levels produced by activities at Blyton Park Driving Centre are likely to be changed by the installation of solar panels nearby, however, the change is predicted to be no greater than +1.3 dB and in most cases less than +1 dB. A change of this magnitude is not expected to be noticeable subjectively by any receptors. For context for a change (either an increase or decrease) to be noticed by a normal person with good hearing would need to be at least 3dB. For a perceived doubling or halving of loudness to be perceived a 10dB increase or decrease would be needed.

APPENDICES

APPENDIX A – ACOUSTIC TERMINOLOGY AND ABBREVIATIONS

Acoustic Terminology

- dB** Sound levels from any source can be measured in frequency bands in order to provide detailed information about the spectral content of the noise, i.e. whether it is high-pitched, low-pitched, or with no distinct tonal character. These measurements are usually undertaken in octave or third octave frequency bands. If these values are summed logarithmically, a single dB figure is obtained. This is usually not very helpful as it simply describes the total amount of acoustic energy measured and does not take any account of the ear's ability to hear certain frequencies more readily than others.
- dB(A)** Instead, the dBA figure is used, as this is found to relate better to the loudness of the sound heard. The dBA figure is obtained by subtracting an appropriate correction, which represents the variation in the ear's ability to hear different frequencies, from the individual octave or third octave band values, before summing them logarithmically. As a result the single dBA value provides a good representation of how loud a sound is.
- L_{Aeq}** Since almost all sounds vary or fluctuate with time it is helpful, instead of having an instantaneous value to describe the noise event, to have an average of the total acoustic energy experienced over its duration. The $L_{Aeq, 07:00 - 23:00}$ for example, describes the equivalent continuous noise level over the 16-hour period between 7 am and 11 pm. During this time period the L_{pA} at any particular time is likely to have been either greater or lower than the $L_{Aeq, 07:00 - 23:00}$.
- L_{Amin}** The L_{Amin} is the quietest instantaneous noise level. This is usually the quietest 125 milliseconds measured during any given period of time.
- L_{Amax}** The L_{Amax} is the loudest instantaneous noise level. This is usually the loudest 125 milliseconds measured during any given period of time.
- L_n** Another method of describing, with a single value, a noise level which varies over a given time period is, instead of considering the average amount of acoustic energy, to consider the length of time for which a particular noise level is exceeded. If a level of x dBA is exceeded for 6 minutes within one hour, then that level can be described as being exceeded for 10% of the total measurement period. This is denoted as the $L_{A10, 1 hr} = x$ dB.
- The L_{A10} index is often used in the description of road traffic noise, whilst the L_{A90} , the noise level exceeded for 90% of the measurement period, is the usual descriptor for underlying background noise. L_{A1} and L_{Amax} are common descriptors of construction noise.
- R_w** The *weighted sound reduction index* determined using the above *measurement* procedure, but weighted in accordance with the procedures set down in BS EN ISO 717-1. Partitioning and building board manufacturers commonly use this index to describe the inherent sound insulation performance of their products.

Abbreviations

CadnaA – Computer Aided Noise Abatement

APPENDIX B – NOISE MODELLING DATA

Car	A Weighted Maximum dB L _{Amax,f}	Frequency Band (Hz), dB L _{max,f} Linear Unweighted Maximum Spectra																											
		25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1.0 kHz	1.25 kHz	1.6 kHz	2.0 kHz	2.5 kHz	3.15 kHz	4.0 kHz	5.0 kHz	6.3 kHz	8.0 kHz	10.0 kHz	
Ford Fiesta	102.0	66.6	68.2	74.6	72.7	72.6	79.5	83.1	86.2	100.8	104.3	89.0	93.4	99.5	95.3	93.6	96.7	91.3	88.1	82.0	80.3	75.9	74.2	70.8	72.2	71.6	63.6	55.9	

APPENDIX C – REPORT CONDITIONS

This Report has been prepared using reasonable skill and care for the sole benefit of Island Green Power Limited (“the Client”) for the proposed uses stated in the report by [Tetra Tech Limited] (“Tetra Tech”). Tetra Tech exclude all liability for any other uses and to any other party. The report must not be relied on or reproduced in whole or in part by any other party without the copyright holder’s permission.

No liability is accepted, or warranty given for; unconfirmed data, third party documents and information supplied to Tetra Tech or for the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report. Tetra Tech does not purport to provide specialist legal, tax or accounting advice.

The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections. Environmental conditions can vary, and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The “shelf life” of the Report will be determined by a number of factors including; its original purpose, the Client’s instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.



