



LIME DOWN SOLAR PROJECT

DEADLINE 5 SUBMISSIONS STOP LIME DOWN

August 2026





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1. Introduction

1.1.1. This document and the attached papers comprise Stop Lime Down's (SLD('s)) Deadline 5 submission. This document will address:

- Comments on any submissions received at Deadline 4;
- Comments on the ExA's second written questions ("ExQ2")

1.1.2. In commenting on questions not directed to SLD, SLD has taken a proportionate approach providing comment where there is something additional to make clear. SLD maintains its position as set out in its earlier submissions unless stated otherwise.

1.1.3. This written submission uses the document reference for the tracked version of documents where multiple versions of the document exist in the Document Library.

1.1.4. As a specific ExAQ is directed to the issue of the SoCG between the Applicant and SLD, a comment on that matter is included there rather than in this introduction.

1.1.5. To provide advance warning to the ExA, SLD's traffic expert (Mr. Bruce Bamber) is unavailable for the remainder of August as a result of planned annual leave. Comments from Mr Bamber are included in this document, and a meeting between Mr. Bamber and the Applicant was held on 3 August 2026 which SLD understands will inform some of the Applicant's submissions at Deadline 5 (and possibly Deadline 6). Unfortunately, Mr. Bamber will be unable to provide any documents to submit at Deadline 6 due to his unavailability. Given the hearings listed in w/c 14 September 2026 and 21 September 2026 (before Deadline 7), SLD proposes to submit delayed comments from Mr. Bamber on or before 7 September 2026. SLD apologises for this, and would respectfully request and welcome the ExA accepting SLD's traffic and transport submissions from Mr.



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Bamber late so that his evidence is accepted in the Examination and available to the parties at least a week in advance of the reserved weeks for hearings. SLD recognises that, if accepted, this would be an exceptional step.

1.1.6. SLD welcome any questions that the ExA or any other party (including the Applicant) may have about this submission. SLD will continue to take steps to assist the ExA and advance its case throughout the remainder of the Examination.

1.1.7. This submission has not been produced with the use of AI.

1.1.8. The following appendices are attached to this submission:

Appendix	Title
A	Landscape Responses to Deadline 4 Documents and ExQ2
B	Glint and Glare Responses to ExQ2 and Independent Review of Pager Power Guidance
C	Spreadsheet of HGV Frequency Fosse Way – Bradfield Cottages
D	Modelling Enhanced Runoff from Solar Panels at Lime Down Farm
E	Site Selection and Cable Route Report
F	Inspector Decision APP/X2600/W/24/3356489

2. Comments on Deadline 4 Submissions

2.1. Landscape

2.1.1. Appendix A to these submissions includes comments from SLD's Landscape expert, Carly Tinkler, on Deadline 4 submissions.

REP4-080 – Technical Note: Alternative Access to the PROW of Way Network

2.1.2. SLD note the contents of this technical note, but does not agree with its assessment. SLD have already commented at length on the likely impacts of the scheme on the PROW network. In particular, **[REP1-169]**, SLD's Landscape and Visual Impact Report, includes an assessment of amenity effects during the lifetime of the Scheme and **[REP1-179]**, SLD's Acoustic's Report addresses noise effects on the PROW network. Additionally, the layered map produced by SLD offers a helpful way of considering cumulative effects on individual PROWs **[REP1-188]**.

2.1.3. Useful evidence of many of the routes regular use has also been provided in SLD's Public Rights of Way Survey **[REP1-187]**. As discussed at the previous hearing, SLD does not agree with the Applicant's various statements that the PROW network is under utilised in areas. Many of these statements are based off single visits, as opposed to lived experience residing within the area.

2.1.4. Also in this regard, the SLD is aware that cameras were placed by the Applicant at various points (including around Ladyswood Farm). SLD has significant concerns about the locations chosen for those cameras given the typical walking routes undertaken by locals, and also the weather conditions when this analysis was undertaken. SLD will comment on the figures resulting if and when they are submitted to the Examination.

2.2. Traffic and Transport



REP4-017 – ES Vol 2, Figure 13-5 Abnormal Load Routes – Solar PV Sites

2.2.1. Mr. Bamber notes that the alternative AIL route to Areas A and C that approaches from the south at Grittleton crossroads has been removed. All AIL vehicles would therefore need to make the left turn at Grittleton crossroads to enter Alderton Road. Mr. Bamber notes that this issue has been picked up at the ExA's Second Written Questions TT2.8 and will review the Applicant's response and respond when able. The point is made by the ExA that there is no swept path analysis showing how the AIL vehicle could make the left turn into Alderton Road and details are requested of a possible manoeuvre whereby the AIL vehicle turns right towards Yatton Keynell, the tractor unit unhitches, re-hitches to the rear of the trailer unit and continues north along Alderton Road.

REP4-038 – Transport Assessment

2.2.2. The updated Transport Assessment includes the provision of new drawings PL302-308 in Annex I. SLD's comment on these drawings is set out in more detail below in its response to TT2.9. In summary, Mr. Bamber has expressed doubt in respect of the dimensions presented in these plans. Mr. Bamber undertook measurements at two sites and noted significant differences between the measurements presented and the measurements taken on site.

2.2.3. Mr. Bamber reported technical difficulties reviewing these plans, and this was part of the matters for discussion at the meeting between the experts on 3 August 2026. Mr. Bamber will provide further information in respect of them when able, but repeats the concern regarding the measurements provided in the plans.

REP4-058 – Outline CTMP

2.2.4. The access drawings in Annex A indicate that banksmen would be used at 21 access points. The description of works in Tables 2 and 3 indicate that banksmen would be used at 9 access points. The Applicant needs to provide clarity because



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the use or otherwise of banksmen has important implications with regards to highway safety and the amount of roadside vegetation that would be lost to achieve visibility splays. The Applicant has yet to provide an estimate of the amount of roadside vegetation that would be lost through the need to achieve safe visibility splays.

2.2.5. Drawing PL21-B (emergency access to Lime Down D from Hill Hayes Lane) is not provided in Annex A although it is listed in Table 2 with a drawing reference number.

REP4-080 Technical Note on Alternative Access to ProWs:

2.2.6. The Technical Note fails to consider the potential adverse highway safety impacts on users of Footpaths HULL29 (joins western side of Bradfield Cottages south of railway) and HULL5 (joins eastern side of Bradfield Cottages north of railway line) during construction. Users of these rights of way are required to walk along the section of Bradfield Cottages that is predicted to carry significant numbers of HGVs and has no footways and limited verges.

REP4-082 Applicant's Response to Submissions Received at Deadline 3

2.2.7. SLD-006: It remains unclear whether the Applicant is suggesting that construction HGV numbers represent a worst case for the purposes of environmental assessment since it is suggested that the Final CTMP may identify higher flows.

REP4-092 Council Post-hearing Submissions:

2.2.8. Paragraphs 4.15 to 4.18 refer to passing bays and spacing. Queries are raised about the adequacy of forward visibility between passing opportunities. The Applicant does not appear to have provided forward visibility measurements on the latest drawings that show the proposed works within the HIAs.

REP4-081 Applicant's Response to Other Parties' Responses to ExAQ1:

2.2.9. TT1.7: The Applicant attempts to justify the distribution of construction workers that have been split in proportion to the solar array areas. Assuming the peak number of construction workers (622) this would lead to 32.7% being assigned to Area D, equivalent to 203 workers. The substation, BESS, Area D solar and cable route would all be constructed at the same time. However, Mr. Bamber notes that the substation and BESS alone are likely to require 100 workers each (on the basis of the Applicant's other assumptions related to this issue) so the Applicant's argument that a worst case has been used does not appear justifiable.

2.2.10. TT1.16: The ExA raises the point that a simple proportional allocation of construction vehicle movements is likely to under-estimate the number of movements through Grittleton because it provides access to major compounds. The Applicant has not responded to this point.

2.2.11. TT1.18 NMU Impacts: Reference is made (p. 244) to the January 2024 ATC surveys and it is stated that these identified 10 cycle movements per day. However, the ATC surveys that are attached to the TA do not identify cycle movements. This statement therefore appears incorrect and misleading.

REP4-082 – Applicant's Response to Submissions Received at Deadline 3

2.2.12. CNL-027: The Applicant responds to the following position expressed by the CNL: *"In conclusion, and notwithstanding the mitigation measures proposed by the Applicant to address the impacts of construction and decommissioning traffic, the Board considers that by routing this significant amount of traffic through the CNL, the Scheme would give rise to a **direct, major/moderate (significant) adverse** effect on the tranquillity of the CNL, one of its special qualities. Whilst it is acknowledged that in EIA terms, this impact would be 'temporary' (i.e. not permanent), it would still last for several years and for its duration, the impact*



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would be significant, direct and adverse.” It is noted that a Tranquillity Assessment will be produced by the Applicant at Deadline 5 which will respond to this statement in part. SLD will provide a response to the Tranquillity Assessment as soon as practicable.

- 2.2.13. GDPR-001 Equine concerns: The Applicant states that Alderton Road and the Fosse Way will be widened ‘up to 6.0m’. This does not overcome the concern for horse riders since this widening is only at passing places and there are sections where the road is not wide enough to allow safe passing. Drivers are likely to attempt to pass rather than wait until a passing place is reached (or a horse reaches a passing place).

REP4-095 and REP4-096 Hullavington Parish Council

- 2.2.14. The Hullavington Parish Council have emphasized a specific road safety concern at the junction of the Street, Hullavington and Norton Road. As described by the Parish Council, *“[the] road currently offers no refuge, footway, or safe passing place for vulnerable road users, creating dangerous conditions even under current traffic volumes. The road is derestricted, we have a primary school on that end of the street and we now have an additional estate under construction at that junction with 71 new properties.”* The Parish Council note that any increase in construction traffic associated with the solar development will materially worsen the conditions for road safety.

- 2.2.15. Mr. Bamber further notes that the development referred to Wiltshire Council planning application 20/10972/OUT) incorporates two public rights of way that cross the site and emerge onto Bradfield Cottages. The construction works will have deterred use of these rights of way recently but when the Scheme is complete not only are the new residents likely to use the rights of way to access Bradfield Cottages (cafe/walks) but the rights of way will become more attractive for existing residents in the village.

REP4-131 Steve Harvey Strava Data:

2.2.16. This document contains extracts from the Strava cycle database which provides evidence of cyclists that use the local highway network. It is interesting to note that the number of riders recorded on Bradfield Cottages in 2026 (967) represents 69% of the number recorded on the Fosse Way in 2026 (1,406). Strava only picks up those who use the app and only records a single journey for each rider. The numbers are therefore significantly below the actual number of riders on each of the routes. However, given the popularity of the Fosse Way for cyclists, the relatively high number recorded on Bradfield Cottages reinforces the concerns about cyclists safety on this highly sensitive link.

2.3. Glint and Glare

2.3.1. Appendix B to this document is a report prepared by Straten CSL in response to the ExQ2 and includes an independent review of the Pager Power Guidance (V4) relied upon by the Applicant for its assessment.

2.4. Ecology and Biodiversity**REP4-011 – Environmental Statement Volume 1 Chapter 9 Ecology and Biodiversity**

2.4.1. Paragraph 9.6.16 has been updated to note that hedgerow surveys were undertaken within the CRC between April and June 2025, wherein hedgerows were appraised against ecological criteria for determining whether they qualified as “important” under the Hedgerow Regulations 1997.

2.4.2. **[REP1-083]** confirms that the overwhelming majority of hedgerows within the boundaries of the PV Sites have been defined by the applicant as species-rich and in good condition. CRC hedgerows showed similar traits and signs of good condition. The Applicant acknowledges the hedgerow network as being of District Importance. Mr. Valori queries that, given the ecological value of the hedgerow and the Applicant’s assumption of species presence, why the proposed

avoidance areas are such a limited fraction of its length. SLD appreciate that horizontal direct drilling is a significant expense, however the Applicant apparently purports to rely upon the availability of HDD to mitigate some of the harms to hedgerow within its Outline Construction Environmental Management Plan **[REP4-050]** and the Cable Route Construction Method Statement **[REP4-040]**.

REP4-086 Written Summary of the Applicant's Oral Submissions and Responses at ISH3 and Responses to Action Points

2.4.3. In relation to expected hedgerow losses, the Applicant has further clarified post-hearing the exact reasoning for the choice of specific hedgerows to be included within the avoidance areas over others. Of the six hedgerow avoidance areas, six are due to these being in association with sensitive brooks and their surrounding woodland habitat, and two due to being associated with road/railside woodland strips. In other words, avoidance has been driven by the hedgerow's association with sensitive off-site habitats, rather than the intrinsic ecological value of the individual hedgerow (as the majority of the hedges on site have been identified as ecologically important, under Hedgerow Regulation 1997 criteria). For all hedgerows outside of avoidance areas, the scheme has been designed with limiting the extent of removal as much as possible.

2.4.4. Mr. Valori further notes that all the listed hedgerows to be avoided correspond to sections where there is already an existing access limitation as well as an ecological factor (e.g. hedges associated with stream sections crossing the order limits, or a major road or railway line). Mr. Valori queries to what extent horizontal drilling would actually be an available option to avoid ecological impacts on hedgerow as well as species within hedgerow.

2.4.5. Within its post-hearing submissions, the Applicant states that that Table 3 of the Outline Operational Environmental Management Plan has been updated to address adaptive skylark mitigation (p. 47). However, there has been no new

information provided in relation to adaptive management. Rather it states at p. 20:

“The Outline LEMP [REP3-100] sets out the provision of areas specifically designed to provide suitable habitat for ground-nesting birds, in particular skylark, and establishes the long-term management requirements for these areas. Section 1.4 of the Outline LEMP [REP3-100] also sets out an ecological monitoring strategy, which includes monitoring of bird populations at the Solar PV Sites, including within the ground-nesting bird mitigation areas, to enable comparison with baseline bird survey data. The findings of this ongoing monitoring will be used to assess the effectiveness of the ground-nesting bird mitigation areas and to identify whether any remedial or adaptive measures, such as changes to the management regime, are required if monitoring demonstrates that ground-nesting birds are not using the mitigation areas to the extent anticipated.”

2.4.6. However, no new information has been provided in relation to how measures might be adapted. The oLEMP **[REP3-100]** states only that monitoring will be carried out more regularly during the first five years of operation so that remediation measures or changes in management can be applied to developing habitats (p. 36). No time period is mentioned for species specific monitoring. In relation to monitoring of bird populations, *“monitoring of the bird populations across the Solar PV Sites, both within the array and potential mitigation areas, will be undertaken and compared to baseline bird survey data collected for the Scheme.”* There is no further detail in respect of how frequent such monitoring will be, or how ecological management may be adapted in response to poor recovery by local bird populations (such as by, for example, increasing sight lines for skylark by lowering the height of boundary hedges).

2.4.7. SLD notes that there is currently a discrepancy between the skylark territory uplift calculations and assumptions (**[REP4-010]** para 9.12.36) and the fields listed to be set aside or enhanced within the OLEMP (**[REP4-010]** para 1.3.140). While this inconsistency is not expected to result in an unexpected impact on

skylark, as the oLEMP reports an increase of 10ha of habitat to be enhanced relative to prior assumptions, the exact number of territories and uplift expected as a result of the present mitigation measures should be updated to better reflect the latest layout, skylark territory targets and for general clarity.

2.4.8. SLD considers that there should be skylark specific monitoring secured within the OLEMP at more regular intervals. As accepted by the Applicant within their Chapter 9 of the ES, even after the successful implementation of the proposed mitigation measures, there would remain a residual displacement of approximately 71.5% of the baseline skylark. Given the extent of this significant adverse effect, close monitoring followed shortly by the necessary management interventions, if required, will be key to ensure that even this partial mitigation is successful.

2.4.9. Among management factors to consider in the short term during the site's operational phase, it is worth factoring that there will be a time delay between the present condition of fields A11, A12, C10, C24 and C28 and their management targets as diverse wildflower meadows. Per in-built estimates within the BNG framework, the general assumption for the amount of time for a field or pasture to develop into a species-rich meadow is estimated between 10 - 15 years of consistent management. While the present habitat will still allow for skylark to continue nesting within the fields as they gradually improve over time, it is expected that an actual increase in skylark territories will not start showing results until several years into the operational phase.

2.4.10. A greater degree of skylark displacement should therefore be assumed within the hay-cut meadow fields in the initial years following the development. This is worth noting, as initial estimates and calculations assumed set-aside low-intensity fields to have a greater carrying capacity for skylark specifically. By contrast, the latest oLEMP currently shows a ~10ha decrease in the amount of these set-aside fields, with a 20ha increase in the proposed amount of hay-cut meadow grassland to be enhanced for skylark instead.

2.4.11. With the above in mind, Mr Valori queries whether any additional measures will be implemented shortly following panel installation to help bridge this 'gap' and delay, as well as how this will be accounted for when monitoring numbers of territories relative to the expected targets in the initial years. Mr. Valori notes a general inconsistency in this approach, with habitat suitability of the ditches generally stated to be relatively low and unsuitable, with standard buffer widths being 8m for ditches not associated with hedgerows and culverting mitigation proceeding on a pre-clearance search basis, but also assuming presence of sensitive fauna due to the lack of species-specific surveys Mr Valori seeks clarification as to what scenarios and processes exactly would trigger a formal aquatic invertebrate re-survey over re-applying the current assumption of presence.

2.4.12. In respect of buffers for watercourses, during SoCG discussions on 6 August 2026 the Applicant acknowledged that additional ecological surveys, such as an updated white-clawed crayfish assessment, may be carried out ahead of works in response to a change in the siting of any features which could affect these watercourses, such as the proposed culverted ditch crossings. Mr Valori queries how these buffers will be implemented and adjusted, if at all, especially in a scenario where crayfish or other sensitive fauna are discovered during pre-clearance searches. Will the wider buffer widths be automatically applied to all suitable wet ditches, or will these be widened (and culverts potentially re-sited) only in a scenario where crayfish are directly observed?

REP4-064 – SoCG with Natural England

2.4.13. Mr. Valori notes that Natural England has confirmed that the species licencing matters identified relating to dormice have been agreed, but has requested further more detailed surveys six months prior to the submission of a formal application to ensure the data remains current. Mr. Valori queries why up

to date information is not sought for dormice or white-clawed crayfish as well, which may similarly require the securing of a licence as a result of works.

2.5. Heritage

REP4-066 – Statement of Common Ground with Historic England

2.5.1. SLD's heritage experts, Marrons, note that agreement has been reached with Historic England in respect of the Applicant's approach to safeguarding designated heritage assets. However, with regards to Bradfield Manor Farmhouse, Historic England have also acknowledged that in winter the screening would not be so effective so there would be less effective mitigation for long-range views. Clarity is sought in respect of whether Historic England also agrees with the level of harm found by the Applicant in their assessment (i.e. at the lower end of the scale of less than substantial harm). Marrons note that the Examiners Questions have raised this query of Historic England and Wiltshire Council at CH2.10. SLD will comment on the response provided at Deadline 6.

2.6. Hydrology

ES Chapter 11 Hydrology, Flood Risk and Drainage Rev 4 [REP4-013]

2.6.1. The updates provided (para 11.9.2) clarifies the position on panel size in flood zone areas. The Applicant has committed to maximum height above ground level of 4.5m for tracking panels and 3.5 m for fixed panels, as well as 0.6 m freeboard of the lowest edge of the panel above the design flood level. This will be achieved by "*adjustment to panel tilt, tracker operating range or panel micrositing*". In other words, the tracking panels will not tilt so much, and the slope of the 3.5 m fixed panels will have to be less in these areas. In discussions with Professor Skeffington, Arthian consultants have clarified that "micrositing" means small adjustments in the position of the panels rather than building small hills to take them above the water level.

REP4-022 – ES Vol 3, Appendix 11-1: Flood Risk Assessment and Outline Drainage Strategy – Lime Down Covering Report Rev 4 [REP4-022]

2.6.2. At para 2.4.9, the Applicant notes that site-specific outline drainage strategies have been produced for each Solar PV Site where positively drained hardstanding or formal drainage is proposed. The Applicant has provided site-specific FRAs which include an “outline” assessment of runoff from hardstanding areas – substations, the BESS, conversion units, and some access tracks. The runoff assessments are quantitative. This is a significant change, discussed under each site FRA.

2.6.3. Professor Skeffington notes that enhanced buffer distances around watercourses have been mentioned at para 3.2.1. An 8m buffer distance is retained for lower sensitivity ditches and watercourses where no higher “sensitivity criteria” are triggered. Larger buffers are applied *“where required by the ecological buffer criteria, protected or notable species interest, designated site proximity, biosecurity requirements or construction-phase pollution prevention controls.”* These buffers are 10m for relevant ecological criteria and 15m for staff, plant and vehicle washdown where required by the oEPMS. SLD seeks clarification as to how these buffers will be implemented having regard to the Applicant’s approach of assuming presence without conducting site-specific surveys.

ES Appendix 11-2: Flood Risk Assessment and Outline Drainage Strategy – Lime Down A Rev 4 [REP4-024]

2.6.4. The site-specific risk assessments have been updated to include an outline drainage strategy in section 3.

2.6.5. Professor Skeffington notes that the Applicant maintains their position that the solar panel areas will not have an increase in runoff and do not need any additional drainage, given mitigation measures such as ensuring grass growth

under the panels (paras 3.2.1-3.2.4). SLD maintains its position that there would be an increase in runoff as a consequence of panel runoff and drip lines. Modelling shows that this would occur at moderate rainfall rates for 4 of the 5 soil types (Appendix D). The embedded mitigation proposed is not sufficient or reliable as it relies upon vegetated ground cover being established and maintained and soil compaction being avoided or remediated. SLD has serious doubts in respect of the ability to maintain a sufficient grass cover below the panels given the loss of light and water which the panels will cause. Likewise, as identified in SLD's Soil Report (Written Representation, Appendix K1 **[REP1-184]**), the panels are located in an area where soil compaction is a serious issue.

2.6.6. The Applicant accepts that there is a potential to increase runoff as a consequence of hardstanding (at para 3.3.3). Professor Skeffington agrees. The hardstanding in Area A is the substation, substation access track, and 9 conversion units, a total of 7154 m².

2.6.7. The FRA then assesses the scheme against the "drainage hierarchy" which gives the order of priority for disposing of excess water. The Applicant concludes that infiltration to the ground is not feasible, having regard to soilscape mapping of the majority of the site which shows the area as having "*lime-rich loamy and clayey soils with impeded drainage.*" However, for the same reason, drainage would be impeded beneath the panels, leading to the excess runoff described in Appendix D.

2.6.8. The Applicant concludes that discharge to an above-ground surface water body is the only option, and for Site A this is a land drain feeding into Norton Brook. Wiltshire policy requires them to demonstrate a 30% betterment on greenfield rates, requiring them to install some water retention features. The Applicant's preferred options are swales, detention basins and ponds for the substation and roads, and infiltration trenches for the conversion units. They calculate the storage volume required as 600 m³ for the substation and 123 m³ for the access

road. A swale of 27 x 27 m and 1 m deep would be required for this volume. SLD would welcome clarification in respect of where these might be located.

2.6.9. A firewater retention facility is detailed for the substation. Professor Skeffington notes the comment at para 4.2.3 which states, *"the risk of flooding from all sources has been assessed and the flood risk is considered to be **Negligible to Low** and, therefore, does not require site-specific mitigation measures*. This appears an odd statement, given the site-specific mitigation measures detailed within the drainage strategy. There appears to be no basis for the Applicant's assessment of *"negligible to low"* flood risk.

2.6.10. Paragraph 4.2.4 further states *"The solar panels and other electrical infrastructure, including inverters, transformers, cabling and substations, which is to be sat on a concrete foundation/pad that will be mounted on frames and raised above ground level allowing flood water to flow freely underneath. Therefore, there will be no loss of floodplain volume as a result of the Scheme"*. There is no suggestion in Chapter 11 of the Applicant's ES (e.g. at [REP4-012] para 11.9.2 or elsewhere) that any equipment will be raised on a concrete pad which will be mounted on frames and raised above ground level to allow water to flow underneath. The Applicant should clarify the meaning of this sentence

ES Appendix 11-6: Flood Risk Assessment and Outline Drainage Strategy – Lime Down D Rev 4 [REP4-032]

2.6.11. Area D contains the BESS and 400 kV substation, and is the only area which previously had a quantitative assessment of flood risk for the BESS and a plan for alleviating it. This has now been extended to the whole of Area D. The conversion units will use infiltration trenches as on the other sites. The BESS will have a system for holding back water, restricting the flow to a maximum of 7.2 l s⁻¹, which will be discharged directly into the Gauze Brook (Table 4). This will require a retention volume of 4507 m³. The 400 kV substation, which is in the same location, will have a similar but larger system, with a maximum discharge

of 8.0 l s^{-1} , which will also be discharged directly into the Gauze Brook (Table 5). This will require a retention volume of 5112 m^3 . The nature and location of this retention storage is not specified either in the FRA or the Construction Environment Management Plan. The volumes concerned would require (for instance) two tanks of around $70 \text{ m} \times 70 \text{ m} \times 1 \text{ m}$ depth, which would occupy a not inconsiderable area. The document claims that it has shown that the requisite volumes can be accommodated on site, but there is no assessment of where or how such structures could be fitted in. The access road for the BESS/400 kV substation would require additional water storage of 1238 m^3 , though it is less clear where this would be, and discharge at a maximum of 2.0 l s^{-1} (Table 2). Area D also contains a 132 kV substation, which would require storage of 971 m^3 and discharge into a different part of the Gauze Brook at 3.7 l s^{-1} (Table 2).

9.32 Hydraulic Modelling Report [REP3-131] and 9.53 Lime Down E2 - Hydraulic Modelling Report [REP4-089]

2.6.12. **[REP3-131]** was submitted at Deadline 3 and covers the Gauze Brook from the crossing of Hill Hayes Lane in Hullavington to just upstream of Corston, including the smaller northern branch which starts near Bradfield Wood. This affects Area D of the Scheme. **[REP4-089]** covers the Rodbourne Brook from Lower Stanton St Quinton to Rodbourne Bottom, affecting Area E2 of the Scheme. These are the two areas of the Scheme where panel infrastructure is proposed to be built in EA Flood Zones 2 and 3. In the absence of an EA hydraulic model for these areas, models have been developed by Arthian on behalf of the Applicant. The modelling uses a 1D/2D commercial flood model (TUFLOW). A slightly earlier version is used for Area D than Area E2 – this is unlikely to be significant. Topographic data is from an EA LIDAR survey in 2020 supplemented in the case of E2 by a detailed channel survey from a specialist company conducted in March 2026. Area D was also surveyed at the same time, but there is no mention of use of these data in the model. It is understood that the modelling is being revised after comments from the EA.

2.6.13. The results output by the models differ between sites. The main text at both sites is concerned purely with flood depth. The Rodbourne Brook model also includes an appendix (Annex B) which reproduces a checklist from the Flood Estimation Handbook and reports peak flow rates for flood events of differing return periods. It is not clear why the sites have been treated differently, because this would be valuable information in both cases. The ExA also asked for a consistent approach here.

2.6.14. Models should always be checked against data where it is available, and this is a standard part of the Flood Estimation Handbook procedures. Flow gauge data are available for both the Gauze Brook and the Rodbourne Brook, but the Applicant has not assessed their model outputs against the measured data. This can be conveniently accessed from the Government's Hydrology Data Explorer website at <https://environment.data.gov.uk/hydrology/explore>. For the Rodbourne Brook, the gauging station is at Startley, ID 530120 at Grid Reference ST9401283156. In the Hydraulic Modelling Report for the Rodbourne Brook ([REP4-089] Annex B para 2.4), the Applicant appears to have confused this station with the nearby station on the Gauze Brook (see below). The station does not appear in the National River Flow Archive and there is a note to say that the data are affected by weed growth. Nevertheless, there are 30 years of data with a few gaps. The Applicant's analysis ([REP4-089] Annex B para 6.5) suggests that a flood peak with a 30-year return period should be $9.31 \text{ m}^3\text{s}^{-1}$. In other words, a peak of this size should occur once every 30 years on average. The data show that there were 27 peaks in excess of this value in the 30 years since 1996. This suggests that the maximum flood peak for the Rodbourne Brook is being seriously underestimated.

2.6.15. For the Gauze Brook, the gauging site is called Rodbourne, ID530140 at Grid Reference ST9373184031. The site is approximately 1.25 km downstream of the Applicant's hydrological modelling area, increasing the catchment area by about 5%. It is a higher quality site than Startley, and although primarily designed

to monitor low flows, higher flows are estimated from measured river level data from the gauge by the Environment Agency. The Applicant does not provide output peak flows from the Gauze Brook Modelling Report, but input flows are provided ([**REP3-131**] Table 3). The 30-year return period input flow is given as $10.1 \text{ m}^3\text{s}^{-1}$ – in other words this flow should be exceeded once every 30 years on average. The data show that this output flow was exceeded at least 25 times in the last 30 years. The highest flow was Storm Bert in November 2024. Storm Bert was approximately a 1% AEP event which should have a flow peak of $13.5 \text{ m}^3\text{s}^{-1}$ according to Table 3. The observed flow peak for Storm Bert was $31.58 \text{ m}^3\text{s}^{-1}$. This evidence, coupled with the observed flooding extent during Storm Bert being greater than the Applicant's modelling suggests it should be [**REP1-176**], indicates that the Applicant needs to revise their models so the results are more in line with the observed data. The Applicant should also publish modelled peak flow rates at the very least from the Area D modelling so it is possible to start to assess the risk of flooding off-site.

2.6.16. The Applicant seems unaware that flow in the Gauze Brook is enhanced by sewage effluent from Grittleton, which is outside the Gauze Brook catchment area, and hence not included in input calculations. Though the volume of sewage as such will probably not be very material, the area has a problem with groundwater influx into foul drainage pipes which can increase flows substantially. This is cited by Wessex Water as the main reason for the discharge of untreated sewage at Hullavington sewage treatment works, as the works becomes overwhelmed by the volume of input water. Wessex Water should be able to advise on the flows involved.

2.6.17. For both hydraulic modelling reports, the principal model output is the flood depth. Although the TUFLOW suite of models which were used can be characterised as dynamic models, dynamic results such as hydrographs, speed of onset (e.g. time to peak data), or flow velocities are not presented. This supports Stop Lime Down's contention in the Written Representation, Appendix F1 [**REP1-174**] that the Applicant's FRAs are concerned almost exclusively with

the protection of their own assets, and not with the risks of flooding off-site. The modelling considers only the baseline case, and not how the Scheme would affect flooding either in terms of flood depth or flows off site. The Applicant relies on its claims that enhanced runoff from hardstanding areas will be adequately mitigated, and that there will be no enhanced runoff from panel areas given control of the ground conditions. Stop Lime Down continues to dispute the second of these claims.

9.38 Figure 9.9 Water Crossing Schedule [REP3-139]

2.6.18. SLD are pleased to note that the Applicant has responded to its suggestion **[REP2-051]** of providing a map of the indicative watercourse crossing sites as **[REP3-139]**. They have not however responded to the point (**[REP2-051]** Appendix D para 15) that there is no crossing of the Gauze Brook in the original or revised Water Crossing Schedule **[REP3-122]**, which is now obvious from the map. A crossing of the Gauze Brook will be essential to take power from the Area D and Area E 132 kV substations to the main 400 kV substation.

REP4-082 – The Applicant’s Response to Submissions Received at Deadline 4

2.6.19. SLD-025: SLD maintains its position that the Sequential Test has been failed. The Applicant describes the situation in the second paragraph of its response: the Sequential Test is used to steer development to sites with the lowest risk of flooding – because there are sites with a lower risk, the Exception Test has to be used to justify going to Lime Down. The Applicant then describes how it uses the Exception Test, but the fact that it is using it at all demonstrates that the Sequential Test has been failed.

2.6.20. SLD-026: The Applicant claims that its FRAs show that there will be no significant off-site flooding due to the Scheme. In fact, they do not assess off-site flooding at all, because to do so would require dynamic modelling which has not been provided (save for Areas D and E2). Even there, the modelling is used only

to provide flood depths on site and not dynamic parameters such as peak height and time to peak in the streams and rivers that drain the area. The claim that the Scheme will not increase off-site flooding is based on calculation of mitigation efficiency for impermeable surfaces coupled with the assumption that solar panels do not affect runoff. The latter assumption has been shown to be false by the modelling now described in SLD Appendix D.

2.6.21. SLD-027 and SLD-028: These points concern the photograph of extensive flooding in Area D due to Storm Bert, and the implications for the Applicant's flood modelling. On both these points, the Applicant provides lists of information which could never be determined from an image, and have never been claimed to do so by Stop Lime Down, such as rainfall return periods, antecedent conditions, blockage conditions.

2.6.22. The Applicant also states, at both SLD-027 and SLD-028, that "*The photographs are oblique views taken during a storm event. They cannot be accurately or definitively located, time checked, or used to identify the flood extent.*" This is incorrect. All image files have embedded a hidden file of metadata called an EXIF file, which records information about the image depending on the technology used to take it. It can be accessed using a suitable program. The EXIF file for the original video used to produce the images in SLD's Written Representation, Appendix F1 **[REP1-174]**, states that it was taken on 24.11.2024 at 15:26:11, more than 3 hours before the flood peak as stated in **[REP1-174]**. As the phone camera included a GPS, the location was recorded as 51° 33' 9.00" N; 2° 7' 19.92" W; 73.401 m ASL. This is the location shown on Figs 3 and 4 in **[REP-174]**. The angles of view in the figures were determined from landmarks in the photographs: the fence line, West Park Wood and Bradfield Wood. The position of the photograph is thus known to the nearest metre, the time to the nearest second, and the only limitation on assessment of the flood extent is that it clearly extends outside the picture boundary. SLD would be happy to supply the video file to the ExA and the Applicant on request to verify the EXIF data. We recommend metadata2go as the access program.

2.6.23. The relevant point made by the Applicant is that *"The Applicant does not agree that the photographs demonstrate that flood extents were greater than predicted by the Applicant's assessment"*. SLD continues to maintain that the photographs show exactly that. As described in SLD's Written Representation, Appendix F1 [REP1-174], Storm Bert was approximately a 1% AEP event which should correspond to Flood Zone 3. The photographs clearly show that the flood extent was greater than that predicted by the Applicant's modelling of this event as shown in ES Appendix 11-6: Flood Risk Assessment and Outline Drainage Strategy – Lime Down D Rev 4 [REP4-032]. Coupled with other evidence of underestimation (see Appendix D) it calls into question the Applicant's conclusions from its FRAs, particularly concerning off-site flooding.

2.7. BESS Fires

REP4-032 – ES Appendix 11-6: Flood Risk Assessment and Outline Drainage Strategy – Lime Down D Rev 4

2.7.1. Appendix 11-6 also deals in outline with firewater retention (para 3.11), which is also covered by the documents Firewater Containment and Drainage Strategy – Lime Down D BESS [REP3-118], Firewater Containment and Drainage Strategy – Lime Down Substation [REP3-120] and the Outline Battery Safety Management Plan [REP3-106] submitted in the latest revision at Deadline 3. None of these documents have much detail. While principles are described in the documents, the nature and location of the water containment apparatus is not specified. Firefighting water will be supplied in two tanks of 228 m³ each, with a pumped connection to fire hydrants located round the site. The potentially contaminated water will be collected and stored. It will only be released after analysis shows it is safe to do so, and if not will be tankered off the site to an "approved facility". This would be a major operation. The water storage would be the same system described above, assessed assuming a concurrent 1 in 10 year rainfall event. Though the ExA queried whether this was enough, I think it is a

defensible figure in terms of likely risk. This arrangement has apparently been agreed by the Dorset and Wiltshire Fire and Rescue Service (see below).

2.7.2. The volume of firefighting water would provide 4 hours at the recommended rate of 1900 l min⁻¹, though the Applicant points out this is reduced to 1500 l min⁻¹ in the latest guidance. The main concern for SLD here is whether this would be sufficient time given the current evidence on the length of time BESS fires take to burn out, where would additional water would come from if more were needed (the ExA also questioned this), and whether the storage system could cope with this extra water. None of this is addressed in the current documents.

2.8. Climate

The Applicant's Response to Submissions Received at Deadline 3 [REP4-082]

2.8.1. **[SLD-062]** In Appendix J2 of Stop Lime Down's WR, **[AS-020]** the Applicant was criticised for using rainfall from Yeovilton, 68 km distant from Lime Down, in its Climate Change Assessment in Chapter 7, leading to a substantial underestimation of rainfall, when there were at least 11 approved Met Office sites closer to Lime Down. The Applicant continues to cite a Met Office website as justification for this, and reproduces the url in **[REP4-082]** SLD-062. This website no longer exists, but was never appropriate in any case. Data can now be accessed via the Met Office climate data portal at <https://climatedataportal.metoffice.gov.uk/>. Stop Lime Down notes that the Applicant uses Hadley Centre Gridded Rainfall data as rainfall input for the site hydrological risk assessments (Flood Risk Assessment and Outline Drainage Strategy Rev 4, Appendices 11-2 to 11-8; **[REP4-024]** to **[REP4-036]**). This was recommended in Appendix J2 Table 1, and is an appropriate value to use, giving substantially higher rainfall than Yeovilton. This raises the question of whether the Climate Change Assessment in Chapter 7 is still based on the low value from Yeovilton, and what conclusions, if any, have been drawn from it.

2.8.2. Further, as a standalone point, SLD have noted the length of the CRC elsewhere in its submissions. SLD note that, in other schemes, significant CRCs have required shunt reactors as part of the development. From a carbon accounting perspective (among other issues), SLD would welcome clarity on whether this development requires shunt reactor(s).

2.9. Soils, agriculture and ground conditions

The Applicant's Response to Submissions Received at Deadline 3 [REP4-082]

2.9.1. The Applicant cites a study by Solar Energy UK in support of its contention that vegetation can establish and persist under solar panels, though they concede that vegetation cover is likely to be limited. The study does indeed show some encouraging results on establishment and biodiversity, but it is based on a sample of solar sites whose mean area is only 16 ha and mean electrical capacity 9 MW. Small community-owned sites often benefit from free volunteer labour. The logistical and financial commitments required to achieve similar results at Lime Down, which is 50 times larger, are grossly underestimated by the Applicant in their Outline LEMP **[REP3-100]**.

REP4-079 - Farming and Food Security Technical Note

2.9.2. The Applicant has prepared a technical note on farming and food security within the solar PV sites. Within the document, the Applicant argues that the Scheme aligns with policy by favouring lower-grade land, that there will be *"little to no change to the farming operations"* and *"the loss of the agricultural land use is not significant at a county scale."* and will have a negligible practical impact on the affected farms' food output and represents a negligible effect on local and national food security overall.

2.9.3. At paras 2.2.9-2.2.14 the Applicant suggests that because the ALC system is a qualitative scale and expected to be updated by 2028, that the conclusions which

can be drawn in respect of food production are less reliable. However, the ALC system is an independent assessment of agricultural potential and the “only approved system for grading agricultural quality in England and Wales” (NPS EN-3, para 2.10.33). It remains the tool by which this scheme is required to be assessed (NPS EN-1 §5.11.34, NPS EN-3, para 2.10.29-2.10.30) and the Applicant is required to seek to minimise impacts on agricultural land by reference to the land classifications. (NPS EN-1, para 5.11.12).

2.9.4. The Applicant has conducted their own ALC assessment which acknowledges that of the 720 hectares of agricultural land within the Solar PV Sites, 240.1 hectares of the land is BMV land ([REP1-064], para 1.3.38) – or 33% of the agricultural land. All of this land will be taken out of agricultural production during the lifetime of the Scheme.

2.9.5. The Technical Note relies on responses received from some landowners in respect of the effects of implementing the Scheme on the affected farm holdings. The questionnaire which was provided to landowners has not been shared, nor are the maps of the landholdings to support the statements which have been made. In any event, such comments do not provide the objective and independent analysis of land quality and capability provided by assessment (i.e. the ALC assessment pursuant to MAFF Guidelines).

2.9.6. Most of the responses focus on the current management of the landholding and the loss of agricultural production in the short-term. They conflate the current use of the land with its capability for the lifetime of the Scheme. For example, Landowners 1, 2, 4 and 5 note that some of the land is held under ELM agreements or within ELM schemes that are currently active. However, the existence of an ELM agreement is not evidence that the land lacks agricultural capability.

2.9.7. Plainly, however the Scheme will have an impact on *actual* farming operations on the Solar PV Sites through the loss of farmable areas. The Applicant

understands the loss of agricultural land for the production of animal feed and indirect effects on food production. For example, in respect of Landowner 4, there would clearly be indirect impacts on food production where the loss of land will affect the provision of feed for cattle on the holding. Additionally, SLD has received the following comment from a tenant farmer within the Solar PV Sites:

"My loss of approximately 85 acres of good cereal growing land, assuming that is all under winter wheat would result in a loss of approximately 250 tonnes at a value of £47,500 at today's prices.

Add this to the other land in Rodbourne that is suitable for cereal growing and the figures would read at approximately 750 tonnes of wheat at a value of £142,500.

Obviously, these arable fields are grown on rotation and sometimes would have a crop of maize, oats or grass for fodder. Most of the crops grown in the village would not go directly into the human food chain, unless a good crop of oats went for biscuits/porridge or a crop of milling was good enough for bread making. Rodbourne has always supported a lot of dairy and beef cattle so the majority of the food grown would be fed to the cattle for milk and meat.

Just a note about my 85 acres grade 2 listed land. The sand over clay would have great potential for growing potatoes/ root vegetables. Land between Great Somerford and Startley which is very similar to mine is growing decent crops of commercial vegetables for human consumption."

2.9.8. Connectedly, it is unclear whether landowners are commenting upon the reasonable worst case for the loss of agriculture production. It appears landowners are commenting upon what they understand to be the effect on their land. For example, Landowner 1 also comments that farming operations "are



anticipated to be unaffected by the Scheme” and as a result “there will be no associated loss of food production or impact on food security.” There is no assessment of what agricultural production would be lost in a reasonable worst case scenario.

2.10. Open Floor Hearing 2

REP4-088 – Written Summary of the Oral Submissions at the Open Floor Hearing 2 and the Applicant’s Responses

2.10.1. SLD does not provide individual specific submissions in response to those included at DK-001 to DK-007. As will have been apparent from Mr. Kozelko’s oral submissions, the position he set out relied upon the assessments and commentary of SLD’s experts. That evidence should be considered when understanding the submissions that were made at the Open Floor Hearing. Ultimately, what this hearing provided an opportunity to do was to paint a picture of the experience of living with the Scheme. SLD maintains that that is what Mr. Kozelko presented by his three walks around the area.

