Green Hill Solar Farm

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Statement of Common Ground: Environment Agency

Revision A

Prepared by: Lanpro Services

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Report Prepared for: Green Hill Solar Farm

Examination Deadline 4

Statement of Common Ground: Environment Agency (Revision A)

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1 Introduction

1.1 Purpose of the Document

1.1.1 This Statement of Common Ground (SoCG) has been prepared as part of the proposed Green Hill Solar Farm Development Consent Order (the Application) made by Green Hill Solar Farm Ltd (the Applicant) to the Secretary of State for Energy Security & Net Zero (the Secretary of State) pursuant to the Planning Act 2008 (PA 2008).

1.1.2 This SoCG does not seek to replicate information which is available elsewhere within the Application documents. All documents are available on the Planning Inspectorate's website.

1.1.3 This SoCG has been produced to confirm to the Examining Authority (ExA) where agreement has been reached between the parties, and where agreement has not yet been reached. SoCGs are an established means in the DCO consenting process, of allowing all parties to identify and focus on specific issues that may need to be addressed during the examination.

1.2 Parties to this Statement of Common Ground

1.2.1 This SoCG has been prepared by (1) Green Hill Solar Farm Ltd. as the Applicant and (2) the Environment Agency (EA).

1.2.2 Collectively, Green Hill Solar Farm Ltd. and the Environment Agency are referred to as 'the parties'.

1.3 Terminology and Referencing

1.3.1 In the Tables in Section 3 of this SoCG below:

- "Agreed" indicates where the issue has been resolved;
- "Not Agreed" indicates a final position; and
- "Under discussion" indicates where these points will be the subject of ongoing discussion wherever possible to resolve, or refine, the extent of disagreement between the parties.

1.4 Topic Referencing for All Matters

1.4.1 All matters agreed, under discussion and not agreed have been given unique references which relate to the topic matter. The referencing system is defined as follows:

Table 1.1: Topic Referencing

Topic	Unique Identifying Code
Ecology and Biodiversity	EB-XX
Hydrology Flood Risk and Drainage	HYD-XX
Ground Conditions and Contamination	GCC-XX

2 Record of Engagement

2.1 Summary of Consultation

2.1.1 The parties have been engaged in consultation since March 2024.

2.1.2 A non-statutory consultation took place in March to May 2024. The statutory consultation process took place between 7th November and 19th December 2024.

2.1.3 The Applicant and the Environment Agency have engaged extensively throughout the pre-application and Environmental Impact Assessment (EIA) stages of the Proposed Development. The key engagement has included statutory consultation responses, technical discussions on flood risk modelling and drainage design, and provision of supporting information to inform the Environment Agency's review.

2.1.4 The main focus of discussions has related to:

- The hydrology, flood risk and drainage assessments set out in Environmental Statement (ES) Chapter 10 **[REP1-023]** and the Flood Risk Assessment (FRA) Covering Report **[REP1-053]** and Annexes **[APP-098 to APP-108, REP1-055 and REP1-057].**
- The scope and methodology of the Water Framework Directive (WFD) Assessment **[REP1-155]**.
- The approach to climate change allowances in the FRA and drainage strategy.
- Provision of rainfall hyetograph data and ReFH2 calculations to support verification of the 2D direct rainfall model.
- The design of bunded drainage and pollution prevention measures for Battery Energy Storage System (BESS) areas.
- Measures to manage residual flood risk, including emergency response procedures.
- Construction phase flood risk management.
- Consideration of impacts upon fish species, especially migratory fish species and impacts associated with trenching and Horizontal Directional Drilling around watercourses.
- Consideration of impacts upon aquatic invertebrates.

2.1.5 Consideration of the risks associated with historical landfill areas in proximity to the site, including their potential to cause contamination and impact controlled waters. A summary of the meetings and correspondence that has taken place between Green Hill Solar Farm Ltd and statutory consultees in relation to the Application is outlined in **Table** 2.1 below.