Appendix B: Summary of Blyton Park Driving Centre Results

Summary of Blyton Park Driving Centre Results

Cottam Solar Project Limited

Cottam Solar Project

January 2024



PLANNING SOLUTIONS FOR:

- Solar
- Telecoms
- Railways
- Defence
- Buildings
- Wind
- Airports
- Radar
- Mitigation

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ADMINISTRATION PAGE

Job Reference:	10856M
Author:	Hannah McNaul
Telephone:	01787 319001
Email:	hannahm@pagerpower.com

Reviewers:	Michael Sutton
Email:	michael@pagerpower.com

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1	23 January 2024	Initial issue
2	29 January 2024	Minor amendment

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Stour Valley Business Centre, Brundon Lane, Sudbury, CO10 7GB

T: +44 (0)1787 319001 E: info@pagerpower.com W: www.pagerpower.com

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Overview

The purpose of this addendum is to present a summary of the results for Blyton Race Track, as assessed within '10856 - Glint and Glare Cottam Solar Project - Blyton Circuit', in response to the concerns raised by the Blyton Driving Centre operators.

This addendum should be read in conjunction with C8.4.16.1 ES Addendum 16.1 Solar Photovoltaic Glint and Glare Study [REP-077] undertaken for the Cottam Solar Project.

Assessed Receptors

The assessed circuit receptor points are shown below. A height of 1.5 metres above ground level has been taken as typical eye level for a race track user. The distance between road receptors is circa 50m. A total of 50 receptors points has been identified for modelling.



Cottam 3a, Blyton Park Race Track: identified receptors

Geometric Modelling Results

Receptor	Are Solar Reflections Geometrically Possible?		Comment	Overall Impact
	Fixed Panel Layout	Tracking Panel Layout		
1	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
2	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
3	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
4	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
5	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
6	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
7	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact

Receptor	Are Solar Reflections Geometrically Possible?		Comment	Overall Impact
	Fixed Panel Layout	Tracking Panel Layout		
8	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
9	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
10	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
11	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
12	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
13	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
14	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact

Receptor	Are Solar Reflections Geometrically Possible?		Comment	Overall Impact
	Fixed Panel Layout	Tracking Panel Layout		
15	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
16	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
17	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
18	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
19	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
20	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
21	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact

Receptor	Are Solar Reflections Geometrically Possible?		Comment	Overall Impact
	Fixed Panel Layout	Tracking Panel Layout		
22	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
23	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
24	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
25	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
26	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
27	Yes	No	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
28	Yes	No	Proposed screening predicted to remove visibility of potential solar reflections.	No impact

Receptor	Are Solar Reflections Geometrically Possible?		Comment	Overall Impact
	Fixed Panel Layout	Tracking Panel Layout		
29	Yes	No	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
30	Yes	No	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
31	Yes	No	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
32	Yes	No	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
33	Yes	No	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
34	Yes	No	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
35	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact

Receptor	Are Solar Reflections Geometrically Possible?		Comment	Overall Impact
	Fixed Panel Layout	Tracking Panel Layout		
36	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
37	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
38	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
39	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
40	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
41	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
42	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact

Receptor	Are Solar Reflections Geometrically Possible?		Comment	Overall Impact
	Fixed Panel Layout	Tracking Panel Layout		
43	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
44	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
45	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
46	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
47	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
48	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact
49	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact

Receptor	Are Solar Reflections Geometrically Possible?		Comment	Overall Impact
	Fixed Panel Layout	Tracking Panel Layout		
50	Yes	Yes	Proposed screening predicted to remove visibility of potential solar reflections.	No impact

Geometric analysis results for Blyton Park Race Track receptors

Time and Duration of Potential Glare

Solar reflections occur along the circuit between 5:51am – 6:09am GMT throughout March – September, and between 6:01pm – 6:15pm GMT throughout March – September for the fixed panel layout.

Solar reflections occur along the circuit at times between 3:34am – 8:09am GMT throughout mid-late January and early February - November, and between 3:39pm – 5:28pm GMT throughout January – February and October – December for the tracking panel layout.

Conclusions

The results of the analysis have shown that solar reflections from the proposed development (the Cottam 3a site) are geometrically possible towards drivers using the race track.

The proposed screening is predicted to significantly obstruct the visibility of the reflecting panel area towards users of the race track. Details of the screen planting are detailed on Figure 8.16.10 A Landscape and Ecology Mitigation and Enhancement Plan – Cottam 3a[REP-025].

If necessary, the developer will implement an interim mitigation measure (opaque fence) before planting has established, as is set out in the C7.16_C Outline Operational Environmental Management Plan submitted at Deadline 4. The Operational Environmental Management Plan is secured via requirement 14 in the draft Development Consent Order for the Scheme [REP3-004].

Therefore, no impact is predicted upon drivers using the race track following the establishment of mitigation measures, and no further mitigation is required.



Urban & Renewables

Pager Power Limited
Stour Valley Business Centre
Sudbury
Suffolk
CO10 7GB

Tel: +44 1787 319001 **Email:** info@pagerpower.com **Web:** www.pagerpower.com