3. Responses to ExQ2

Reference	Question	Response
ALT2.1	Site Selection Process – Consistency Q1 The applicant's Technical Note on Site Selection Assessment [REP2-043] sets out, in Table 4-1, areas of newly drawn Potential Development Areas (PDAs) with all constraints removed. However, it neglects to provide a figure for PDA 10 (the site subject of this application) on the basis that the document focuses on alternatives to the current site. However, the ExA requires Table 4-1 to be updated to include PDA 10 to provide an overall comparison between sites to ensure that a consistent site selection process was undertaken.	3.1.1. SLD welcomes this question, which also mirrors its request at para 6.1.13 of [REP3-173]. SLD consider that it would also assist to have a map in a similar format to that at Figure 4-6 of [REP2-043] so that some insight into the removals can be understood.
CH2.3	Direct Impacts to the Fosse Way Wiltshire Council's response [REP2-046] to Stop Lime Down's concerns regarding the direct impacts on the Fosse Way stated that:	3.1.2. SLD maintains its conclusion that there would be a moderate adverse (significant) effect on the Fosse Way. This is considered to be made up of three elements, which are a combination of direct and indirect impacts. These are:

	<i>Wiltshire Council Archaeology Service (WCAS) considers that there is no direct impact on the Roman road itself, which has already been heavily impacted by modern road construction. Its relationship to the archaeological sites identified by the geophysical survey will remain unchanged if the solar farm is constructed, as the heritage assets to the southeast of the road are sub-surface features, so there will be no visual impact to their relationship, which is purely spatial. Those sites impacted by development will be preserved by record, knowledge which will add to understanding of the landscape.</i> Stop Lime Down is asked to respond to this and confirm if it maintains that there would be a direct moderate adverse (significant) effect on the Fosse Way?	• The localised direct impacts upon any potential archaeological remains of the Fosse Way; • The direct impacts upon archaeological remains contemporary with the Fosse Way, beyond the limits of the no-dig zones set out by the Applicant; and • The indirect impacts through the loss of the spatial and visual relationship between the buried remains of the Fosse Way and cotemporary sites with the Proposed Development through the introduction of large-scale solar PV infrastructure. Marrons highlight the following statement in Historic England's Good Practice Advice in Planning Note 3 in relation to the setting of buried remains: <i>"Heritage assets that comprise only buried remains may not be readily appreciated by a casual observer. They</i>
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		<i>nonetheless retain a presence in the landscape and, like other heritage assets, may have a setting ... the form of survival of an asset may influence the degree to which its setting contributes to significance and the weight placed on it, it does not necessarily follow that the contribution is nullified if the asset is obscured or not readily visible."</i>
CH2.8	Avil's Farmhouse (Grade II) The applicant [REP2-039], in response to Stop Lime Down's WR [REP1-167], states that it welcomes Stop Lime Down's conclusion of a negligible adverse effect on Avil's Farmhouse. As this would be an increased residual effect from the neutral effect reported in appendix 12-8 of the ES [APP-232], the applicant is asked to confirm if there would be 'less than substantial harm' to Avil's Farmhouse?	3.1.3. Following the methodology and approach of the Applicant within their submission documents, a negligible adverse effect should equate to less than substantial harm. 3.1.4. This approach was applied to Townlease Barn (HER: MWI65981). For example, at Appendix 12-8 (Cultural Heritage Impact Assessment Tables, Table 15, [APP-232]) the Applicant identifies a Negligible residual effect in relation to Townlease

		Barn within the tabulated format. This is subsequently reported as less than substantial harm within Chapter 12 Cultural Heritage [APP-064] and Table 16 of the Heritage Statement [APP-219].
CH1.13	Noise Impacts In response to Stop Lime Down's WR [REP1-167], it is noted that the applicant states [REP2-039] that the noise impact on built heritage assets has been assessed to not constitute a significant effect on health and quality of life. The applicant is asked whether the significance of effect on health or quality of life is an appropriate threshold for determining whether noise from the proposed development would have an adverse impact on the setting of heritage assets or whether noise can have a significant effect on the setting and understanding of a heritage asset without crossing the threshold of significance for health or quality of life? In response, please provide references to any relevant guidance.	3.1.5. The Applicant has conflated the impact of noise on health and quality of life with the level of impact on the setting of a heritage asset. The significance of effect on health or quality of life is not an appropriate threshold for determining whether noise from the proposed development can have a significant effect on the setting of heritage assets. The two are not interconnected and there is separate and distinct guidance for each. 3.1.6. This approach was confirmed by the Inspector in APP/X2600/W/24/3356489 (2025) who stated

	Wiltshire Council, Historic England and Stop Lime Down may also wish to comment on this matter	in relation to the PPG noise limits that; <i>“These PPG limits relate to amenity, or nuisance noise, and this is different from the way in which heritage assets are experienced in their settings. The acoustic character of the area around a heritage asset also contributes to the surroundings within which the asset is experienced. In this context, the effect of noise has to be considered differently from nuisance noise.”</i> (para 32). 3.1.7. The Inspector clearly states at para 33 that <i>“although the noise levels would be within the guidelines set out in the PPG, changes to the noise climate in the vicinity of a heritage asset will have an effect on the way in which that asset is experienced.”</i> 3.1.8. Therefore, it is not correct that because the noise impacts are below the significance
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		thresholds set out by PPG that they would not have an adverse effect on the setting of heritage assets. The impact of the noise implications of the proposed development to the setting of the heritage asset must be considered separately. This assessment has been provided by Marrons who have concluded that the noise effects of the Scheme would have an impact on the setting of several heritage assets (as discussed in WR Appendix [REP1-171]). This Inspector decision is provided at Appendix E.
<i>DCO 2.1 addressed later in this document</i>		
DCO2.6	Article 7 - Defence to proceedings in respect of statutory nuisance ExQ1 DCO1.11 queried whether Article 7 was justified given the statement of the applicant in the Explanatory Memorandum that there is no statutory nuisance expected as a result of the authorised development. The applicant's	3.1.9. SLD agree with this query and have addressed it at para 3.1.88 of this note below.

	response [REP3-128] stated that Section 158 of the Planning Act 2008 confers statutory authority for the carrying out of development or doing anything else authorised by the Order and that this acts as a defence in any criminal or civil proceedings for nuisance in the absence of any contrary provision in the Order. It added that nuisance from noise is not anticipated from the Scheme, and is not required to be managed through the Requirements. It is therefore very unlikely that the Applicant would need to rely upon the statutory defence conferred by section 158 of the Planning Act. The ExA seeks to understand from the applicant if there are any contradictions between Article 7 and the monitoring and mitigation measures included in Table 8 of the oOEMP [REP4-051], which states that annual noise monitoring will be undertaken and the undertaker and relevant planning authority will then liaise in respect of any further maintenance or mitigation required to reduce levels at receptors back to	
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	those presented in the ES. Further, in the case of third-party complaints about noise, correction actions will be taken by the Environment Manager and recorded as outlined in Section 6.2.	
DCO2.11	Article 40 – Felling or lopping of trees and removal of hedgerows Q2 Stop Lime Down has suggested [REP3-173 and REP4-132] that the word ‘only’ should be inserted after the word ‘remove’ in Article 40(4), such that it would say: (4) The undertaker may, for the purposes of the authorised development or in connection with the authorised development and subject to paragraph (2), remove only the hedgerows specified in the table in Part 1 and the table in Part 2 of Schedule 12 (hedgerows to be removed) to the extent set out in the ecological protection and mitigation strategy approved pursuant to requirement 8 in Schedule 2 (requirements). <u>Stop Lime Down:</u>	3.1.10. The intention of proposing “only” was to provide clarity in respect of the scope of the Applicant’s power to remove hedgerow. SLD accept that it is not a necessary addition, however as the current language still constrains the Applicant’s power to remove hedgerow by reference to compliance with the ecological protection and mitigation strategy. 3.1.11. SLD remain concerned in respect of the feasibility of the ECoW having the time, information and means necessary to make informed and effective routing decisions, being already under significant external pressures.

	1) Stop Lime Down are requested to explain the necessity for this insertion. <u>The Applicant and Wiltshire Council</u>: 2) The applicant and Wiltshire Council are invited to comment on the implications (if any) of this suggested insertion.	3.1.12. Likewise, SLD remain concerned that a much higher amount of hedgerow may be lost than initially indicated – and the controls in place to manage this. That might extend to securing a reasonable worst case within the DCO for the amount of hedgerow lost.
DCO2.17	Requirement 20 - Decommissioning and restoration Q1 Notwithstanding Requirement 20(7) requiring the undertaker to notify the relevant planning authority within 28 days of any part of the authorised development permanently ceasing to be in commercial use, there is no legally enforceable requirement for that part (or parts) to be decommissioned and the land restored once it ceases to be used for the purposes of electricity generation for commercial use. Rather, Requirement 20(1)(a) as currently drafted, links decommissioning to a 60-year time period after the initial date of final commissioning, rather than the point at which any	3.1.13. SLD note this question and agree that this issue is required to be managed as (inter alia) it is not clear that Part 8 PA 2008 powers could be used in such a situation. In addition, SLD consider that this issue again draws into sharp relief the problems caused by a situation where piecemeal decommissioning is likely. Any answer to this question cannot resolve the broader issue that SLD has flagged elsewhere (e.g. at para 16.3.2 of [REP1-167] and para 2.1.3 of [REP2-051]) that such piecemeal decommissioning may lead to a

	relevant part ceases to be used for electricity generation for commercial use (which may be much earlier than 60 years). Please provide alternative drafting that would ensure that there is a legally enforceable requirement for the proposed development, or relevant part of it, to be decommissioned and the land restored following all or any part of the Order land ceasing to be used for the purposes of electricity generation for commercial use at any time, or explain why this is not reasonable/ necessary. For the avoidance of doubt, the ExA is seeking to avoid a situation where an option agreement on one part of the site expires after 40 years yet the infrastructure remains non-functional on the land for a further 20 years before decommissioning commences.	version of the scheme likely to cause more significant adverse effects than that assessed
DCO2.19	Requirement 20 - Decommissioning and restoration Q3 Wiltshire Council [REP4-092] suggests that Requirement 20 should include the requirement for a decommissioning phasing timetable and plan to be submitted to and approved by the planning authority, rather than just submitted to it. This	3.1.14. SLD agree with the suggestion and also note that this provision would require approval of the timetable and plan. SLD note that such approval is not currently included in Schedule 2, Requirement 2(2) for a construction phasing plan

	would necessitate a revision to paragraphs (2), (3) and/ or (4). The Council also suggests that a new paragraph should be included in the Requirement indicating that the decommissioning report and certificate of completion should be submitted to the local planning authority for approval. The ExA considers that there is merit in these suggestions and therefore requests the applicant's consideration of them, and a justification if it does not wish to take the insertions forward.	and SLD (for the reasons explained again below in para 3.1.99) consider that approval for that phasing plan should be provided for also.
EV2.6	Brown hare In Stop Lime Down's WR Appendix E paragraph 39 [REP1-173] you state that brown hare enjoys open fields, but the applicant provides no mitigation, so you question the potential impact on brown hares. In the applicant's response to ExQ1 EB1.12 [REP3-128], it comments that the security fencing is large enough to allow the passage of brown hare. You are asked to consider if this resolves your concerns and if not, what further mitigation would you expect to avoid impact on	3.1.15. SLD's primary concern in relation to hare relates to the harms by exclusion from fields and higher roadkill mortality due to inappropriate boundary fencing specifications as the main concern to hare for a development of this scale. The lack of detail during the early stages of the enquiry about exact mesh width and absence of precautionary gaps/wildlife gates along sections where fencing was present for long stretches at either side of a road left open a potential for

	brown hare. If your position is that there is no possible mitigation, then please provide an explanation.	significant long-term ecological impacts at the local scale for hares and several other medium-large terrestrial species. 3.1.16. As of June 2026, the Applicant has amended the Outline Ecological Protection and Mitigation Strategy to include additional controls by the EcoCoW to ensure minimum 100mm gaps are present along the base of all Solar PV fencing, whether through natural gaps in the ground or by intentionally raising sections of fencing ([REP4-052] at para 3.5.5). SLD very much welcome the inclusion of these measures. However, wider gaps will be required, as 100mm may still represent a deterrent for larger, non-burrowing mammals, including hare, especially in the period shortly after installation or routine repairs where incidental, larger gaps from badger and rabbit will not have formed yet. Along roadsides, given the scale of the development these fencelines can be
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		an extensive obstacle funnelling larger fauna along roadsides, even when accounting for deer exclusion requirements. 3.1.17. In SLD's opinion, gaps proposed along the base of the deer fencing should be no less than 200mm, both in width and height; this would be closer in line with standard specifications used in commercial hedgehog gates (~ 150 x 150 mm) and badger gates (200/300 x 200/300 mm). Where fencing cannot be raised sufficiently high to allow for these specifications, and natural undulations are insufficient, these can be created by cutting square gaps into the base of the mesh, excavating holes below the fenceline beforehand or, in more extreme cases, installing a badger gate or similar. These larger gaps should be primarily concentrated along roadside sections. With this increase in size, and provided these gaps are implemented across the various solar
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		PV field perimeters, SLD feel this measure would successfully mitigate potential impacts on hare and other medium-large terrestrial mammals. 3.1.18. While the presently suggested 100mm raised gap will not entirely preclude access into the fields, particularly to burrowing mammals such as badger or rabbit, too small a gap may still act as a deterrent, particularly to terrestrial mammals such as otter, hedgehog and hare. While individuals, such as juveniles, may still squeeze through even smaller gaps, initial reactions will often be to follow the fenceline searching for a wider opening. When fencing abuts roadside sections, this can create unintentional funnels with increased potential risk of mortality, particularly following initial installation or routine repairs of a section of fencing. For this reason, SLD's advisors advise this slight widening of the
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		proposed gaps to be more in line with common practice. 3.1.19. SLD's expert would still advise carrying out a more comprehensive hare population assessment prior to any works commencing as a matter of ecological best practice, considering the frequent lack of these important baseline data for such developments and to inform eventual long-term monitoring efforts, should the proposal proceed. This being said, additional surveys should be prioritized for species that were not surveyed at the initial impact assessment stage which are at higher risk of direct and indirect impacts than hare (e.g. dormouse, white-clawed crayfish).
FHW2.3	Flood Risk Assessment – Hydraulic Modelling	3.1.20. Stop Lime Down considers that there is a case for extending the Flood Zone 3b around

	The EA, in its hearing submission [REP4-097], explains that for Lime Down D modelling there are unresolved issues regarding the data used and missing information and requests further information from the applicant. The applicant submitted at deadline 4 the hydraulic modelling report for Lime Down E2 [REP4-089]. <u>The Environment Agency:</u> 1) Can the EA confirm if all the required further information for Lime Down D modelling has been submitted? 2) Can the EA please provide an update of the review of the hydraulic modelling for Lime Down E2 at deadline 5 confirming if further information is required and highlighting any significant issues found? <u>The LLFA:</u> 3) Considering the EA response to ExQ1 FWM1.4 (2) [REP3-146], the outputs from the applicant's Gauze Brook and Rodbourne Brook modelling which include the 3.33% AEP	the Gauze Brook upstream of Corston as explained in [REP1-176]. Though Flood Zone 3b is defined by modelling and its extent will depend on the assumptions made, it is clear that the Applicant's latest modelling (ES Appendix 11-6: Flood Risk Assessment and Outline Drainage Strategy – Lime Down D Rev 4 [REP4-032], Annex B) underestimates the flood extent observed during Storm Bert. Storm Bert was an approximately 1 % AEP event, and the flood extent should correspond to the appropriate figure in Annex B, but the flood extent is clearly underestimated there. There is thus a case for including the whole of Fields D13 and D14 as “Functional Floodplain” which would correspond well with the historical flood extent shown in ES Appendix 11-6: Flood Risk Assessment and Outline Drainage Strategy – Lime Down D Rev 4 [REP4-032], Figure 6.
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	scenario and the evidence presented by the Stop Lime Down report [REP1-176], does this information support an extension to Flood Zone 3b in Lime Down D? If so, to which fields? 4) If your response to question 3 is positive, please explain any potential impact on the sequential and exception tests results. <u>The LLFA:</u> In your response to ExQ1 FHW1.12 [REP3-142] in relation to an ordinary watercourse running between the fields D22 and D1 you requested the applicant to: • Undertake targeted topographic and channel survey of the watercourse corridor. • Provide proportionate hydraulic assessment (or equivalent evidence) to define flood extents, depths, and flow routes. • Demonstrate that the layout maintains conveyance, including appropriate stand-offs and no obstruction of flow paths.	
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	• Confirm how the watercourse will be protected and managed. • Address any consenting requirements for works affecting an ordinary watercourse. 5) Considering the modelling provided for Lime Down D and its review by the EA, is your response to ExQ1 FHW1.12 still relevant or do you consider that the available information and the applicant's existing commitments will suffice?	
FHW2.4	Flood Risk Assessment – Freeboard Allowance The applicant explained in its response to ExQ1 FHW1.5 [REP3-128] that the <i>“Manning calculations (...) were used to compare the assessed 1% AEP plus climate change levels with the conservative 0.1% AEP surface water mapping used for context, to understand local drainage pathways and to inform the micro-siting of infrastructure. (...) Manning calculations did not identify locations where the smaller ordinary watercourses or land drainage features would give rise to a significant flood risk to the Scheme, or where the Scheme would be likely to increase off-site flood risk through</i>	3.1.21. SLD notes that the EA agreed the Mannings calculations were unrealistic, but justified using the EA's Risk of Surface Water Flooding (RoSWF) maps as a proxy for fluvial flood risk, rather than a direct model of water flows. Improved explanations of the Manning's calculations from both the Applicant and the EA were provided. SLD continues to maintain that (a) before using model results for such assessments, they should be producing more credible results; (b) the Applicant has still not explained why the

	<i>displacement of floodwater or interruption of existing flow routes. They also informed the micro-siting of infrastructure by helping to identify local flood flow pathways, indicative flood levels and areas where infrastructure should be avoided or managed through embedded mitigation. They were not intended to be a full dynamic hydraulic model of the catchments.</i> The EA in its response to [REP3-146] agreed that the Manning Calculations had limitations but were useful to contextualise the 0.1% AEP extent of the Risk of Flooding from Surface Water (RoFSW) mapping. RoFSW mapping was used by the applicant as a proxy to understand fluvial flood risk from smaller ordinary watercourses due to the lack of information available. The EA considered that the assessment was proportionate. To address any uncertainty arising from the assessment the EA requested from the applicant a commitment to ensure 0.6m freeboard above the	Manning's assessments in the FRA's show the 0.1% AEP results when the description in the text states the assessment is based on the 1% AEP event and (c) how the modelling translates into an overall assessment of "negligible to low". Paras 4.1.21 to 4.1.24 of [REP4-132] still apply. 3.1.22. Professor Skeffington agrees however that the RoFSW maps are a reasonable and proportionate proxy for flood risk in those areas missing more relevant information, with the caveat that the new maps appear to underestimate surface water flooding in the area. The Mannings calculations do not make Professor Skeffington any more or less satisfied about this. 3.1.23. On the Freeboard Allowance, Professor Skeffington discussed SLD's concerns expressed in Section 4.1.18 of [REP-132] in a meeting with
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	design flood event for any solar PV panels placed in areas of flood risk. <u>The LLFA:</u> 1) Considering your response to ExQ1 FHW1.5 [REP3-142] and the EA conclusions, can you please confirm agreement or otherwise with the EA conclusions regarding the Manning calculations and freeboard allowance commitment? <u>The Applicant:</u> The applicant confirmed in [REP3-128] that <i>“(...) sensitive electrical infrastructure within areas of modelled flood interaction will either be located outside the design flood extent or raised with a minimum 0.6 m freeboard above the design flood level, including climate change. For Solar PV Panels, sensitive electrical equipment mounted on the panels will also be set no less than 0.6 m above the design flood level, including climate change. The lowest leading edge of the panel itself is not sensitive electrical equipment and</i>	the Applicant and consultants Arthian on 22 June 2026. The Applicant also addressed the matter to some extent in their Response to Submissions Received at Deadline 3 [REP4-082] SLD-032. Professor Skeffington’s understanding was that the Applicant is prepared to commit to an absolute maximum height of 4.5 m above existing ground level for the tracking panels and 3.5 m above existing ground level for the fixed panels; that where the panel installations are elevated to provide the required 0.6 m freeboard in flood zone areas, this will be achieved by limiting the maximum tilt of the tracking panels and the angle of the fixed panels; and that “micrositing” means moving installations around on the existing ground surface rather than constructing elevated platforms in the flood plain areas. This ought to prevent the panels being more visually intrusive in the flood plain areas and the lower edge of the
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	<i>may sit lower, depending on the final fixed or tracker arrangement."</i> The EA required further clarity from the applicant regarding the freeboard applied to the lowest leading edge of the solar PV panels above the design flood level to ensure operability during a flood event for both Lime Down D and Lime Down E2 [REP4-097]. 2) Can the applicant provide the clarity requested by the EA? Please also consider the design parameters and any potential Landscape and Visual impacts in your response. <u>Stop Lime Down:</u> 3) Given your post hearing submission [REP4-132] please provide concise comments on the issues discussed above.	panels acting as a water flow barrier in flood situations. If the Applicant were to commit to this then SLD's concerns would be resolved.
FHW2.8	Construction – Water Management Plan	3.1.24. Stop Lime Down agrees with the ExA's implication that, given the importance of the Water

	The applicant in its rebuttal to Wiltshire Council's response to ExQ1 FHW1.9 [REP4-081] indicates that <i>"The Water Management Plan forming part of the detailed CEMP will provide the phase-specific construction drainage and exceedance arrangements. It will identify:</i> <i>• the existing drainage features and overland flow routes relevant to the construction phase;</i> <i>• the proposed temporary drainage and runoff controls;</i> <i>• the routing of flows exceeding the capacity of temporary drainage measures;</i> <i>• the interaction with compounds, haul routes, stockpiles, excavations and watercourse crossings; and</i> <i>• the measures required to maintain existing floodplain capacity and avoid diversion of flows towards sensitive receptors."</i> Some of the issues mentioned in the bullet points above are not included in the latest oCEMP [REP4-049]. <u>All parties:</u>	Management Plan not only during the construction phase but throughout the lifetime of the project, it is not acceptable that it does not currently exist. Embedding disconnected sections in the other outline management plans prevents regulatory bodies from seeing water problems as a whole and risks missing significant interactions with soils, ecology, construction techniques, maintenance and decommissioning. Enforcing a requirement for the other plans to adhere to the WMP, and setting out the principles of water management would ensure that water issues are not lost within the detail of the other plans, possibly not understood by specialists without expertise in those areas. These outline plans could then reference the WMP. 3.1.25. The approval mechanism should be the same as the other plans, consultees should
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	1) Given that the WMP is going to be an important management plan for the duration of this project (and also referred to in the oOEMP and the outline Decommissioning Strategy (oDS)) is it still adequate that it is approved through these documents, rather than being a standalone certified document? 2) If so, should it not have more overt relevance within the oCEMP, oOEMP and the oDS, possibly through the addition of a standalone section which explains its purpose, contents and links with other management plans, instead of being embedded in Table 5 of the outline management plans? 3) If a separate WMP that covers the lifetime of the development is the best way forward, please give reasons why. Please also include information regarding the approval mechanism and consultees. 4) As water management will be key for other topics such as soil and ecology, should it also be referenced in the oSRMP, oEPMS and other outline management plans/strategies? If so, please set out which ones and the reasons why	clearly include water-related organisations such as the EA and LLFA, and the sewage operator (Wessex Water). Wiltshire Council should be a consultee to allow its ecology and transport functions access, and Natural England for ecological aspects.
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GCT2.4	Re-powering Regarding the current policy direction of travel and the need for renewables going forward, on what basis should the ExA consider the proposed development to be 'temporary'? Whilst there is a decommissioning date (60 years) written into Requirement 20 of the dDCO, what is to stop the proposed development being re-powered? In such circumstances, would not the label of 'temporary' be misplaced in all ES assessments?	3.1.26. SLD notes this question and addressed it in its planning submission at Section 5 [REP1-169].
HW2.1	Mental Wellbeing Stop Lime Down, in its comments on the applicant's responses to ExQ1 HW1.1 and HW1.3 [REP4-132], expressed concern that the applicant had not adequately addressed the potential mental health impacts associated with the proposed development. It requested further information on a communications strategy demonstrating how the recommendations contained within Suffolk County Council's Energy and Climate Adaptive Infrastructure Policy:	<u>Question 1</u> 3.1.27. Having regard to the Suffolk SGD, it is felt that the following principles are the most relevant: Extended community engagement: Providing communities with active, responsive communication channels so that emerging wellbeing risks can be flagged, recorded, and addressed without delay.

	Community Engagement and Wellbeing Supplementary Guidance Document (SGD) have been considered and incorporated into the applicant's approach. The ExA acknowledges the sensitivity of this matter and recognises the efforts made by the applicant to engage with mental health providers within and around the Order limits to mitigate potential mental health impacts. Nevertheless, the ExA considers that the SGD contains guidance of relevance to the post-consent phase and that its recommendations could usefully inform the development of a clear and structured communications strategy. This may have implications for the applicant's response to ExQ SE2.9, particularly in relation to the proposed role and function of the Community Liaison Group (CLG). <u>Wiltshire Council and Stop Lime Down:</u> In its response to ExQ1 HW1.1, the applicant questioned the appropriateness of relying on the SGD on the basis that it is	• Safeguarding well-being: Regular reviews to ensure physical mitigation measures (such as noise barriers, dust control, and traffic routing) are successfully preventing the degradation of local living conditions. Promoters are also expected to look at community feedback through structured wellbeing lenses—such as the emotional needs frameworks highlighted by Suffolk Mind. • Procedural fairness: Suffolk County Council's guidance emphasizes maintaining an auditable trail, utilizing "You Said, We Did" reports, and tracking engagement with "seldom-heard" groups. This guidance emphasizes accountability and transparency, which SLD agrees is important. 3.1.28. A number of recommendations within the SGD were noted within SLD's Deadline 4
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	not specifically directed at the post-consent stage. The applicant requested that Wiltshire Council identify those elements of the SGD it considers most relevant to the development of a communications strategy. 1) Wiltshire Council and Stop Lime Down are therefore invited to identify the specific recommendations or principles within the SGD that they consider applicable to the post-consent phase and explain how these should be reflected within a communications strategy for Lime Down. Responses should also clarify their expectations regarding the purpose, scope and delivery of that strategy. <u>The Applicant, Wiltshire Council and Stop Lime Down:</u> Having regard to Stop Lime Down's deadline 4 submission [REP4-132], the ExA invites comments on how a communications strategy informed by the SGD could be secured, implemented and monitored. In particular:	Submission [REP4-132]. Those relevant to the post-consent phase include: • To establish a panel made up of a group of engaged individuals, who have the confidence of the communities they represent, and who can engage and work with the promoter, without prejudice to any objections they may have to the scheme. • Delivering information regarding the infrastructure programmes to community leaders, supported by face-to-face conversations to ensure that community leaders can ask questions, and get responses, in a timely manner. • Consideration should be given to the funding of local mental health organisations, to enable them to mentor those who volunteer to undertake wellbeing support roles. This would ensure that volunteers receive appropriate
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	2) Should responsibility for overseeing or supporting delivery of the communications strategy form part of the CLG's role? If so, how could this be achieved in practice? 3) How might such arrangements avoid placing additional burdens on volunteer representatives and Parish Councils? 4) What mechanisms, if any, would be appropriate to secure implementation and monitoring of the strategy throughout the post-consent phase? In responding, parties should also have regard to ExQ2 SE2.9. Wiltshire Council and Stop Lime Down are welcome to provide comments on that question where relevant.	training, support, and guidance, and would also reduce the feelings of isolation and overwhelm often described by community leaders in these roles. • Project promoters should invest in the development of community assets, as mitigation and enhancement. The identification of relevant assets should be undertaken in close collaboration with the community, and may include for example, proactively investing in supporting local community events, the enhancement of community buildings such as village halls or places of worship, or public spaces and community organisations, so supporting communities to continue to foster a sense of pride, allyship and belonging. <u>Question 2</u>
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		3.1.29. SLD understand that a commitment has been given by the Applicant to Wiltshire Council to provide a draft Terms of Reference to the CLG at the earliest opportunity to maximise benefit and engagement with community groups. SLD would welcome this approach, as it is very important that the local community has input with any such strategy. 3.1.30. SLD expects such a strategy will consider how updates to the local community will be given. Ideally the Applicant will manage a website with updates on traffic movements, road closures, interactive maps, construction updates, schedules of maintenance. The website could also give regular updates on noise assessments, dust assessments and environmental assessments.
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		3.1.31. It is also important that the CLG continue to have a role after the construction phase. That will be particularly so at key points in the operational phase, and in the decommissioning phase (as is provided). 3.1.32. Administrative support for the CLG should be provided by the Applicant. There also should be appropriate funding to support members of the CLG, in view of their time and responsibilities. While it is important that members of the CLG are not overburdened, SLD expects that regular monthly/bimonthly meetings will be appropriate during initial stages of the construction phase. 3.1.33. Consideration should also be given to having a separate CLG for the cable route during construction, so that councils local to it could be
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		involved. This would also relieve the burden on CLG members and parish councils near the solar PV sites. 3.1.34. It is considered that the CLG should be consulted by the Applicant as part of the process of securing discharge of detailed design provisions. That is the best way that the local community can feel listened to in that process. The Applicant should present the views of the CLG to the Council when it seeks such discharge. <u>Question 3</u> 3.1.35. The appointment and employment of a community liaison officer/manager by the Applicant is welcome. The appointment of a CLM could help to alleviate pressures on volunteers and Parish Council members of the CLG.
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		However, SLD suggests that that person might be employed by the Applicant. 3.1.36. The CLM should arrange the meetings for the CLG, be responsible for drafting in attendees and present the log of “you said we did “tracker” for accountability purposes. Their responsibility should also include taking notes of the meetings, circulating these and at the next meeting, presenting what has been completed. 3.1.37. The Applicant should also provide parish councillors and other members funded suitable training and support in respect of the project to carry out their duties. 3.1.38. However, it is considered that the CLG should be properly independent, and SLD would welcome the appointing of an independent Chair
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		or lead person paid for by the Applicant. That would allow confidence in the independence of that body. <u>Question 4</u> 3.1.39. The CLM should set up and manage an enquiry line/inbox, log grievances and investigate issues with site managers and help implement fair solutions. 3.1.40. The SPD advises that developers adopt provisional Key performance Indicators for the monitoring and evaluation of engagement and community wellbeing. For example 3.1.41. Information is key for monitoring emotional wellbeing. The Applicant should consider conducting mental health audits during the construction phase.
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LV2.11	Aviation - Cumulative Green Glare The Glint and Glare assessment submitted by Stop Lime Down [REP1-178] concludes that the RWY09 approach at Bowldown Farm and the RWY25 approach at Charlton Park each receive sustained cumulative green glare, in excess of 12,000 minutes from multiple contributing arrays. The applicant responded [REP2-039] that under the Sandia method and former Federal Aviation Administration guidance, there is no duration of green glare which is considered unacceptable from an aviation safety perspective, and the applicant therefore does not consider this to be a material cumulative effect. Furthermore, the applicant's Glint and Glare Study [APP-261] states that where solar reflections are of an intensity of 'low potential for temporary afterimage' (green glare), mitigation is not required. <u>The Applicant:</u>	3.1.42. Please refer to Appendix B of this document which addresses the questions raised in ExQ2 in relation to glint and glare.

	1) The applicant is asked to identify and submit extracts of relevant guidance supporting its position on this matter. <u>Stop Lime Down:</u> Stop Lime Down is asked to respond to the applicant on this and explain the following: 2) What it considers is a correct assessment of the impact significance of the green glare on these approaches? Provide references to relevant guidance and submit this guidance into the examination. 3) Whether it considers that mitigation measures could reduce the impact to an operationally accommodatable level or if the impact is a result of the overall scale, spread and layout of the proposed development?	
LV2.12	Road and Rail - Guidance In response to Stop Lime Down's concerns [REP1-178] regarding the duration of yellow glare on road users and train drivers, the applicant [REP2-039] states that intensity of glare towards receptors is not a relevant consideration under Pager	3.1.43. Please refer to Appendix B of this document which addresses the questions raised in ExQ2 in relation to glint and glare.



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	Power's glint and glare guidance. Instead, reference is made to a driver's primary field-of-view to determine whether a driver is likely to be looking in the direction of solar reflections. At deadline 4 Stop Lime Down [REP4-132] questioned the use of guidance produced by the authors of the applicant's Glint and Glare Assessment [APP-261]. <u>The Applicant:</u> 1) The applicant is asked to provide justification of its use of Pager Power guidance and confirm if there is any other guidance available that supports its methodology regarding the assessment of the impact on road users and train drivers. 2) The applicant is asked to submit the Pager Power guidance and other relevant guidance supporting its position. <u>Stop Lime Down:</u> 3) Stop lime down are asked if there is guidance supporting the position that the duration and intensity of glare towards road users and train drivers should factor into the assessment	
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	of impact on these receptors rather than just the driver's primary field of view? If so, submit the relevant guidance.	
LV2.14	Statement of Common Ground and Questions Raised by Stop Lime Down at Deadline 4 It is noted from the Statement of Commonality [REP4-059] that a draft SoCG between the applicant and Stop Lime Down is proposed to be submitted at deadline 5. In addition to the items requested by the ExA in ExQ1 LV1.28, the ExA request that written responses to the questions in paragraph 3.5.6 of Stop Lime Down's deadline 4 submission [REP4-132] are included, either within the SoCG or as a separate document.	3.1.44. SLD note this question, which concerns the draft SoCG between the Applicant and SLD. Given the form of that document, which SLD considers to be disappointing given the discussions that have occurred between the Applicant and SLD, it is thought that some context would assist the ExA. With that said, SLD wish to record that the meetings between its experts and the Applicant's have been very helpful, and the sharing of information and discussion has resulted in progress on both sides and the information submitted to the Examination. SLD welcome such meetings continuing. 3.1.45. SLD was originally provided a draft SoCG on 1 April 2026 by the Applicant which,

		broadly, repeated both sides' Relevant Representations. Prior to the meeting on 20 April 2026 SLD provided a draft on 18 April 2026 which made some limited suggestions to aid discussion. Following that meeting SLD produced a further draft on 8 June 2026, whereby it attempted to provide new rows with specific items that appeared to be agreed between the parties or that SLD considered agreement might have been possible on. SLD recognise that this SoCG took a while to produce, but did include a number of new line entries for discussion. 3.1.46. Following providing that draft SoCG, 9 meetings between SLD and the Applicant have taken place in a number of expert fields. SLD had understood that, as part of the Applicant holding the pen on that draft SoCG, it would reflect discussions and points of agreement between the
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		parties arising from the expert meetings. At the meeting on 22 July 2026 SLD understood that those parts of the SoCG just repeating the Relevant Representations would be removed, and matters arising out of the SoCG meetings (including points of agreement, but also reflecting the points reached by both parties following discussion) would be included. 3.1.47. However, the draft SoCG that was provided on 4 August 2026 did not reflect the meetings (or, indeed, SLD's understanding of what was to be provided) save for to a limited degree. Rather, in that draft SoCG: (1) a limited number of concessions that SLD had made in meetings were recorded; (2) the line entries SLD provided on 8 June 2026 were added to SLD's column in some form; and, (3) the Applicant's column was, broadly, changed to assert parts of
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		its Environmental Statement and outline plans are acceptable. Functionally, 2 days were given for return of this draft. 3.1.48. This draft was disappointing to receive. It is recognised that the Applicant has significant pressures and calls on its time, and that managing the changes in the SoCG from one which relied heavily on the Relevant Representations was considerable work. However, the document does not reflect the points of discussion and agreement at the meetings which SLD considers would assist the ExA. Given 2 days to respond, and given the difficulty of marshalling experts to input, SLD was limited in the changes it could make to the draft to better assist the ExA. 3.1.49. SLD repeat that the meetings between the Applicant and SLD have been very helpful. It
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		is hoped that they will continue given they have been fruitful (e.g. the progress made between the highways experts of HGV numbers, which, while they are likely to remain in dispute, are likely not to as significantly disagree). SLD continue to consider a SoCG would be helpful between the Applicant and it (and some rows in the current draft are helpful). However, it is considered that a renewed effort to produce a more helpful document for the ExA should be pursued. Given the period of time between Deadline 6 and Deadline 7, and the ISHs which will take place with experts on both sides present, it is hoped that substantial progress to a more helpful document to be submitted on Deadline 7 can be achieved.
TT2.1	Construction Phase HGV Trip Generation “...As can be seen from that table, the applicant assumed that a total of 588,988 solar PV panels would be installed on the	3.1.50. While this question is addressed to the Applicant, Mr. Bamber would add that the Applicant has previously stated that a high cube

	sites and it is that number of panels which has informed the 1,200 HGV delivery figure. The ExA notes that this would roughly align with paragraph 7.10.11 of the Climate Change Chapter [APP-059], which stated that the total number of modules to be installed is expected to be 598,260. However, at deadline 3, the applicant's Climate Change Sensitivity Assessment Report [REP3-132], which in essence is a rebuttal to Wiltshire Council's and Stop Lime Down's written representations on climate change, stated that a notional figure of approximately 842,000 panels has been assumed, which reflects an estimated maximum achievable installed capacity of the Scheme within the defined design parameters. Further, in responding to Stop Lime Down's Transport submission at deadline 3 [REP3-133], the applicant suggested that up to 864,000 panels would be delivered if using high-cube containers (instead of regular containers) without increasing the number of HGV deliveries stated in the Transport Assessment (1,200).	transport container can transport 720 solar panels whereas a conventional container can transport 500 panels. A high cube container is one foot higher than a conventional container (9' 6" rather than 8' 6" external). The latter is therefore 12% larger than a conventional container (1-(9.5/8.5) x 100%). The Applicant is, however, suggesting that 44% more panels can fit in a high cube container (220/500 x 100%). This is inconsistent.
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	The ExA remains concerned that the applicant has underestimated the amount of solar PV panels required in its original assessments (and thus has not assessed the worst-case), and for transport issues specifically that it is either maintaining that the 1,200 deliveries associated with 588,988 modules would be no greater for 864,000 panels (and the associated increase in mounting structures), or alternatively relies upon the 50% buffer to account for under assessment...”	
TT2.9	ISH3 Action Points 7 and 8 At ISH3, the ExA issued Action Point 7 to the applicant to provide a set of plans showing which parts of the construction route(s) would fail to meet the highway code requirements for passing non-motorised users (NMUs) with sufficient verge protection buffer, and/ or to provide a log of the locations and the length of those locations that would not provide sufficient	3.1.51. Mr. Bamber notes that the drawings which have been provided within the Transport Assessment are generally inadequate as they are inaccessible due to the size/configuration of the file. Mr. Bamber has requested these drawings separate to the Transport Assessment but access has been difficult technically. Mr. Bamber will comment further upon the measurements within

	passing space for each of the NMUs (with verge protection buffer) in line with the highway code. On page 19 of the applicant's written summary of oral submissions at ISH3 [REP4-086] the applicant records part of that discussion, noting that <i>"the ExA directed the applicant for deadline 4 to identify areas where the road is not 5.5 metres wide on the plans, using a red box around those areas."</i> This is a slightly different version of the discussion, but nonetheless, at the top of page 20 of its post hearing note, the applicant then states that it has provided additional plans in Annex I of ES Volume 3 Appendix 13-1: Transport Assessment [EN010168/APP/6.3] (Revision 4) (Drawing PL109B) which shows the width of construction routes; and Appendix E in the Outline Construction Traffic Management Plan [EN010168/APP/7.22] (Revision 4) which includes proposed Highway Improvement Area Drawings for road widening and AIL movements."	the drawings and intervisibility when the information is received. 3.1.52. Mr. Bamber has reasons to doubt the accuracy of the dimensions provided by the Applicant. On 2 August 2026, Mr. Bamber took measurements on site in relation to Drawing 305 (Bradfield Cottages) and 309 (Route to Lime Down A), as these are both locations which fall outside the Applicant's Highway Improvement Areas. Mr. Bamber's measurements on site do not accord with the measurements presented by the Applicant. 3.1.53. Mr. Bamber's visit to the section of the road between the northern end of the Fosse Way and Lime Down A revealed that almost all the widths and the lengths of carriageway over which the target widths are achieved have been
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	The ExA notes that the citation to Drawing PL109B is incorrect as no such plan number is included in Annex I of the Transport Assessment [REP4-037], and similarly no such drawing number is provided in Appendix E of the oCTMP either [REP4-057]. Whilst the ExA notes that Drawing Nos. PL302, PL303, PL304, PL305, PL306 and PL309 included in Annex I of the Transport Assessment [REP4-037] appear to now show either passing bays and/ or dimensions of various parts of some of the construction routes, this is not strictly in accordance with ISH3 Action Point 7, although drawing numbers PL302, PL303 and PL304 appear to address ISH3 Action Point 8. <u>The Applicant:</u> 1) The applicant is requested to confirm whether another drawing specifically addressing Action Point 7, e.g. Drawing PL109B referred to in its ISH3 Note, should have been provided, or whether reference to that drawing is an error, with	overstated by the Applicant. There are significant sections where it is suggested that safe passing widths (5.5m) are available when it is clear that they are not. Even taking generous measurements in relation to where the embankment has been eroded into a concave slope (measuring into the loose material within the concavity which in many cases which would have been beyond the edge of the carriageway), there were still differences. Whereas the Applicant's measurements give the impression that this section of the route is able to safely accommodate 2-way HGVs, the reality of the situation is that there are very few passing opportunities and large vehicles would be forced to mount verges, break into embankments and over-run verges either side of access points. Forward visibility is also restricted due to bends in the road. For example:
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	drawing numbers PL302, PL303, PL304, PL305, PL306 and PL309 instead intended to fulfil Action Point 7? 2) The applicant is also requested to advise whether the existing road widths shown on the latest drawings referred to above were actually measured on site? <u>Wiltshire Council and Stop Lime Down:</u> 3) Advise whether drawing nos. PL302, PL303 and PL304 now provide sufficient dimensions and details to the satisfaction of the parties to demonstrate sufficient passing space on Alderton Road and the Fosse Way, in accordance with ISH3 Action Point 8. Comments on drawing numbers PL305, PL306 and PL309 are also welcomed. The ExA is particularly interested to understand if additional drawings, dimensions or annotations are still required (and why) (including whether colour-shaded route sections, as per Wiltshire Council's suggestion at ISH3 and its post hearing submission [REP4-092] remain necessary).	• The width of the carriageway around the sharp bend north of the Hullavington junction on Bradfield Cottages is identified, by the Applicant, to provide a width of between 6.42m and 6.53m either end of the bend. Mr. Bamber measured the width to be 5.8m in both cases, increasing to 6.0m at the centre of the bend; • The width of the carriageway north of the bend is shown by the Applicant to be 5.84m in width whereas Mr. Bamber measures it as 5.4m; • The length of the section of carriageway at the Brookside junction north of the railway line that is over 5.5m in width is identified as 26.46m by the Applicant. Mr. Bamber measured it as 13.1m; • The length of the section of Bradfield Cottages immediately north of the railway at
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		the employment access over 5.5m in width is shown by the applicant to be 32.3m whereas Mr Bamber measured it as 25.1m; • The Applicant identifies a section of carriageway north of the Flying Monk where the carriageway is 5.63m wide over a length of 25.2m. Mr. Bamber measured all sections of carriageway in this area to be less than 5.5m in width; • On the road to Sherston (Lime Down A) the Applicant identifies two sections of road north of Fosse Way with lengths of 57.3m and 56.57m that are over 5.5m in width. Mr. Bamber measured both sections as around 35m; • The Applicant identifies numerous sections further north where the road is said to be over 5.5m in width. The vast majority of this section of road is less than 5.5m in width.
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		3.1.54. From Mr. Bamber's observations on site it is clear that the Applicant has overstated the road space available at all of the identified potential passing spaces to a point north of the Flying Monk. This section is particularly constrained and suffers from poor forward visibility in many places. Mr. Bamber remains sceptical of the reliability of the measurements in the other drawings, in light of these errors. 3.1.55. The drawings explain that they are based on a topographical survey produced by Dando Surveying Limited, dated 30 April 2025. Mr. Bamber notes that it is possible the Applicant has misinterpreted the topographical surveys which have been relied upon to identify the dimensions, resulting in the issues identified.
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		3.1.56. In relation to passing places more generally, Mr. Bamber notes that the Applicant is suggesting that driveways and side-roads can be used as passing places in some areas. Mr. Bamber is concerned that some of these driveways and side-roads (e.g. access into the Flying Monk café) will be used on a regular basis and there is a risk of vehicle collision if vehicles are regularly forced into bellmouths that accommodate vehicles approaching the main road. The Street junction at Hullavington is another location where vehicles travelling north on the lane may pull across the give-way line at the junction into the path of vehicles leaving the village and approaching the lane. The Applicant should distinguish between lay-bys or road widenings, private accesses and side roads when identifying potential places for vehicles to pass.
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		3.1.57. Mr. Bamber notes that the drawings do not show the inter-visibility at key locations along the access routes. It is therefore unclear whether situations could arise where HGVs would be forced to reverse and over-run verges because there is no available passing place between them and an approaching vehicle. Mr. Bamber does not believe the intervisibility on the Bradfield Cottages and Route to Lime Down A is adequate, having assessed this on site and the Applicant proposing no changes to these roads.
TT2.13	Construction Phasing As can be seen from that table, the applicant assumed that a total of 588,988 solar PV panels would be installed on the sites and it is that number of panels which has informed the 1,200 HGV delivery figure. The ExA notes that this would roughly align with paragraph 7.10.11 of the Climate Change Chapter [APP-059], which stated that the total number of	3.1.58. The calculations that have been undertaken to date by the Applicant derive an average daily HGV flow for Area D by assuming a 250 day construction period. This is more than the originally assumed 6-month construction period for the 400kV substation but less than the now suggested 2 year construction period. If the

	modules to be installed is expected to be 598,260. However, at Deadline 3, the applicant's Climate Change Sensitivity Assessment Report [REP3-132], which in essence is a rebuttal to Wiltshire Council's and Stop Lime Down's written representations on climate change, stated that a notional figure of approximately 842,000 panels has been assumed, which reflects an estimated maximum achievable installed capacity of the Scheme within the defined design parameters. Further, in responding to Stop Lime Down's Transport submission at deadline 3 [REP3-133], the applicant suggested that up to 864,000 panels would be delivered if using high-cube containers (instead of regular containers) without increasing the number of HGV deliveries stated in the Transport Assessment (1,200). The ExA remains concerned that the applicant has underestimated the amount of solar PV panels required in its original assessments (and thus has not assessed the worst-case), and for transport issues specifically that it is either maintaining that the 1,200 deliveries associated with 588,988 modules would be no	Applicant's figures are used, the peak level of HGV movements to and from Area D would decrease but the period over which they are spread would increase. Mr. Bamber has raised concerns that the HGV trip generation for the 400kV substation and the BESS have been under-estimated. Mr. Bamber's latest calculations, as set out in his latest spreadsheet calculations [REP4-132] (p. 141), are based on a 462 day construction period for Area D and lead to an average daily level of HGVs that is slightly higher than the Applicant's despite a much longer construction period. 3.1.59. The frequency of HGVs meeting on the Fosse Way and Bradfield Cottages has now been agreed (see attached at Appendix C). This is based on the Applicant's estimate of '+50%' hourly flows as set out in Appendix F of the TA [REP4-
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	greater for 864,000 panels (and the associated increase in mounting structures), or alternatively relies upon the 50% buffer to account for under assessment.	037]. This indicates that there would be 2.31 meetings of HGVs on the Fosse Way and 1.71 meetings of HGVs on Bradfield Cottages.
NV2.2	Noise Monitoring Location LT7 In response to ExQ1 NV1.4 [REP3-128] the applicant advised that the sound level meter at LT7 stopped monitoring after approximately 14 hours of a week-long survey, due to a technical issue with the meter, and that the limited data collected was inconsistent with typical expectations for a rural setting, as the background night-time sound levels were over 10 dB higher than those during the daytime. Explain why repeat noise surveys at LT7 have not been undertaken, given that data from LT7 would have been used to inform the baseline sound level at R24 (Lordswood Cottage) and R25 (Commonwood Farm)? If the applicant considers that noise surveys at another location were sufficient to inform the baseline level at R24 and R25 please	3.1.60. The Applicant confirmed that weather conditions had not been monitored during the surveys, and that the measurement data had therefore not been filtered accordingly. 3.1.61. The modal LA₉₀ background from the dataset had been selected as the 'typical' background level by the Applicant, unless the value was an obvious outlier, in which case an alternative value was selected using professional judgement to represent a realistic median/modal value. 3.1.62. SLD maintain that, given the uncertainty of the dataset collected, using the lower ranges of



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	explain this further, including the distances of the LT7 meter from those receptors and the distance(s) of any other meter(s) relied upon from R24 and R25.	background levels measured would be the most appropriate approach. 3.1.63. SLD's opinion differs from the Applicant's on how this affects the assessed significance of noise impacts and the inherent uncertainty within the ES noise assessment, as SLD consider that the adopted approach discounts significant periods during which the background noise is substantially lower. 3.1.64. Using a fixed 30 dB background threshold further masks the fact that the area can be very quiet. For example, receptors R24 and R25 were allocated monitor LT8 to define the baseline. (ref: ES Chpt 14 table 14-12). However, R24 is approx. 750m from LT8, and R25 approx. 1.25km away. LT8 itself is located within 100m from the nearest public road (Fosse way). Thus,
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		both R24 and R25 are significantly further from the closest though road. 3.1.65. Notwithstanding this, the data collected at LT8 has been deemed by the Applicant to be 'representative' of those receptors, in the absence of the data at the closer monitoring location. Given the increased uncertainty of the validity of the data through the large difference in location, this assumption should have at least adopted a precautionary approach by using the lower measured ranges of background levels
NV2.3	Background Noise Level Methodology In ExQ1 NV1.5 the ExA asked the Council to reconsider whether the applicant's use of fixed 30dB as a minimum background noise level at night continued to be appropriate. In its response [REP3-142], the Council presented the relevant British Standard and guidance and agreed that it was	3.1.66. SLD's position remains that the approach does ignore the context of a very quiet receiving environment. 3.1.67. SLD has discussed the adoption of the fixed background level with the Applicant at the

	acceptable to replace background noise measurements with a fixed level as the applicant had done. The ExA appreciates the Council's explanation of the relevant British Standard and the associated guidance from the Association of Noise Consultants, which appears to allow for such an approach, but the ExA nonetheless still queries whether the effect of doing this firstly ignores the context of the receiving environment, and secondly artificially raises the baseline and therefore raises the LOAEL and SOAEL level (which is set against the baseline), which in turn informs the assessment of significance in EIA terms. The ExA would welcome a further response from the Council to these queries, particularly as the definition of 30dBLA90 as a 'very low' background level was removed from the British Standard and is not supported by the current version of BS4142:2014, and given the rural location where background levels at night were found for some residential receptors to be	SoCG meeting and how, in the opinion of SLD's experts, this obscures the true significance of the operational noise impact and the extent of change presented within the ES, as it dispenses with comparison to actual background levels and effectively adopts a fixed operational rating level limit of 35 dB. 3.1.68. SLD have highlighted that this level of noise will clearly be audible to some people at times and may cause annoyance - potentially to the degree that it disturbs sleep and quiet enjoyment of their homes. Although it may be argued that this fixed level sits below recognised internal noise thresholds derived largely from transportation noise research (which represents the principal body of evidence relating to sleep disturbance), SLD's expert's opinion is that the ES
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	as low as 20dB and may therefore have given rise to a lower threshold for receptor sleep disturbance than the internal noise levels recommended in both BS 8233:2014 and the World Health Organisation (WHO) Guidelines, which were also cited by the Council.	methodology fails to adequately reflect this important element. 3.1.69. The Applicant appeared to accept at the SoCG meeting that the ES could have been presented more clearly and accepted that some people may clearly hear the noise at times and could be annoyed by it. 3.1.70. Overall, SLD's position remains that the assessment does not adequately communicate the likely perceptibility of the operational noise or the potential for adverse effects on residential amenity. 3.1.71. The fixed threshold masks the initial significance estimate of comparing the operational noise with the background level - implying it is similar, where in fact it can be
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		significantly above the background levels during quiet evening and nighttime periods. 3.1.72. The research data into sleep disturbance noise thresholds is related to maximum noise levels from aircraft. The internal noise level guidelines in BS8233 are based upon WHO long term health effects, focussed on transportation noise sources, not industrial noise. 3.1.73. The proposed SOAEL thresholds (which is the committed target) will give rise to internal industrial noise which would be readily audible and inescapable where there are low background levels. 3.1.74. The Applicant has described this as being similar to a kitchen fridge. However, this rather makes the point as people do not typically
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		or by choice have their kitchen fridges in their bedroom (as, among other things, the noise would be audible and annoying).
NV2.4	Operational Noise Level Mitigation In response to ExQ1 NV1.8 [REP3-128], the applicant refers to the national policy for noise and vibration, in which significant effects are identified as those above the SOAEL. It added that, as moderate effects for the high sensitive receptors listed in Table 14-12 and Table 14-13 (of ES Chapter 14) correspond to levels above the LOAEL and below the SOAEL they are excluded from the classification of significance for noise and vibration as they are below the SOAEL. On reviewing the Noise Policy Statement for England (NPSE), the ExA notes that it describes LOAEL as the level above which adverse effects on health and quality of life can be detected, whilst SOAEL is described as the level above	3.1.75. SLD's position is maintained in that the Applicant should demonstrate how quiet the development can be mitigated to, targeting the LOAEL, not adopting the minimum mitigation to satisfy being at or below the SOAEL. 3.1.76. There is additional noise mitigation that can be incorporated, and the Applicant has not demonstrated whether or not this would be impracticable or unsustainable in policy terms. 3.1.77. SLD have discussed with the Applicant the issue of the Applicant targeting noise levels at, or just below, the adopted SOAEL, rather than seeking to mitigate and minimise effects occurring

	which significant adverse effects on health and quality of life occur. This appears to confirm the applicant's position in its ExQ1 NV1.8 response around significant effects. Nonetheless, whilst the first aim of the NPSE is to avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise, its second aim it to mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise. The NPSE clarifies that the second aim of the NPSE refers to the situation where the impact lies somewhere between LOAEL and SOAEL and it requires that all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development.	between the LOAEL and SOAEL, consistent with the aims of the NPSE. 3.1.78. For effects above the LOAEL, SLD have emphasised that many receptors would experience an audible, continuous increase in background noise where none previously existed. 3.1.79. The Applicant's main response has been that the NPSE effect thresholds adopted are consistent (or lower than) with other consented solar applications. 3.1.80. In relation to mitigation, the Applicant has explained that the inherent mitigation measures considered (including the BESS bunds/barriers) were optimised and that increasing their heights would not significantly reduce noise levels. However, the cost-benefit/sustainability analysis
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	Paragraph 14.10.50 of ES Chapter 14 [REP1-021] states that 16 receptors are predicted to experience operational noise levels between the LOAEL and SOAEL: • North of Hullavington around Lime Down D (R10 – Bradfield Manor); • Norton between Lime Down B and D (R15 - Gorsey Leaze House, R16 – West Lodge, R41 – Honey Lane Cottage, R43 – Vine Tree Cottage, R44 – Orchard Cottage); • North of Grittleton around Lime Down C (R19 – Surrendell Farm); • Pig Lane between Lime Down C and D (R20 – Townleaze Farm, R21 – Farleaze South, R23 – Farleaze Cottages, R45 – Grain Store Barn); and • Ladyswood around Lime Down A and C (R28 – Lordswood Farm, R29 – Ladyswood Farm, R30 - Ladyswood Cottage, R35 – Fosse Farm, R36 – Lordswood Cottage)	supporting this conclusion has not been provided and does not appear to consider increased barrier heights or other potential options such as fully enclosing the BESS. 3.1.81. SLD has raised the question of the provision of silencers, particularly for the 166 distributed conversion units, of which only seven have silencers in current plans. SLD highlighted that these noise sources (primarily cooling fans) are not overly complex, and that the provision of silencers (being a relatively simple piece of noise control hardware) to minimise the widespread noise from these sources would not, in SLD's expert's opinion, represent a significant financial burden or an unreasonable noise minimisation technique.
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	Paragraph 14.10.56 adds that the oOEMP commits to the resulting levels at properties to provide reassurance that the Scheme as built will not lead to significant effects from noise. The ExA is concerned that this does not demonstrate compliance with the NPSE and the requirement to mitigate and minimise adverse effects, rather merely commits to operational noise remaining between LOAEL and SOAEL, which for those 16 receptors would be worse than the present situation. The ExA therefore requests the applicant's clear position on whether it can commit to lower noise emissions and targets for those 16 high sensitivity receptors in the oOEMP, taking proper account of the very quiet rural nature of the area in which those properties are situated, and the NPSE aim of mitigating and minimising adverse noise impacts.	3.1.82. The Applicant appeared to accept this observation in relation to the conversion unit mitigation, although they highlighted that they had adopted a worst-case approach by considering two converters per position where there may only be one. Whilst this assumption is conservative, it still allows for higher committed operational noise levels than may ultimately be necessary, indicating that further reductions could potentially be achieved. 3.1.83. In respects of the NPSE, it should be noted that this policy is incorporated into NPS EN-1 and that "Due regard" must be given to it (para 5.12.16). In addition, for the Secretary of State's decision making, para 1.7 of the NPSE is functionally repeated in NPS EN-1 at para 5.12.17. Importantly, the second bullet point states "<i>mitigate and minimise other adverse</i>
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		<i>impacts on health and quality of life from noise</i> ". It is clear from NPSE at para 2.24 that this is identifying (as the ExA do as well) a requirement to mitigate and minimise noise between SOAEL and LOAEL.
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DCO2.1 – Changes to the draft DCO

3.1.84. In relation to DCO2.1, the ExA has asked parties to provide further comment in relation to the text of the dDCO and associated management plans. In the first instance, the parties are invited to: *"Outline any remaining or residual issues that you have with any articles, requirements or schedules of the dDCO, set out why the applicant has not yet resolved your concerns or why you are not content with the applicant's justification, and define what remedy or solutions you are seeking (including suggested redrafting if applicable) to address your concerns, and explain (make your case) why the applicant, the ExA and the SoS should consider such amendments to the dDCO. Statutory Undertakers are also alerted to ExQ2 DCO2.23 which specifically relates to protected provisions."*

Article	Comment
Article 2(1): "permitted preliminary works" / Schedule 2, Requirement 13(1)	3.1.85. SLD has not yet seen the permitted preliminary works management plan (which the ExA has directed be provided at Deadline 5). As explained in

	its other submissions, SLD accepts this as an acceptable way of addressing its (and others') concerns about the scope of permitted preliminary works in principle. However, SLD's comments are reserved behind seeing the detail of the proposed detailed management plan. 3.1.86. SLD has a residual concern about the definition of "laying of apparatus" in this provision. However, again, this issue may be resolved by the management plan and SLD will comment at the appropriate time. 3.1.87. SLD also note that a number of the ExA's questions in ExAQ1 were addressed to this issue and amendments to the Requirements to control for permitted preliminary works. Again, SLD's comments on the need for this will be determined by the form of the permitted preliminary works management plan.
Article 7: defence to statutory nuisance	3.1.88. In its Written Representation [REP1-167], SLD invited further clarification in the Explanatory Memorandum addressing why the defence was required. In [REP2-039] the Applicant stated that it would provide that further explanation, and at [REP4-082] (SLD-067) that an updated

	explanatory memorandum was provided at Deadline 3. In the most recent Explanatory Memorandum (Deadline 4), the text on this issue is broadly the same as the original Memorandum (save that further precedent DCOs are provided). 3.1.89. SLD welcome ExAQ DCO2.7. SLD consider that explanation in the Explanatory Memorandum should be provided if the Applicant intends to maintain Article 7. SLD agrees that, in principle, the existence of the defence appears inconsistent with the provisions managing noise of the Scheme.
Article 17: disapplication of s.106 of the Water Industry Act 1991	3.1.90. SLD has raised this issue previously as a result of the ongoing judicial review of the Gatwick Airport DCO. The Court of Appeal has now refused permission to appeal on grounds including a ground related to water discharge, so that the claim is at an end (see <i>R (Barclay) and Another v Secretary of State for Transport and Another</i> [2026] EWCA Civ 1040). As the challenge related to the right to connect to sewers failed, SLD is content that this matter is now resolved.



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Article 40(4): the addition of “only”	3.1.91. This is addressed above as a specific ExAQ is raised in relation to this.
Article 47(4): “six weeks”	3.1.92. SLD remain concerned that six weeks for discharge under this provision is substantially shorter than even the 10 weeks currently provided for in Schedule 16.
Schedule 2, Requirement 2(2): construction phasing scheme	3.1.93. SLD note the terms of Requirement 2(2) which provides that a phasing timetable and plan only be submitted to the Council. As the Council and SLD maintained at ISH4, it is considered that this should also provide for approval of the phasing (to which see also the Council’s submission at [REP4-092] para 6.57). As SLD explained in its post-hearing submission [REP4-132] , approval was recently required in the Springwell Solar Farm DCO (see para 2.5.20).
Schedule 2, Requirement 4(3): “first anniversary”	3.1.94. In its Written Representation [REP1-167] SLD requested that the Community Liaison Manager be left in place until the “sixth anniversary” rather than the “first anniversary” of the date of final commissioning. This was because, looking at the oLEMP among other documents, much initial work is

	conducted in the first five years of the Scheme to ensure that mitigations are properly established and effective (e.g. planting). The Applicant's response in [REP2-039] at SLD-426 (repeated in REP4-082) at SLD-073 is, essentially, that the oLEMP and other plans will be monitored and that any concerns can be raised with Wiltshire Council. SLD still consider that it is appropriate to have someone in role that can be directly spoken to at the Applicant, to manage concerns that arise. An indirect route is necessarily less effective to resolve concerns about the Scheme (including specific remediation that might be required, e.g. a failing tree), and five years strikes the right balance given the work required at that stage. See also SLD's comments under the Health question above.
Schedule 2, Requirement 5: works beyond Works Nos. 1-3 and 5	3.1.95. In its Written Representation [REP1-167] SLD raised the concern that Works Nos. 4, and 6-10 were not included at all within Requirement 5 (with Works No.5 included to a limited extent). This was highlighted to be different to other recently made DCOs. The Applicant in its response [REP2-039] at SLD-428 stated that these works were excluded because they were subsoil or were controlled by other Requirements. At [REP3-173] SLD maintained the point and invited that the Applicant clarify this in the



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	Explanatory Memorandum (or a technical note) if it intended to maintain the position. In its response, the Applicant stated that this is already explained in the Explanatory Memorandum (REP4-082) at SLD-075). 3.1.96. Save for to a limited degree in respect of Works No.5, this is not explained in the text on Requirement No.5 in the Explanatory Memorandum. Given this is a departure from other made DCOs, it is considered the Applicant should explain this approach in respect of each Works Number.
Schedule 2, Requirement 5: the list of details secured	3.1.97. SLD noted in its WR [REP1-167] that the list of matters to be approved under Requirement 5(1) was shorter than and departed from other made DCOs. This included in relation to (1) refuse and other storage units, signs and lighting; (2) drainage, water, power and communication cables and pipelines; (3) security measures; (4) other mitigation measures for noise (applying the list from the Springwell Solar DCO, excluding items clearly captured by other Requirements). 3.1.98. In its reply to ExAQs [REP3-128] the Applicant pointed to Requirements 10 and 13. This is noted, and it is assumed that the Applicant

	would also rely on Requirement 14 (concerning the oOEMP). SLD recognise that such plans could manage this issue, albeit in those circumstances would welcome the Explanatory Memorandum explaining this further.
Schedule 2, Requirement 20: Applicant's additions concerning "initial date of final commissioning".	3.1.99. SLD welcome the addition of these provisions which mean that the operational life of the DCO overall is confined to 60 years. SLD now consider that Requirement 20(1)(b) should also be updated so as to tie its lifetime to the initial date of final commissioning as well (which should simplify the drafting of Requirement 20(1)(b). Indeed, Requirement 20(1) might be collapsed to simply "The date of decommissioning for each part of Works 1-3 and 5-10 must be no later than 60 years following the initial date of final commissioning". 3.1.100. SLD note that this does not resolve its separate concern about the piecemeal decommissioning of the Scheme and the lifetime of the option agreements for the land (and whether it can be said that a reasonable worst case for the Scheme has been assessed – see e.g. at para 16.3.2 of [REP1-167] and para 2.1.3 of [REP2-051]).

Schedule 14, Article 8(2): confidentiality of documents etc.	3.1.101. In its WR [REP1-167] SLD considered that any materials filed in the arbitration (including the award) should be open and accessible to the public, unless ordered otherwise by the arbitrator, in line with the provision for public hearings in Art 8(1). In its response at [REP2-039] SLD-430 the Applicant stated that some documents could be commercially or otherwise sensitive (and it provided the example of badger sett locations). It said that the default should be confidentiality, with agreement between the parties allowing for that confidentiality to be removed. 3.1.102. SLD resisted this [REP3-128] and pointed out that if a specific issue required confidentiality, the arbitrator could order this. SLD had in its WR pointed out that at least some DCOs leave this issue as open (until the arbitrator orders otherwise). The Applicant's response ([REP4-082] at SLD-077) unhelpfully refers back to its original response with no further reasoning. It then goes on to state badgers require protection justifying confidentiality. For the avoidance of doubt, SLD only commented on badgers because the Applicant raised that example in [REP2-039], and this is no answer to leaving confidentiality in the hands of the Arbitrator.
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	3.1.103. In SLD's view, there is no good reason why the default position should not be that all materials are public unless an application is made to the arbitrator and they order that they be confidential. Clearly, for badgers, they would be most likely to order so. However, otherwise, it is appropriate that departures from open justice be in the hands of a decision-maker that can weigh up the competing considerations. The Applicant's position gives no positive reason that confidentiality should be the default (especially when the proceedings themselves are open under Article 8(1)). 3.1.104. Even if SLD's view on a presumption of confidentiality is not accepted, SLD consider that removal of that confidentiality should be on application to the arbitrator and not turn on agreement of the parties. If it turns on agreement, each party has an absolute veto which is not appropriate.
Schedule 16: time periods	3.1.105. SLD in its original WR [REP1-167] raised concerns about the shortness of the time periods in Schedule 16 for the Council to act. The principal time period for discharge has been changed to 10 weeks in more recent drafts. However, SLD understands that the Council seeks further extension of the relevant time periods [REP4-092] section 2.10. SLD supports

	this given the various provisions in Schedule 16 have deemed discharge provisions.
Council suggested requirements in the Local Impact Report [REP1-137]	3.1.106. In its LIR the Council advanced a number of further requirements and provisions for the DCO. In its Deadline 2 submission [REP2-051] SLD identified a number of these and expressed its support (e.g. for the provision of a business survey, response plan, and fund). [REP2-051] . SLD continue to support the requirements and provisions which the Council suggest, while noting that some of these may be more appropriate for provision in the outline plans. SLD will consider the Council's answer to DCO2.1 in this regard.

DCO2.1 – Changes to the Management Documents

3.1.107. In the second instance, the parties are invited to *“Outline any remaining or residual issues that you have with any of the management plans/ documents listed below, set out why the applicant has not yet resolved your concerns or why you are not content with the applicant's justification, and define what remedy or solutions or amendments you are seeking to address your concerns within the drafting of the relevant management plan(s)/ document(s)…”* SLD's comments on the relevant management plans and documents are set out in the table below.

Reference	Document	Response
REP4-049	Outline Construction Environmental Management Plan	<u>Generally</u> 3.1.108. <u>Paragraph 3.4:</u> when outlining EcoCoW responsibilities, it should be highlighted that supervision will be required during sensitive phases of highway improvement works as well, namely measures such as partial hedgerow clearance for visibility splays, as these tasks are not strictly associated with the PV fields or CRC works, but still carry a potential for significant ecological impacts. 3.1.109. <u>Paragraph 2.1.1 (ninth bullet point):</u> SLD suggest that text is added to make clear that the date of final commissioning relates to the final part of the authorised development. The same applies to Schedule 2, req 4(2) of the draft DCO. This is because the definition in the DCO would appear to accord with any energy generation commencing being the “date of final commissioning”, rather than the last part of the Scheme commencing generation. 3.1.110. <u>Para 2.14.1:</u> a single display board for the entire site appears to be small for a site of this size. In respect of the logbook of complaints, SLD suggests that this should be made available to Wiltshire Council at regular intervals.

		3.1.111. <u>Table 3</u>: SLD's ecology expert has already expressed concerns that the EcoCoW's role has significant difficulties in light of the lack of surveys and also pressure to allow work to proceed (particularly in the CRC). While the monitoring requirements provide for surveys to account for "seasonality constraints", SLD's expert has already explained how significant the delays could be as a result of this surveying. 3.1.112. <u>Table 5</u>: given the length of the suggestions, this is addressed below. 3.1.113. <u>Table 6</u>: SLD would have concern about the use of strip, map and sample on any archaeological asset where it would give rise to a significant effect in EIA terms (given SLD's analysis in its Appendix C of its WR). Where that is the case the preference must always be for the other option identified in the Table: "no solar development". SLD consider also that the Applicant should have to report on a regular basis complaints received to the Council. There should be provision for detailed archaeological briefing. 3.1.114. <u>Table 8</u>: SLD note there is extensive use in this table of the formulation "<i>as far as practicable</i>". For example, avoiding combined noise effects on sensitive receptors or a 250m distance for construction compounds from residential receptors "<i>as far as practicable</i>". SLD consider that a higher standard should be required, such as "save for exceptional
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		circumstances”. Consider also that the Applicant should have to report on a regular basis complaints received to the Council. 3.1.115. <u>Table 10</u>: SLD note suggestions of the Council on socioeconomics and the provision of funds to ameliorate effects. This would be welcome. 3.1.116. <u>Table 11</u>: On cable depth, an approach of “impracticable” is considered too low a test where the viability of farming the land is in issue. This matter should be approached on an exceptionality basis to ensure that land is not sterilised from use. As is discussed below, SLD also have significant concerns about soil storage and earthwork mounds. 3.1.117. <u>Table 17</u>: SLD consider that clarity on “where required” should be provided as it is currently unclear in what circumstances some of the proposed mitigations will be used. 3.1.118. <u>Section 6.2</u>: SLD consider that the records produced should be made available to the Council at regular intervals. <u>Table 5: Hydrology, Flood Risk and Drainage</u>
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		3.1.119. SLD is concerned that the strategy proposed by the Applicant to monitor water quality during and after construction is inadequate for identification and remediation of problems. It is stated that the strategy “<i>will be based on a combination of visual observations and reviews of the Environment Agency’s automatic water quality monitoring network</i>”. This is inadequate because: • The Environment Agency does not have an automatic water quality monitoring network; • Visual observation is dependent on the presence of a trained observer at the site of a pollution incident. At best this will only occur during working hours, whereas incidents can occur at any time, including at night. It is unsystematic and hard to document. 3.1.120. The Applicant is proposing to monitor high-risk areas more intensively during construction which is reasonable. 3.1.121. Important detail, without which the adequacy of the sampling cannot be assessed, is delegated to the currently non-existent Water Management Plan. However, the Applicant clearly intends to take spot samples and send them to a laboratory for analysis. This is far too slow to allow remedial action to be taken. There is a reliance on visual assessment which is subject to the same problems discussed above. The criteria for deciding what is “appropriate” or “proportionate” are not stated, nor who is to take these decisions.
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		3.1.122. Stop Lime Down proposes an alternative monitoring strategy which will address these problems. Automated continuous water analysis is becoming increasingly common and affordable. Commercial instruments (e.g. YSI's EXO system) are available which will make continuous measurements of certain pollutants in flowing waters, transmit the data to a remote operator, and sound alarms if thresholds are exceeded. The entire Lime Down PV site could be monitored by such an installation on just four streams: the Rodbourne Brook, the Gauze Brook, the Norton Brook, and the "un-named watercourse" west of Foxley. This would provide early warning of problems on site, allowing them to be investigated and remediated quickly, and provide evidence of compliance with standards or otherwise. Mobile versions of these systems could be used closer to sites of active construction, including the cable route. They would not be dependent on the random presence of observers and monitor problems day and night. 3.1.123. Additionally, water quality monitoring should have a more established period as it is vague and unspecified currently. Particularly pertinent in construction although query whether it should extend to lifetime of scheme.
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REP4-051	Outline Operational Environmental Management	<u>Noise</u> 3.1.124. Outstanding issues are that the applicants noise monitoring, and ES assessment did not adequately capture or take proper account of the low background levels. Consequently, the adopted LOAEL and SOAEL thresholds may well produce higher noise impacts to local residents than as presented in the ES. Table 9 does not provide for mitigating below LOAEL and instead adopts figures which are just below SOAEL. SLD consider, in line with its main submissions on noise, that a focus on mitigating to LOAEL could be included in the oOEMP. <u>Human Health</u> 3.1.125. Table 12 proposes that a Community Liaison Manager should be appointed as a temporary facilitator of communications between communities and the Scheme's operators during the peak replacement scenario. This currently provides for the CLM to be in place during the peak replacement scenario. SLD consider that the CLM should be in place for battery replacement also. 3.1.126. SLD understand that the Council has proposed a fund to help address the economic effects of the Scheme on businesses. SLD agree with this proposal.
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		<u>Glint and Glare</u> 3.1.127. As with the oCEMP, SLD consider that, for Table 17, clarity on “where required” should be provided as it is currently unclear in what circumstances some of the proposed mitigations will be used.
REP3-096	Outline Decommissioning Strategy	3.1.128. As SLD have stated elsewhere, it has significant concerns about the piecemeal decommissioning of the Scheme. Notwithstanding this, however, if the Applicant is going to provide for this, the oDS should have a clear section addressing how such decommissioning will be undertaken, and the relationship of such land to the remainder of the Scheme. 3.1.129. The oDS should also provide for abiding by regulations and guidance which changes to become more stringent by the time of decommissioning. See, for example, para 2.7.2 which currently is formulated so that the 2011 and 2005 Regulations are said to apply. This should be made clearer notwithstanding the general comment about following regulations and guidance at the time at para 3.1.2. 3.1.130. <u>Para 2.10.1</u>: As with oCEMP, one display board is insufficient. Similarly, as was expressed on the oCEMP, the logbook should be shared with the Council.

		3.1.131. In respect of ecology, SLD welcome the proposed carrying out of a new set of ecological surveys and re-assessment of the mitigation measures necessary prior to the eventual decommissioning of the scheme in Table 3. SLD would welcome a clearer commitment to complete these surveys, as opposed to the “expectation” currently proposed. 3.1.132. <u>Table 8:</u> as with the oCEMP, SLD note there is extensive use on this table of the formulation “as far as practicable”. For example, avoiding combined noise effects on sensitive receptors or a 250m distance for decommissioning compounds from residential receptors. A higher test should be applied. 3.1.133. <u>Section 6.2:</u> the records should be made available to the Council at regular intervals.
REP3-098	Outline Soil Resources Management Plan	3.1.134. <u>Paragraph 1.7.2:</u> SLD has concerns in respect of the health and quality of soil that is stockpiled for long periods. It is presently unclear how the health of the soil would be maintained during this period. The extent and location of the stockpiling is also unclear. The extent of provision is specified in 1.8.3 (bullet point 9 and 10) but it is unclear how this does enough to actually maintain soil health and fertility.



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		3.1.135. <u>Section 1.8:</u> It is unclear whether more stringent handling rules could be applied to manage the issue of sensitive soils being handled in wet conditions. Para 1.8.14 should arguably be framed to more positively indicate against the handling of wet soil as this all seems currently to be left to discretion. 3.1.136. <u>Paragraph 1.8.7:</u> The plan states that "<i>the subsoils will not be disturbed</i>". However, anywhere where there is piling taking place to install the panel supports, both topsoil and subsoil will be disturbed, firstly by the action of piling but also the driving of the equipment over the soils to get to the panel positions causing compaction. Likewise, at decommissioning, the same disturbance will occur and that caused by pulling out of the piles could well be worse than at installation. The Applicant has not provided evidence in support of its assertion that the soils will not be structurally damaged by the installation and removal of panels. How this aspect of the oSRMP will be met should be explained by the Applicant. 3.1.137. <u>Paragraphs 1.8.22-1.8.25:</u> As above, detail on stockpiling is very limited. Given the length of the Scheme there is no engagement with how fertility is going to work over this period. Also no consideration of location as this is left to detailed assessment.
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		3.1.138. <u>Paragraph 1.8.37</u>: This paragraph suggests that monitoring will pick up any compaction from machinery during installation, and machinery will be employed to relieve it. However, there is no indication of approach. Likewise, ideally compaction should be avoided rather than depending on remediation. 3.1.139. There is also no mention of an aftercare period and commitment to rectify problems up to 5 years after reinstatement/decommissioning. It has to be remembered that many of these soils are of high sensitivity and low resilience to structural damage so need considerable care.
APP-282	Outline Public Rights of Way and Permissive Paths Management Plan	3.1.140. <u>Paragraph 3.2.1 (bullet point 4)</u>: It is unclear how ensuring that PRoW users will always have right of way as against vehicles associated with the Scheme is secured. See also 3.3.3 on this issue. 3.1.141. <u>Paragraph 5.1.4</u>: SLD consider that there should be provision of information to locals advertising the end of the availability of permissive paths.
REP3-100	Outline Landscape and	3.1.142. <u>Paragraph 1.3.9</u>: SLD has already raised concerns that direct drilling of wildflower into the stubble of the previous arable crop is likely to be unsuccessful due to the residual

	Ecological Management Plan	fertility in the soils. The Applicant should explain in the oLEMP how it will seek to achieve effective growth of wildflower in such circumstances, as SLD consider this to be a flaw in its approach. 3.1.143. <u>Paragraphs 1.3.120-1.3.121</u>: Depending on findings of follow-up white clawed crayfish surveys and inspections, further mitigation in the form of planting location and species selection may need to be taken into account. Where relevant, additional landscaping considerations must be made for long-term ditch management and planting along relevant sections, considering factors such as, but not limited to, overshadowing or increase in leaf litter. 3.1.144. <u>Paragraphs 1.3.30, 1.3.45, 1.3.55 and 1.3.65</u>: SLD has raised concern about how this watering described in these paragraphs will be achieved and whether it will be successful. It is unclear what is a reasonable worst case for the extent of watering to be required, and whether that might have environmental effects (e.g. the need for water tankers to regularly drive around the area).
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		3.1.145. <u>Paragraph 1.3.140</u>: Updated calculations reporting the expected increase in number of skylark territories as a result of the latest proposed enhancements should be included, serving as long-term management targets. 3.1.146. <u>Paragraphs 1.3.136 – 1.3.146;1.4.3</u>: As one of the major sources of both short- and long-term impact expected from the proposal, and a central part of its mitigation strategy, follow-up skylark monitoring (and other ground-nesting, agricultural land specialists in general) should be distinct from broader, general bird monitoring surveys proposed. 3.1.147. Skylark monitoring should be based on number of territories, with expected, broad uplift targets set at regular intervals within the years following the development (for example: year 1, 2, 4, 6, 8). Should territory counts be found to be falling below the expected increase value, or worse broadly decreasing, this should trigger re-assessment of the LEMP and landscape management practice to correct this, followed by monitoring in the immediately following years. 3.1.148. Once the overall uplift targets are met after this initial monitoring cycle, the frequency of skylark territory counts can decrease to once every five years, for example, with additional visits following any major changes in management action or if a significant
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		decrease in territories is observed. It is important to note that the proposed skylark enhancements are a core part of the Scheme's mitigation following displacement of the species; failure to ensure and confirm an increase in territory uplift would be a failure of this mitigation as a whole, further increasing the already expected significant displacement resulting from the proposal. 3.1.149. <u>Paragraph 1.4.4</u>: As a species sensitive to silting and pollution impacts, white-clawed crayfish should be included as well as a species indexed for additional follow-up monitoring, particularly shortly post-development, to confirm it has not been unexpectedly impacted negatively during construction. Findings should trigger and inform remedial site management action, if so required.
REP4-055	Outline Ecological Protection and Mitigation Strategy	3.1.150. <u>Paragraph 3.3.5</u>: Amend to ensure larger gaps (200mm x 200mm) along the fence-base, bringing these more in line with standard wildlife gate size specifications. Ensure gaps are present across the various sections of Solar PV fencing, preferably with higher frequency along roadside sections. 3.1.151. <u>Paragraphs 14.1 – 14.3</u>: If not carried out at the examination stage, full nest-tube/footprint tunnel dormouse surveys should be conducted well prior to works

		commencing. Results should inform the mitigation approach adopted within the eventual, finalised EPMS, with measures including but not limited to: securing relevant licences, wider implementation of horizontal drilling at sensitive hedgerow crossings, avoidance of works within particular hedgerows entirely, clearing particular sections under a two-stage clearance and/or identification of low-risk sections which can be safely cleared even outside the narrow seasonal window for single-stage clearances. The above measures should be incorporated alongside the already-outlined schedule of toolbox talks and pre-clearance searches. 3.1.152. <u>Paragraphs 15.1-15.3</u>: If not carried out at the examination stage, full crayfish trapping/torching should be conducted on relevant water courses on and off-site well prior to works commencing. As with dormice, findings should inform the eventual, finalised EPMS. Measures may include, but are not limited to: securing relevant licences, re-routing access to avoid the relevant stream/wet ditch sections entirely, allowing for broader embankment buffers along stream sections and landscaping considerations (see section below)
REP3-106	Outline Battery Safety Management Plan	3.1.153. <u>Paragraph 4.1.9</u>: SLD remain concerned about the option being open to the Applicant that a BESS enclosure is left to burn out rather than steps taken to try and halt

		the thermal runaway event. This issue also arises in respect of the proposed firefighting approach in 5.5.2. 3.1.154. <u>Paragraph 5.5.10:</u> it is recognised that the availability of water on site is provided for by reference to the NFCC guidance (albeit see the concerns expressed in the ExAQs on this). However, the NFCC guidance recognises that “any incident may last several hours” (part 10). That reflects broader evidence that BESS thermal runaway can last for many hours and even days. As a consequence, after initial stored water provided for by the site is used, there is the potential for further water to be sourced offsite to continue the response by the fire services. For that reason, there is concern that any drainage design should take this into account and not simply be based on the water available for the initial response on-site.
REP4-057	Outline Construction Traffic Management Plan	3.1.155. The following changes are proposed: • <u>Table 1:</u> This needs to be updated to reflect the fact that it is now acknowledged that the 400kV substation will take much longer to construct (2 years).

		• <u>Paragraph 2.1.4</u>: The proposed emergency access for a fire appliance to the BESS is along Hill Hayes Lane that has a width of around 3.0m and no passing places in some areas. This may not be safe as emergency vehicles could be blocked or delayed. • <u>Paragraph 2.1.5</u>: Mr. Bamber has previously voiced his concern about the over-reliance on banksmen to overcome visibility constraints at access points. • <u>Cable route access (general)</u>: The CTMP makes no provision for other junctions on the highway network (other than access points) where construction traffic may lead to highway safety problems. Examples would be the two junctions south of Grittleton (Neeld Court and road to Leigh Delamere) that are used to access cable route access points but suffer from very poor visibility. • <u>Table 3</u>: Further detail of access 109 (Fowlswick Lane) is required. • <u>Paragraph 2.5.2 and Section 4.7</u>: The HGV booking system has not been shown to be feasible or effective. Given how important this is from a highway safety perspective, the CTMP needs to provide a much more detailed description of a possible arrangement,
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		including monitoring and enforcement. No measures are available to prevent construction HGVs from meeting existing HGVs on narrow lanes. • <u>Paragraph 2.5.5</u>: It is not made clear how 'specific traffic management' differs from the use of banksmen since both appear to be achieving the same result. • <u>Paragraph 3.2.1</u>: It is not proposed that each BESS unit will constitute an abnormal load. This was not originally anticipated. • <u>Table 4 and para 6.14.1</u>: Given the high sensitivity of the local network, local communities, vulnerable highway users and the National Landscape to increases in HGV movements, there is a reasonable argument to monitor and enforce HGV numbers with additional mitigation/penalties if the predicted HGV numbers are exceeded. Paragraph 6.14.1 requires monitoring of HGV numbers but reporting and enforcement is not clearly defined. It appears that contractors may be targeted for breaches of the CTMP. • <u>Paragraph 3.2.5</u>: It appears likely that the peak number of HGV movements will increase trip generation rates.
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		• <u>Paragraph 3.2.8 onwards:</u> The Applicant makes assumptions about numbers of workers and modes of travel. Again, given the sensitivity of the local highway network, there is a reasonable argument for monitoring numbers and modes (minibus use etc) and introducing penalties if vehicle numbers exceed those currently predicted; • <u>Section 3.3:</u> There have been very broad assumptions made about the numbers of light and heavy vehicles accessing the cable route corridor. There are some places (e.g. Grittleton) that are highly sensitive to any uplift in vehicle numbers. There needs to be a way to monitor and manage movements at different access points along the cable route. • <u>Section 4:</u> There is no management of staff vehicle movements. It is possible that sensitive villages such as Norton and Hullavington could experience significant uplifts in vehicle movements. Paragraph 3.4.3 suggests that workers are advised to avoid local schools but there is no stronger obligation to minimise adverse impacts on these sensitive areas.
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		• Additionally, there should be a requirement for HGVs to avoid using reversing alerts that are unnecessarily loud to minimise noise impacts on neighbouring areas. Consideration should be given to removing such audible noises where possible. • <u>Section 4.6</u>: There is ongoing discussion regarding the sections of road that would require widening or improvement to avoid unacceptable highway safety impacts. This will need to be accounted for in the outline plan. • <u>Section 5</u>: This section needs to include arrangements for the BESS unit abnormal loads. • <u>Table 7</u>: Given the difficulties examining the Highway Improvement Areas, Mr. Bamber is not yet able to comment on this but will do so as soon as feasible. • <u>Section 6.6</u>: The Construction Worker Travel Plan is described briefly as an advisory document. This does not appear to provide a robust means of managing the potential adverse impacts on local communities over an extended period.
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		• <u>Section 6.6 penultimate bullet</u>: In the case of road closures, the requirement for construction traffic to use the formal diversion routes may be entirely inappropriate because of the size of most construction vehicles. In the event of construction routes being temporarily closed, construction vehicle movements should be stopped. • <u>Section 6.14</u>: Monitoring will be complicated by the multiplicity of compounds and accesses. The CTMP does not provide a robust system for managing this complexity. • <u>Section 6.15</u>: Briefing drivers on the Highway Code does not compensate for the use of unsuitable highway links and unacceptable impacts on vulnerable highway users.
APP-230	Outline Archaeological Mitigation Strategy	3.1.156. Stop Lime Down note that within the Outline Archaeological Mitigation Strategy [APP-230], the proposed mitigation of Field F120 of the Cable Route, remains undetermined. Stop Lime Down wish to reiterate that it considers that strip map and record excavation of the scheduled monument is not an appropriate mitigation and clarity should be sought regarding the viability of horizontal directional drilling in this location. See Marrons' comments at [REP1-171] para 3.22 onwards.

		3.1.157. As explained at [REP1-171] para 3.15, SLD have concerns about ecology and landscape mitigation leading to long term intrusive planting that impacts unidentified archaeological remains. This should be provided for an avoided in the outline AMS. 3.1.158. As explained at [REP1-171] para 3.17, SLD has concerns about and considers more detail should be given about the briefing of non-archaeological professionals in advance of works around valuable assets. This alternatively could be managed 3.1.159. SLD have also highlighted concerns about HDD nearby to Scheduled Monuments and consider that this should be addressed and avoided.
REP4-044	Design Principles and Parameters	3.1.160. While not a control document per se, SLD's expert Ms. Tinkler notes the various references to colours which blend into the setting of the Scheme (e.g. the Conversion units on PDF p.11, acoustic barriers on PDF p.24 etc.). Ms. Tinkler considers that some form of informal colour assessment would be appropriate. This was a point made at para 2.2.42 of [REP4-132].

4. Conclusion

4.1.1. This submission has responded to ExQ2 and commented upon the documents submitted by the Applicant and other parties at Deadline 4.

4.1.2. SLD's review of that material confirms that the additional information has not resolved the concerns raised by SLD at preceding deadlines. For all the reasons set out in this submission, and the documents prepared by SLD so far, SLD maintains that development consent should not be granted for the Scheme.



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5. Appendices



APPENDIX A

LANDSCAPE RESPONSES TO DEADLINE 4 DOCUMENTS AND EXQ2



Lime Down Solar

Comments on submissions received at Deadline 4

Introduction

Section A of this note sets out SLD's comments on landscape-related matters in the new and updated information submitted by the Applicant at Deadline 4, including responses to Deadline 3 submissions, ISH2 submissions / responses, and information requested by the ExA.

Section B sets out SLD's comments on ExQ2, where relevant to landscape matters.

SLD has reviewed and noted landscape-related matters in information submitted at Deadline 4 by consultees / respondents, but has no comments on the material at this stage.

In summary, whilst the Applicant's new and updated information has raised a few additional queries, at this point SLD fully maintains the position of its landscape expert Ms Tinkler as set out in SLD's Written Representation *Landscape and Visual Impact Report* (LVIR) [REP1-170].

Section A

Comments on Applicant's Deadline 4 submissions

1) Applicant D4 new documents

Including D4 submissions, responses, and information requested by the ExA.

a) Sequential Visual Effects on the Wiltshire Cycleway [REP4-078]

Para. 1.1.2 states that the Wiltshire Cycleway is part of the National Cycle Network (NCN). However, as noted at para. 8.6.41 of Ms Tinkler's LVIR, the Wiltshire Cycleway is no longer part of the NCN.

Previously it was NCN route no. 254. It was removed by Sustrans in 2020 as part of a wider review of safety standards, in particular where cyclists were now having to share previously quiet unsegregated roads with increased amounts of motorised vehicles often travelling at high speed.

However, importantly, the cycleway is still well-used, and is supported and actively promoted by Wiltshire Council. In an announcement reported on Corsham Town Council's Facebook page in July 2020, the Council said that *"Sustrans has made the decision to remove around 4,000 miles of its National Cycle Network, and the Wiltshire Cycleway, route NCN 254, is one of the routes affected. Sustrans has made this decision because part of the route is on rural roads that have a speed limit of more than 40mph. However, despite this change in the classification of the route, we will continue to promote the Wiltshire Cycleway as a beautiful leisure and recreational route on our website and support it with effective signage"*.

Para. 3.2.12 concludes that *"there are no sequential cumulative visual effects on Section 14 of the Wiltshire Cycleway. Therefore, the effects of the Lime Down Scheme on the Cycleway are as set out in the LVIA"*.

This conclusion is mainly due to there currently being no intervisibility between receptors on the Wiltshire Cycleway and the proposed development, which is the result of a combination of topography, intervening vegetation, and occasionally, built form.

As explained in Section 7.5 of the LVIR, Ms Tinkler does **not agree** that vegetation which currently screens views, or is proposed to screen them, can be relied to do so in future, and considers that judgements about effects on views do not reflect a reasonable worst-case scenario. Levels of adverse visual effects are likely to be higher than stated.

For example, the extract from LVIA Table 3-1 in [REP3-046] shows that during construction and the first few years of operation, receptors travelling along Honey Lane (TR202, adjacent to Lime Down B) would experience a **Major – Moderate Adverse (significant)** visual effect. By Year 10, the level is predicted to have dropped to **Minor Adverse**, and would remain at that level for the duration of the operation. In Ms Tinkler's opinion, the change in level may not be as large as assumed, as explained in the LVIR.

Another reason for levels of sequential effects having been underestimated along this route and others is that levels of visual receptor sensitivity are underestimated.

For example, Table 3-1 shows that receptors travelling along Honey Lane (TR202) are categorised as being of **Medium** sensitivity. According to [REP3-045] *Landscape and Visual Assessment Sheets* (Rev. 2), under the heading *Visual Baseline* for Honey Lane (TR202) on page 344, this is the result of the combination of Medium levels of a) visual value, and b) visual susceptibility to change.

In Ms Tinkler's opinion, all levels should be **High**.

Firstly, according to Table 12 *Lime Down B, Landscape Character – The 1km Study Area*, on page 91, the level of landscape value is reported as **High**, and the level of visual value should reflect this.

Secondly, according to LVIA method [REP1A-007] Table 8.1.1.10 *Visual Receptor Susceptibility to Change*, the criteria for **High** apply to these receptors, not Medium (for ease of reference, they include "Views from well used public rights of way including strategic footpaths / long distance trails and cycle routes (where the attractive nature of the countryside is a significant factor in the enjoyment of the walk)"; "Travellers on road, rail, or other transport routes along scenic routes, where the appreciation of the view contributes to the enjoyment and quality of the journey"; "Visitors to protected landscapes or heritage assets where views of the surroundings are an important contributor to the experience"; and "The location, numbers, frequency of use and visual context of the viewpoint would be high").

Based on the LVIA's matrix at Table 8.1.1.14 of [REP1A-007], the combination of **High** sensitivity receptors and the LVIA's **High** level of adverse magnitude of effect up to Year 10, results in a **Major Adverse (significant)** visual effect (the highest level on the scale), not Major – Moderate Adverse (significant). Even with the LVIA's Very Low level of magnitude after Year 10, the High sensitivity receptors would experience a Moderate – Minor Adverse effect, although as explained above, in Ms Tinkler's opinion, a Very Low level of magnitude is unlikely.

Also, note – as mentioned in previous submissions – the problems associated with the LVIA's use of a four-point, even-numbered scale for levels of magnitude: High is the highest level on the scale, and there is no Very High category to balance, so Moderate is not in the middle, which skews the results / conclusions.

The implications of this are set out in the Landscape Institute's publication LITGN-2024-01 *Notes and Clarifications of Aspects of [GLVIA3]*, which explains that "typically, effects falling **below** the middle of the range of overall effect are assessed as not significant" (emphasis added). Using the three-point scale as an example, with Moderate in the middle, the TGN explains that 'moderate effects may or may not be significant and justification would be needed in the methodology or receptor assessment as to whether a moderate effect is significant'.

However, if an even-numbered scale is used, as is the case here, Moderate is not the median point. Therefore, receptors which *should* be treated as borderline cases *automatically* fall into the 'not significant' category, with no professional, qualitative judgement applied.

b) Applicant's Response to Other Parties' Responses to ExQ1 [REP4-081]

LV1.2 re Landscape Fabric – Technical Note, to Wiltshire Council

Wiltshire Council *"maintains its position that the LVIA conflates its assessment of landscape fabric and landscape character. The council considers that the assessment of landscape fabric only represents a limited and partial assessment of landscape fabric effects within the DCO limits."*

Ms Tinkler agrees with the Council's comments. The Applicant's response does not appear to accept that solar panels, access tracks, and other 'hard' / man-made scheme elements should be categorised as 'fabric', which the LVIA restricts to 'soft' / natural elements. This approach does not accord with GLVIA3, although the Applicant now admits it is a deliberate departure, the purpose being specifically – as set out in their response to LV1.4 – to "[allow] *the physical landscape benefits of the Scheme (such as new hedgerows and meadows) at the Site level. to be quantified without affecting the separate assessment on Landscape Character*".

Had this approach not been adopted, there would only be very minimal Scheme benefits, confined to a small area adjacent to the National Landscape. Using this approach, the Applicant is able to attribute **Moderate Beneficial (significant)** effects (albeit only in respect of 'fabric') which would further the purpose of the National Landscape.

Notwithstanding the above, as explained in SLD's submissions and responses, the LVIA erroneously double counts the 'soft' / natural 'fabric' that is required for mitigation as enhancement, whereas the amount of 'true' enhancement is minimal.

In summary:

- i) The proposed development would introduce new 'hard' / man-made items into the landscape, in the form of surfaces, structures, and other visible Scheme elements / features.
- ii) The Applicant does **not agree** that the surfaces, structures, and other items are 'fabric', but the parties do **agree** that the introduction of the 'hard' / man-made items would result in adverse landscape and visual effects.
- iii) The development would also introduce new 'soft' / natural 'fabric' in the form of hedges, trees, and grass. The parties **agree** that the majority of the latter is proposed as mitigation, which in itself would result in certain adverse landscape and visual effects.
- iv) Wiltshire Council and SLD do **not agree** with the Applicant that the new 'soft' / natural 'fabric' proposed as mitigation can also be counted as an enhancement / beneficial effect.
- v) SLD **agrees** with the Applicant that whilst they exist, the 'true' enhancements could be considered to further the purpose of the CNL.
- vi) Given the very small amount of proposed enhancement relative to the very large size of the Scheme, SLD does **not agree** with the Applicant that the level of beneficial operational effect would be Moderate and significant. In Ms Tinkler's opinion, based on the criteria in Table 8.1.1.15 of the LVIA method [REP1A-007], the level would be Minor at most.

LV1.4 re Landscape Fabric – Beneficial Effects, to the Applicant

Related to LV1.2. Wiltshire Council notes the double-counting error; the adverse effects arising from the proposed mitigating measures; and the potential lack of efficacy of the measures.

Ms Tinkler **agrees** with the Council's observations, and does **not agree** with the Applicant's opinion that mitigation in the form of 'fabric' would deliver beneficial effects.

LV1.5 re Landscape Fabric – Enhancement Opportunities, to Wiltshire Council

Related to LV1.2 and LV1.4.

The Council states that *"where the proposals include re-planting lost historic field hedgerows or would increase the age diversity and species composition and distribution of hedgerow trees and field corner trees or seek to enhance or create more diverse waterside habitats and visual interest.... may provide some-long-term opportunities for enhancement for landscape fabric"*.

In Ms Tinkler's opinion, the above would only apply a) where the proposals are enhancement, not mitigation (for example, some lost hedgerows may have to be replaced in order to provide visual screening); and b) potentially, post-decommissioning ('legacy landscapes').

Note that the Applicant's response does not mention enhancement / benefit, despite this being the subject of the question.

LV1.6 re Landscape Character – Assessment Methodology, to Wiltshire Council, SLD, and the Applicant

This question relates to the LVIA having assessed geographical study areas as opposed to Landscape Character Types (LCTs) and Landscape Character Areas (LCAs).

"Wiltshire Council considers the approach departs from the standard typical approach", which "fails to acknowledge that development of this scale and nature is acting as a highly relevant force for change, incrementally and cumulatively changing the landscape... at a Landscape Character Type and Landscape Character Area scale over a large area and over a short timeframe."

Ms Tinkler's response to this question is in SLD's [REP3-173], with further comments in [REP4-132]. In summary, Ms Tinkler **agrees** with the Council about the Applicant's approach being unusual, and considers that it would be helpful if the LVIA included the LCTs and LCAs.

[REP4-132] explains why Ms Tinkler does **not agree** with the Applicant's justification for not having assessed effects on the LCAs and LCTs, the reason being, in Ms Tinkler's opinion, a misinterpretation of, and therefore departure from, GLVIA3.

LV1.9 re Landscape Character – Assessment Methodology, to the Applicant, Wiltshire Council, CNLB, SLD

The parties do **not agree** about the extent of the CNL's setting. In Wiltshire Council's and SLD's landscape experts' opinions, it would be greater than shown on the Applicant's recently-submitted plans. See SLD's response to this question in [REP3-173], with further comments in [REP4-132], also see comments on the *Written Summary of Applicant's Oral Submissions and Responses at ISH2* [REP4-085] below.

LV1.14 re Visual Impact – Photomontages, to Wiltshire Council and CNLB

The parties agree that the information provided is sufficient, although Wiltshire Council notes that *'Additional photomontages may, however, be needed to illustrate intra-project sequential cumulative effects'*. SLD has no comments.

LV1.19 re *Visual Impact - Residential Visual Amenity Assessment*, to Wiltshire Council and SLD

The Applicant's response confirms that *"During ISH2, it was agreed by both WC and SLD that the scheme would not breach the RVAA Threshold, and that an RVAA was not required"*.

The reason is because of the high threshold set for RVAA under the framework and parameters of the current guidance. The Applicant's response to this question confirms this, in the extract from the Burnthouse Farm inquiry report, ie even if residential receptors would experience significant adverse visual effects – and the parties **agree** that would be the case here – *"There needs to be a degree of harm over and above an identified substantial adverse effect to take a case into the category of refusal in the public interest"*.

LV1.23 re *Cumulative and Combined Effects - Cumulative Sequential Visual Effects*, to the Applicant, Wiltshire Council, and SLD

Ms Tinkler **agrees** with Wiltshire Council's opinion as set out in the response, which states that the Applicant's assessment of inter-project cumulative sequential visual effects is inadequate, *"[placing] undue emphasis on major roads, while overlooking the well-used minor routes that define the character of the Lime Down project area and from which intra-project sequential effects are likely to be most noticeable"*.

This question asked SLD to identify other routes it considered should be included in the sequential visual effects assessment: the routes were outlined in SLD's [REP3-173]. At ISH2 the ExA asked SLD to provide maps of the routes (Action Point 19): these were included in SLD's [REP4-132].

See also Ms Tinkler's response to the Applicant's assessment of sequential visual effects on the Wiltshire Cycleway [REP4-078] above.

In addition, Ms Tinkler is concerned that the Applicant has not assessed the cumulative / sequential effects of glint and glare, which will increase levels of adverse visual effects at certain locations (see SLD's LVIR para. 12.14).

LV1.24 re *Cumulative and Combined Effects – Cumulative Effects on Landscape Character*, to the Applicant, Wiltshire Council, and SLD

The parties do **not agree** about the most appropriate approach to the landscape and visual cumulative effects assessment. Ms Tinkler's response to this question is set out in [REP3-173], and at this stage she has no further comments.

c) Written Summary of Applicant's Oral Submissions and Responses at ISH2 [REP4-085]

In response to ISH2 Action Point 9, the Applicant has produced a plan of the *"Augmented Zone of Theoretical Visibility (ZTV) showing the Scheme, including the boundaries of the CNL"*, at Annex D of [REP4-085].

As well as showing screening from topography and built form, 'augmented' ZTV plans show existing vegetation, and, where this vegetation would theoretically screen views of a development, the resultant 'view shadows' within which no views would be available. The Applicant's ZTV also factors in screening from the installation itself.

The LVIA included both 'augmented' and 'bare earth' scenarios. As explained in SLD's LVIR, GLVIA3 recommends the latter as the starting point for LVIA, with the nature and likely degree of permanence of both existing and proposed screening vegetation subsequently factored in (as per the Applicant's

'augmented' ZTV plans). That is because it cannot be assumed that existing off-site / proposed on-site vegetation would remain in place and continue to screen views over the longer term, and the reasonable worst-case scenario should be assessed.

At ISH2, Ms Tinkler said, *"it would be really helpful if we could have the [ZTV plan] with existing screening and the one with no vegetation, because that one would tell us in the future this would not be screened by vegetation, but it would be screened by buildings or topography"* (extract from transcript of ISH2, Agenda Item 3, page 18 of PDF, at 00:47:48:24 - 00:48:26:26).

SLD still considers that bare-earth ZTV plans of each site (Lime Down A – E) would be helpful, although as mentioned below, the augmented ZTV plans are sufficient for the purpose of the exercise which, as Ms Tinkler explained at ISH2, is to establish the maximum theoretical extent of intervisibility between the Scheme and the CNL, which in turn will help establish the extent of the CNL's setting, as this is not agreed between the parties (see SLD's comments on the *Applicant's Response to Other Parties' Responses to ExQ1* at LV1.9 above).

The LVIA appears to conclude that there would be no intervisibility between the CNL and Lime Down D and E, but the 'augmented' ZTV plans produced for Lime Down D and E show that there could be a degree of intervisibility between these parts of the Scheme and the CNL, including locations over 10km from Lime Down E's array area boundary. For example, there could be intervisibility between Lime Down E and the Monarch's Way as it passes through / near Tresham to the north west, and again east of Tetbury to the north. The degree of visibility would depend on the nature of the existing and proposed intervening screening vegetation at specific locations, and may vary over time, for example if tall roadside hedges are cut back or mature forestry plantations felled.

However, levels of effects decrease gradually with distance from development, and at such distances, levels of adverse visual effects on receptors within the CNL are likely to be at the lowest end of the scale, even where no vegetation screens views, except during periods when glint and glare is experienced.

The CNLB states that the extent of the CNL's setting is determined by *"the area within which development... can be considered to have an impact, positive or negative, on the landscape, scenic beauty and special qualities of the Cotswolds AONB"* (as far as Ms Tinkler is aware, the same criteria apply to all National Landscapes).

The definition does not state that the **level** of the effect determines the extent of the setting: the criterion appears to be whether there is any effect at all.

If that is the case, then the first stage of the process is to establish the points at which there would be no (or a Neutral) effect on the CNL (using a combination of ZTV plans and character studies), and join up the points to delineate the setting's outer limit. The second stage is to assess what the level of the effect on the CNL would be, and whether it would be positive or negative. The third stage is to determine whether or not the effect would be 'significant'.

The Applicant's new 'augmented' ZTV plans show potential intervisibility between Lime Down E and the CNL. However, if there would be views of Lime Down E, or part of it, from the CNL, the level of effect could be Negligible (but possibly more). According to the CNLB's definition of 'setting', even a Negligible effect means that Lime Down E would therefore lie within the CNL's setting.

However, the main focus of EIA / LVIA is on 'significant' effects. In relation to the CNL's setting, the parties appear to **agree** these would occur west of the Fosse Way, so that is where attention is focussed (notwithstanding a wider setting might possibly be inferred from the new ZTV plans). The parties do **not agree** about the extent of the 'significant' effects, nor the levels of effects.

2) Applicant D4 updated documents

At Deadline 4 there were no revisions to the Applicant's LVIA, and associated appendices and figures.

[REP4-016] LEMP Maps *Figure 3-4-5.1 to 3-4-5.2: Landscape and Ecology Mitigation Plan (4 of 4)*

The only change is an update 'to reflect amendments to the Bincombe Wood access track. Noted, no comments.

[REP4-044] *Design Principles and Parameters (Rev 4) (Tracked)*

The following has been added to Table 2-5 *Work No. 6 Design Parameters and Commitments*: "The exact colour of the acoustic barrier will be subject to manufacturer specifications and be carefully selected in subdued, non-reflective tones to sit as discreetly as possible within the landscape".

SLD's opinion and position on this matter are set out in SLD's deadline 4 comments **[REP4-132]**, at paras. 2.2.42 – 2.2.45.

[REP4-062] *SoCG with Wiltshire Council (Rev 2) (Tracked)*

Items on which SLD has no comments are not included here; however, some of the items not commented upon are still under discussion, and SLD may have comments on later iterations of the SoCG.

Ref 3.4.4 ZTVs

This matter is currently Under Discussion.

Wiltshire Council's concerns about the Applicant's ZTVs include "failing to specify structure heights or visibility assumptions, and not clearly assessing or combining the tallest elements across sites".

Ms Tinkler **agrees** that aspects of the ZTV plans are unclear, but her understanding is that the ZTVs are based on the reasonable worst-case scenario of the theoretical visibility of the tallest elements, as per Note 2 on the ZTV plans. Therefore, some receptors may see the tallest elements which are scattered throughout the site, but not necessarily lower elements such as panels.

clarification of this point from the Applicant would be helpful.

Ref 3.4.5 Landscape Zol

This matter is currently Under Discussion.

Ms Tinkler **agrees** with Wiltshire Council's comment that the Scheme's Zone of Influence (Zol) has been established on the basis of intervisibility only, without consideration of character in terms of interinfluence and association.

The latter relate to non-visual effects, which can extend over long distances with no intervisibility between development / feature and visual receptor. An example of this is where landscape influence and association relate to cultural aspects, such as a remnant medieval deer park / forested chase, which would have been dense woodland interspersed with open spaces within a clearly-defined boundary (timber pale fence or earth bank and ditch). Sometimes these landscapes form a distinct landscape character type or area, which is recognised in published character assessments.

Ms Tinkler also **agrees** with the Council's conclusion that "the creeping baseline scenario will lead to under reporting of assessed effects in relation to the overall significance of cumulative change to landscape character". As explained in previous submissions, the concern is that in itself, the industrial nature and scale of the Scheme would result in significant and extensive adverse landscape and visual effects;

therefore, in combination with the other similar existing and proposed developments in the wider area, there is the risk of the prevailing character types / areas changing from rural / agricultural to industrial / industrialising.

Ref 3.4.6 Assessment Methodology

This matter is currently Agreed.

Wiltshire Council's position is that *"The LVIA methodology follows standard best practice (GLVIA 3)"*.

The Applicant's position is that the LVIA method *"is considered acceptable to fully understand the extent of effects associated with the Development"*.

Ms Tinkler's understanding of the above is that whilst Wiltshire Council **agrees** that the Applicant followed the guidance in terms of using GLVIA3, with the LVIA having followed the recommended step-by-step process, it does **not agree** that the guidance has always been correctly interpreted, nor that the LVIA does not depart from it, and therefore the method is **not** 'considered acceptable to fully understand the extent of effects associated with the Development'.

Note that at SoCG item ref 3.4.8, the Council states that ***"The LVIA findings should not be relied on to inform decision-making"***.

clarification of this point by Wiltshire Council may be helpful.

Ref 3.4.7 Application of Assessment Methodology

This matter is currently Under Discussion.

Ms Tinkler **agrees** with Wiltshire Council's position, with which the Applicant does **not agree**, in that there a contradiction between paras. 3.1.9 and 3.1.10 in the *Technical Note on Landscape Fabric and Landscape Character* [REP1-121].

This relates to the Applicant's deliberate departure from the guidance, as set out in SLD's comments on the *Applicant's Response to Other Parties' Responses to ExQ1* at LV1.2 above, the purpose being specifically – as set out by the Applicant in their response to LV1.4 – to "[allow] the physical landscape benefits of the Scheme (such as new hedgerows and meadows) at the Site level. to be quantified without affecting the separate assessment on Landscape Character".

Ref 3.4.8 Embedded Design Mitigation

This matter is currently Under Discussion.

Ms Tinkler agrees with Wiltshire Council's position that *"The LVIA findings should not be relied on to inform decision-making"* – see also 3.4.6 above.

Ref 3.4.22 Protected / valued landscape status

This matter is currently Under Discussion. It relates to the extent of the CNL's setting.

In the SoCG, Wiltshire Council's position is that Lime Down Areas A, B and C fall within the setting.

The Applicant states, *"The applicant agrees that Lime Down Sites A, B and C are within the setting of CNL and have a higher value than Lime Down Sites D and E"*.

However, the latter statement is not entirely correct, as the Applicant has now confirmed (in writing and on plans) that only **parts** of Sites A, B and C are within the setting.

This is not reflected in the LVIA, which ascribes the same level of value to the whole of Areas A, B, and C (all Areas are treated in this way). If it is the case that the Applicant considers only parts of those Areas to be within the setting, **the LVIA should be revised** to factor in what the Applicant considers to be the different levels of value across these Areas (in theory there could be a reduction in levels of adverse effects as a result).

[REP4-064] SoCG with Natural England (Rev 3) (Tracked)

Ref 3.2.2 Methodology

This matter is currently Agreed.

Natural England agrees that the LVIA method is *"considered acceptable to fully understand the extent of effects associated with the Development"*.

Neither Wiltshire Council nor SLD agrees that the LVIA method is *"acceptable to fully understand the extent of effects associated with the Development"* – see SLD's comments on the Wiltshire Council SoCG [REP4-062] at item ref 3.4.6 above, where the Council states that **"The LVIA findings should not be relied on to inform decision-making"**. Ms Tinkler is of the same opinion.

Ref 3.2.4 Assessment Results – Cotswold National Landscape

This matter is currently Agreed.

Natural England's position is that *"Lime Down D & E have no landscape of [sic] visual relationship with the National Landscape"*.

However, as explained in SLD's comments on the *Written Summary of Applicant's Oral Submissions and Responses at ISH2* [REP4-085] above, and mentioned in comments on above item ref. 3.4.22, the Applicant's new ZTV plans show intervisibility between Lime Down D and E and the CNL.

Ref 3.2.7 Cumulative Effects

This matter is currently Agreed.

Natural England's position is that *"the project alone is unlikely to cause significant adverse landscape impacts"*.

SLD is of the view that Natural England should reconsider this opinion in the light of the Applicant's LVIA (current version Rev. 2 (Tracked) [REP3-025]).

The LVIA concludes (and both Wiltshire Council's landscape expert and Ms Tinkler **agree**) that the proposed development would result in **significant** adverse effects on both landscape character and visual amenity, many of which would be experienced throughout the Scheme's operational lifetime.

Specifically, within the Order Limits, during construction, operation, and decommissioning, there would be **significant** adverse *direct* residual effects on landscape character within the CNL's setting.

During construction and at least the first 15 years of operation there would also be **significant** adverse *indirect* effects on landscapes (and villages / communities) within the CNL and its setting.

Within the CNL and its setting, at many public and private viewpoints and along recreational routes, receptors would experience **significant** adverse visual effects, some lasting for the duration of the operation.

In addition, SLD's experts conclude that during all phases of development, the Scheme is likely to result in **significant** adverse effects on social / recreational amenity within the CNL and its setting, especially along the proposed construction route (see also SLD's transport expert's submissions on this subject).

Evidently, in combination with the other similar existing and proposed developments in the wider area, the effects would also be significant, but very extensive. Levels of adverse effects would be particularly high, and the majority could not be further mitigated.

Also note both Wiltshire Council and SLD's concerns about levels of adverse effects having been underestimated, and beneficial effects overstated.

Section B) Comments on ExQ2

This section sets out SLD's comments on ExQ2, where relevant to landscape matters.

Landscape and Visual (LV) - Cotswolds National Landscape

LV2.1 re *Time Limited Enhancements*, to the Applicant, Wiltshire Council, Natural England, CNLB

"The applicant's stated in its response to ExQ1 LSF1.1 [REP3-128] that there are no significant permanent effects on agricultural land, as all land will be returned to its original use and condition as far as practicable following decommissioning..."

In SLD's opinion, as set out at paras. 8.4.11 – 8.4.15, and 8.4.22 – 8.4.34 of Ms Tinkler's LVIR, it may not be possible to successfully return the land to its 'original use and condition'.

"The creation of wildflower meadows within fields A1, C1, C6, C8, C9 and B12 and the creation of wildflower meadow verges in A11, A12 and C10 are relied on by the applicant as beneficial effects to further the purposes of the Cotswolds National Landscape (CNL)."

In SLD's opinion, as noted at para. 7.3.5. v) of Ms Tinkler's LVIR, wildflowers do not establish successfully on arable soils without intervention such as the removal of topsoil. It is not clear whether the Applicant has accounted for this. Also note the problems with the restoration of fertility post-operation (see for example paras. 8.4.26 – 8.4.32 of Ms Tinkler's LVIR).

"The ExA understands that these enhancement measures are therefore time limited and removed at decommissioning."

If that is correct, the ExA asks, can *"a time limited enhancement... be relied on to seek to further the purpose of conserving and enhancing the natural beauty of the national landscape under section (s) 85...?"*

In SLD's opinion, a time-limited enhancement can be relied on to seek to further the purpose of the CNL, but it is important to consider the scale of the enhancement in relation to the scale of harm.

"If enhancements are removed at decommissioning, would that then be considered a harm to the purposes of the Cotswolds National Landscape at decommissioning?"

In SLD's opinion, this would not harm CNL's purpose as the removal would be the cessation of a time-limited benefit, not the introduction of a new adverse landscape / visual effect.



APPENDIX B

GLINT AND GLARE RESPONSES TO EXQ2 AND INDEPENDENT REVIEW OF PAGER POWER GUIDANCE



Response to Examiners Questions – ExQ2

Introduction

This report responds to the Examining Authority's Second Written Questions and Requests for Information (ExQ2), issued on 27 July 2026. It addresses Questions LV2.11 and LV2.12 (page 31), which are reproduced below in full, with relevant extracts shown in italics.

This response, including the independent review of the Pager Power *Glint and Glare Guidance*, has been prepared by John van Hoogstraten, Managing Director of Straten CSL, on behalf of the Stop Lime Down campaign in support of its representations to the Examining Authority.

Response

LV2.11: Aviation - Cumulative Green Glare

The Glint and Glare assessment submitted by Stop Lime Down [REP1-178] concludes that the RWY09 approach at Bowldown Farm and the RWY25 approach at Charlton Park each receive sustained cumulative green glare, in excess of 12,000 minutes from multiple contributing arrays. The applicant responded [REP2-039] that under the Sandia method and former Federal Aviation Administration guidance, there is no duration of green glare which is considered unacceptable from an aviation safety perspective, and the applicant therefore does not consider this to be a material cumulative effect. Furthermore, the applicant's Glint and Glare Study [APP-261] states that where solar reflections are of an intensity of 'low potential for temporary after-image' (green glare), mitigation is not required.

The Applicant:

1) *The applicant is asked to identify and submit extracts of relevant guidance supporting its position on this matter.*

Stop Lime Down:

Stop Lime Down is asked to respond to the applicant on this and explain the following:

2) *What it considers is a correct assessment of the impact significance of the green glare on these approaches? Provide references to relevant guidance and submit this guidance into the examination.*

Stop Lime Down Response:

Stop Lime Down does not suggest that all green glare is unacceptable. However, neither does the Sandia methodology conclude that green glare is always operationally acceptable. The Sandia classification simply describes the predicted intensity of the reflection; it does not assess the operational significance in the context of a particular aerodrome or flying activity.

The issue in this case is therefore not whether the glare is classified as green, but whether the extent, duration and distribution of that glare is acceptable for two airfields that rely entirely on visual flying.

Unlike larger commercial airports, Bowldown Farm and Charlton Park operate in a purely visual environment. Pilots are reliant on continuous external visual references throughout the approach and landing. Any assessment must therefore consider not only the intensity of the glare, but also how often it occurs, how long it persists, and whether pilots are exposed to glare from multiple parts of the development during a single approach.

The Applicant's assessment predicts cumulative green glare in excess of 12,000 minutes on the RWY09 approach at Bowldown Farm and the RWY25 approach at Charlton Park. Whilst the Applicant states there is no recognised threshold at which green glare becomes unacceptable, that does not mean duration is irrelevant. On the contrary, where glare is predicted for such prolonged periods, further consideration is required to determine whether the effect is operationally acceptable for the specific airfield concerned.

Stop Lime Down is also concerned that insufficient consideration has been given to the overall scale and layout of the proposed development. The assessment identifies cumulative glare from multiple arrays but does not adequately explain the operational implications of pilots encountering glare from different directions as they progress along the approach. The cumulative effect of a development spread across such a large area cannot simply be dismissed because each individual reflection falls within the 'green' category.

The CAA's Combined Aerodrome Safeguarding Team (CAST) Advice Note 5 recognises that glint and glare assessments should be considered in the context of the aerodrome and emphasises the importance of engagement with affected aerodromes. CAA CAST Advice Note 5 states that, *"the scope of a glint and glare assessment should be agreed with the relevant aerodrome where possible and that assessments should be proportionate to the operational circumstances of the aerodrome"*. The Note reinforces that an assessment cannot rely solely on generic modelling but should consider the operational environment of the affected aerodrome. In this case there is no evidence that Bowldown Farm or Charlton Park have been consulted on whether the predicted glare is operationally acceptable for their activities.

Accordingly, Stop Lime Down considers that the issue is not one of further modelling, but of further consideration of the operational impact. The current assessment does not adequately demonstrate that prolonged cumulative green glare is acceptable for these visual approaches, nor that the affected airfields have been engaged in reaching that conclusion.

3) Whether it considers that mitigation measures could reduce the impact to an operationally accommodatable level or if the impact is a result of the overall scale, spread and layout of the proposed development?

Stop Lime Down Response:

Stop Lime Down considers that the predicted impact arises principally from the overall scale, spread and layout of the proposed solar development rather than from any single array.

Whilst mitigation measures may be available in principle, their effectiveness will depend on the operational requirements of the affected airfields and cannot be assumed. Measures such as altering panel orientation, reducing the extent of particular arrays, introducing setbacks or redesigning sections of the development may reduce the effect, but these are matters for the Applicant to develop in consultation with the affected stakeholders.

The important point is that the current assessment has not demonstrated that the predicted cumulative glare can be reduced to an operationally acceptable level. Generic statements that green glare does not require mitigation are not sufficient where the predicted exposure exceeds 12,000 minutes on visual approaches and arises from a development of this scale.

Stop Lime Down therefore considers that any solution must be design-led and informed by engagement with stakeholders. If an operationally acceptable solution cannot be demonstrated, the layout of the development would need to be amended to remove or substantially reduce the source of the cumulative glare.

LV2.12 Road and Rail - Guidance

In response to Stop Lime Down's concerns [REP1-178] regarding the duration of yellow glare on road users and train drivers, the applicant [REP2-039] states that intensity of glare towards receptors is not a relevant consideration under Pager Power's glint and glare guidance. Instead, reference is made to a driver's primary field-of-view to determine whether a driver is likely to be looking in the direction of solar reflections. At deadline 4 Stop Lime Down [REP4-132] questioned the use of guidance produced by the authors of the applicant's Glint and Glare Assessment [APP-261].

The Applicant:

1) The applicant is asked to provide justification of its use of Pager Power guidance and confirm if there is any other guidance available that supports its methodology regarding the assessment of the impact on road users and train drivers.

2) The applicant is asked to submit the Pager Power guidance and other relevant guidance supporting its position.

Stop Lime Down:

3) Stop lime down are asked if there is guidance supporting the position that the duration and intensity of glare towards road users and train drivers should factor into the assessment of impact on these receptors rather than just the driver's primary field of view? If so, submit the relevant guidance.

Stop Lime Down Response:

Stop Lime Down is concerned that the Applicant has not justified its statement that there are "more relevant metrics" than reflection intensity and yellow glare when assessing impacts on road and rail users.

The Applicant does not identify what these metrics are, nor does it explain whether they are recognised or accepted by the relevant transport authorities. Whilst the FAA and Sandia methodology have evolved over many years for aviation, Stop Lime Down is unaware of any equivalent nationally recognised guidance for assessing the effects of solar glare on road or rail transport.

In the absence of nationally recognised guidance, the assessment should be based on established operational and human factors principles. The ability of a train driver or motorist to safely perceive signals, hazards and changes in the environment depends not only on where they are looking, but also on the intensity, duration, frequency and timing of any visual distraction.

A driver's primary field of view is therefore only one factor in determining an impact. A reflection that is brief and of low intensity may have little consequence, whereas one that is prolonged, repetitive or encountered at critical points along a route may increase distraction or reduce the time available to detect and respond to operational cues. For that reason, Stop Lime Down considers that intensity and duration remain relevant considerations alongside field of view.

The Applicant appears to rely on Pager Power's methodology. However, this is Pager Power's own guidance and, to the best of Stop Lime Down's knowledge, has not been independently peer-reviewed or formally adopted by any national aviation, highways or rail authority. The Applicant should therefore explain why it considers these metrics to be appropriate and sufficient.

Importantly, both the Applicant's assessment and the independent Straten CSL review identify the presence of yellow glare. The question is therefore not whether yellow glare exists, but whether its significance has been properly assessed.

The assessment quantifies the glare but does not demonstrate why the predicted effects are acceptable. Road and rail safety both rely on maintaining a driver's ability to detect, interpret and respond to operational cues such as signals, hazards, other traffic and changes in the environment. Any source of unnecessary visual distraction therefore requires careful consideration, particularly where it is predictable, repetitive or prolonged.

Stop Lime Down therefore considers that the Applicant has not demonstrated that the predicted yellow glare is acceptable using guidance recognised by the relevant transport authorities, nor that the implications have been sufficiently assessed.

Independent Review of the Pager Power Guidance (V4)

I have undertaken an independent technical review of the Pager Power Glint and Glare Guidance as part of this Examination. The purpose of this review is not to dismiss the contribution made by Pager Power or the practical experience behind its methodology, but to provide balance to the evidence presented on behalf of the Applicant.

In particular, I have considered whether the guidance, and the conclusions drawn from it, are sufficient for a development of the scale, complexity and operational context of Lime Down Solar Park.

In my opinion, generic guidance is a useful starting point for assessing glint and glare. It cannot, however, be the end point for a development of this scale and geographical extent. Lime Down comprises multiple solar arrays extending over a large area, affecting numerous aviation, road and rail receptors. Assessing the consequences of cumulative glare from multiple arrays requires a more detailed, receptor-specific and operationally focused assessment than can be achieved through the application of a generic methodology alone. I do not consider that this has been sufficiently demonstrated in the Applicant's submissions.

The Pager Power Fourth Edition provides a structured framework. It brings together optical, planning, aviation, road and railway considerations into a structured assessment process supported by receptor screening criteria and significance flowcharts.

As with any generic guidance, its value lies in providing a consistent starting point for an assessment. It should not, however, replace professional judgement, site-specific analysis or evidence, particularly where a nationally significant infrastructure project presents a level of complexity beyond that envisaged by a generic methodology. A structured methodology does not remove the need to demonstrate that the approach is appropriate for the particular receptors, environment and scale of the proposed development.

I have not seen evidence that the Pager Power methodology has been approved or endorsed by the CAA, DfT, National Highways, Network Rail or any other recognised authority. Nor have I seen evidence of independent peer review, formal technical validation, or acceptance as best practice or as a national or international standard.

Pager Power refers to the number of assessments it has undertaken, and that practical experience is relevant. However, the volume of work undertaken by a consultancy should not be confused with independent validation or accepted best practice. It demonstrates commercial experience rather than technical endorsement.

Equally, widespread use of a methodology through repeated planning submissions does not, in itself, establish technical validity or industry acceptance; it may simply reflect market adoption rather than independent verification. In my view, best practice requires wider scrutiny, transparent technical validation and, ideally, acceptance by the relevant competent authorities. That has not been demonstrated and, accordingly, claims that the methodology represents "best practice" should be treated with caution.

Many of the underlying principles are drawn from publicly available FAA, Sandia, CAA, planning and railway guidance, or simply reflect well-established optical and human factors principles. The more distinctive elements of the methodology, particularly the receptor screening distances and significance classifications, appear to represent Pager Power's own professional judgement. Whilst these provide a

structured framework, they should not be regarded as authoritative thresholds without clear technical justification or agreement from the relevant stakeholder.

The methodology also provides no objective threshold at which cumulative glare can be considered unacceptable, leaving the final judgement largely dependent on professional interpretation. This becomes particularly important where a development extends over several kilometres and affects multiple receptors, as is the case at Lime Down.

These limitations are reflected in the Applicant's assessment of Lime Down. Whilst the methodology identifies where glint and glare may occur, it provides little guidance on how the consequences should be assessed where a development extends over several kilometres and multiple arrays contribute to cumulative effects. In particular, it does not adequately address how a pilot, train driver or motorist may experience repeated reflections from different parts of the development during a single movement, nor how those cumulative exposures should be evaluated in an operational context.

More fundamentally, the methodology stops short of applying recognised safety and human factors principles. Across aviation, rail and road transport, safety assessments are not based solely on identifying the presence of a hazard, but on understanding the relationship between exposure, likelihood, consequence and the ability of the operator to safely complete the task.

Human performance, workload, distraction, visual adaptation and the potential severity of an adverse outcome are all recognised considerations in determining risk. Simply assigning glare to a particular category within the methodology does not, in itself, demonstrate that the predicted effect is acceptable. That judgement requires consideration of the environmental context, the nature of the task being undertaken, human performance and the potential consequences should the glare affect the operator. In my opinion, this is a significant omission for a development of the scale and complexity of Lime Down.

The guidance is also now dated in an important respect. Published in September 2022, it does not reflect the latest [CAA guidance](#)¹ issued through CAST, which promotes a more proportionate and evidence-based approach to aviation safeguarding and makes clear that no single assessment methodology is mandated. The current CAA position places greater emphasis on the operational context of each development and the requirements of the affected aerodrome, rather than reliance on generic screening distances or significance criteria. In that respect, the guidance no longer fully reflects current regulatory thinking and should not be relied upon as representing the current position of the CAA.

Finally, the document's confidential status and restrictions on disclosure (page 3) sit uncomfortably alongside its stated objective of providing guidance for planners, developers and stakeholders. Guidance intended for general industry use should be openly accessible, capable of independent scrutiny and reproducible by others. In its present form, the document is more accurately described as a proprietary consultancy methodology than open industry guidance.

Overall, I consider the document's confidential status as not a technical deficiency. However, it does limit independent scrutiny of the methodology and the assumptions on which significance is determined. That is particularly important where the methodology is relied upon to conclude that impacts are acceptable. Without wider peer review or regulatory scrutiny, there remains a risk that embedded assumptions or

¹ There are a number of CAST publications pertaining to safeguarding of an aerodrome and associated early engagement of developers with airport authorities.

significance criteria may under-assess effects, particularly for developments of the scale and complexity of Lime Down.

For a nationally significant infrastructure project of the scale of Lime Down Solar Park, reliance on a generic methodology alone is, in my opinion, insufficient. The assessment should instead be supported by a more detailed, receptor-specific and focused evaluation that demonstrates how predicted glint and glare effects translate into real consequences for the receptors affected by the proposed development.

I would make one further observation. Throughout this Examination, there has been a tendency to rely on the output of a recognised methodology as evidence that the assessment itself is complete. In my opinion, the opposite is true. The methodology is only the means by which an assessment begins. The robustness of the assessment depends on how well it addresses the specific environment, the sensitivity of the receptors and the real-world consequences of the predicted effects. For a project of this scale, that level of analysis is essential and, in my view, has not been adequately demonstrated.



APPENDIX C

SPREADSHEET OF HGV FREQUENCY FOSSE WAY – BRADFIELD COTTAGES



Fosse Way

Journey Time Along Construction Route		
Average Speed	25	mph
Average Speed	40.2335	km/h
Average Speed	11.17597222	m/s
Route Length	3100	metres
Journey Time	277	Seconds
Minutes	4.623013161	Minutes

Existing HGV Flows	Northbound	Southbound
Peak Construction Hour (see Appendix F of TA)	2	1

Proposed HGV Flows	Northbound	Southbound
Peak Construction Hour (see Appendix F of TA)	4	4

Combined HGV Flows	Northbound	Southbound
Peak Construction Hour	6	5

Vehicles per Period	Northbound	Southbound
Vehicles per second	0.00167	0.00139
Vehicles per Period (i.e. 277s)	0.46230	0.38525

Number of HGV's meeting another in 1 hour	2.31
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Chance of HGV meeting another along the route	1 in	5
Chance of HGV not meeting another along the route		79%

Bradfield Cottage

Journey Time Along Construction Route		
Average Speed	25	mph
Average Speed	40.2335	km/h
Average Speed	11.17597222	m/s
Route Length	980	metres
Journey Time	88	Seconds
Minutes	1.461468677	Minutes

Existing HGV Flows	Northbound	Southbound
Peak Construction Hour (see Appendix F of TA)	7	4

Proposed HGV Flows	Northbound	Southbound
Peak Construction Hour (see Appendix F of TA)	3	3

Combined HGV Flows	Northbound	Southbound
Peak Construction Hour	10	7

Vehicles per Period	Northbound	Southbound
Vehicles per second	0.00278	0.00194
Vehicles per Period (i.e. 277s)	0.24358	0.17050

Number of HGV's meeting another in 1 hour	1.71
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Chance of HGV meeting another along the route	1 in	10
Chance of HGV not meeting another along the route		90%



APPENDIX D

MODELLING ENHANCED RUNOFF FROM SOLAR PANELS AT LIME DOWN FARM



Modelling Enhanced Runoff from Solar Panels at Lime Down Solar Farm

¹Richard Skeffington

Summary

1. This study uses the only model of runoff from solar panel areas which has been validated against measured data, to estimate whether runoff is enhanced from solar panel areas at Lime Down. The model is parameterized from the Applicant's measured soil data and from the National Soil Map. The Applicant's asserts that sowing and maintaining a diverse grass sward under the panel drip lines is sufficient to control runoff and prevent flooding off-site. The model demonstrates that this is only true for one of the soils on site. For the other four soil series, probable rainfall events lead to enhanced runoff from the panel areas. This will increase flood risk to houses and infrastructure both on- and off-site. This will particularly affect the small communities in Foxley and Rodbourne Bottom, but also potentially larger communities in Malmesbury and downstream at Chippenham, Melksham and Bradford on Avon. The Applicant's assumption that solar panel runoff can be mitigated means that they have provided no assessment of these risks. The analysis also shows that using unusually large panels increases the risks of runoff, as does constructing the panel areas in a fixed orientation irrespective of the natural slope direction. The current flood sensitivity of the area and the presence of a large area of sensitive soils means that Lime Down is unsuitable for large-scale solar development.

Introduction

2. A central pillar of the Applicant's Flood Risk Assessments for Lime Down, repeated numerous times, is that as solar panels drain to the existing ground and utilize existing flowpaths, there is therefore no risk that flood risk off-site will be increased. Stop Lime Down's Written Representation, Appendix F2 [REP1-175] contains a review of the academic literature on solar panel runoff which challenges this view. The Summary states "*...studies using a variety of models, including the only models tested against data, consistently show that the panels can increase runoff given certain conditions. The panels alter the distribution of rainwater, concentrating it on their lower edge, typically into drip points. Measured concentration factors averaged 5 to 10 times rainfall, though concentrations up to 23 times were measured in individual storms. To avoid enhancement of runoff and erosion, the soil under the drip line has to be able to adsorb this water and transmit it to areas where it can percolate into the groundwater or an engineered drainage system. If the soil infiltration capacity is exceeded, surface runoff can occur, leading to increased runoff volumes and higher flood peaks. Soils with a low infiltration capacity, low hydraulic conductivity and low storage capacity are particularly vulnerable to generating excess runoff, and it is suggested that solar developers should avoid these. Maintaining an adequate vegetation cover under the panels is essential, but may not be adequate with poor soil conditions.*" This note describes the application of a model of runoff from solar panels to Lime Down Solar Farm, and explores the implications of the results.
3. Models which have been tested against real data offer the most reliable way to predict the effects of solar panels on runoff. Mulla et al (2024) [1] measured soil hydrological values at 5

contrasting solar sites across the USA, with annual rainfall rates varying from 406 mm to 1245 mm (compare Lime Down 820 - 875 mm). They built a hydrological model based on the observed facts: that solar panels collect and concentrate runoff along a drip edge; that this water percolates into the soil and migrates both downwards and laterally; that the open area between panel rows is available for water infiltration; and that the dry area under the rows of panels is also available for infiltration. They applied an established soil hydrology model, Hydrus-3D, to this framework, and calibrated it to each of the five sites. Their model gave good simulations of the observed soil moisture parameters during subsequent storm events. Subsequently they developed a model, the PV-SMaRT Solar Runoff Calculator, which allows the calculation of additional runoff from solar panels (if any) and the effects on runoff of rainfall rate, soil characteristics, slope, vegetation characteristics, panel size, spacing and orientation. This is the model used for this study.

4. The model is based on the Curve Number (CN) method, a widely used empirical technique for estimating the volume of surface runoff from a rainfall event, based on land use, soil type, and antecedent moisture conditions. It was originally developed by the US Soil Conservation Service in the 1950s, but is now used all round the world as a method of scoping the amount of surface runoff. Instead of using a purely empirical relationship as in the original method, PV-SMaRT is based on a large set of model runs by a numerical hydrological model, Hydrus 2D/3D, which was used to develop exponential regression equations relating soil texture, soil bulk density, and soil depth to a runoff CN. In the model, the CNs are then modified by the factors rainfall rate, slope, vegetation characteristics, panel size, spacing and orientation based on data from the PV-SMaRT study and literature values. The model can then be run without re-running the complex and time-consuming hydrological model on each occasion.
5. PV-SMaRT is the only publicly-available model of solar panel runoff which has been validated against real data from actual solar farms. In this application it has been parameterized using data from Lime Down and used to explore whether the Applicant's assertions that solar panel runoff can be controlled solely by planting grass swards under panels are valid. It has also been used to explore the type of vegetation which might be most effective, the areas and soil types which would be most at risk, and the effects of panel size and orientation on runoff.

Methods

6. The model used was the PV-SMaRT Solar Runoff Calculator v3.1 derived from the Photovoltaic Stormwater Management Research and Testing (PV-SMaRT) Project, kindly supplied by the University of Minnesota, USA. The model is based on work by Mulla et al, 2024 [1], and is described by Galzki and Mulla, 2024 [2].
7. The model requires input of a number of parameters. Their source and justification are described below.

Soils

8. There are five soil series in the Lime Down Area, identified in the National Soil Map [3], and shown on Figure 1.

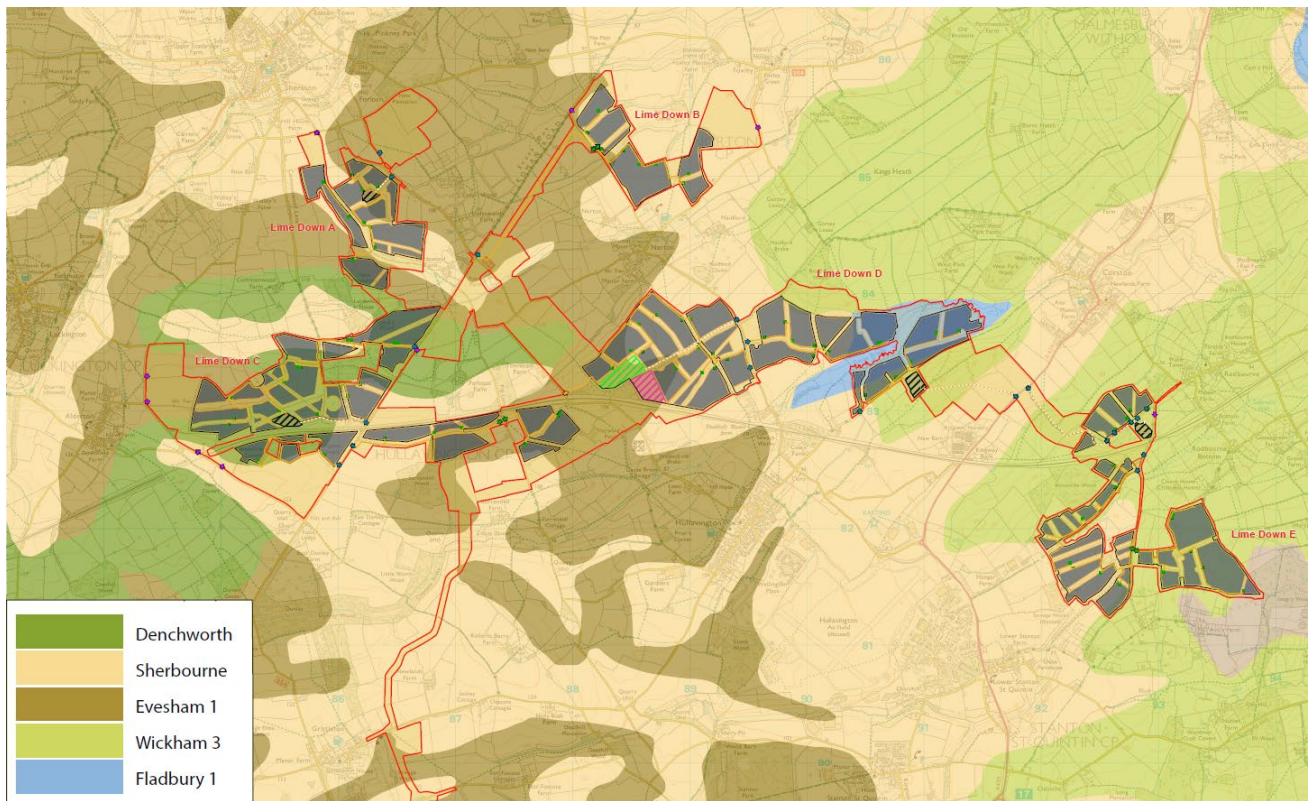


Figure 1 Soil series on the Lime Down Site from the National Soil Map. Solar panel areas are shown in grey. Soils data ©Cranfield University 2026.

9. Soil descriptions from [4] are:

- a. Denchworth – *slowly permeable, seasonally waterlogged clayey soil*
- b. Sherbourne – *shallow well-drained brashy permeable clayey soils over limestone*
- c. Evesham 1 – *slowly permeable calcareous clayey soils*
- d. Wickham 3 - *slowly permeable seasonally waterlogged fine loamy over clayey and coarse loamy over clayey soils and similar more permeable soils with slight waterlogging*
- e. Fladbury 1 - *stoneless clayey soils, in places calcareous variably affected by groundwater*

10. It will be noted that all soils are described as “clayey” and only Sherbourne is “well-drained”.

11. The model requires a number of soil measurements, but these are best derived from measured on-site data (see below). The soil series have been used (a) to categorise areas for study and (b) to estimate depth to a slowly permeable layer, which is required for the model. Typical depths for each soil series are given in [4] and shown with the other input data in Table 1. The smallest permissible depth for the model is 30.5 cm, which was used for the Evesham 1 and Denchworth series – typical depths from [4] are given in brackets.

12. Other soil data was sourced from the detailed soil analyses in the Applicant’s Environmental Statement. Soil sample data is from Annex A in Appendix 17-1 Agricultural Land Classification and Soil Resource Survey Report [APP-243]. The locations of soil samples were identified from Figure 17-3 [APP-173]. The data required for the model are texture and bulk density. Texture

is given in [APP-243], bulk density can be calculated from the data in Annex A using a pedotransfer function for cultivated topsoils in [5], Table 5. This is the standard pedotransfer function for European soils. The high clay content of most sites mean that the bulk densities are rather low.

13. The soil data used are shown in Table 1

Site Numbers	Lime Down Site	Soil Series	Depth (cm)	Texture	Bulk Density (gcm ⁻³)	Observation Sites [APP-173]
1	A	Evesham 1	30.5 (24)	Clay Loam	1.24	73,77
2	B	Sherbourne	150	Clay	1.05	106, 293, 386, 390, 402
3	C	Denchworth	30.5 (27)	Clay	1.13	334, 350, 378
4	D	Sherbourne	150	Clay	1.05	106, 293, 386, 390, 402
5	D	Fladbury 1	54	Clay	1.04	128
6	E	Wickham 3	38	Clay Loam	1.23	150
7	E	Wickham 3	38	Sandy Loam	1.47	196

Table 1: Soil Data Used in the Model.

Other Parameters

14. The model offers a number of ground cover types for the panels [2]. Results were calculated for three types - a diverse pollinator mixture, which is what the Applicant is proposing to sow (see Outline Landscape and Ecological Management Plan [REP3-100] §1.3.86 to 1.3.105); turf grass, which is shallow-rooted, mowed grass coverage; and mature grassland ("prairie" as this is an American model), representing continuous grassland protected from grazing. The model instructions state that the sown sward might approximate to this in a few years.
15. Two panel sizes were simulated: 4.85 m high corresponding to the tracking panels, and 2.46 m high representing a more normal-sized panel (ES Appendix 3.3 [REP1A-004] §1.4).
16. Spacing between the panels was 7.62 m, a slight increase in the minimum spacing of 7.35 m derived from Table 3-1, ES Ch3, p.7 [APP-055].
17. Two options were assessed for the position of arrays on the slope – following the slope contours or a 50-50 mixture of following the slope contours and perpendicular to the slope.
18. The % slope was fixed at 2°. Below 5° this parameter has little effect on model output [2].
19. The model assesses a 24-hour precipitation event. Rainfall assessed was 10, 20, 30, 40, and 50 mm in the 24 hours. A 50 mm event would have a return period of 20-40 years [6].
20. The soil is assumed to be at field capacity at the start of the event. The catchment is in this condition from 171 to 188 days per year [APP-243] Table 1, representing the time that the area is vulnerable to flooding.

Licenses

21. The PV-SMaRT Runoff Calculator Version 3.1 was funded by a DOE grant to NREL, GPI and the University of Minnesota under contract DE-AC36-08GO28308.
22. Soils data originated from the Cranfield University, Land Information System LandIS® Portal [NSI Explorer 23.03.2026] as Public Data 2026, subject to the LandIS Portal Open Licence.

Results

24. Selected results are shown in Figures 2 to 6. These show the increase in runoff (mm) due to the presence of solar panels at 7 sites. Daily rainfall increases from 10 mm (Fig. 2) to 50 mm (Fig. 6). Results for the large (tracker) panels and smaller conventional panels are shown. The ground cover was the diverse pollinator mixture, the panels were arranged parallel to the slope, and the slope angle was 2°.

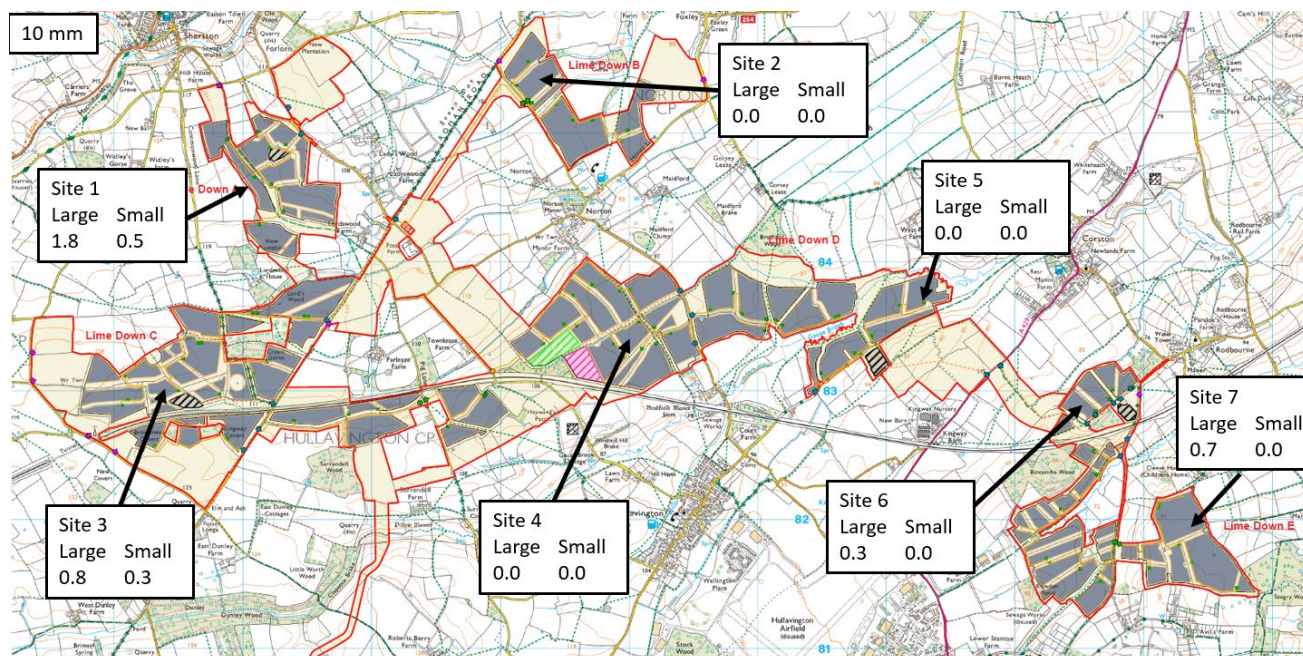


Figure 2: Runoff increase (mm) due to solar panels from a rainfall event depositing 10 mm in 24 h. Panel sizes are large (tracking) or small (conventional).

25. Runoff is small at this modest rainfall rate, with the smaller panels mostly producing none at all. The very shallow clayey soils on the west side do however generate a little even at this rate, which could be expected several times a year.

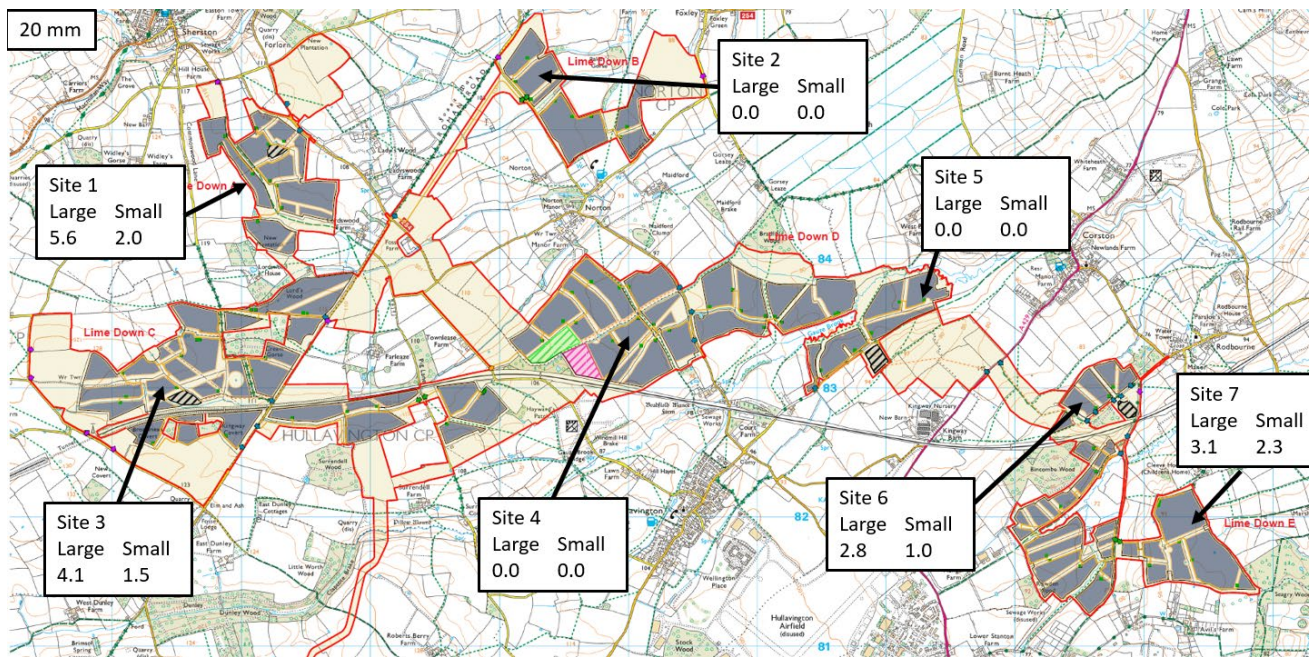


Figure 3: Runoff increase (mm) due to solar panels from a rainfall event depositing 20 mm in 24 h. Panel sizes are large (tracking) or small (conventional).

26. At 20 mm, the deeper soils of the Sherborne and Fladbury 1 series are still producing no runoff. On the other soils, the increase due to the large panels is becoming clear.

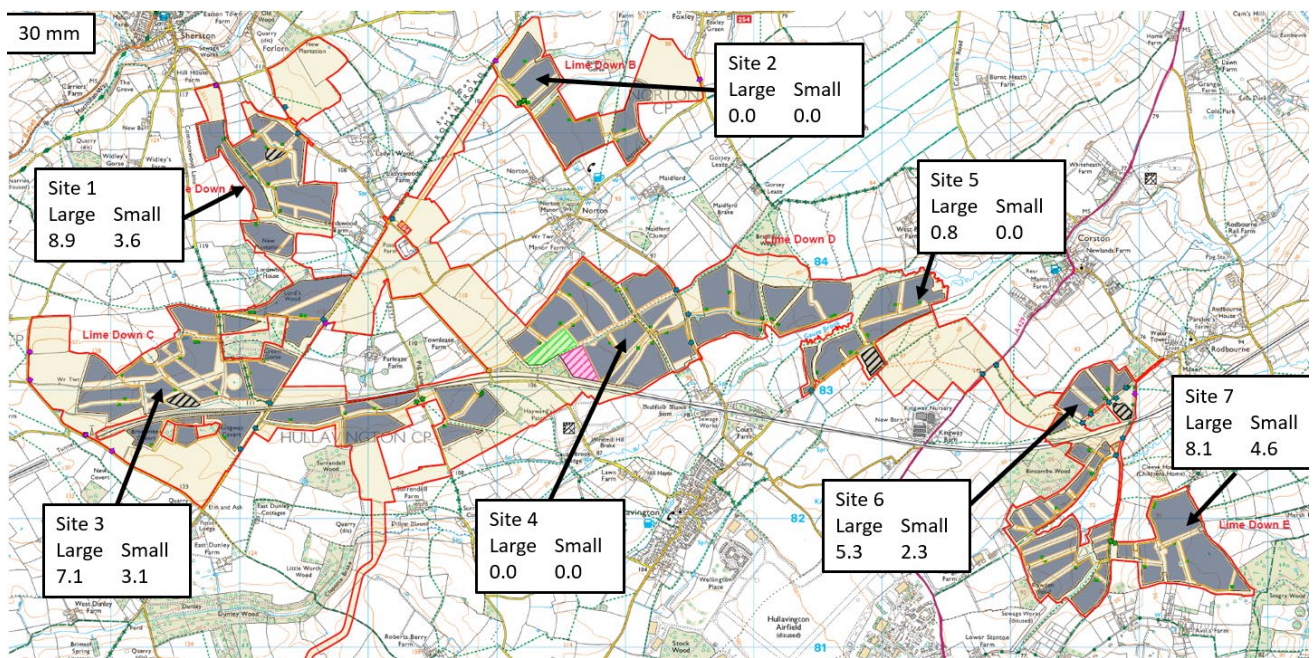


Figure 4: Runoff increase (mm) due to solar panels from a rainfall event depositing 30 mm in 24 h. Panel sizes are large (tracking) or small (conventional).

27. At 30 mm, the large panels on the Fladbury 1 series now produce a little runoff, but the Sherbourne series still produces nothing. Runoff from the sandy soils of the Wickham 3 series

in Area E (Site 7) now overtakes the clay Denchworth soil in Area C as having the second highest runoff.

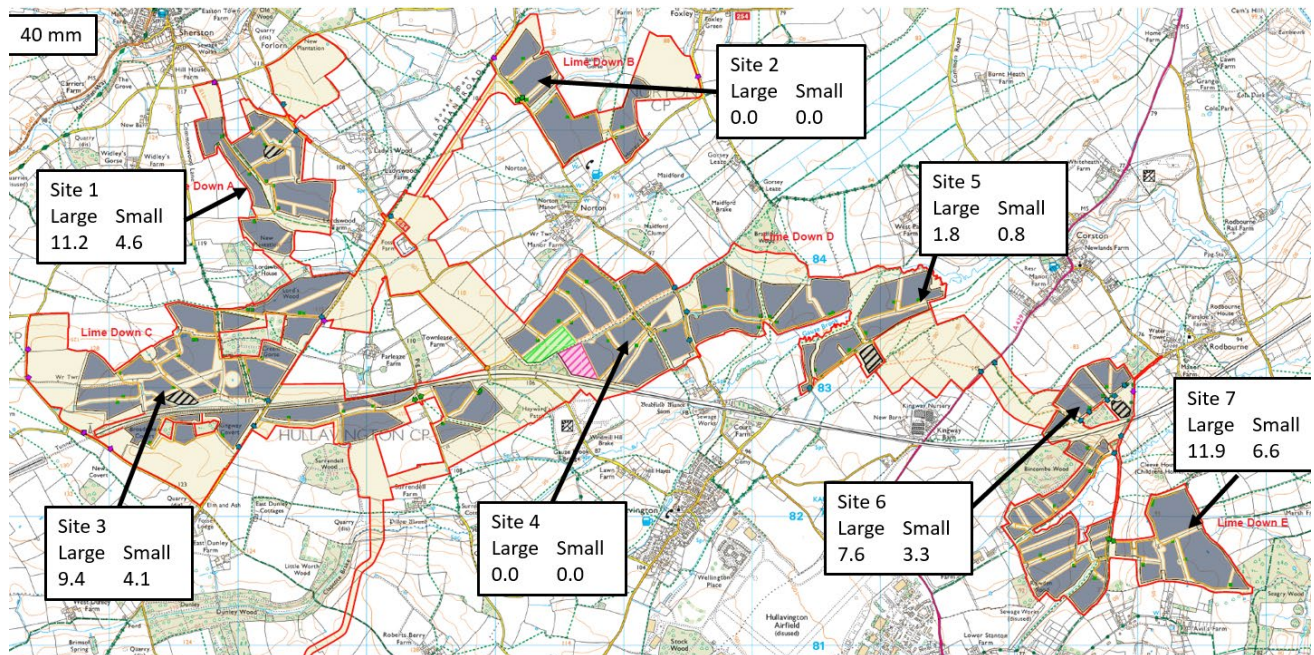
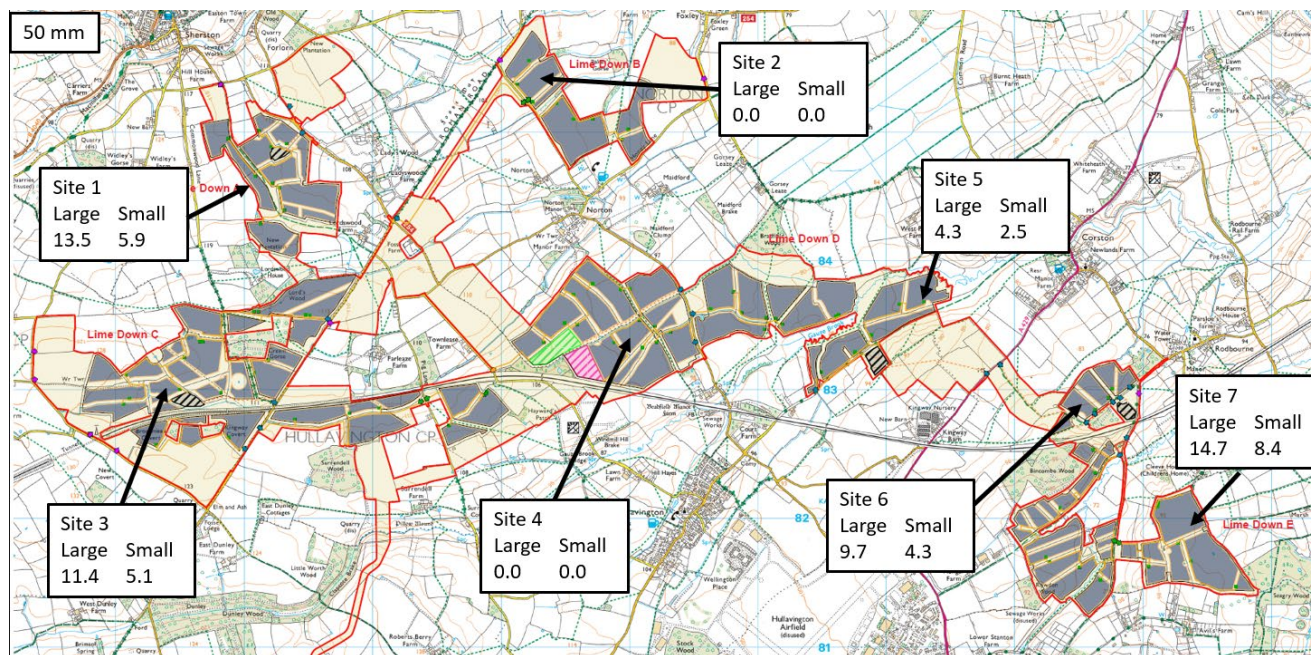


Figure 5: Runoff increase (mm) due to solar panels from a rainfall event depositing 40 mm in 24 h. Panel sizes are large (tracking) or small (conventional).

28. At 40 mm rain, Site 7, Area E now has the highest runoff, closely followed by the shallow clay soil in Site A.



29. Figure 6: Runoff increase (mm) due to solar panels from a rainfall event depositing 50 mm in 24 h. Panel sizes are large (tracking) or small (conventional).

30. At 50 mm rain, there is still no runoff from the Sherbourne series in the middle of Lime Down, and this would be true also from the Sherbourne series in the middle of Site E. On the other sites, however, enhanced runoff from the panels is substantial. This contradicts the Applicant's assertions that planting an appropriate seed mix under the panel driplines would be sufficient to eliminate any flood risk off-site.

31. The detailed results are given in the Tables below, and are discussed in the next section.

	Site 1	Lime Down A	Evesham 1 series		Along Contours			Site 1	Lime Down A	Evesham 1 series		Along & across Contours	
	Input	Output (mm)						Input	Output (mm)				
	(mm)		Tracker Panels		Smaller Panels			(mm)		Tracker Panels		Smaller Panels	
Sward		Without Panels	With Panels	Increase	With Panels	Increase			Without Panels	With Panels	Increase	With Panels	Increase
Diverse	10	0.00	1.78	1.78	0.51	0.51		10	0.00	10.00	10.00	3.56	3.56
	20	2.54	8.13	5.59	4.57	2.03		20	2.54	20.00	17.46	11.43	8.89
	30	7.11	16.00	8.89	10.67	3.56		30	7.11	30.00	22.89	20.57	13.46
	40	13.46	24.64	11.18	18.03	4.57		40	13.46	40.00	26.54	29.97	16.51
	50	20.57	34.04	13.47	26.42	5.85		50	20.57	50.00	29.43	39.62	19.05
Turf	10	0.76	7.87	7.11	2.54	1.78							
	20	5.33	17.78	12.45	9.65	4.32							
	30	12.19	27.69	15.49	18.03	5.84							
	40	19.81	37.59	17.78	27.18	7.37							
	50	28.45	47.75	19.30	36.83	8.38							
Mature	10	0.00	0.25	0.25	0.00	0.00							
	20	0.76	3.05	2.29	1.52	0.76							
	30	3.56	8.13	4.57	5.33	1.78							
	40	7.87	14.73	6.86	10.92	3.05							
	50	13.46	22.35	8.89	17.27	3.81							

Table 2: Detailed results from Site 1, Lime Down A.

32. The increase due to solar panels is highlighted in blue. The left-hand table shows modelled runoff at five rainfall input intensities, with and without panels, with three levels of ground cover: a diverse sward which is what the Applicant intends to establish; mown turf grass; and mature grassland protected from grazing. Two sizes of panel are simulated: large tracker panels and smaller conventional panels. Panels are arranged parallel to slope contours. The right-hand table shows the same with panels arranged both along and across the slope, just for the diverse grassland.

	Sites 2, 4	Lime Down B,D	Sherbourne series		Along Contours			Sites 2, 4	Lime Down B,D	Sherbourne series		Along & across Contours	
	Input	Output (mm)						Input	Output (mm)				
	(mm)		Tracker Panels		Smaller Panels			(mm)		Tracker Panels		Smaller Panels	
Sward		Without Panels	With Panels	Increase	With Panels	Increase			Without Panels	With Panels	Increase	With Panels	Increase
Diverse	10	0.00	0.00	0.00	0.00	0.00		10	0.00	0.00	0.00	0.00	0.00
	20	0.00	0.00	0.00	0.00	0.00		20	0.00	0.00	0.00	0.00	0.00
	30	0.00	0.00	0.00	0.00	0.00		30	0.00	0.00	0.00	0.00	0.00
	40	0.00	0.00	0.00	0.00	0.00		40	0.00	0.00	0.00	0.00	0.00
	50	0.00	0.00	0.00	0.00	0.00		50	0.00	0.00	0.00	0.00	0.00
Turf	10	0.00	0.00	0.00	0.00	0.00							
	20	0.00	0.00	0.00	0.00	0.00							
	30	0.00	0.00	0.00	0.00	0.00							
	40	0.00	0.00	0.00	0.00	0.00							
	50	0.00	0.51	0.51	0.25	0.25							
Mature	10	0.00	0.00	0.00	0.00	0.00							
	20	0.00	0.00	0.00	0.00	0.00							
	30	0.00	0.00	0.00	0.00	0.00							
	40	0.00	0.00	0.00	0.00	0.00							
	50	0.00	0.00	0.00	0.00	0.00							

Table 3: Detailed results from Sites 2 and 4, Lime Down B and D. Legend as in Table 2 above.

	Site 3	Lime Down C	Denchworth series		Along Contours			Site 3	Lime Down C	Denchworth series		Along & across Contours			
	Input	Output (mm)							Input	Output (mm)					
	(mm)		Tracker Panels		Smaller Panels			(mm)		Tracker Panels		Smaller Panels			
Sward		Without Panels	With Panels	Increase	With Panels	Increase			Without Panels	With Panels	Increase	With Panels	Increase		
Diverse	10	0.00	0.76	0.76	0.25	0.25		10	0.00	5.59	5.59	1.78	1.78		
	20	1.78	5.84	4.06	3.30	1.52		20	1.78	14.73	12.95	8.13	6.35		
	30	5.59	12.70	7.11	8.64	3.05		30	5.59	24.38	18.80	16.26	10.67		
	40	11.18	20.57	9.40	15.24	4.06		40	11.18	34.04	22.86	24.89	13.72		
	50	17.78	29.21	11.43	22.86	5.08		50	17.78	44.20	26.42	34.04	16.26		
Turf	10	0.25	3.81	3.56	1.27	1.02									
	20	3.81	12.45	8.64	6.86	3.05									
	30	9.65	21.59	11.94	12.70	3.05									
	40	16.76	30.99	14.22	22.61	5.84									
	50	24.64	40.89	16.26	31.75	7.11									
Mature	10	0.00	0.00	0.00	0.00	0.00									
	20	0.25	2.03	1.78	1.02	0.76									
	30	2.54	6.60	4.06	4.32	1.78									
	40	6.35	12.19	5.84	8.89	2.54									
	50	11.43	19.30	7.87	14.99	3.56									

Table 4: Detailed results from Site 3, Lime Down C.

33. The increase due to solar panels is highlighted in blue. The left-hand table shows modelled runoff at five rainfall input intensities, with and without panels, with three levels of ground cover: a diverse sward which is what the Applicant intends to establish; mown turf grass; and mature grassland protected from grazing. Two sizes of panel are simulated: large tracker panels and smaller conventional panels. Panels are arranged parallel to slope contours. The right-hand table shows the same with panels arranged both along and across the slope, just for the diverse grassland.

	Site 5	Lime Down D	Fladbury series		Along Contours			Site 5	Lime Down D	Fladbury series		Along & across Contours	
	Input (mm)	Output (mm)						Input (mm)	Output (mm)				
		Tracker Panels		Smaller Panels					Tracker Panels		Smaller Panels		
Sward		Without Panels	With Panels	Increase	With Panels	Increase			Without Panels	With Panels	Increase	With Panels	Increase
Diverse	10	0.00	0.00	0.00	0.00	0.00		10	0.00	0.00	0.00	0.00	0.00
	20	0.00	0.00	0.00	0.00	0.00		20	0.00	0.25	0.25	0.00	0.00
	30	0.00	0.76	0.76	0.00	0.00		30	0.00	2.03	2.03	1.02	1.02
	40	1.02	2.79	1.77	1.78	0.76		40	1.02	5.33	4.31	3.81	2.79
	50	2.03	6.35	4.32	4.57	2.54		50	2.03	10.16	8.13	7.62	5.59
Turf	10	0.00	0.00	0.00	0.00	0.00							
	20	0.00	0.25	0.25	0.00	0.00							
	30	0.76	2.29	1.52	1.27	0.51							
	40	2.79	6.10	3.30	4.06	1.27							
	50	6.10	10.92	4.83	8.38	2.29							
Mature	10	0.00	0.00	0.00	0.00	0.00							
	20	0.00	0.00	0.00	0.00	0.00							
	30	0.00	0.00	0.00	0.00	0.00							
	40	0.00	0.76	0.76	0.25	0.25							
	50	1.02	2.54	1.52	1.78	0.76							

Table 5: Detailed results from Site 5, Lime Down D. Legend as in Table 4 above.

	Site 6	Lime Down E	Wickham 3 series		Along Contours			Site 6	Lime Down E	Wickham 3 series		Along & across Contours	
	Input	Output (mm)						Input	Output (mm)				
	(mm)		Tracker Panels		Smaller Panels			(mm)	Combination	Tracker Panels		Smaller Panels	
Sward		Without Panels	With Panels	Increase	With Panels	Increase			Without Panels	With Panels	Increase	With Panels	Increase
Diverse	10	0.00	0.25	0.25	0.00	0.00		10	0.00	2.54	2.54	0.76	0.76
	20	1.02	3.81	2.79	2.03	1.02		20	1.02	9.65	8.64	5.33	4.32
	30	4.06	9.40	5.33	6.35	2.29		30	4.06	18.03	13.97	12.19	8.13
	40	8.89	16.51	7.62	12.19	3.30		40	8.89	26.92	18.03	19.81	10.92
	50	14.73	24.38	9.65	19.05	4.32		50	14.73	36.58	21.84	28.45	13.72
Turf	10	0.00	1.78	1.78	0.51	0.51							
	20	2.54	8.13	5.59	4.57	2.03							
	30	7.11	16.00	8.89	10.67	3.56							
	40	13.21	24.64	11.43	18.03	4.83							
	50	20.57	33.78	13.21	26.42	5.84							
Mature	10	0.00	0.00	0.00	0.00	0.00							
	20	0.00	1.27	1.27	0.51	0.51							
	30	1.78	4.83	3.05	3.05	1.27							
	40	4.83	9.65	4.83	7.11	2.29							
	50	9.40	16.00	6.60	12.19	2.79							

Table 6: Detailed results from Site 6, Lime Down E.

34. The increase due to solar panels is highlighted in blue. The left-hand table shows modelled runoff at five rainfall input intensities, with and without panels, with three levels of ground cover: a diverse sward which is what the Applicant intends to establish; mown turf grass; and mature grassland protected from grazing. Two sizes of panel are simulated: large tracker panels and smaller conventional panels. Panels are arranged parallel to slope contours. The right-hand table shows the same with panels arranged both along and across the slope, just for the diverse grassland.

	Site 7	Lime Down E	Wickham 3 series		Along Contours			Site 7	Lime Down E	Wickham 3 series		Along & across Contours	
	Input (mm)		Output (mm)					Input (mm)		Output (mm)			
			Tracker Panels		Smaller Panels					Tracker Panels		Smaller Panels	
Sward		Without Panels	With Panels	Increase	With Panels	Increase			Without Panels	With Panels	Increase	With Panels	Increase
Diverse	10	0.00	0.76	0.76	0.00	0.00		10	0.00	1.02	1.02	0.25	0.25
	20	0.76	5.33	4.57	3.05	2.29		20	0.76	6.10	5.33	3.30	2.54
	30	3.56	11.94	8.38	8.13	4.57		30	3.56	12.95	9.40	8.64	5.08
	40	7.87	19.81	11.94	14.48	6.60		40	7.87	21.08	13.21	15.49	7.62
	50	13.72	28.45	14.73	22.10	8.38		50	13.72	29.72	16.00	23.11	9.40
Turf	10	0.00	3.30	3.30	1.02	1.02							
	20	2.03	11.43	9.40	6.35	4.32							
	30	6.35	20.32	13.97	13.72	7.37							
	40	12.19	29.72	17.53	21.84	9.65							
	50	19.05	39.37	20.32	30.73	11.68							
Mature	10	0.00	0.00	0.00	0.00	0.00							
	20	0.00	2.03	2.03	0.76	0.76							
	30	1.52	6.10	4.57	4.06	2.54							
	40	4.32	11.94	7.62	8.64	4.32							
	50	8.64	18.54	9.91	14.48	5.84							

Table 7: Detailed results from Site 7, Lime Down E. Legend as in Table 6 above.

Discussion

35. According to the PVSMaRT Model, the Applicant's assertion that sowing and maintaining a diverse grass sward under the panel drip lines is sufficient to control runoff and prevent flooding off-site is true only on the more permeable Sherbourne soil series which runs through the middle of the site. On this soil type, runoff only appears at the highest rainfall intensity on the poorest-performing grass sward (turf grass - Table 3). On all other soil types, increasing amounts of runoff appear as the rainfall intensity increases (Figures 2-6, Tables 2-7). Except

for the Fladbury 1 series, runoff even appears on these soils at 10 mm rainfall per day (Fig. 2), a value that can be expected several times a year. The two existing solar farms in the Lime Down catchment, at Hullavington and Rodbourne, are both located on the more permeable Sherbourne series, and even they are not without erosion problems (e.g. [7]). Figure 7, adapted from [1], shows the contrast between the response of a permeable soil such as Sherbourne and a shallow less permeable soil, albeit for a more intense event than simulated in this report.

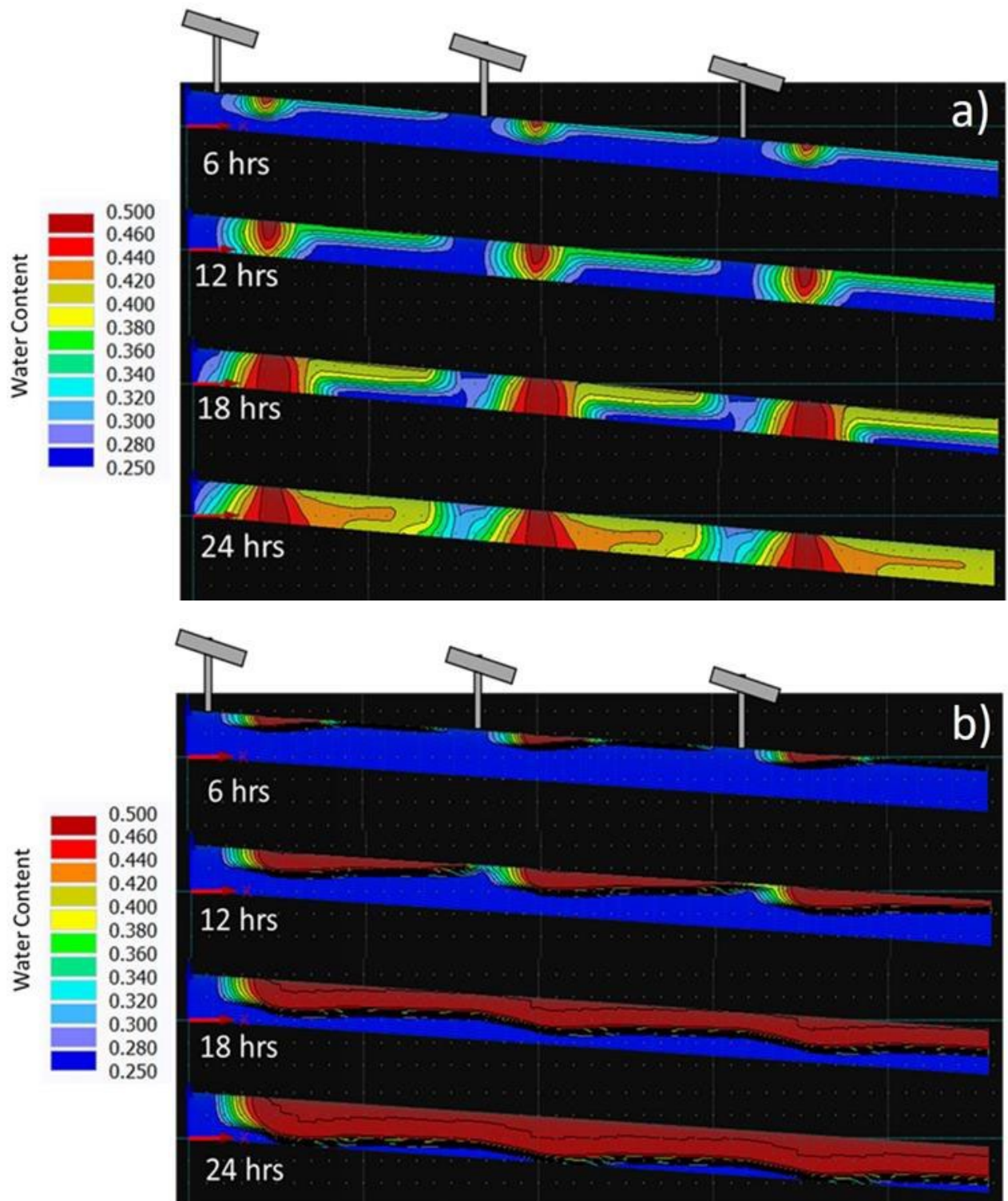


Fig. 7. PV-SMaRT - Simulated runoff from a 100-year design storm on a permeable soil (a) and a less permeable soil (b). From [1] Supplementary Material Fig. S5. Reproduced with permission.

36. In the permeable soil (a) the soil under the dripline saturates within 6 hours, and water starts to spread downslope. However, the space between the panels is capable of absorbing this water, and although it becomes progressively wetter, the amount of downward percolation means that there is always a low-water content gap between the panel rows even after 24 hours. This will prevent overland flow and erosion. In the shallow, less permeable soil (b) the same processes occur, but the low downward percolation rate means that the surface soil saturates more quickly and the dry gap between the rows disappears after 12 hours. In these circumstances, there is a connected hydrological pathway for water to flow over the surface and in the superficial layers, leading to enhanced runoff into receiving watercourses and the risk of rill and gully erosion. This will be the circumstance for the Evesham 1, Denchworth and Wickham 3 soils at Lime Down, and also any soils where percolation has been reduced sufficiently by compression.
37. Tables 2 to 7 also show the importance of ground cover. The newly-planted diverse sward mitigates the runoff to some extent, and would be much better than bare soil or gravel. It is also better than shallow-rooted mown grass ("turf"), which is the ground cover at many solar farms established on former arable land, but not as good as mature grassland which is protected from grazing. Protection from grazing and careful maintenance would be essential to maintain the hydrologically-protective functions of the ground cover, but this is not secured by the provisions of the Outline Landscape and Ecological Management Plan [REP3-100] §1.3.86 to 1.3.105, where grazing is mooted as a management option. Even with the best ground cover, however, the sensitive soils do not offer sufficient protection from runoff generation.
38. The Tables and Figures also clearly show that the large tracking panels enhance runoff compared to conventionally-sized ones. Given the lack of experience of panels of this size in the UK, this must be taken as a serious additional risk.
39. Finally, the orientation of the panels on the slope is shown to be an important factor. The tracking panels are designed to be oriented in North-South arrays, whereas the Cotswold dip slope where Lime Down is located is generally West to East. This means that the panels will tend to be mounted in arrays which are oriented up and down the slope, rather than along the contours. This is important because it means that the direction of water flow is not at right angles to the arrays, as assumed in Fig. 7, and this reduces the proportion of ground under the panels and between the rows which is available to assimilate excess water. In the worst case, the panel drip lines will align down the slope without any dry ground in between, leading to a high probability of rill erosion and excess runoff. The PV-SMaRT simulations assume 50% along slope and 50% cross slope orientations in the right-hand side of the tables and along-slope only on the left. Though this is not the worst-case scenario, the differences are considerable, with runoff more than doubling compared to wholly along slope orientations in most cases (Sites 1,3,5 and 6). This is yet another flood risk factor for which there is little experience in the UK.
40. The results can be used to assess the watercourses most at risk for off-site flooding. The Applicant has provided flowpaths on drainage maps in Figures 11-1- to 11-7, Rev 2, [REP3-

027] to [REP3-033] which show nothing very unexpected though it is not clear how they have been calculated. On this basis the watercourses impacted by each part of the Scheme can be summarized schematically as in Fig. 8. Area A drains principally into the “unnamed watercourse” which reaches the Avon just downstream of Whatley Manor. Area B has reduced in size since the map was prepared, and the flow is also now principally into this stream. Area C drains into the Norton Brook which reaches the Avon at Cowage Farm. Area A also makes a small contribution to the Norton Brook, and the drainage from Area C is enhanced by runoff along the railway culvert and from flood-prone areas near Farleaze Farm. Area D drains exclusively into the Gauze Brook and Area E into the Rodbourne Brook. The PV-SMaRT analysis shows that the areas most at risk of generating runoff are Areas A, C and E. Runoff into the Norton Brook puts houses in Foxley at risk. To a lesser extent, houses in Malmesbury are put at risk by enhanced runoff into the Avon from the Norton Brook and “unnamed watercourse”. The Applicant has provided no assessment of these risks. The PV-SMaRT analysis suggests that Corston and the Gauze Brook will be less affected by panel runoff. The Rodbourne Brook will be affected, and Bottom Farm and its fields and buildings in Rodbourne Bottom are potentially affected. Again, the Applicant has provided no assessment of such off-site risks because of their assumption that solar panels will not affect runoff. All these waters discharge into the Bristol Avon, with potential effects downstream at Chippenham, Melksham and Bradford-on-Avon.

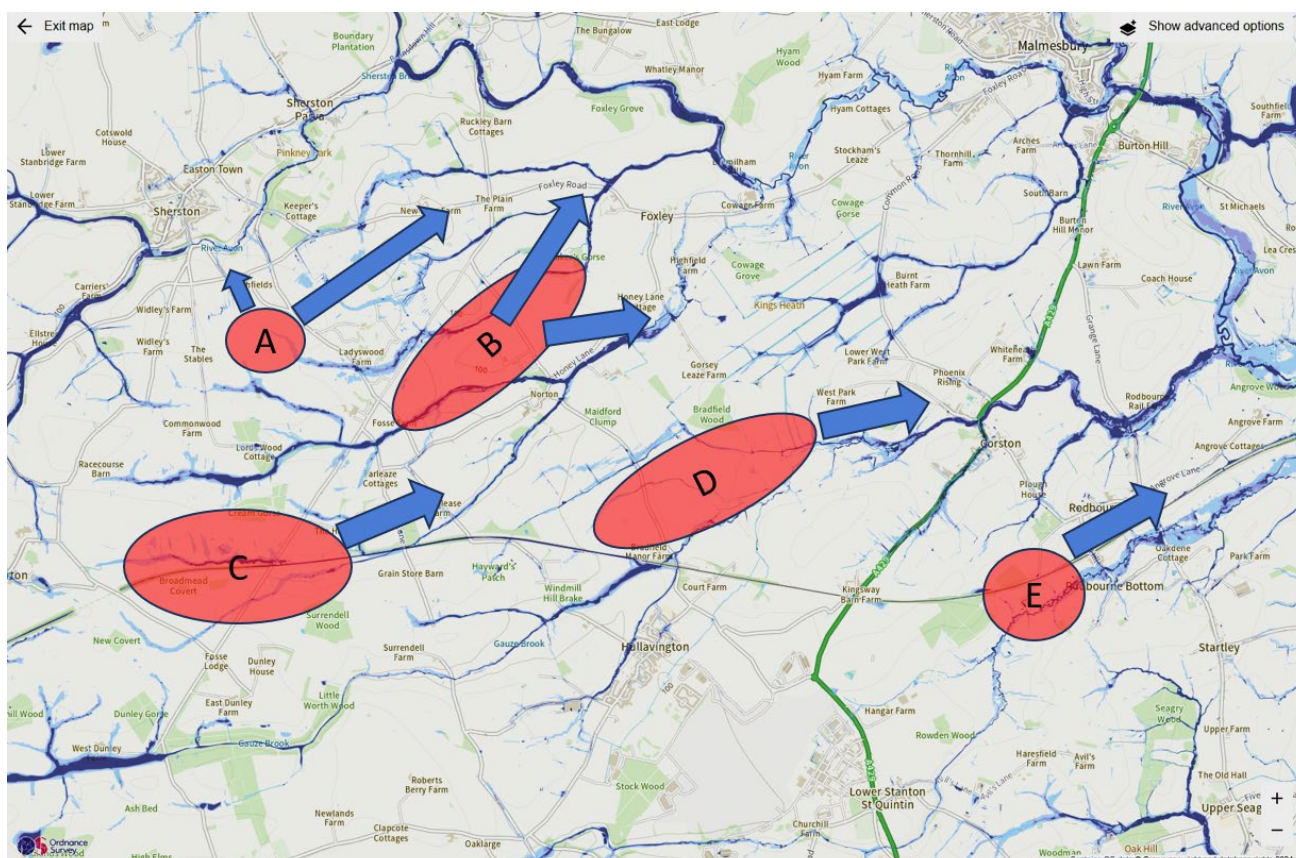


Figure 8. Watercourses impacted by runoff from each area of Lime Down

41. Soils are typically spatially variable and the sites modelled in these simulations should be regarded as indicative only. PV-SMaRT is a plot-scale model, not a catchment model, and the effects of the enhanced runoff which the model has demonstrated on the rivers which drain the area will depend on how well the solar panel sites are connected to the drainage network.

Notwithstanding these caveats, these simulations show that many of the soils at Lime Down carry a high risk of generating excess surface runoff if used to carry solar panels. These risks will be exacerbated by the use of large panels and the fact that orientation of the panel rows will necessarily be sub-optimal. The simulations show that the applicant's use of a grass sward under the panels will not be sufficient to mitigate these risks. The reasons for the reactivity of the sensitive soils are likely to be the shallow depth to low permeability surfaces, and the texture, particularly the high clay content. These are the same factors which make the area flood-prone in its current condition. Given that the area already has a high flood risk, my conclusion is that construction of the Lime Down Solar Park as proposed carries an unacceptably high flood risk to the tributaries of the Bristol Avon on site, and the communities that already experience flooding from them, and potentially the larger communities downstream on the Avon such as Chippenham, Melksham and Bradford on Avon.

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¹Author's Statement

I am an Emeritus Professor of Geography and Environmental Science at the University of Reading. I have been involved in hydrological research since 1977, first as an environmental scientist in the electrical generation industry working on the effects of acid rain on freshwaters, and after I returned to academic life in 1999, working on modelling and monitoring freshwaters, and hydrology and climate change. I am a co-author of the standard paper on climate change and the water environment in England and Wales, and co-led the modelling work packages of two large EU-funded projects, EUROLIMPACS and REFRESH, which investigated the predicted effects of climate change on waters across Europe. My publications on hydrological topics have been referenced more than 1000 times. I live adjacent to the Lime Down area. The evidence I have produced is based upon my professional expertise, and is my true and professional opinion.



APPENDIX E

SITE ALTERNATIVES



Appendix E: Site Selection and Cable Route

Summary

1. SLD welcome ongoing dialogue in the submissions between the Applicant and SLD on the issue of site selection. In light of that dialogue, and also the ExA's questions on site selection in ExAQ2, this submission brings SLD's position up to date.
2. It remains the case that SLD consider the approach to site selection taken by the Applicant is flawed both methodologically and substantively. As a result, the approach to considering Potential Development Areas (**PDA**s) is defective in terms of the requirements of the EIA Regulations 2017 and substantively, causing considerable unnecessary harm where appropriate alternative locations for the Scheme were and are available. Among other things, those flaws result in an approach which is overly deferential to the site for the Scheme (which was PDA 10).
3. SLD consider this issue remains contentious, and also notes the documents submitted by the Applicant and the questions asked by the ExA. As a result, SLD respectfully requests that time in the second week of the ISHs in September 2026 be reserved for the issue of site selection and then cable route.¹

Previous Submissions

4. This document complements and adds to the following submissions previously made in the Examination:
 - a. Appendix L of SLD's WR at Deadline 1 (**SDL-WR**): **[REP1-186]**.
 - b. Appendix 1 of SLD's Deadline 3 Submission (**SLD-D3**): **[REP3-173]**.
5. Of the Applicant's submitted documents, reference is particularly made to:

¹ It is considered that the second week is more appropriate as site selection is a cross-cutting issue which might properly fall to be considered after other ISH topics. SLD would also welcome this direction if the ExA were minded to list a hearing on this issue as SLD's advisor (Sir Mike Pitt) on this issue is unavailable prior to 21 September 2026 (due to a significant holiday booked well in advance). Sir Mike has made multiple visits to the areas containing the other PDAs.

- a. The original Site Selection Assessment Report (**SSAR**): **[APP-185]**.
- b. The Applicant's response to Written Representations (**AWR**): **[REP2-039]**.
- c. The Technical Note on Site Selection (**TNSS**): **[REP2-043]**.
- d. The Applicant's comments on Deadline 3 submissions (**A-D4**): **[REP4-082]**.

Policy and Law

- 6. The proper approach to the assessment of alternatives is that described in the SLD-WR at [5] onwards. Given the comments of the Applicant (including most recently in A-D4 at SLD-60) it is pertinent to highlight the following:
 - a. The requirement to assess alternatives is detailed in the NPSs (SLD-WR at [5]-[7]) and goes to the sufficiency of the Environmental Statement (**ES**) submitted pursuant to the EIA Regulations 2017 (SLD-WR [8]). To conclude that an ES is adequate in law, the information contained in the ES must be such that to accept it would not disclose a demonstrable flaw or otherwise be irrational. Related to this, the existence of an alternative may be a mandatory material consideration because it would be irrational not to take it into account (SLD-WR [9]).
 - b. SLD and the Applicant agree that NPS EN-1 directs that the assessment of alternatives "should be carried out in a proportionate manner" (SLD-WR [11]). However, whether or not the assessment is proportionate, the errors in the preceding sub-para still go to adequacy of the ES. An otherwise proportionate assessment will still be inadequate in law if it makes an error as defined above. As to proportionality, there is no stated test, but SLD and the Applicant disagree on what is proportionate here.
 - c. The Applicant itself accepts that site selection could be a reason to refuse when considered with other aspects of law and policy (SLD-D3 at [6.1.5]). SLD agree and note that this accords with its analysis at SLD-WR from [14].

- d. For the reasons expressed at SLD-WR [16]-[19] SLD consider the CRWA s.85 duty to seek to further the purposes of the CNL heightens the obligations in respect of the assessment of alternatives. As is explained in SLD-D3 at [6.1.7] SLD does not say that the Applicant must avoid all harms to the CNL. Rather, what is required by avoidance within the mitigation hierarchy (which is key at the site selection stage) must extend to effects which conflict with the s.85 duty.
7. A fuller summary of the law and policy is set out in the SLD-WR at [5]-[19]. The remainder is not repeated here.

Process Defects

8. A feature of both the SLD-WR and the SLD-D3 submissions is various process defects in how the Applicant approached the issue of site selection. In large part the TNSS was directed to resolve these by departing from the original SSAR. SLD did not agree that those issues were resolved, and in SLD-D3 went on to identify further process defects in the TNSS (see summary in SLD-D3 at [6.1.2]). This was separate to the substantive review of the assessment of PDAs (to which see below), which only received superficial attention from the Applicant (as explained at SLD-D3 at [6.1.3]).
9. The Applicant's A-D4 submission does not attempt to address the flaws originally identified in the SSAR further. Rather it responds at SLD-60 to the SLD-D3 submission. However, again, the response is superficial and does not treat site selection as a serious issue.
10. **The 25km approach** (SLD-D3 [6.1.8]-[6.1.9]): the Applicant's submission in A-D4 at SLD-60 amounts to the assertion that it is disproportionate to RAG rate the additional areas identified in the 20-25km radius of the National Grid Substation (**NG Substation**). As SLD refer to in SLD-D3 at [6.1.8], and as is explored further below, there are inherent disadvantages in planning terms with a lengthy cable route.
11. Reading [2.3.2] of the TTSS along with Appendix 1, it would seem the Applicant itself identified four potential land portions (those identified in Appendix 1, excluding the area marked "area generally constrained by Salisbury Plain").

SLD for its part at noted at SLD-D3 [6.1.9] two locations from the analysis that particularly indicated a flaw (that in bp2, the area north of Malmesbury; and that in bp4, to the south of Royal Wootton Bassett).

12. In the context of a 500MW Scheme which has assessed only 12 PDAs in the principal SSAR, covers a land area of approximately 1,237ha, and has an approximate cost of £900-950m (on the Applicant's figures, see **[APP-019]** at [2.2.1]²), it is wrong to suggest that it is disproportionate to assess these locations. Indeed, the assertion that it is disproportionate without explanation cannot give the ExA a proper understanding of why the Applicant says that NPS EN-1 para 4.3.22 does not require proper assessment of this alternative. This is a flawed approach which, again, applies inconsistent parameters to different proposed sites, and is disproportionately cursory in the context of the size and value of the Scheme.
13. **Green Belt** (SLD-D3 [6.1.10]): the same issues arise here, as is highlighted by SLD's submission. No independent comment is provided by the Applicant.
14. **Combining PDAs and using the least constrained areas** (SLD-D3 [6.1.11]-[6.1.17]): under this heading the Applicant resists redrawing PDA with the relevant constrained areas removed (in line with the approach to all other PDAs) on the basis that "it would not be a representative comparison against the Scheme as proposed" (A-D4 at SLD-60). This is difficult to understand; the point is to comprehend the site selection process which has been undertaken by the Applicant. Table 4-1 of the TTSS should provide a like-for-like comparison so that the process adopted by the Applicant can be understood. This would address specific concerns raised by SLD at SLD-D3 [6.1.11]-[6.1.14] that the Applicant has uniquely privileged PDA 10 through the process.
15. In this regard, the ExA's question ALT2.1 addresses this point and is welcome. SLD also consider that plans equivalent to those at Figure 4, 5 and 6 should also be produced to show the outline of PDA 10 so that a consistent approach to site selection can also be compared to the other figures provided. Given this question SLD will comment on this issue further when the answer is provided.

² It is also not apparent if this figure includes decommissioning, on which SLD would welcome clarity.

16. The remainder of the Applicant's comments under this heading at SLD-60 are hard to understand.

- a. At SLD-D3 [6.1.15] SLD raised the concern that it is opaque how PDAs have been clustered, considering the acceptable ranges and sides the Applicant had already applied. The Applicant's response at SLD-60 simply says they have been clustered "in consideration of their size... their proximity to the point of connection and their proximity to one and other". That is not explanation at all, as it provides no information about what size parameters or proximity parameters have been applied and, importantly, why they deviate from the parameters previously applied by the Applicant in its original SSAR.
- b. At SLD-D3 [6.1.16] SLD raised the concern that no steps at all have been taken to address the quite clear availability of land within the clusters to avoid the very reason for which it argues that the cluster is inappropriate. The Applicant's response essentially accepts that this land may be more acceptable but points to NPS EN-1 para 4.3.23-4.3.24. However, as the Applicant itself has accepted, the availability of alternatives is a reason to refuse in relevant circumstances, and the problems here reflect a flawed approach to the site selection process. That there are these alternatives that have not been assessed are troubling given the significant harmful effects of the Scheme, its proximity to the CNL, and the length and effects of the cable route.

17. **Redrawing PDAs to apply criteria consistently** (SLD-D3 [6.1.18]-[6.1.22]): the Applicant's comments are again cursory here and rely upon assertions of proportionality and implicit references to NPS EN-1 para 4.3.23-4.3.24 which do not answer the point being made.

18. It is remarkable that the Applicant considers assessment of Cluster 1 and 2 against the Annex A criteria to not be proportionate. This argument is again unexplained and, as is identified above, the context of this Scheme clearly indicates that the conclusion of the Applicant is wrong. Why selecting a site which minimised environmental harm for a development of the size and cost

identified above cannot be inferred from vague references to proportionality and these should not be accepted by the ExA.

19. The reality of the submissions of the Applicant on this issue is that, if anything, they heighten the sense that PDA 10 has been uniquely privileged in its selection and assessment. As is explained below, one of SLD's key concerns has consistently been that agreements to use land (and to include land that has inappropriate environmental effects) has been preferred

Substantive defects

20. As was highlighted above, the Applicant has only engaged in a cursory way with the substantive analysis of the PDA approach set out in the SLD-WR from [33] (see the AWR at SLD-046). SLD maintains that view and, while accepting a 'mini-EIA' is not appropriate for each PDA, remains of the view that a proper and proportionate approach to assessment against the Annex A criteria was not conducted. Aside from this, SLD also highlights the following.
21. **Selection of outlier PDAs:** SLD note that a feature of the SSAR and maintained in the TTSS is the identification of outlier PDAs as comparators for PDA 10. This has the effect of inappropriately skewing the RAG scale against which PDA 10 (and other PDAs) were assessed.
22. For example, PDA 9 and the easterly 'satellite' offshoot of PDA 3 immediately adjacent to the North Wessex Downs National Landscape were and are surprising additions in the SSAR due to their boundaries pressed up against that National Landscape. For the reasons explained when SLD conducted its own assessment of the PDAs against the Annex A criteria, such proximity to National Landscapes should weigh heavily against selection of a site in the site selection process.
23. In the SSAR the Applicant marked "Landscape and Visual" for PDA 9 as red, noting the North Wessex Downs National Landscape and (and also Spye and Bowood Parkslands SLA). The elevation of the National Landscape was noted. Thus, by including this obviously inappropriate PDA, the Applicant then skewed the scale for assessing PDA 10, for which under "Landscape and Visual" a yellow is recorded with simply a note that the PDA sits "immediately adjacent

to the Cotswolds National Landscape”. It is only by comparison to an extreme example that this could be a yellow, and as SLD has maintained from the start properly the scale should not be skewed and PDA 10 assigned a red for this matter.

24. Similarly, in respect of PDA 1, this is a particularly small PDA compared to the others (at 256ha) and given its location and proximity to other PDAs could patently never provide for a proposal close to 500MW. However, by including this PDA (which alongside PDA 10 is recorded as “Between 15-20km from the point of connection” in Annex D to the SSAR) it attempts to skew the approach to assessing these distances and attempts to normalise cable routes which have profound environmental effects due to their distance. While SLD has engaged with the 20-25km approach adopted by the Applicant in the TNSS, as was explained at SLD-D3 such lengths are in principle more harmful.
25. As to PDA 11, this PDA on its own is included enclosing Broughton Gifford (a conservation area), but as was explained in the SLD-WR at [29] the flaw of failing to combine PDAs is particularly problematic here. It has consistently been a flaw of the site selection process that the staged approach without back-checking has led to the artificial separation of PDAs which are in close proximity to each other. This is apparent considering cluster 1 as proposed by the Applicant in the TNSS and commented upon in SLD-D3 at [6.1.20].
26. From the perspective of proportionality, the point has already been made that it remains unexplained why for a scheme of the size and cost of the Scheme such an analysis has not been undertaken. However, it is also troubling that, if proportionality is in issue, the analysis has not actually attempted to identify the most appropriate candidate PDAs to compare.
27. **Gradient:** in the SLD-WR at p.20 SLD noted the departure in this selecting this scheme on the issue of. This commented upon the fact that the Applicant originally used a 3% gradient as the cut-off for land suitability notwithstanding its use of 5% in other schemes (e.g. Green Hill Solar Park). It is correct that at Stage 5 and 6 of the original SSAR in the ES that the Applicant went back and considered a 5% gradient for PDA 11 and 12, and in the TNSS at section 5 the gradient modification was retrospectively applied to PDAs 1-9. However, this

was only done after correspondence that SLD previously sent to the Applicant (on 3 June 2025) raising this inconsistency.

28. Once applied properly, as was seen in the TNSS at [5.1.9] this revealed an additional 391.1ha available to PDA 2. This addition of land (as is made clear at SLD-D3 at [6.1.20]-[6.1.21]) makes a substantial difference to the availability of land in Cluster 1 and 2 putting them both close to 1,200ha *with* the removals for constraints considered in the TNSS.

29. This approach in the TNSS is troubling for the reasons explained in SLD-D3. However, in addition, it remains the case that it has never been properly explained why the Applicant departed from what it recognised as an acceptable approach in other schemes (e.g. Green Hill Solar Park) and what it subsequently came to assess here in the TNSS.

30. **The SLD assessment:** as SLD has explained in its other submissions, it is considered that much of the significant harms of the Scheme arise out of its inappropriate location. It is not enough for the Applicant to argue that the location is not, in planning terms, required to be ideal. The mitigation hierarchy, and particularly the requirement first to avoid harms of proposed development, is at the heart of the regime that must be applied. SLD consider that a proper approach to the RAG assessment at Annex 4 of the SSAR

31. SLD has already conducted this assessment again, appropriately applying the parameters set by the Applicant itself in its Appendix A criteria. The analysis is set out in the SLD-WR at [37], with re-evaluated scores set out in the table at Appendix C. Of the scores there (higher is better):

Scoring 22	PDAs 2 and 7
Scoring 21	PDAs 1, 5, 6, 11 and 12
Scoring 20	PDAs 3 and 9
Scoring 19	PDAs 4 and 8
Scoring 18	PDA 10 (the Scheme)

32. SLD maintains that a proper approach to site assessment would have revealed the defects of PDA 10 and directed development away from the site. That is only emphasised now by the re-analysis of the PDAs arising out of the TNSS

and the clustering approach. No RAG assessment of what the Applicant itself recognises as Cluster 1 and 2 has ever been conducted.

33. It bears repeating that the 1,237ha of the Proposed Development does not apply the more rigorous exclusion criteria that apply to Cluster 1 and 2 identified in the TNSS. The reality, as SLD has consistently maintained, is that a proper and lawful approach to site selection would have identified sites closer to the point of connection which (taking account of the cable route) would have been considerably less harmful.

34. **Selection by reference to agreement:** SLD noted in its original SLD-WR the focus of the Applicant on agreements and interactions with land agents (see [3d], [21d-f] and [35]). As explained at that time, SLD had a real concern that the Scheme location was chosen with an undue focus on land ownership considerations, without a proper engagement with planning constraints applying to the site. The submissions in the TNSS and A-D4 submission further support that concern. Given the analysis that SLD has undertaken, it is hard to understand how PDA 10 was alighted on without such land agents. And, further, it would appear the inclusion of inappropriate (in environmental harm terms) land stemmed from the involvement of such agents (see e.g. SSAR at [2.6.3]).

35. Indeed, while SLD has seen the SSAR and the papers that have followed, it is difficult to understand what is post-hoc analysis of the selection that the Applicant made, and what is analysis which was conducted at the time and informed the selection. Given it is understood that the underlying offer from National Grid and agreements with landowners began in 2022, the concern that site selection analysis was conducted in a post-hoc way is real. This would also accord with the issues that SLD has identified to date in the Examination, which suggests an undue favouring of PDA 10 and the Scheme site.

The 400kV cable

36. **General:** At various points in the SSAR and the TNSS the Applicant comments on the cable route and asserts that it is appropriate. For example, in the TNSS at [2.2.4] it states “the length of 22km is considered by the Applicant to be suitable for a project of this type and scale because the electrical connection is viable at this length”.

37. However, whether the cable length is viable is a distinct question to the harmful effects of such a cable route and whether a shorter cable route could have avoided those effects. That is recognised in NPS EN-3 itself at para 2.10.17:

“To maximise existing grid infrastructure, minimise disruption to existing local community infrastructure or biodiversity and reduce overall costs, applicants may choose a site based on nearby available grid export capacity.”

38. This recognises that close proximity to nearby grid export capacity minimises various negative effects of a proposed development. The Applicant, through IGP in the Green Hill Solar Park scheme (see **[REP1-038]** pdf page 38 in that examination), said similarly:

“With increased distance from the connection point comes increased potential for environmental impact associated with construction of a longer connection infrastructure and potential for increased complexity if multiple land owners and/or requirements to cross other features in the landscape (roads, railways etc.) are involved.”

39. Aside from the negative environmental effects which arise from such a long cable route directly, separately the issue of how the Scheme offsets the costs of that long cable route can have indirect effects. In this case, SLD estimate the cost of the cable route to be in excess of £300m (SLD-WR at Appendix F [2b]).³ The result of that expense, which does not have to be accounted for in schemes more proximate to their point of connection, is either the indirect effect of increasing the cost of electricity for consumers, or the requirement to more intensively use and/or expand the area of a proposed development (running directly counter to the need to avoid or mitigate). That is a further harm.

40. Some of the key issues with such a lengthy connection route are also set out in SLD-WR Appendix F.

³ SLD would welcome the Applicant confirming its estimate of the cost of its 400kV connection to the National Grid substation at Melksham.

41. As SLD set out below, the Scheme is an outlier in the length of its cable at 22km. On the average of the analysis below (the average length being 4.3km) the Scheme represents around 6x the average distances involved.
42. **Analysis:** When the Scheme was originally proposed SLD was surprised that the Applicant had selected a location so far removed from the point of connection near Melksham. In order to get a better understanding of how Lime Down compares with similar NSIP solar projects, SLD has analysed the solar proposals currently listed on the Planning Inspectorate's website.
43. Scheme designs and layouts evolve during the acceptance and pre-Examination Stages in response to consultation and continuing discussions with statutory consultees. Therefore only the schemes that had reached or passed the examination stage (at the time of drafting this note) were included. This produced 30 schemes.
44. The detailed analysis of the lengths provided is as follows (note the further appendix to this document where extracts of the relevant environmental statements are provided):

Scheme	Location	Size	Cable Length	Comment
Less than 5km from NG Substation				
Droves SF	Norfolk	500MW	Zero	
Tween Bridge SF	South Yorkshire	800MW	Zero	
Dean Moor SF	West Cumbria	150MW	Zero	On-site connection
Little Crow SP	Scunthorpe	150MW	Zero	Adjacent to NG
Cleve Hill SP	Kent	300MW	Zero	Adjacent to NG
Fenwick SF	Doncaster	238MW	Zero	Or 1.5 km, not finalised
Botley West SF	West Oxfordshire	840MW	Zero	New NG substation
East Pye Solar	Norwich	500MW	Zero	New NG substation
Mallard Pass SP	Lincolnshire	350MW	0.4 km	NG adjacent to site
Rosefield SF	Bucks	335MW	0.8 km	NG adjacent to site
Steeple RP	Nottinghamshire	400MW	1.0 km	NG adjacent to site
Frodsham Solar	Cheshire	150MW	2.0 km	
Stonestreet Green	Kent	100MW	2.0 km	
Oaklands Farm SP	Derbyshire	152MW	2.0 km	
Helios Renewable EP	North Yorkshire	190MW	2.3 km	
One Earth SF	Nottinghamshire	740MW	2.5 km	
Longfield SF	Essex	500MW	2.6 km	
Springwell SF	Lincolnshire	800MW	2.8 km	
Great North Road	Newark	800MW	3.0 km	

Light Valley Solar	North Yorkshire	500MW	4.9 km	Optional +3km
5 to 10km from NG Substation				
East Park Energy	St Neots	400MW	5.0 km	
Heckington Fen SP	Lincolnshire	500MW	8.5 km	
East Yorkshire SF	East Yorkshire	400MW	9.0 km	
West Burton SP	Lincolnshire	480MW	9.9 km	
10 to 15km from NG Substation				
Fosse Green Energy	Lincoln	240MW	10.0 km	
Byers Gill Solar	Darlington	180MW	10.0 km	
Green Hill SF	Wellingborough	500MW	11.0 km	All of Works No. 5A
Peartree Hill SF	North Yorkshire	320MW	13.0 km	
Sunnica EF	Newmarket	500MW	13.0 km	
Beacon Fen EP	Sleaford	300MW	13.0 km	
15 to 20km from NG Substation				
None				
Over 20km from NG Substation				
Lime Down SP	Wiltshire	500MW	22.0km	

Notes:

1. The lengths of cable shown in the table are the external distance from the on-site 400kV substation to the National Grid connection point. Internal cables that join up individual areas of panels and on-site infrastructure are excluded.
2. Sources are typically the relevant National Grid Connection Agreement. Some agreements do not quote the length of 400 kV cable and in those cases the length has been scaled using site and OS plans.
3. Tillbridge SP (18.5km), Cottam SP (13.3km), and Gate Burton (7.5km) are a special case and not included in the above. Substantial portions of all three solar farms' cable routes are shared connecting into Cottam National Grid Substation. Site selection criteria and the approach to connection must reflect the knowledge of the other schemes and the availability of that cable route in such circumstances. In any event, all three are (at minimum) 4.5km shorter than the Scheme, and their inclusion in the analysis would only move the average cable length to 5.1km.

45. As the above indicates, the Scheme here is an outlier when compared to other Schemes of a similar type. It is already known that the Scheme has significant adverse environmental effects; the length of the cable route exacerbates this and should have been avoided.

Conclusion

46. This paper is produced to assist the ExA with the current state of the arguments around site selection. SLD remains of the view that the analysis conducted by the Applicant is fundamentally defective, and does not meet the relevant tests as described in law and policy. It is also considered that the significant length, far in excess of other schemes, explains some of the particularly harmful aspects of this Scheme. A proper approach should have been adopted and, had that been done, a scheme which was acceptable in planning terms (including by way of appropriate siting) may have been achieved.

Connecting to the National Grid

Reference Documents for:

Table showing the lengths of cable joining solar sites to the National Grid

Less than 5 km

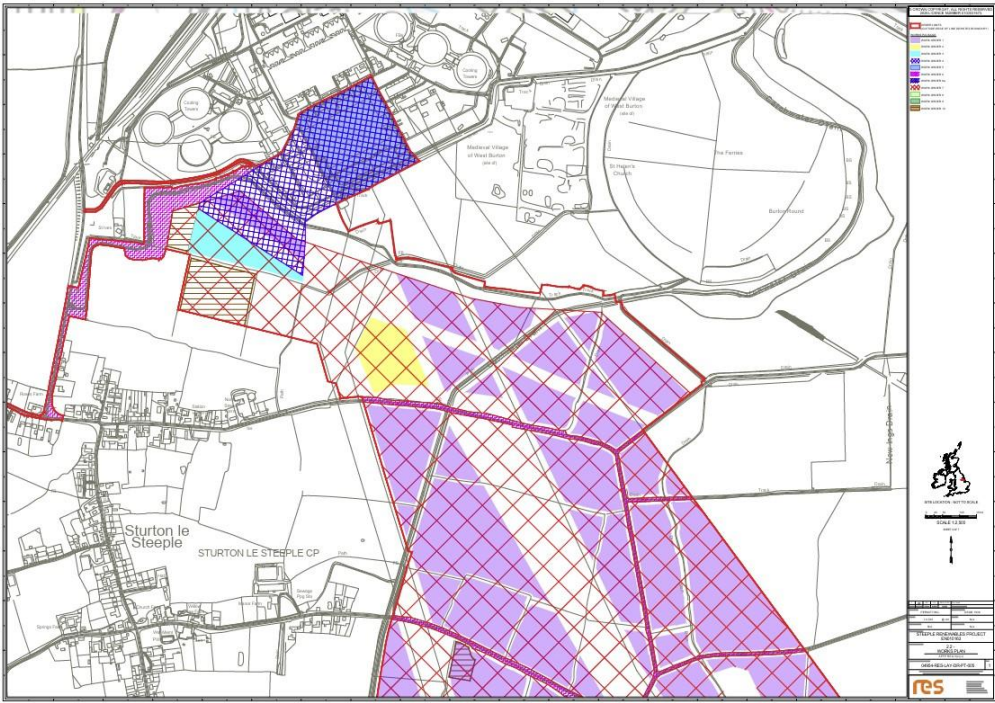
Scheme	Location	MW	Length of connection	Reference Documents (Unless stated otherwise, document is the Grid Connection Statement and page numbers are PDF page numbers)
The Drovers SF EN0110013	Norfolk	500	Zero	[APP-181] Page 7. Para 3.1.3 3.1.3 There is a requirement for cables to accommodate the circuit running between the Customer Substation, the new National Grid Substation and the Solar PV Site. There is also a need to install a 400kV cable between the 400kV Customer Substation and the new National Grid Substation. This cabling is contained within the Site.
Tween Bridge SF EN010148	South Yorkshire	800	Zero	[APP-035] Page 12. Para 5.1.5 5.1.5. The Applicant expects to be responsible for designing and constructing the 400kV export connection cable between the RWE on-site 400kV Substation (Work No. 4G) and the NGET 400kV Substation (not part of the Scheme). The 400kV cable connection to the NGET 400kV substation will be consented separately (once the location of the NGET 400kV substation is confirmed by NGET). However the DCO includes powers for the provision of cables from the RWE on-site 400kV substation to the Order Limits as part of Work No. 2, in order to facilitate a connection with the 400kV export connection cable from the boundary of the Order Limits to the NGET 400kV Substation.
Dean Moor SF EN010155	West Cumbria	150	Zero (on site connection)	[APP-176] Page 7. Para 2.1.3

				2 Description of the Grid Connection 2.1 Connecting to the Electricity Grid 2.1.1 The Point of Connection ('POC') for the Proposed Development would be via one of the existing pylons, which run east-west across the north of Area C (as shown on Figure 1.1) and connect into the existing 132kV overhead lines ('OHL'). 2.1.2 The existing OHL are connected to the local distribution network, which connects to Harker 132kV Substation near Carlisle, Cumbria. ENW own, operate and manage the distribution of the existing OHL to Harker 132kV Substation. 2.1.3 No new cable route is required outside of the Site to connect to the electricity grid. And: [APP-176] Page 8. Para 2.3.4 Work No. 2 Grid Connection Infrastructure 2.3.4 Work No. 2 includes the following infrastructure to support the connection to the grid via existing DNO infrastructure: ■ The POC Compound comprising external electrical equipment and ancillary infrastructure; ■ The Customer Substation Building and Customer Control Building; ■ DNO Substation Building; ■ Communication Mast; ■ Electrical cables; and ■ POC Masts (Work No. 2A).
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Little Crow SP EN010101	Scunthorpe	150	Zero (Adjacent to NG)	[4.4 LC REP] Page 9. Appendix 1 Point of Connection (PoC) Information 7. Appendix 1 – Point of Connection (PoC) Information The PoC sits on an existing 132kV underground cable that is located between adjacent 132kV overhead line towers within the development as shown on Plan 2
Cleve Hill SP EN010085	Kent	300	Zero (Adjacent to NG)	[APP-029] Page 4. Para 4.1 4.1 Electricity generated by the Solar Array and the Energy Storage Facility will be exported to the existing 400 kV National Grid Cleve Hill Substation (part of the NETS), via the Electrical Connection. That substation is located adjacent to the Project Site and has available capacity for the Project to connect directly into the NETS.
Fenwick SF EN010152	Doncaster	238	Zero (or 1.5km - not finalised)	[APP-194] Page. 6 Para 4.3.1 4.3 Grid Connection Line Drop (Work No. 5(b)) 4.3.1 The Grid Connection Line Drop would comprise of below ground cables running approximately 1.5 km (refer to ES Volume II Figure 2-3: Indicative Site Layout Plan [EN010152/APP/6.2]) connecting the On-Site Substation Prepared for: Fenwick Solar Farm Limited October 2024 AECOM 9 Fenwick Solar Farm Document Reference: EN010152/APP/7.5 Grid Connection Statement to a new cable sealing end compound at the base of an existing on-site 400 kV overhead line tower located within Field SE2. 4.3.2 As part of the Grid Connection Line Drop option, the Scheme will be connected to the NETS via underground cables from the On-Site Substation to a new cable sealing end compound at the base of an existing on-site 400 kV overhead line tower located within Field SE2 of the Solar PV Site. All works to accommodate the connection including the new cable sealing end compound to the overhead lines would likely be undertaken by National Grid and are anticipated to include the installation of an above ground cable within the line tower, between the new cable sealing end compound and the 400 kV overhead lines to connect them.

Botley West SF EN010147	West Oxfordshire	840	Zero (new NG substation)	[APP-019] Page 7. Para 2.1.2 2.1.2 The Solar Farm will connect to the new Botley West National Grid substation via two new 400kV circuits comprising each three 400kV underground cables plus auxiliary cables (e.g. optical fibre and communication cables). The 400 kV cable circuits will connect the Main Substation located within the Solar Farm to the Botley West National Grid Substation.
East Pye Solar EN0110014	Norwich	500	Zero (new NG substation)	[APP-207] Page8. Para 2.1.4 2.1.1 The Site was identified as part of the pre-application process. The Applicant had considered an existing substation (Norwich Main) as the PoC (see ES Volume 1, Chapter 5 - Alternatives and Design Evolution [EN0110014/APP/6.1.5], however NGET informed the Applicant that this substation could not accommodate a suitable connection. However, during discussions with NGET, it was identified that capacity was available on the existing overhead line running south from Norwich Main and that a new National Grid Substation would enable the Applicant to connect the Scheme to the grid. 2.1.2 The Applicant submitted a grid application to National Energy System Operator (NESO), formerly named National Grid Electricity System Operator Limited (NGESO), the system operator of NETS, in June 2022 to connect the Scheme to the NETS existing overhead transmission line between Norwich Main and Bramford via the new National Grid Substation 2.1.3 NESO then worked with NGET to produce a connection offer which was received by the Applicant in October 2022 (NESO reference: A/NGET/IGP/22/LONS-EN(1)). 2.1.4 As part of that offer, NESO contracted the Applicant to identify and provide the land and gain consent for the proposed new National Grid Substation. This has therefore been included as part of the DCO Application.
Mallard Pass SP EN010127	Lincolnshire	350	0.4 km (NG adjacent to site)	[APP-006]

				
Rosefield SF EN010158	Buckinghamshire	335	0.8 km (NG adjacent to site)	[APP-137] Page 9. Para 3.1.3 3.1.3. The grid connection cables comprised in the Grid Connection Cabling Corridor (Work No. 6) will consist of one or two 400kV cable circuits, each consisting of three cables, which will run approximately 800m from Rosefield Substation to National Grid's East Claydon Substation.
Steeple RP EN010163	Nottinghamshire	400	1.0 km (NG adjacent to site)	[APP-056] Page 6. Para. 2.1.3 2.1.3 The Proposed Development's substation would be connected to the national grid via an underground 400kV cable which would run northeastwards through land within the Order limits, passing under the access road to the sand and gravel quarry under construction by Aggregate Industries, before passing into land at the former West Burton Power Station and then into the National Grid Electricity Transmission West Burton Substation, at which point it would be connected into the substation infrastructure and the national electricity grid. And

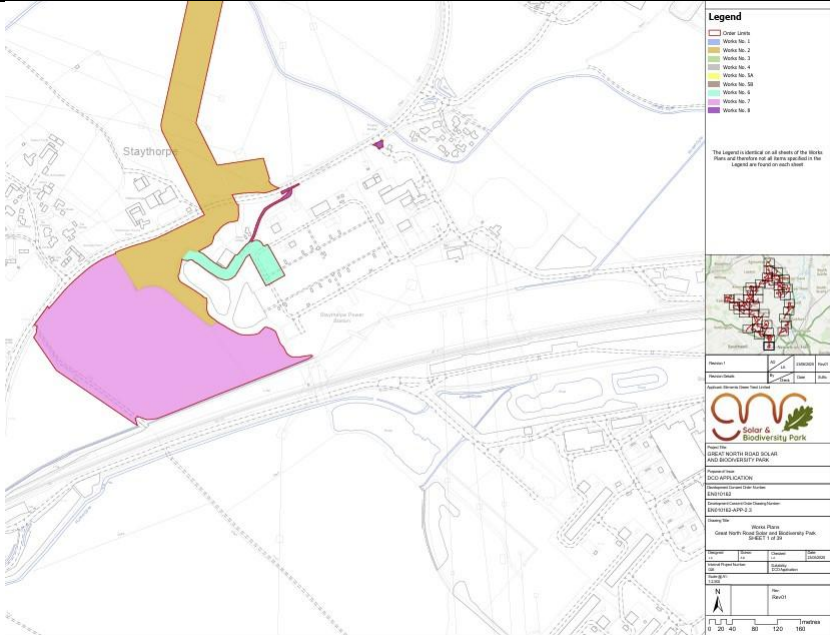
				[REP2-004] Work Plan. Page 3 Works No 3 (turquoise) & Works No 5 (royal blue) 
Frodsham Solar EN010153	Cheshire	150	2.0 km	[APP-145] Page 9. Para 3.1.6

				3.1.6 The Frodsham Solar Substation would connect to the SPEN Frodsham Substation via overhead 132kV cables. The connection would be a single 132kV circuit comprised of three sets of cables and a fibreoptic link and would be just under 2km in length.
Stonestreet Green EN010135	Kent	100	2.0 km	[APP-148] Page 5. Para 2.2.2 2.2.2 The Grid Connection is via a single 132kV cable circuit, itself consisting of three smaller cables which will run approximately 2 kilometres ('km') underground from the Project Substation to Sellindge Substation.
Oaklands Farm SP EN010122	Derbyshire	152	2.0 km	[APP-007] Works Plan Page 3. Work 5A & 5B

Helios Renewable EP EN010140	North Yorkshire	190	2.3 km	[APP-015]

				
One Earth SF EN010159	Nottinghamshire	740	2.5 km	[APP-174] Page 11. Para 4.3.2 4.3.2 The Grid Connection Corridor will contain the following main components: > A 400kV underground cable circuit approximately 5.0km long connecting the two 400kV/33kV on-site substations; > A single 400kV cable circuit (consisting of three single-core cables) which will be approximately 2.5km in length, connecting the 400kV cables from the two on-site substations to the new National Grid High Marnham 400kV Substation;
Longfield SF EN010118	Essex	500	2.6 km	[APP-054]

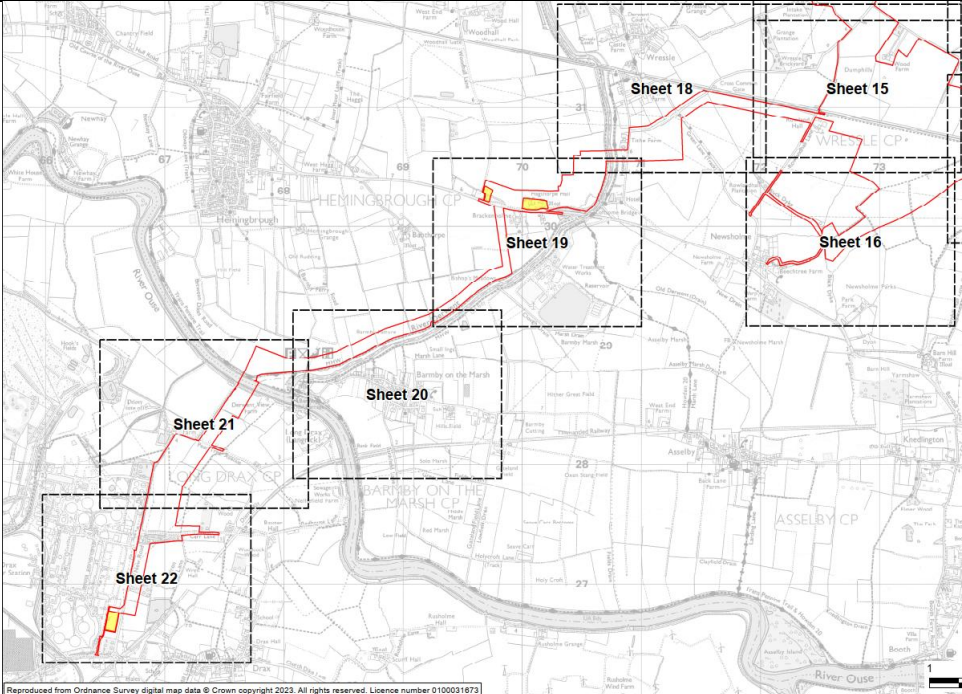
				Indicative length of cable (km)	
					The Grid Connection Route from the Longfield Substation (Work No. 3) to the Bulls Lodge Substation Extension (Work No. 5) will be located within the area marked Work No. 4 on the Works Plans [EN010118/APP/2.2].
Springwell SF EN010149	Lincolnshire	800	2.8 km	[APP-0160] Page 9. Para 4.1.3 4.1.3. The grid connection cables comprised in Grid Connection Infrastructure (Work No. 5) will consist of one or two 400kV cable circuits, each consisting of three cables, which will run approximately 2.8km from Springwell Substation to National Grid Navenby Substation.	
Great North Road EN010162	Newark	800	3.0 km	[APP-019] Page 4. Works Plan. Works 6	

				
Light Valley Solar EN0110012	North Yorkshire	500	4.9 km (optional +3km)	[APP-222] Page 8. Para 3.1.6 3.1.6 The total high voltage Cable Route Corridor distance from the Site 4 275kV substation to Monk Fryston 275kV National Grid substation is approximately 4.9km. This route will contain a 275kV circuit (referred to as “Grid Connection Cables”. The Grid Connection Cables may extend a further 3km to the 275kV substation on Site 2 should this be determined to be the most efficient design.

5 to 10 km from NG

Scheme	Location	MW	Length of connection	Reference Documents (Unless stated otherwise, document is the Grid Connection Statement and page numbers are PDF page numbers)
East Park Energy	St Neots	400	5 km	[APP-169] Page7. Para 3.1.1

				3.1.1 Electricity generated by the Scheme will be exported to the NETS at the Eaton Socon Substation. The Eaton Socon Substation is located approximately 5km away from the proposed on-site substation, therefore the Scheme includes works to install underground cabling to connect the on-site substation to the Eaton Socon Substation.
Heckington Fen SP EN010123	Lincolnshire	500	8.5 km	[APP-051] Page 4. Para 2.1.5 2.1.5. The energy park will be connected to a new generator bay located at the National Grid Bicker Fen Substation using a 400 kilovolt (kV) underground cable(s) of approximately 8.5km in length. The new generator bay will be provided as part of an extension to the National Grid Bicker Fen Substation.
East Yorkshire SF EN010143	East Yorkshire	400	9.0 km	[APP-008] Work No 3 Grid Connection Corridor Pages 20 – 24 of Plans

				
West Burton SP EN010132	Lincolnshire	480	9.9 km	[APP-316] Page 8. Para 3.6.1 3.6.1 A single 400kV circuit, consisting of three cables will run underground from the West Burton 3 substation to the West Burton 400kV Gas Insulated Switchgear (GIS) substation extension part of the NETS, at West Burton Power Station. This cable route will be approximately 9.9km long.

10 to 15km from NG

Scheme	Location	MW	Length of connection	Reference Documents (Unless stated otherwise, document is the Grid Connection Statement and page numbers are PDF page numbers)
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Fosse Green Energy EN010154	Lincoln	240	10.0km	[APP-200] Page 4. Para 1.1.2. 1.1.2 The Proposed Development will comprise the construction, operation (including maintenance), and decommissioning of a ground-mounted solar photovoltaic (PV) electricity generating station with battery storage; Onsite Substation and associated infrastructure to generate, and export and import electricity; and areas of landscaping and biodiversity enhancement. The Proposed Development will export and import electricity to the national electricity transmission network. The Proposed Development includes Solar PV arrays, access provision, Battery Energy Storage System (BESS), Onsite Substation, underground cabling; and areas of landscaping and biodiversity enhancement. The Proposed Development also includes a 400kV underground Cable Route Corridor of approximately 10km in length connecting the Onsite Substation to the proposed National Grid substation near Navenby, which is the subject of a separate application by National Grid under the Town and Country Planning Act 1990. A full description of the Proposed Development is included in Chapter 3: The Proposed Development of the Environmental Statement (ES) [EN010154/APP/6.1].
Byers Gill Solar EN010139	Darlington	180	10.0 km	[APP-168] Page 5. Para 3.1.1 3.1.1. Electricity generated by the Proposed Development will be exported to the NETS via the existing 275/132kV Norton Substation. The Norton Substation is located approximately 10km away from the proposed on-site substation and therefore the Proposed Development includes works to install underground 132kV cabling to connect the onsite substation to the Norton Substation.
Green Hill SF EN010170	Wellingborough	500	11.0km (Works No.5A)	[APP-557] Page 9. Section 3.3.

				3.3 Substations and Cable Routes at 400 kilovolts <u>Green Hill C Substation (Work No. 3A)</u> 3.3.1 The Green Hill C 400 kV substation will collate all electricity produced from Green Hill A, A.2, B, D, and E which will enter the Green Hill C substation at either 33 kV or 132 kV, along with the electricity produced and stored at Green Hill C, which is at a voltage of 33 kV. It will then be converted using high voltage transformers to a single 400 kV supply that can be exported to the Green Hill BESS substation. <u>Green Hill C Cable Route (Work No. 5A)</u> 3.3.2 A single 400 kV circuit will run underground from the Green Hill C substation to the Green Hill BESS substation. This cable route will be approximately 10.7 km long. The circuit will run north then east of Mears Ashby, then east and south of Earls Barton. Horizontal Directional Drilling (HDD) techniques will be used to cross the River Nene, where the cable will turn east towards Green Hill BESS substation. <u>Green Hill BESS Substation (Work No. 3A)</u> 3.3.3 The Green Hill BESS 400 kV substation will collate all electricity produced from Green Hill F and G which will enter at 132 kV, along with the electricity transported from the substation at Green Hill C, which is at a voltage of 400 kV. It will then be converted using high voltage transformers to a single 400 kV supply that can be exported to the NETS. Green Hill BESS 400 kV substation will either contain Air Insulated Switchgear (AIS) or Gas Insulated Switchgear (GIS). <u>Green Hill BESS Cable Route (Work No. 5A)</u> 3.3.4 A single 400 kV circuit will run underground from the Green Hill BESS substation to the adjacent Grendon 400 kV Air Insulated Switchgear (AIS) substation at Grendon National Grid Substation. This cable route will be approximately 314m long.
Pear tree Hill SF EN010157	North Yorkshire	320	13.0km	[APP-152] Page 7. Para 3.1.1 3.1.1 Electricity generated by the Proposed Development will be exported to the NETS via the existing 132 kV National Grid Creyke Beck Substation. The National Grid Creyke Beck Substation is located approximately 10 km away from the proposed western on-site substation and 13 km from the eastern on-site substation and therefore the Proposed Development includes works to install underground 132 kV cabling to connect the on-site substations to the National Grid Creyke Beck Substation.
Sunnica EF	Newmarket	500	13.0km	[APP-265] Page 7. Para 2.1.1

				2.1.1 The connection to Burwell National Grid Substation will be provided via a 400kV underground cable from the Burwell National Grid Substation Extension. The Sites will connect to the Burwell National Grid Substation Extension via buried 132kV cables. The cable will connect Sunnica East Site A to Sunnica East Site B; Sunnica East Site B to Sunnica West Site A (Grid Connection Route A); Sunnica West Site A to Sunnica West Site B; and Sunnica West Site B to the Burwell National Grid Substation Extension (Grid Connection Route B). The total length of the cable run for Grid Connection Route A will be approximately 7km, and 13km for Grid Connection Route B.
Beacon Fen EP EN010151	Sleaford	400	13.0km	[APP-285] Page 7. Para 2.1.1. 2.1.1 The Solar Array Area will connect to the existing Bicker Fen Substation via a new single 400kV circuit comprising of three 400kV underground cables plus auxiliary cables (e.g. optical fibre and communication cables) to be located within the Cable Route Corridor. The underground cables will connect the Onsite Substation located within the Solar Array Area to the Bicker Fen Substation. The total length of the cable route is approximately 13km.

15 to 20 KM from NG

None

Over 20 km from NG

Scheme	Location	MW	Length of connection	Reference Documents (Unless stated otherwise, document is the Grid Connection Statement and page numbers are PDF page numbers)
Lime Down SP EN010168	Wiltshire	500	22.0km	[APP-270] Page 7. Para 3.1.4 3.1.4 The total high voltage Cable Route Corridor distance from the Lime Down D 400kV substation to Melksham 400kV National Grid substation is approximately 22 km. This route will contain a single 400kV circuit (referred to as "Grid Connection Cables").



APPENDIX F

Appeal Decision 3356489





Appeal Decision

Inquiry held on 11 March 2025

Site visit made on 12 March 2025

by John Dowsett MA DipURP DipUD MRTPI

an Inspector appointed by the Secretary of State

Decision date: 18th December 2025

Appeal Ref: APP/X2600/W/24/3356489

Land off Crab Apple Lane, Haddiscoe, Norfolk, NR14 6SJ

- The appeal is made under section 78 of the Town and Country Planning Act 1990 (as amended) against a refusal to grant planning permission.
 - The appeal is made by Breedon Trading Limited against the decision of Norfolk County Council.
 - The Application Reference is: FUL/2022/0056.
 - The development proposed is described as: Extraction of Sand and Gravel with low level restoration to meadow species rich grassland with an ephemeral water body.
-

Decision

1. The appeal is allowed, and planning permission is granted for the extraction of sand and gravel with low level restoration to meadow species rich grassland with an ephemeral water body at Land off Crab Apple Lane, Haddiscoe, NR14 6SJ, in accordance with the terms of the application, Reference: FUL/2022/0056, subject to the conditions in the attached schedule.

Preliminary Matters

2. Before the Inquiry opened, the appellant and the Council reached agreement on the remaining matters in dispute between them, and supplementary Statements of Common Ground were provided on noise, heritage, and planning matters. As a result, the Council did not contest the appeal at the Inquiry. At the Inquiry, the Council confirmed that its previously submitted evidence was still before me but had been superseded by the more recent Statements of Common Ground. The Inquiry did, however, hear representations from interested parties who object to the proposal.
3. In addition to viewing the site from public land in advance of the Inquiry opening, the day after the Inquiry, I undertook a more extensive unaccompanied site visit following a route and visiting locations in the vicinity agreed with the main parties. I also drove the proposed vehicle route between the appeal site and Norton Subcourse quarry with the exception that I travelled via Ferry Road rather than by the appellant's private haul road that runs broadly parallel to it.
4. Following the close of the Inquiry the Council adopted the Norfolk Minerals and Waste Local Plan (hereinafter NMWLP) on 20 May 2025. At the Inquiry it was common ground between the main parties that the proposal complied with the requirements of Policy MIN25 of what was at the time the emerging Norfolk Minerals and Waste Local Plan. Policy MIN25 has not substantially changed in the interim between the Inquiry and the adoption of the NMWLP. The Inspector's report on the examination of the NMWLP was published shortly after the Inquiry

closed¹ and recommended slight textual changes to parts a) and c) of the Policy. These changes do not significantly alter the requirements of the Policy. The provisions of Policies CS14, DM8 and DM12 of the previous Minerals and Waste Development Framework Core Strategy and Development Management Policies Development Plan Document that are cited on the decision notice issued by the Council are largely restated in broadly similar terms in Policy MW1 of the NMWLP.

5. The NMWLP was at a very advanced stage at the time of the Inquiry having been examined with only the Inspectors Final report awaited. Because the Council is not contesting the appeal and there was not a formal Rule 6 party, the views of the main parties in respect of any implications of the adoption of the NMWLP on their cases have not been sought. As no substantive changes were made to the relevant policies in the NMWLP following the Inspectors report, I do not consider that any parties interests have been prejudiced by not doing so.
6. Prior to the main parties reaching agreement, on 31 January 2025 a case management conference was held by one of my colleagues during which the main issues in the appeal at that time were identified as being whether the appeal proposal would preserve the special architectural or historic interest of the designated heritage assets in the locality, with particular regard to the Grade I listed St Mary's Church, through development within its setting; and whether the appeal proposal would result in acceptable living conditions for nearby residents, with particular regard to dust/air quality and noise.
7. Irrespective of the fact that the main parties have reached agreement and the appeal is not contested, these remain relevant. In considering whether to grant planning permission for development which affects a listed building or its setting, Section 66(1) of the Planning (Listed Buildings and Conservation Areas) Act 1990 requires the decision maker to have special regard to the desirability of preserving the building or its setting, or any features of special architectural or historic interest which it possesses. A large number of interested parties also raised concerns with respect to the implications of noise and dust from the proposal on the living conditions of nearby properties, both in writing and orally at the Inquiry. Consequently, I have also identified these as still being the main issues in this case.

Main Issues

8. The main issues in this appeal are:
 - The effect of the appeal proposal on the character and appearance of the area and whether it would preserve the special architectural or historic interest of the designated heritage assets in the locality, with particular regard to the Grade I Listed St Mary's Church, through development within its setting;
 - The effect of the appeal proposal on the living conditions of nearby residents, with particular regard to dust/air quality and noise; and
 - Whether the appeal proposal would comply with the relevant requirements of national and local planning policies.

¹ On 24 March 2025

Reasons

9. The appeal site comprises approximately 21.5 hectares of land adjacent to the village of Haddiscoe. It is currently in agricultural use. There is established tree planting on the site boundaries with Church Road, Crab Apple Lane and the B1136 Lodden Road. The tree planting continues along part of the south east boundary of the site with Manor Farm. The site is generally level, rising only slightly from south east to south west. Haddiscoe Bridleway 5 crosses the site in a broadly north westerly direction from Church Road to Crab Apple Lane and is barely visible on the ground as a very faint line of trampled earth, albeit it does not appear to entirely follow its definitive line.
10. The appeal proposal seeks planning permission for the extraction of 650,000 tonnes of gravel and 510,000 tonnes of sand over a 7 year period. The only processing of materials at the site would be screening to separate the sand from the gravel. The gravel would be transported by heavy goods vehicle (HGV) to the appellant's quarry site at Norton Subcourse where any further processing would take place. The extracted sand would be retained on site and used in the site restoration. A new access to the site would be formed from Crab Apple Lane on the west side of the site.
11. The site would be worked in 7 phases in a counterclockwise direction commencing adjacent to the proposed new site access. It would be progressively restored as the extraction proceeds, with an additional year at the end of the 7 year extraction period to complete the site restoration. Temporary screening bunds would be erected on parts of the site boundary. Bridleway 5 would be temporarily diverted around the perimeter of the site during the working of Phases 5 to 7. Within the site, a boundary to the extraction area would be set so that no mineral extraction would take place within 100m of the rear elevation of nearby residential properties close to the site boundaries.
12. The existing tree planting around the site boundary would be retained, with the exception of an area near the southern end of Crab Apple Lane which would be removed to create the new site access. The section of Crab Apple Lane running from the site access to the B1136 Lodden Road would be widened to 6.5 metres in order to accommodate vehicular movements from the site and to allow HGVs to pass.
13. Following extraction of the mineral, the site would be restored to meadow grassland with some woodland planting and new hedges. It is not proposed to import material to backfill the voids and restoration would be carried out using soils and sand from the site. This would result in the finished land level being lower than the present level. Bridleway 5 would be re-instated on its definitive route.

Character and Appearance

14. The site is located on the edge of the village of Haddiscoe, bounded to the south by the B1136 road, to the north by Church Road/Thorpe Road and to the west by Crab Apple Lane. The site is low lying and is at a point where arable farmland transitions into the marshy grassland of the Norfolk Broads. The landform rises gently to west heading inland.
15. The surrounding land predominantly consists of agricultural land to the west which extends towards the villages of Thurlton to the northwest and Maypole Green to

the southwest. Agricultural use also characterises land to the southwest beyond the A143, which extends in a general south westerly direction from Haddiscoe towards Toft Monks. The agricultural landscape comprises a mosaic of differently sized and shaped fields. Some of these retain hedgerow boundaries or remnants of hedgerows, although alongside roads fields often have open boundaries. There are scattered groups of trees and hedgerow trees within the landscape which form vertical features within a relatively open, gently undulating, landform. To the south, linear residential development extends along Rectory Road and Church Road, forming the southern part of the village, while the rest of the village is located to the east, where the A143 meets Thorpe Road. Haddiscoe Marshes, beyond the village to the north and east, consists of low-lying agricultural land separated by a pattern of drainage channels. This area is crossed by a road linking Haddiscoe with St Olaves on the banks of the River Waveney, on the northern edge of the Marshes.

16. The appeal site is not within an area which is subject to a specific landscape designation, nor is it within a Conservation Area. It is immediately adjacent to the designated Norfolk Broads area, the boundary of which is located on the opposite side of Church Road to the appeal site. This area has equivalent status to a National Park. The National Planning Policy Framework (the Framework) requires that development within the setting of a national park should be sensitively located and designed to avoid, or minimise, adverse impacts on the designated areas. Nevertheless, this has to be considered alongside the Framework's recognition that minerals can only be worked where they found. In addition, the Framework requires that a steady and adequate supply of aggregates should be planned for and that mineral planning authorities should maintain landbanks of at least 7 years for sand and gravel.
17. The appeal site comprises a single agricultural field and is largely enclosed by a wide band of established tree planting. It does not contain any landscape features of any significance or that are unique to the area. The surrounding landscape is relatively flat and open. However, the tree screening around the site would conceal the quarry workings except where they may be visible though the site access, which would be a limited viewpoint from the southern end of Crab Apple Lane. At times when the trees in this screening are not in leaf, there would be some visibility of the screening mounds which would be constructed on parts of the site boundary. These screening mounds would appear as unnatural features in the landscape whilst the quarry was in operation but would be of a temporary nature and would be removed at the end of the working period.
18. Because of the relatively short term nature of the development and the restoration of the site to lowland meadow grassland, the proposal would not have an overall unacceptable impact on the appearance, quality and character of the landscape, countryside and visual environment more generally, or the special character of the Norfolk Broads. The temporary change in appearance would be reversed at the end of the development. This would comply with the relevant requirements of Policies MW1 and MIN25 of the NMWLP which expect development to not cause harm to the appearance, quality, and character of the landscape, countryside, and visual environment and to provide appropriate mitigation for any landscape or visual impact.

The effect on Heritage Assets

19. There are a number of Listed Buildings in the vicinity of the site including two Grade I Listed churches, the Church of St Mary [List Entry No: 1169126] to the immediate south of the appeal site, and the Church of St Matthias [List Entry No: 1306674] approximately 500m to the north west of the site. Within the churchyard of St Mary's are the Grade II listed Haddiscoe War Memorial [List Entry No: 1453240] and a Grade II listed Monument to William Salter [List Entry No: 1373170] set into the churchyard wall. Just to the north of the site is the Grade II White House Farmhouse [List Entry No: 1373172] on Thorpe Road and further to the north west on Church Road, Thorpe Hall [List Entry No: 1050527], close to the Church of St Mathias, is also a Grade II listed building. The proposal would not directly affect any of the listed buildings/structures and any effects would be on the setting of these.
20. Historic England have raised concerns in terms of the effect on the setting of the Grade I Church of St Mary and also the Grade I listed St Matthias Church to the north of the site due to its group value. Historic England particularly mention noise, vibration, dust, and traffic effects on the setting of the Church of St Mary, in addition to any visual effects. The main parties are agreed that the effects of the proposal are limited to the effect on the setting of the Church of St Mary.
21. The Glossary to the Framework defines the setting of a heritage asset as the surroundings in which a heritage asset is experienced. It also notes that the extent of the setting is not fixed and may change as the asset, and its surroundings evolve. It further notes that elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance, or may be neutral. The contribution that setting makes to the significance of the heritage asset does not depend on there being an ability to access or experience that setting.
22. The Planning Practice Guidance notes that although views of or from an asset will play an important part in the assessment of impacts on setting, the way in which we experience an asset in its setting is also influenced by other environmental factors such as noise, dust, smell and vibration from other land uses in the vicinity, and by our understanding of the historic relationship between places.
23. The Church of St Mary is listed Grade I, which is a building of exceptional importance. The building is a round tower church dating from the 11th century onwards. It is one of a relatively large number of similar buildings predominantly found in Norfolk. The church stands in a churchyard to the south of the appeal site on the opposite side of the B1136 road.
24. The significance of the building arises primarily from its architectural and aesthetic value as a well-preserved example of a Saxon/Norman church of a distinctive local form, which was later altered and adapted as a result of changes in liturgical practice. It also has historic interest and communal/social interest as a church which has served the surrounding area for nearly 1,000 years. The church is sited on a localised high point resulting in the church tower being a prominent feature in the surrounding landscape, particularly in long views from the west along the B1136 Lodden Road. There are also views of the church tower above the treeline from Bridleway 5 within the site. The wider countryside setting reflects, and is indicative of, the area that historically was served by the church.

25. The appeal site contributes to the setting of the Church of St Mary in so far as it forms part of the agricultural/countryside setting of the building. However, the evidence indicates that there has not been a functional or ownership connection between the appeal site and the church. In addition, this wider setting has altered over time as the village of Haddiscoe has expanded. Field boundaries have changed, particularly within the appeal site where historic field boundaries have been lost and the site amalgamated into one large field. More recently, significant tree planting has been introduced around the boundaries of the appeal site that has developed into a prominent feature. As a result, the appeal site only makes a minor contribution to the understanding of the significance of the building.
26. As set out above, the appeal site is bounded by a well-established tree belt which the evidence suggests has developed over a period of around 20 years. It is also proposed that during the operational phase of the proposed quarry a temporary screening bund would be constructed inside the tree belt, opposite the end of Church Lane. Whilst the proposal would introduce quarry workings within the setting of the Grade I listed building, these would be screened by the tree belt along Lodden Road. The boundary tree belt also occludes views across the site from Church Road and Crab Apple Lane. I accept that the screening value of the tree belt will be reduced during those months when the deciduous trees within it are not in leaf, nonetheless, the density of the planting would still provide visual filtering and opposite the church a screening bund is to be constructed behind the tree belt. From within the site, the top of the church tower is visible above the tree belt from the bridleway.
27. It is only from the bridleway that the quarry workings would be seen at the same time as the church tower. The effect on the setting would likely be greatest during the later phases of the development when the route of the bridleway would be diverted behind the screening bunds on the site boundary. This would have an adverse effect on the setting of the listed building for the duration of the works.
28. Whilst I have noted the comments of Historic England, although views from the tower would be affected during the operational period, from other evidence put to me special arrangements are required to access the tower.
29. The Planning Practice Guidance (PPG) Minerals chapter identifies noise limits for minerals working². These are that at noise-sensitive properties, noise does not exceed the background noise level by more than 10dB(A) during normal working hours, unless this would be difficult to achieve without imposing unreasonable burdens on the operator, and that in any event, the total noise from the operations should not exceed 55dB(A) LAeq, 1h (free field). The PPG also allows for a higher noise limit of up to 70dB(A) LAeq 1h (free field) for a temporary period to facilitate essential site preparation and restoration work and construction of baffle mounds.
30. The appellant's noise evidence sets out that during most phases of the works, the noise levels at the church would be equal to, or less than, 10dB(A) above the background noise levels, except during Phase 3 of the works where the upper limit of 55dB(A) would not be exceeded, and Phase 4 when soil stripping and final restoration would be taking place. However, at these latter times, allowance is

² Paragraph: 021 Reference ID: 27-021-20140306

made for an upper limit of 70dB(A) as the works would be of a relatively short duration.

31. There is no estimated noise level for within the churchyard. However, the evidence indicates that at Lodden Road the increase in noise levels would be more than 10dB(A) above background noise levels during early phases but not in excess of 55dB(A) at any time, and equal to or below 10dB(A) in the three later phases.
32. These PPG limits relate to amenity, or nuisance noise, and this is different from the way in which heritage assets are experienced in their settings. The acoustic character of the area around a heritage asset also contributes to the surroundings within which the asset is experienced. In this context, the effect of noise has to be considered differently from nuisance noise. I noted when I visited the site that within the churchyard at the north side of the church, perceived noise was relatively low. Nevertheless, there was some road noise from traffic on the B1136 Lodden Road. The submitted evidence³ indicates that at St Mary's Church the development would result, in predicted highest noise levels of between 50 and 53 dB compared to the background noise level of 44 dB. The highest noise levels will vary over the working time of the quarry being highest in the early phases of the site closest to the church and lowering in the later phases as the works progress further away. Within the churchyard, closer to the appeal site, noise from the proposed workings would be more noticeable at times when the bunds are being constructed and during the early phases of mineral extraction. It is agreed by the parties that for a temporary period of approximately 5 years (during Phases 1, 2, 3, 4 and 5 of the quarrying), there would be a clear and perceptible adverse change in the character of the soundscape found at St Mary's Church. This would result in the tranquillity score changing from Fair to Neutral. At times when the quarry would not be operating, during the evenings, on Saturday afternoons, or on Sundays, this change in tranquillity would not occur.
33. Although the noise levels would be within the guidelines set out in the PPG, changes to the noise climate in the vicinity of a heritage asset will have an effect on the way in which that asset is experienced. As such the increased noise and reduction in tranquillity would be harmful to the setting of the Church of St Mary, albeit for a temporary period and ending once the development was completed.
34. In terms of vehicle movements, the church lies a short distance to the south of the B1136 Lodden Road with parts of the churchyard lying between the two. I observed when I visited the site that the B1136 was relatively lightly, although regularly, trafficked. I also noted that the A143 road which runs through Haddiscoe village and then passes to the south of the churchyard carried a greater number of vehicle movements. I do, however, recognise that this will be different at other times of the day. Nevertheless, regular traffic movements are a feature within the setting of the church.
35. Gravel would be transported from the site to Norton Subcourse Quarry for processing. Vehicles would exit the site via Crab Apple Lane and then travel west along the B1136 to access a private haul road, which is accessed from Ferry Road, to reach the Norton Subcourse site. The evidence indicates that there would be approximately 38 daily HGV movements during the proposed operational

³ Statement of Common Ground on Noise Tables 2.1 and 2.2

hours of the quarry, roughly equating to 2 vehicles entering and 2 vehicles leaving the site every hour during the working day.

36. The junction of Crab Apple Lane with the B1136 is approximately 200m from the Church of Saint Mary. Although it is within the wider setting of the church, no heavy good vehicles associated with the appeal site would pass in front of the church itself. There are no restrictions on other heavy good vehicles using the B1136. Whilst the proposal would result in an increase in vehicles using the Crab Apple Lane junction and moving through the wider setting, due to the distance from the church and its immediate setting of the churchyard, and within the context of the overall number of other vehicle movements on the B1136, this aspect of the proposal would not have any noticeable effect on the ability to understand and appreciate the significance of the church.
37. Because of the proximity of the church and churchyard to the appeal site there is some potential for the deposition of dust generated from the workings. The evidence indicates that the prevailing wind direction is from the south west. As such this would blow any fugitive dust that did escape from the site away from the church and churchyard for much of the time. The proposal also incorporates dust mitigation measures including screening bunds, ceasing dust generating activities above a certain wind speed, and restricting the speed of vehicles within the site. The main parties are in agreement that the proposed dust mitigation measures would suitably control dust generated at the site.
38. Whilst there is a possibility that some fugitive dust may escape from the site on occasions, there is no evidence that any depositions of dust would adversely affect either the church or churchyard, or that these would be harmful to the understanding of the significance of the listed building.
39. The effects of the proposal on the setting of the Church of St Mary would be time limited to the 8 year period during which the quarry works would be operational, and the subsequent restoration works undertaken. As a result of the restoration of the site, its appearance would change. Nevertheless, change does not necessarily equate to either harm or loss of significance. The proposed restoration scheme would return the site to a rural/agricultural appearance with potentially more visual interest than the current single large field. There is nothing in the evidence which suggests that this would better reveal the significance of the church but, nonetheless, in the longer term this would result in a broadly neutral overall effect on the setting of the church.
40. Drawing these strands together, the proposal would result in harm to the setting of the Church of St Mary. It would be restricted mainly to the experience of the church tower from Bridleway 5 during the lifetime of the quarry, when users of the Bridleway would both see the quarry workings and be exposed to noise from the quarry workings due to their proximity. Operational noise would also have an adverse effect on the acoustic environment within the more immediate setting of the church during the operational period. This harm would, however, be less than substantial and would be time limited to the operational and restoration phases of the quarry.
41. The Church of St Mathais to the north west of the site, is another round tower church dating from the eleventh century onwards. Similarly to the Church of St Mary, the significance of the building is primarily derived from its architectural and

aesthetic value. It is notable that the church has a thatched nave. It also has historic value as a good example of a Saxon/Norman church of a locally distinctive design that has historic interest and communal/social interest as the church which served the adjacent Thorpe Hall and the surrounding area for nearly 1,000 years.

42. The appeal site forms part of the wider countryside setting of the church, although due to the topography and the presence of tree screening around the perimeter of the appeal site together with the well-established trees that are present around the churchyard there is very limited intervisibility, with the top of the tower being visible in the middle distance in views from Crab Apple Lane. Due to the screening around the site, the quarry workings would not be seen in the same views as the church tower.
43. There is the possibility that from the top of the tower of the Church of St Mary there would be views to the tower of St Mathias with the quarry workings in the foreground. Nevertheless, as set out above, access to the church tower is by arrangement. There is nothing in the evidence which would indicate that the two churches were deliberately sited to provide intervisibility or to form part of a designed view. The respective List Entries make no reference to any group value of the two churches.
44. The evidence before me does not indicate that there was any functional or historic connection between the appeal site and the Church of St Mathias. Although the appeal site forms part of the wider countryside setting of the church, the combination of the distance of the church from the appeal site, the screening of the quarry workings by the perimeter planting, and the time limited duration of the works would result in the proposed development having a neutral effect on the setting of this building.
45. White House Farmhouse, located on the opposite side of Thorpe Road a short distance to the north east of the appeal site, is an early 18th century farmhouse which is now a private dwelling and not associated with an agricultural use. From the submitted evidence, its significance is primarily derived from its built form, and it has architectural, aesthetic, and historic value as a well-preserved survival of a large, linear, brick-built farmhouse typical of the local vernacular style. Although the evidence indicates that historically it had a larger landholding, including parts of the appeal site, this has reduced over time to the current much smaller curtilage. The functional link to the appeal site has been lost and the immediate setting has been altered both by the transition of the house away from agricultural use and by more recent developments around it. Due to changes in level and the presence of roadside hedgerows, there is limited intervisibility between the building and the appeal site. The proposed development, although within its wider setting, would not undermine the ability to discern the house's historic agricultural associations. I find that the proposed development would have a neutral effect on the setting of this building.
46. To the north north west of the appeal site, some 315m away, Thorpe Hall is a timber framed farmhouse dating from the 16th century. Its significance is primarily derived from its architectural, aesthetic, and historic value as a well-preserved survival of a large, H-plan timber box-framed dwelling which is typical of the local vernacular style. The evidence indicates that the site was formerly occupied by a palace of the Bishops of Norwich and there is some further historical interest in this respect. Although historically having a larger landholding, there is no evidence

before me that indicates the appeal site was part of this and there is no historical functional relationship between Thorpe Hall and the appeal site. There is a degree of intervisibility between the appeal site and Thorpe Hall from Crab Apple Lane outside the site. However, from what I have read and from what I saw when I visited the site, the appeal site does not make a contribution to understanding the significance of Thorpe Hall, beyond being a part of its wider countryside setting. I find that the proposed development would have a neutral effect on the setting of Thorpe Hall.

47. Whilst all heritage assets have a setting, it is common ground between the parties that the setting of Haddiscoe War Memorial and the Monument to William Salter are not affected by the proposal. I would concur with this as they are located within a part of the churchyard to the south of the church and they are largely experienced within the context of that particular part of the churchyard and also, in the case of the war memorial, from parts of Beccles Lane (A143) which runs to the south of the church.
48. The appeal proposal would result in mineral workings taking place within the setting of the Grade I listed Church of St Mary. It is common ground between the main parties that the allocation of the site for sand and gravel extraction in the NMWLP anticipates that there would be a level of harm to its setting. Based on the evidence before me, I have found that for the proposal would result in harm to the significance of the Church of St Mary due to development within its setting. However, that harm would be restricted to slight changes to the acoustic environment, and effects on the perception and appreciation of the church from Bridleway 5 during the operational phase and be temporary during the duration of the extraction and restoration works.
49. Paragraph 212 of the Framework advises that when considering the impact of development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The Framework notes that the more important the asset, the greater the weight that is required to be given to its conservation. Paragraph 213 advises that any harm to the significance of a designated heritage asset should have a clear and convincing justification. Given the above, I find the harm to be less than substantial in this instance but, nevertheless, of considerable importance and weight. Under such circumstances, paragraph 215 of the NPPF advises that this harm should be weighed against the public benefits of the proposal.
50. The appellant is of the opinion that the proposal would be beneficial because it would allow a greater proportion of the overall mineral reserve at Norton Subcourse quarry to be utilised⁴. There would also be economic benefits in terms of continued employment for local staff, contractors and sub-contractors; local business rates contributions and contributions to the aggregates levy. There would be some longer term biodiversity benefits resulting from the restoration of the site to a species rich meadow grassland.
51. The appellant also sets out that there would be landscape, visual, and public access benefits in the form of an additional stretch of permissive footpath running from Bridleway 5 to the north west corner of the site with the provision of a bench

⁴ The evidence indicates that the material at Norton Subcourse does not contain as high a proportion of gravel as originally thought. This would result in a decreased output from this site and a reduced contribution to the supply of County's output of construction aggregates.

seat and interpretation board; the removal of the overhead electricity line which crosses the site from views of the tower of the Church of St Mary; and the reinstatement of Bridleway 5 on its definitive route. It is suggested that there would be climate change benefits in terms of carbon sequestration from the new areas of woodland and hedgerows included in the restoration scheme.

52. The principal benefit arising from the scheme is the effect of facilitating a greater use of the existing mineral resource at Norton Subcourse quarry which would help maintain the minerals landbank in the area and meet the shortfall of supply identified in the NMWLP. This would provide locally sourced construction materials to support new house building and other construction projects in this part of the county. It would also maintain existing local employment. This weighs significantly in favour of the proposal.
53. Moderate weight can also be given to the biodiversity gain and carbon sequestration benefits of the scheme and to the slightly improved public access to the site arising from the formation of a new permissive path at the western side of the site.
54. Grade I listed buildings are of exceptional interest and, consequently, very great weight has to be given to any harm to their significance. That said, minerals can only be worked where they are found and the Framework notes that when determining planning applications, great weight should be given to the benefits of mineral extraction, including to the economy. It also has to be borne in mind that the proposed development would be temporary in nature and the effects that would occur during the lifetime of the development would be largely reversible once the development was completed.
55. I am also mindful that it is common ground between the parties that the benefits of the proposal outweigh the less than substantial harm to the setting of the Church of St Mary. The harm to the setting would be slight and of limited duration. It would be effectively reversed when the development was completed. In these circumstances, I find that the benefits of the scheme outweigh the harm that would result and provide a clear and convincing justification for this harm over the short term.
56. Given the above I conclude that, on balance, the proposal would preserve the setting of the Grade I listed building the Church of St Mary and that of the other listed buildings in the vicinity of the site. This would satisfy the requirements of the Planning (Listed Buildings and Conservation Areas) Act 1990 and Paragraphs 210 and 224 of the Framework. The proposal would not conflict with the relevant requirements of policies MW1 and MIN25 of the NMWLP which seek, among other things, to ensure that proposals for mineral extraction do not have an unacceptable impact on heritage assets.

Living conditions of nearby residents

57. There are a number of residential properties in proximity to the appeal site which would potentially be affected by noise and/or dust from the proposal.

Noise

58. The principal noise sources from the operations would be the plant and machinery operated at the site. Sand and gravel would be extracted using a 360 degree

excavator. The extracted sand and gravel would be separated using a mobile screening plant. The excavated material would be loaded onto the screening plant using a loading shovel, which would also be used for loading screened gravel into an HGV for export off site. During soil stripping and restoration operations, the excavator and two dump trucks would be utilised alongside a bulldozer for spreading the fill material. In addition to mechanical noise there would be noise generated by material being loaded into the dump trucks, screening plant and n.

59. A range of noise mitigation measures are proposed including: 3m high boundary soil bunds on the northeastern and south western boundaries of the site, and in the north west corner, between the proposed working area and residential properties; an additional 3m high soil bund along the eastern boundary during Phases 3 and 4; an extraction limit around 100m from the rear façade of properties; restriction of the hours of operation to 08:00 to 17:00 Monday to Friday and 08:00 to 13:00 on Saturdays; and a reduction in the number of dump trucks to one during the final restoration of phases 5 and 6 when workings are closest to residential properties.
60. The screening machinery would be located and operated at the extraction face in the mineral void. It is stated that the screen would be positioned at least 200m from any noise sensitive property.
61. It is common ground between the main parties that the noise survey results included in the Environmental Statement were unreliable and target noise levels, derived from these, were too high by a significant margin. It is not in dispute that if the noise mitigation measures now proposed in the development application are implemented, then an acceptable noise environment at the nearby residential properties would be achieved. It is also common ground that whilst additional noise mitigation could be put in place, this would represent an unreasonable burden on the operator.
62. The predicted highest noise levels from normal operations at the closest residential receptors would, in most cases, exceed 10dB above the background noise levels but would not exceed the 55dB maximum set out in the PPG. The prevailing background noise levels in the surrounding area are low, and I noted when I visited the site and the area that road noise from traffic on the B1136 was the most noticeable noise source. This road noise was more noticeable to the south of the appeal site but less so on Thorpe Road, Church Lane, and the northern part of Crab Apple Lane.
63. The effects of noise are to an extent subjective and depend on the individual receptor's sensitivity. The current background noise levels are subjectively very quiet, with typical background levels of 33 to 35dB LA90. Consequently, increases in noise over the background level of between 10 and 20dB, as predicted by the evidence, would result in a noticeable change to the noise environment in the vicinity of the appeal site. However, the extent to which individual properties would experience increased noise levels would vary, depending on which stage the quarrying operation was at as the workings progress around the site. As a result, the highest levels of noise would not be experienced by the closest receptors for the entire duration of the quarrying operation.
64. It should also be noted that the agreed typical ambient noise levels at residential receptors in the surrounding area range from 44dB(A) LAeq,T to 55 dB(A) LAeq,T

and the highest predicted noise levels from the quarrying operations and restoration would range from 43dB (A) LAeq,T to 55dB (A) LAeq,T. Whilst at some locations the site generated noise would exceed the ambient noise level, at others it would be equal to or less than the prevailing ambient noise level.

65. The World Health Organisation Guidelines⁵ state that in external areas such as gardens, noise can cause moderate annoyance when it is above 50dB, and serious annoyance when it exceeds 55dB. The evidence indicates that the highest predicted external noise levels from the proposal would not exceed 55dB. Although there would be times when noise levels between 50 and 55dB would occur at some receptors, these would not be for the entire duration of the quarrying operation due to its phased nature.
66. Within this overall context, although there would be a noticeable change to the noise environment at residential receptors in the vicinity of the appeal site, this would vary during the course of the operation of the development and would not exceed the 55dB (A) LAeq maximum set out in the PPG. As such I find that whilst the development would cause some degree of disturbance as a result of noise, this would not be of a sufficient magnitude to cause it to conflict with the relevant requirements of Policies MIN 25 and MW1 of the NMWLP. These expect the submission of a satisfactory noise assessment and for minerals development not to have an unacceptable impact on local amenity as a result of site generated noise.

Dust

67. It is also common ground between the main parties that subject to an agreed Dust Management Plan that includes real time dust monitoring and provisions to cease dust generating activities at the site if PM10 concentrations reach a set trigger level, the appeal proposal would adequately protect and mitigate amenity to acceptable levels with regards to dust emissions.
68. The interested parties raise a point in respect of respirable dust, particularly with regard to PM2.5 particulate matter and recent changes to air quality targets in respect of these. The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023, which introduced lower target values for PM2.5, were considered as part of the Environmental Statement Addendum submitted with the appeal. This identifies that the mean background concentrations of PM10 and PM2.5, taken from the DEFRA background concentration maps, are well below the 2040 annual mean concentration target.
69. The air quality evidence submitted by the Council⁶ sets out that the particle size of sand and gravel is greater than 2.5 microns. The appellant's evidence also indicates that for mineral sites, most emissions will be in the coarse fraction rather than the fine fraction, with only approximately 10% being PM2.5. Other than separation of the sand and gravel, no processing on site is proposed which would break down the material to form smaller particles. It is also noted that the combustion of fuel in vehicles and machinery at the site would account for most PM2.5 emissions from minerals workings. The Environmental Statement Addendum states that all of the HGV's operated by the appellant meet the

⁵ World Health Organisation – Guidelines on Community Noise 1999

⁶ Penny Wilson - Technical Note: Dust 4 February 2025.

minimum emission standard for the London Low Emission Zone and that where appropriate plant can be sought it would also be compliant with this standard.

70. Whilst the site is not within London, the use of vehicles and plant that meet the standard for the Low Emission Zone indicates that the proposal seeks to minimise PM2.5 emissions from fuel combustion where practical. There is nothing in the evidence from any party to indicate that this source would result in emission levels that would be harmful.
71. I have noted the World Health Organisation guidance⁷ that has been referred to by the interested parties, and which recommends target levels for PM2.5 and PM10 of 5µg/m³ and 15µ/m³ respectively. These are lower than the current UK and European target levels. I have noted the interested parties point that decisions should be based on the most recent science, nevertheless, the World Health Organisation state that the achievement of these levels is an ultimate goal and also that the levels of 5µg/m³ for PM2.5 and 15µ/m³ for PM10 are for long term exposure. The appeal proposal would potentially have some short-term effects in respect of fugitive dust, but this would cease once the works were completed and the site restored. The evidence before me does not indicate that the current UK standards would be exceeded, provided the mitigation measures incorporated in the appeal proposal and the Dust Management Plan are implemented.
72. I therefore find that subject to appropriate conditions being imposed, the proposal would comply with the relevant requirements of Policies MIN 25 and MW1 of the NMWLP. These expect the submission of an acceptable dust assessment and a programme of mitigation measures to deal appropriately with any amenity impacts, including a standoff distance between the working area and sensitive receptors to air quality, and for minerals development not to have an unacceptable impact on local amenity and health as a result of dust.
73. Drawing these strands together, I conclude that the proposed development would not cause harm to the living conditions of the occupiers of nearby residential properties, with particular regard to dust/air quality and noise. It would comply with the relevant requirements of Policies MW1 and MIN25 of the NMWLP.

Compliance with development plan policy

74. The NMWLP sets out a strategic objective of providing a steady and adequate supply of aggregate minerals by identifying adequate mineral extraction sites to meet the forecasted need and by maintaining a landbank for sand and gravel of at least 7 years. It also sets out that to meet the forecast need for sand and gravel from 2023 to 2038 it is necessary to allocate sites within the County to provide 6.91 million tonnes of material. The appeal site is one such site and is allocated for the extraction of 1,300,000 tonnes of sand and gravel by Policy MIN25 of the MWLP.
75. The Council currently has a permitted reserve of sand and gravel which provides a landbank in excess of 7 years. However, in order to plan for future growth, the Council has identified that a further 6.91 million tonnes of sand and gravel would be required to maintain the landbank. The appeal site has been allocated to help

⁷ WHO global air quality guidelines: particulate matter (PM2.5 and PM10), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide 2021

meet the identified shortfall in the sand and gravel landbank set out in the NMWLP.

76. Policy MIN 25 sets out a number of criteria that must be met if the appeal site is to be developed. I have found above that the proposed development would not have an adverse effect on the living conditions of nearby residents in terms of noise and dust. I have also found that there would be no harm to the character and appearance of the area and although less than substantial harm would be caused to the setting of the Church of St Mary, the benefits of the proposal would outweigh that harm. There is no substantive evidence before me which would indicate that: the phased working and restoration scheme is not acceptable; that opportunities to study geodiversity during operations would not arise; that the proposals for the diversion and reinstatement of Bridleway 5 are not suitable; that water mains crossing the site cannot be accommodated or diverted; that suitable archaeological assessments cannot be carried out; that there would be unacceptable impacts on the highway network from site traffic; or that the proposal would not be provided with a suitable access. As noted above, it is common ground between the main parties that the proposal would comply with Policy MIN 25. For the reasons set out above, I have no reason to find otherwise.
77. NMWLP Policy W1 sets out a number of general development management criteria for minerals development, some of which overlap with the requirements of Policy MIN 25. I have found that the proposal would not have an unacceptable effect on local amenity, the historic environment, the Norfolk Broads or the character and quality of the area and there is no substantive evidence that the other provisions of Policy MW1 are not satisfied.
78. It is common ground between the parties that the appeal proposal does not offend any other policies in the NMWLP, the South Norfolk Local Plan - Site Specific Allocations and Development Management Policies 2015, or The Greater Norwich Local Plan 2024. There is nothing in the evidence that has been put to me which would lead me to find otherwise.
79. I therefore conclude that the proposal would comply with the relevant requirements of the development plan for the area.

Other Matters

80. I have had regard to the other matters raised in representations by the interested parties. In so far as these have not been covered above, these relate to the effect on an area of nearby woodland; that the site would not yield the quantity of material stated; the proposal would have an adverse effect on tourism in the area; the reinstated Bridleway 5 would not be suitable for all users; and that biodiversity gains included in the proposal could be lost to future development of the site.
81. With respect to the area of woodland known as Bluebell Wood to the south of the appeal site and to the west of the Church of St Mary and which runs alongside the watercourse called Landspring Beck, Natural England have advised that whilst this is long established woodland it is not ancient woodland. Whilst this is an important feature, it is not an irreplaceable habitat.
82. There is no substantiated evidence to suggest that the development would alter groundwater flows toward the Landspring Beck such that this area of woodland would be adversely affected. Nor is there any indication that, subject to good

working practices being followed, the proposal would result in any pollution of the groundwater. With regard to dust, the prevailing wind direction is away from Bluebell Wood. Whilst the wind rose indicates that although the area experiences winds from the north east, blowing towards the site, these are less frequent, and strong winds are not as common. The evidence does not indicate that there would be a significant effect on this area of woodland from dust deposition.

83. As originally submitted, the appeal proposal did not include a 100m standoff from residential properties in the vicinity of the site, but the scheme was later amended to incorporate this and the position of the screening bunds altered to accommodate the change. Although this had the effect of reducing the extent of the extraction area, the appellant did not reduce the predicted output in the amended supporting documents. Whilst the interested parties suggest that the amendment to the extraction area would reduce the output of the site by 10-15%, this is not supported by any technical information that would demonstrate that this would be the case. The appellant remains confident that the site will yield the predicted quantity of gravel.
84. With regard to the potential effect on tourism and tourism related businesses in the area, I have found that the appeal proposal would not have an adverse effect on the character and appearance of the area generally and would only have a relatively minor, short term, effect on the setting of the Church of St Mary. I have also found that the proposal would result in a suitable noise environment and that dust could be adequately controlled. No substantiated evidence has been put to me that the appeal proposal would deter tourists from visiting the area and a generalised fear of a potential adverse effect is not a reason to refuse planning permission.
85. Concerns were raised in respect of the effect on Bridleway Number 5 both during the works and following restoration. Bridleway 5 currently crosses the site from a point on Church Road to a point on Crab Apple Lane. I saw when I visited the site that although the bridleway is signposted from Church Road, the termination point on the ground does not correspond to the point shown and described in the Definitive Map and Statement. Consequently, the route which is currently signposted does not appear to be on the actual recorded, defined, route and is shorter than that shown on the Definitive Map. At the time of my site visit the current route was only faintly visible on the ground. I also noted that, similarly, Bridleway 4 to the east which forms a continuation of the route, although signposted, was also only faintly discernible on the ground. This suggests a relatively low level of use of the route.
86. It is proposed that the Bridleway would be temporarily diverted around the edge of the site during the working of Phases 5 to 7. It is not uncommon for public rights of way to be temporarily diverted during mineral workings or other developments. This is subject to a separate legal process which is not before me as part of this appeal. It is to be expected that suitable security fencing would be installed to prevent access to the working areas from the Bridleway. Although the experience of the using the bridleway would be altered during the working period, nothing has been put to me that would indicate that during the working period of the site that the use of the Bridleway would be inherently unsafe.
87. It is proposed that as part of the restoration of the site, Bridleway 5 would be reinstated on its definitive route. As the restoration of the site would not involve

the importation of additional material, the site would be restored to a lower level than at present. The concept restoration plan shows the proposed new landform dipping to a low point located towards the centre of the site. As a result, the reinstated Bridleway crossing the proposed new contours would also dip towards the middle of its route. At the western end, the route would be at approximately 14 metres above Ordinance Datum and at the eastern end approximately 12 metres above Ordinance Datum. This corresponds to the current ground levels. The appellant has confirmed that the lowest point of the new route would be 8.5 metres above Ordinance Datum and that the maximum gradient at the steepest point would be 1:12 over a short stretch.

88. At present the route of the Bridleway rises very gently from east to west as the landform rises. The concerns raised by interested parties relate to the useability of the Bridleway by elderly and disabled users. No evidence has been adduced as to the number of users of the bridleway, or the number of the users that would fall into these groups. Nor has any relevant design criteria for Bridleways been referred to. In the absence of any such evidence, a gradient of 1:12 is typically the maximum acceptable gradient for a ramp in public spaces. No evidence has been put to me that such a gradient would not be manageable by elderly or disabled users.
89. This notwithstanding, the bridleway currently does not have a hard surface but rather consists of trodden earth. As such, this is likely to be a disincentive to disabled or elderly users, particularly during inclement weather when the ground may be soft or wet. The reinstatement would not result in a less favourable walking/riding surface as it would remain an unsurfaced route. There is no suggestion that the Bridleway would or should be reinstated with a hard surface.
90. The Council's Rights of Way Officer has confirmed that they would be content for the details of the reinstatement alignments and gradients to be the subject of a condition, and the main parties have suggested a condition to this effect. Within this context, I am satisfied that there would not be any adverse effects on the Public Right of Way, or its users, as a result of the proposed development.
91. Concerns were also raised that the site may be redeveloped in the future which would result in the biodiversity gain that is proposed by the appeal scheme being lost. As with the concerns regarding a possible adverse effect on tourism, a generalised concern about potential future development on the site is not a reason to withhold planning permission. Nevertheless, the present scheme is not subject to mandatory biodiversity net gain but any future proposals on the site would be likely to be subject to this. Any future development proposal would have the biodiversity value of the restored site as the baseline for any mandatory biodiversity net gain and in any event would have to be considered on its own merits.
92. I have had regard to all of the other points raised, but none of these, either singly or collectively, lead me to a different overall conclusion.

Conditions

93. I have been provided with a list of conditions that the parties suggest should be attached to any grant of planning permission.

94. The appeal scheme proposed the extraction of minerals followed by the restoration of the site. To ensure that this is carried out in a timely manner, it is necessary to impose a condition that limits the duration of the permission and requires that the restoration be carried out within that time limit. It is also necessary to add to the standard condition relating to commencement a requirement that the developer notifies the Minerals Planning Authority of the date of commencement. This would trigger the condition restricting the duration of the permitted operations. In order to provide certainty regarding what has been permitted it is necessary to include a condition setting out the approved drawings. The suggested condition included a number of documents along with the Environmental Statement. Notwithstanding that these are not drawings or plans, the inclusion of documents in their entirety fails the test of precision and introduces uncertainty with regard to what is required to comply with the terms of the planning permission. The relevant requirements of these various documents are included in other suggested conditions, and I have therefore omitted these documents from the list of approved drawings.
95. To ensure that the site is developed in accordance with the planning permission and that proper monitoring of the output is undertaken, it is necessary to impose a condition that requires records of the monthly output to be kept and made available to the Minerals Planning Authority.
96. In order to avoid potential interference with, or pollution of, groundwater, it is necessary to restrict the depth of the workings to no lower than 0m above Ordnance Datum. It is also necessary to impose a condition requiring that there be no dewatering of the site in order to protect the groundwater environment and to ensure that the site is effectively drained to prevent pollution and mitigate against the risk of increased flooding. To ensure that the effects of the proposal on nearby properties and the surrounding area are minimised, a condition is necessary that requires the development to be carried out in accordance with the scheme of phasing set out in the Environmental Statement and submitted drawings.
97. In order to ensure that an access suitable for use by HGVs is available for the transport of material off-site, it is necessary to impose a condition that requires details of the proposed access to be submitted for approval and implemented prior to the commencement of minerals being extracted. In the interests of the appearance of this part of the countryside, it is also necessary that provision is made for the removal of that vehicular access as part of the site restoration once the extraction of minerals has ceased. In order to ensure that the carriageway of Crab Apple Lane is not obstructed, a condition is necessary requiring that any security gates open into the site and are situated at a minimum of 8 metres from the carriageway in order to allow an HGV to wait outside of the site and clear of the highway.
98. In the interests of highway safety, it is necessary to restrict the number of vehicular access points from Crab Apple Lane and require that the existing field access to the appeal site be temporarily closed for the duration of the permitted works. Also in the interests of highway safety, it is necessary to impose conditions requiring suitable visibility splays from the new access point to be formed and kept clear of obstruction and for a section of Crab Apple Lane to be widened to allow two HGVs to pass on the carriageway.

99. No details of an internal site compound have been submitted. In order to prevent obstruction of the carriageway and in the interests of highway safety, it is necessary to provide a parking and turning area within the site to enable site operative's vehicles to be parked within the site and to ensure that all vehicles are able to turn within the site and to re-enter the public highway in forward gear.
100. In order to maintain the efficient operation of the highway network, in the interests of highway safety, and to minimise the effect of the development on residential properties in the area, it is necessary that a HGV management plan for the routing of vehicles to and from the site be submitted to the Minerals Planning Authority for approval and is thereafter implemented. Due to the nature of the development, there is potential for vehicles leaving the site to track mud or debris onto the highway and, consequently, it is necessary to impose a condition requiring that vehicles leaving the site are suitably cleaned and covered to ensure that this does not occur.
101. Due to the proximity of residential properties to the appeal site, it is necessary to restrict the site working hours in order to minimise any effects of the proposal on the living conditions of nearby residents and on the setting of the Church of St Mary. Also because of the proximity of residential properties it is necessary to impose a condition requiring that the plant and machinery to be used on the site is fitted with suitable silencers.
102. Details of a site office/staff facilities and the proposed mobile screening plant were not included in the submissions. It is therefore necessary, in the interests of the appearance of the area, that details of these be submitted to the Minerals Planning Authority for approval.
103. In order to achieve the agreed level of noise mitigation to minimise the effect of the development on nearby residential properties and the surrounding area, it is necessary to impose a condition requiring the screening bunds on the site boundaries be extended as agreed in the Statement of Common Ground on Noise. For the same reason, it is necessary to include conditions which set maximum noise levels at the identified noise sensitive receptors; prevent the use of tonal reversing alarms on HGVs and vehicles or plant operating on the site; and to require that the noise mitigation measures included in the proposal are implemented.
104. In order to minimise the effects of the proposal on nearby residential properties and the surrounding area, it is necessary to attach a condition requiring that the proposed dust mitigation is implemented.
105. The submitted Environmental Statement identifies that the site has some potential archaeological interest, and, due to the nature of the development, any archaeological evidence would be lost. To ensure that any archaeological remains present are properly recorded, it is therefore necessary to impose a condition requiring that the Archaeological Written Scheme of Investigation included in the Environmental Statement be implemented.
106. In order to ensure the retention and re-use of soils on the site and their proper storage during the operational phase, conditions are necessary that require the submission, approval, and implementation of a Soil Resource and Management Plan for the site; the retention of all topsoil, subsoil, and soil-forming materials on the site; all soils to be stripped before any phase of excavation is carried out; soils

to be only moved when dry; details of the method of soil storage and bund construction; and any bunds that are to remain in situ for more than 6 months or over winter are seeded with grass.

107. Because the excavation voids are to be backfilled with sand extracted from the site, there is potential for differential settlement during the restoration and aftercare of the site. To ensure that the site is restored to the levels approved in the aftercare scheme, a condition is required to achieve this and ensure that suitable infill material is imported to the site for this purpose.
108. The trees present on the site boundaries are to be retained for landscape purposes and to provide visual screening of the site. They need to be protected from damage during the construction of screening bunds and mineral extraction enabling works. It is, therefore, necessary to impose a condition requiring the scheme to be carried out in accordance with the submitted Arboricultural Method Statement.
109. The appeal scheme contains a restoration scheme which includes elements to create wildlife habitats and improve biodiversity. To ensure that the restoration scheme becomes properly established and the ecological benefits of this are achieved and maintained, it is necessary to require the submission, approval and implementation of an aftercare strategy and a longer-term management scheme to follow the aftercare period.
110. The proposal involves the temporary diversion of a Public Right of Way and its reinstatement as part of the restoration of the site. In order to limit the effect of this on users of Bridleway 5, it is necessary for details of the alignment, width, gradient, and construction of the diversion and the restored alignment of the bridleway to be submitted for approval⁸.
111. To ensure that the development operates in accordance with the planning permission and would not have unacceptable adverse effects on the natural environment or human health, it is necessary to impose a condition restricting the processing plant that can be operated on the site to a mobile screening plant for the separation of sand and gravel. To prevent light pollution and to protect residential amenity it is also necessary to include a condition preventing the installation of fixed external lighting within the site or attached to any buildings.
112. It is suggested that a condition is necessary to control related activities on the site. The Town and Country Planning (General Permitted Development)(England) Order 2015 (the GPDO) grants planning permission for certain developments including the installation of plant and machinery, and the erection of buildings and other structures on land used as a mine⁹. The Planning Practice Guidance advises that conditions restricting the future use of permitted development rights may not pass the test of reasonableness or necessity. Nevertheless, the appeal site is located adjacent to the boundary of the Norfolk Broads, is within the setting of a Grade I Listed Building and is in proximity of a number of residential

⁸ It should be noted that a grant of planning permission does not authorise the diversion of a Public Right of Way and that a temporary diversion order made by the Highway Authority under Section 261 of the Town and Country Planning Act 1990 is required to effectuate the diversion. The appellant would need to initiate this process with the Highway Authority. The diversion or stopping up of footpaths and bridleways is a separate process which must be carried out before the route is affected by the development.

⁹ The GPDO defines "mine" as any site on which mining operations are carried out; and "mining operations" as the winning and working of minerals in, on or under land, whether by surface or underground working. For the purposes of the GPDO, a quarry is the same as a mine.

properties. As such it both is in a sensitive location and bounded by sensitive properties. Consequently, it is both reasonable and necessary to impose a condition restricting the operation of the permitted development rights granted by Class A and B of Part 17 of Schedule 2 to the GPDO.

113. The proposal includes ecological mitigation measures and proposals to provide biodiversity gains as part of the restoration scheme. To ensure that these are achieved and the restoration scheme is implemented, and becomes established, it is necessary to impose a condition requiring the development to be carried out in accordance with the details set out in the Environmental Statement and the submitted ecological enhancement plan.
114. Policy MP7 of the NMWLP, which replaced Policy DM14 of the Norfolk Minerals and Waste Development Framework Core Strategy and Minerals and Waste Development Management Policies Development Plan Document 2011, restates the provision of the previous policy that restoration proposals must demonstrate that any important geology or geomorphology on the site will be retained in sample exposures for study purposes where practical and safe to do so. To comply with the requirements of Policy MP7 it is necessary to attach a condition requiring the submission of a scheme for geological recording and sampling.

Conclusion

115. Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that if regard is to be had to the development plan for the purpose of any determination to be made under the planning Acts, the determination must be made in accordance with the plan unless material considerations indicate otherwise.
116. The appeal site is allocated in the NMWLP as a site for the extraction of 1,300,000 tonnes of sand and gravel. I have found that subject to the mitigation measures proposed being implemented that the proposal would not cause harm to the living conditions of nearby residents as a result of noise or dust generated at the site. Although I have found that the proposal would result in a degree of less than substantial harm to the setting of the Grade I listed Church of St Mary, this harm would be of a temporary duration and would cease to occur once the development is completed and the site restored. I have also found that the public benefits of the appeal proposal would outweigh the harm to the setting of the listed building. The proposal would satisfy the requirements of the Planning (Listed Buildings and Conservation Areas) Act 1990 and Paragraphs 210 and 224 of the Framework. Having considered all other pertinent matters, I conclude that the proposal would comply with the relevant policies in the development plan.
117. No material considerations have been identified that would indicate that a decision should be made other than in line with the development plan. For the above reasons, I therefore conclude that the appeal should be allowed.

John Dowsett

INSPECTOR

APPEARANCES

FOR THE APPELLANT:

Killian Garvey KC	Advocate for the appellant
Helen Hudson	Planning Consultant
Michelle Dawson	Noise Consultant
Bob Thomas	Air Quality Consultant
Emma Well	Heritage Consultant
Grant Anderson	Solicitor

FOR THE LOCAL PLANNING AUTHORITY:

Ben Du Feu	Advocate for the Council
Andrew Sierakowski	Norfolk County Council Planning Department
Ralph Cox	Norfolk County Council Planning Department
Jodie Cunningham-Brock	Norfolk County Council Legal Department
Clive Bentley	Noise Consultant

INTERESTED PARTIES:

Councillor Barry Stone	Norfolk County Council
Ben Goldsborough MP	Member of Parliament for South Norfolk
Sari Kelsey	Haddiscoe Parish Council
Daryl Packer	STOPIT 2 Campaign / local resident
Marcus Aldren	STOPIT 2 Campaign / local resident
Jane Moir	Springbok Properties
Tony Burton	Local resident

DOCUMENTS

- ID1 Appellant's opening submissions
- ID2 Council's opening submissions
- ID3 Statement by Sari Kelsey
- ID4 Statement/Presentation by STOPIT 2
- ID5 Statement by Jane Moir
- ID6 Revised Table in respect of suggested Condition 19

Schedule of Conditions

1. The development to which this permission relates shall cease and the site shall be restored within 8 years of commencement of development, as notified under Condition 2. Restoration shall be undertaken in accordance with Drawing No. HADD009 Rev.B, Concept Restoration Plan, dated November 2024 and Drawing No. HADD010 Rev. A, Landscape Planting and Aftercare Plan, November 2024
2. The development hereby permitted shall commence no later than three years from the date of this permission. Within seven days of commencement the operator shall notify the Minerals Planning Authority in writing of the start date. Thereafter the operator shall notify the Minerals Planning Authority in writing within seven days of the commencement of each subsequent phase.
3. The development must be carried out in strict accordance with the following drawings:
 - Drawing No. 2022_05_26_H20_001, Location Plan, dated May 2022;
 - Drawing No. 2022_05-26_H20_002 Rev. A Site Plan, dated September 2023
 - Drawing No. 2022_05-26_H20_003, Location Overview, dated May 2022;
 - Drawing No. 2022_05-26_H20_004, Aerial View, dated May 2022;
 - Drawing No. 2022_05-26_H20_005, Site Survey, dated May 2022;
 - Drawing No. 2022_05-26_H20_006, Rev A Phasing Overview, dated November 2024;
 - Drawing No. J000279-01/SK101 Rev. C, Proposed Site Access, dated 19th September 2023;
 - Drawing No. HADD001 Rev.C, Phase 1, dated September 2023;
 - Drawing No. HADD002 Rev.C, Phase 2, dated September 2023;
 - Drawing No. HADD003 Rev.C, Phase 3, dated September 2023;
 - Drawing No. HADD004 Rev.C, Phase 4, dated September 2023;
 - Drawing No. HADD005 Rev.C, Phase 5, dated September 2023;
 - Drawing No. HADD006 Rev.C, Phase 6, dated September 2023;
 - Drawing No. HADD007 Rev.C, Phase 7, dated September 2023;
 - Drawing No. HADD008 Rev.C, Restoration Landform, dated September 2023;
 - Drawing No. HADD009 Rev.B, Concept Restoration Plan, dated November 2024;
 - Drawing No. HADD010 Rev. A, Landscape Planting and Aftercare Plan, dated November 2024;
 - Drawing No. HADD011 Rev. A Restoration Concept Plan: Sections A-A' & B-B', dated November 2024.
4. From the date of commencement of mineral extraction, the operators shall maintain records of their monthly output and shall make them available to the Minerals Planning Authority at any time upon request. All records shall be kept for at least 2 years.
5. No excavations shall be carried out at a depth greater than 0m AOD.
6. The development, including soil stripping, extraction and restoration, shall be undertaken strictly in accordance with the scheme of phasing set out in Chapter 3 of the Environmental Statement Volume 2, Manor Farm, Crab Apple Lane,

Haddiscoe, Norfolk, Breedon Trading Limited, dated October 2022 and approved drawings set out in Condition No.3 and as may be amended by Condition 18.

7. Prior to the commencement of mineral extraction, the vehicular access over the verge shall be constructed in accordance with a detailed scheme to be submitted to, and approved in writing by, the County Planning Authority in accordance with the highways specification and thereafter retained at the position shown on the approved plan. Arrangements shall be made for surface water drainage to be intercepted and disposed of separately so that it does not discharge from or onto the highway.

Once the development has ceased operation the access shall be removed and landscaping reinstated in accordance with Drawing No. HADD009Rev. B, Concept Restoration Plan, dated November 2024 and Drawing No. HADD010 Rev. A, Landscape Planting and Aftercare Plan, dated November 2024.

8. Any access gates/bollard/chain/other means of obstruction shall be hung to open inwards, set back a minimum distance of 8 metres from the near channel edge of the adjacent carriageway, and thereafter retained as such for the duration of the development.
9. Vehicular access to and egress from the adjoining highway shall be limited to the access shown on Drawing No. J000279-01/SK101 Rev. C, Proposed Site Access, dated 19th September 2023 only. The existing field access on Crab Apple Lane shall be temporarily closed for the duration of development, and the highway verge shall be reinstated in accordance with a detailed scheme to be submitted to, and approved in writing by, the Minerals Planning Authority. The reinstatement of the highway verge at the existing access shall be implemented concurrently with the bringing into use of the new access.
10. Prior to the commencement of mineral extraction, visibility splays shall be provided in full accordance with the details indicated on Drawing No. J000279-01/SK101 Rev. C, Proposed Site Access, dated 19th September 2023. The splays shall thereafter be maintained at all times free from any obstruction exceeding 0.6 metres above the level of the adjacent highway carriageway.
11. Prior to the commencement of mineral extraction, detailed drawings for the off-site highway improvement works, as indicated on Drawing No. J000279-01/SK101 Rev. C, Proposed Site Access, dated 19th September 2023 shall be submitted to, and approved in writing by, the Minerals Planning Authority.
12. Prior to the commencement of mineral extraction, the off-site highway improvement works referred to in Condition No. 11 shall be completed in accordance with the approved details.
13. Prior to the commencement of mineral extraction, a scheme showing sufficient space within the site to enable heavy goods vehicles and cars to park, turn, and re-enter the highway in forward gear shall be submitted to, and approved in writing by, the Minerals Planning Authority. This area shall be laid out, demarcated, levelled, surfaced, drained, and made available for use before any minerals are exported from the site. Thereafter it shall be retained and kept available for that specific use for the duration of the development.

14. Prior to the commencement of mineral extraction, a Heavy Goods Vehicle Management Plan for the routing of heavy goods vehicles to and from the site shall be submitted to, and approved in writing by, the Minerals Planning Authority. The Plan shall make provision for:

- Monitoring of the approved arrangements during the life of the site;
- Ensuring that all drivers of vehicles under the control of the Applicant are made aware of the approved arrangements;
- The disciplinary steps that will be exercised in the event of a default;
- Appropriate signage, details to be approved by the Minerals Planning Authority in consultation with the Highway Authority and erected advising drivers of the vehicle routes agreed with the Minerals Planning Authority in consultation with the Highway Authority;
- Wheel cleaning facilities and their use/retention.

Thereafter, the Heavy Goods Vehicle Management Plan shall be implemented as approved for the duration of the works at the site.

15. No operation authorised or required under this permission shall take place on Sundays or public holidays, or other than during the following periods:

08.00 - 17.00 Mondays to Fridays

08.00 - 13.00 Saturdays.

16. Prior to installation, details including:

- a) dimensioned elevations/sections, material finishes and colours of all of the component parts of the Site Office/Messroom; and
- b) dimensioned elevations/sections of the sand and gravel screening plant;

shall be submitted to, and approved in writing by, the Minerals Planning Authority.

The Site Office/Messroom and Sand and Gravel Screening Plant shall thereafter be installed and maintained in accordance with the approved details.

17. No plant or machinery shall be used on the site unless it is maintained in a condition whereby it is efficiently silenced in accordance with the manufacturer's specification, the latter to be provided to the Minerals Planning Authority on request.
18. Prior to the construction of the temporary soil bunds shown on Drawing Nos. HADD001Rev.C, HADD002Rev.C, HADD003Rev.C, HADD004Rev.C, HADD005Rev.C, HADD006Rev.C, and HADD007Rev.C, revised drawings shall be submitted to, and approved in writing by, the Minerals Planning Authority showing the extension of the bunds along the southern boundary of Phase 2 and Phase 3 and along the northern boundary of Phase 5, and the provision of a bund along the eastern boundary of Phases 3 and 4. These bunds shall be in general accordance with the Statement of Common Ground – Noise Haddiscoe (Sharps Acoustics) and appended Noise Technical Note - Rev 0 Appeal land off Crab Apple Lane (SLR), both documents dated 21 February 2025.

The temporary soils bunds shall thereafter be constructed and maintained in accordance with the revised drawings, for the duration of the operational phases of the development as shown.

19. With the exception of noise emitted from the site from temporary operations, the noise emitted from the extraction site or the plant site shall not exceed the noise limits stated below at the following properties and locations (as defined in the Statement of Common Ground – Noise Haddiscoe (Sharps Acoustics) and appended Noise Technical Note - Rev 0 Appeal land off Crab Apple Lane (SLR) both documents dated 21 February 2025).

Receptors	During extraction dB, LAeq,1 hour	Restoration, except periods (up to 8 weeks a year) when plant is operating within 1 metre of the final restoration level dB, LAeq,1 hour
Low Farm	43	43
Windmill Cottage	53	52
The Boundaries	54	50
Willow Barn	50	47
Whitehouse Farm	48	46
Haddiscoe Manor	50	49
1 Loddon Road	51	51
St Mary's Church	48	49

Noise from temporary soil stripping operations, landscape operations, final restoration, and bund construction and removal operations, at each of the properties listed above shall not exceed 70 dB LAeq (1 hour) free field. Temporary operations shall not exceed a total of 8 weeks in any calendar year. The noise limits apply during normal site operations between 0800 and 1700 Monday to Friday and 0800 to 1300 Saturdays. Measurements shall be taken at 1.5 meters above local ground level, in free-field condition away from any buildings. LAeq, T sound level should be sampled for a minimum period of one hour at each monitoring position.

20. All heavy goods vehicles and all mobile plant operating on the site shall be fitted with broadband ('white noise') reverse warning systems and maintained in accordance with the manufacturers recommendations for the lifetime of the development. Tonal reversing alarms shall not be used on any vehicles or mobile plant operating at the site.
21. The development shall be undertaken strictly in accordance with the Manor Farm, Crab Apple Lane, Haddiscoe, Norfolk, Environmental Statement Addendum

Chapter 8, dated January 2025, and as defined in the Statement of Common Ground – Noise Haddiscoe (Sharps Acoustics) and appended i) Noise Technical Note - Rev 0 Appeal land off Crab Apple Lane (SLR) both documents dated 21 February 2025 and ii) Michelle Dawson Proof of Evidence - Noise and its Appendices A-E both dated 10 February 2025.

22. Before any minerals are exported from the site, details of measures to ensure that vehicles leaving the site shall not be in a condition whereby they would deposit mud or other loose material on the public highway shall be submitted to, and approved in writing by, the Minerals Planning Authority. Thereafter, the approved measures shall be implemented for the duration of the operational period of the development.
23. The development shall be undertaken strictly in accordance with the Manor Farm, Crab Apple Lane, Haddiscoe, Norfolk, Environmental Statement and Technical Appendices, Volume 2, Breedon Trading Limited, October 2022, Chapter 10, Air quality, including the dust mitigation measures set out in Section 10.5 Embedded Mitigation and Section 10.7 Additional Mitigation, Compensation, Enhancement Measures, and the Dust Management Plan, Manor Farm, Haddiscoe, Breedon Trading Limited, dated September 2023, so as to prevent dust nuisance and sand blow caused by the operations, including the spraying of the access, turning area, and stocking area and stockpiles. Prior to the commencement of development, the Dust Management Plan shall be updated to include:
 - (a) Contact arrangements by which residents can raise any complaints, concerns and issues;
 - (b) Details of the provision of an on-site meteorological station;
 - (c) Details of the placement of an MCERTS certified indicative real-time particulate monitor which will be connected to a web-based platform and can be accessed by the operations manager and officers designated by the Minerals Planning Authority. The web-based platform will have a PM10 concentration trigger level agreed with the Minerals Planning Authority, which will alert the operations manager and the Minerals Planning Authority designated officer(s) if and when the limits are breached. An exceedance of the PM10 concentration trigger level would result in the cessation of dust generating activities until the source of dust is identified and dust emissions controlled. The location of the monitor is to be reviewed with the Minerals Planning Authority at the commencement of each phase; and
 - (d) A register of every limit breach and the actions taken.

The development shall be carried out in accordance with the updated Dust Management Plan.

24. There shall be no dewatering of the site. The development shall be undertaken strictly in accordance with the Manor Farm, Crab Apple Lane, Haddiscoe, Norfolk, Environmental Statement and Technical Appendices, Volume 2, Breedon Trading Limited, October 2022, Chapter 9, Hydrogeological and Flood Risk Assessment, including the surface water, flood risk and water quality mitigation measures set out in Section 9.5 Embedded Mitigation and Section 9.7 Additional Mitigation, Compensation, Enhancement Measures, and the and the supporting Appendices 9.1 to 9.3.

25. No development shall take place other than in accordance with the Archaeological Written Scheme of Investigation set out in the Environmental Statement Volume 2 Manor Farm, Crab Apple Lane, Haddiscoe, Norfolk, Breedon Trading Limited, dated October 2022, Technical Appendix 12.6, Haddiscoe Quarry Archaeological Mitigation Strategy and Written Scheme of Investigation, Andrew Josephs Associates, dated October 2022 and any addenda to that WSI covering subsequent phases of mitigation.
26. Prior to any soil stripping operations commencing on site, other than those associated with installation of the site access works, a Soil Resource and Management Plan, which shall be prepared in accordance with the Institute for Quarry's Good Practice Guide for Handling Soils in Mineral Workings (2021), shall be submitted to, and approved in writing by, the Minerals Planning Authority. The Plan shall identify clearly the origin, intermediate, and final locations of soils for use in the restoration, as defined by soil units, together with details balancing the quantities, depths, and areas involved. All soil handling operations shall be carried out in accordance with the approved Soil Resource & Management Plan.
27. All topsoil, subsoil, and soil-forming material shall be retained on the site in accordance with the approved drawings listed in Condition No. 3. Pockets of suitable soil-forming material shall be recovered during the stripping or excavation operations, wherever practicable, for use during the restoration phase.
28. All available topsoil (and subsoil) shall be stripped before any phase of the site is excavated, built upon, or otherwise traversed by heavy machinery (except for the purpose of stripping or stacking soil on those parts).

Soil stripping and soil stripping depths shall accord with the details to be set out in the Soil Resource and Management Plan to be submitted and approved in accordance with Condition No. 26.
29. Soil shall only be moved when in a dry and friable condition. For all soil types, no soil handling shall proceed during and shortly after significant rainfall, and/or when there are any puddles on the soil surface. Soil handling and movement shall not be carried out between the months of October to March inclusive. Plant or vehicle movement shall be confined to clearly defined haul routes, or the overburden surface and shall not cross areas of topsoil and subsoil.
30. Bunds for the storage of agricultural soils shall conform to the following criteria:
 - (a) Topsoils, subsoils and subsoil substitutes shall be stored separately;
 - (b) Where continuous bunds are used dissimilar soils shall be separated by a third material;
 - (c) Topsoil and subsoil bunds shall not exceed 3 m in height; and
 - (d) Materials shall be stored like upon like so that topsoil shall be stripped from beneath subsoil bunds and subsoil from beneath overburden bunds.
31. Prior to the construction of any bunds intended to remain in situ for more than 6 months, or over the winter period (December, January and February), a specification for these to be grassed over, weeds controlled, and other necessary maintenance to ensure the stability of the bunds shall be submitted to, and

approved in writing by, the Minerals Planning Authority. Thereafter the development shall be carried out in accordance with the approved specification.

32. In any part of the site where differential settlement occurs during the restoration and aftercare period, the applicant, where required by the Minerals Planning Authority, shall fill the depression to the final settlement contours specified with suitable imported soils, to a specification to submitted to, and approved in writing by, the Minerals Planning Authority.
33. The development shall be undertaken strictly in accordance with the Manor Farm, Haddiscoe, Tree Survey Review, Arboricultural Impact Assessment and Arboricultural Method Statement, The Landscape Partnership, dated 17th October 2023. The tree protection shall be erected strictly in accordance with the details set out Section 7.3 of the Arboricultural Method Statement and Drawing No. E23822-TLP-602, dated 28th September 2023 (included in the Arboricultural Impact Assessment - Arboricultural Method Statement, before any machinery or materials are brought on to the site or before any stripping soils commences, and shall be maintained for the lifetime of the development.
34. Within 12 months of the commencement date of operations (as notified in accordance with Condition 2), details of a 5 year aftercare strategy for the restored site and a 10 year management scheme in order to maximise the landscape value and interest for biodiversity from the hedgerow planting, mixed deciduous woodland, gapped up areas, wet woodland, and mixed scrub block planting (as shown on the approved Concept Restoration Plan HADD009RevB and approved Landscape and Planting Plan HADD010RevA or as subsequently updated and approved) shall be submitted to and approved in writing by the Minerals Planning Authority. Thereafter the aftercare strategy shall be implemented in accordance with the approved details.

Upon expiration of the 5-year initial aftercare period for the restoration area of the application site, the 10 year long-term management scheme for the hedgerow planting, mixed deciduous woodland, gapped up areas, wet woodland and mixed scrub block planting shall be implemented in accordance with the submitted and approved details.

35. Prior to the commencement of Mineral Extraction from Phase 3, details of the alignment, width, gradient, and construction of the diversion and the restored alignment of Haddiscoe Bridleway BR5, and details of the timing and timescales for the implementation of the diversion and restored alignment, shall be submitted to the Minerals Planning Authority for written approval. The diversion and the restored alignment of Haddiscoe Bridleway BR5 shall thereafter to be implemented, in accordance with the approved details.
36. The processing plant to be located and used on the site shall be limited to a mobile screening plant to separate the sand and gravel only.
37. No fixed external lighting shall be erected within the site or fixed to any buildings.
38. Notwithstanding the provisions of Article 3 and Schedule 2, Part 17, Class A and Class B, of The Town and Country Planning (General Permitted Development) (England) Order 2015 as amended, (or any order amending, or revoking and re-enacting that Order, with or without modification, either in whole or in part), no plant/structures, machinery or lighting, whether fixed or static, lagoons,

mineral/waste or other material stocking, or other buildings or structures shall be erected or placed on the site, except as provided for under the other conditions of this permission or with the prior approval of the Minerals Planning Authority.

39. The development shall be undertaken strictly in accordance with the Manor Farm, Crab Apple Lane, Haddiscoe, Norfolk, Environmental Statement and Technical Appendices, Volume 2, Breedon Trading Limited, October 2022, Chapter 14 Ecology, including the ecological mitigation measures set out in Section 14.6 Embedded Mitigation and Section 14.8 Additional Mitigation, Compensation, Enhancement Measures, and the supporting Appendices 14.1 to 14.5, the Preliminary Ecological Appraisal (PEA) Report, Proposed Quarry at Land at Haddiscoe, Norfolk, Report Refer. CE-HQ-1984-RP01-FINAL Rev A, Crestwood Environmental Ltd, dated 10th October 2022, including Section 5 Conclusions and Recommendations and Section 6 Enhancements, the Ecological Enhancement Plan, Manor Farm, Haddiscoe, Norfolk, Report Ref. CE-HA-2301-RP01-FINAL, Crestwood Environmental Ltd, dated 26th April 2023, the revised version of Drawing No. HADD009Rev. B, Concept Restoration Plan, and Drawing No. HADD010 Rev. A, Landscape Planting and Aftercare Plan, (both dated November 2024) and aftercare and long term management details to be approved in accordance with Condition No.34.
40. Prior to the commencement of mineral extraction, a scheme for geological recording and sampling shall be submitted to, and approved in writing by, the Minerals Planning Authority. The Scheme shall include details of:
 - (a) The opportunities during working for geological features exposed during excavation or other operations to be recorded, sampled, studied and retained as an open face as part of the restoration of the site; and
 - (b) Access to the site to allow geological study and research by educational and research groups, as requested.

Thereafter, the scheme shall be implemented in accordance with its terms.