Table 2.1: Record of Engagement

Date	Form of Correspondence	Key Topics Discussed	Key Outcomes
March–May 2024	Email correspondence (non statutory consultation)	Applicant requested EA Product 4, 5 and 6 data and sought early agreement on baseline information needs for the FRA and WFD screening, including available hydraulic models, historic flood records and climate allowance parameters.	EA acknowledged the requests and confirmed data availability to support preparation of the assessments.
November–December 2024	Statutory consultation response (Section 42)	Environment Agency provided detailed comments on ES Chapter 10, the FRA, and the WFD screening assessment, including recommendations on model verification, drainage design and pollution prevention measures.	Comments and recommendations to take forward.
December 2024–January 2025	Email correspondence	EA requested provision of rainfall hyetograph data, ReFH2 calculations and model logs to support verification of the hydraulic modelling approach.	See below.
January 2025	Statutory consultation response (Section 42)	Environment Agency provided detailed comments on fisheries legislation; mitigation measures for activities which may impact fish (such as trenching of watercourses); potential impacts on aquatic invertebrates; and characterisation of watercourses.	Comments and recommendations to take forward.
January 2025	Statutory consultation response (Section 42)	Ground Conditions and Contamination: Environment Agency requested the assessment of landfill risk to controlled waters, queried the requirement	Comments actioned within GH6.2.22 Environmental Statement **Chapter 22 Ground Conditions and**

Date	Form of Correspondence	Key Topics Discussed	Key Outcomes
		of cable leak protection and requested further details regarding Source Protection Zones (SPZs) and aquifers as potential receptors.	**Contamination [REP1-025].**
January–March 2025	Email correspondence and file submission	Applicant provided model logs, rainfall hyetograph files and ReFH2 outputs. Updated mapping datasets were submitted reflecting NaFRA2 (January 2025) and revised RoFSW outputs.	EA acknowledged receipt and confirmed the information would inform their review.
April–May 2025	Email correspondence	Ongoing review of hydraulic modelling and drainage design. EA raised clarifications on residual risk measures, construction phase arrangements and pollution prevention measures for BESS areas.	N/A
June–July 2025	Email correspondence and SoCG preparation	Parties discussed the structure of the SoCG, confirmed the topics for inclusion.	Parties agreed to record current positions pending final review.
1st October 2025	Teams meeting	Issue raised in EA Relevant Representation **[RR-1224]** regarding avoidance of the coarse fish spawning period for open-cut trenching of watercourses during cable route installation.	Applicant committed to avoidance period of October – June 15th for relevant works, or completion of habitat suitability survey work pre-commencement to establish whether spawning fish are likely present/absent. This commitment is secured in the **Outline Ecological Protection Mitigation and Strategy Revision A [EX4/GH7.5_B].**

2.1.6 It is agreed that this is an accurate record of the key meetings and consultation undertaken between Green Hill Solar Farm Ltd and the Environment Agency in relation to the issues addressed in this SoCG.

3 Matters of Discussion

3.1 Overview

3.1.1 Error! Reference source not found.**1** to Error! Reference source not found.**3** below detail by topic the matters agreed, under discussion, or not agreed with the Environment Agency at the point of this document being published.

3.2 Ecology and Biodiversity

Table 3.1: Ecology and Biodiversity

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
EB-01	Legislation	EA Statutory Consultation Feedback The Salmon and Freshwater Fisheries Act 1975 and The Eels (England and Wales) Regulations 2009 have not been included in the list of legislation that is relevant to biodiversity. The legal responsibility on the developer pertaining to this fish specific legislation has not been considered. This infers that the impacts on fish from the construction, operation and decommissioning have not been fully considered. Both pieces of legislation should be listed as relevant in the biodiversity chapter of the ES and submitted as part of the DCO.	This legislation has been considered and referenced in the Environmental Statement Chapter 9 Ecology and Biodiversity **[REP1-033]**.	Noted and agree.	Agreed
EB-02	Mitigation for fish species	EA Statutory Consultation Feedback Fish surveys or fish habitat surveys have not been included as part of	An approach is set out whereby either open-cut trenching or trenchless techniques, such as HDD, will be used for cable	Noted and agree with this approach based on detail and mitigation in section 7.4 Rivers and Stream of	Agreed

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
		the baseline data collection. Certain construction activities may have a negative impact on notable fish populations. Particularly where open cut trenching is proposed for cable crossing of waterbodies. A qualitative fish habitat assessment (coupled with the desk-based study) should be completed where cable crossings are proposed. This will inform necessary mitigation measures. Where quantitative fish surveys have not been completed, the precautionary approach should be taken and assumed that fish species present within the catchment will be present if habitat is suitable. Mitigation measures should be stringent to control pollution and fine sediment runoff into waterbodies. Where open trench crossings are proposed, it is assumed that waterbodies that will be flumed, or coffer dammed and thus require over-pumping. It may be necessary for a fish rescue and relocation to take place and for key spawning and migration periods to be avoided. Mitigation should be included within the Outline CEMP and submitted	crossing points. The final approach may be revised based on qualitative assessments to be completed pre-construction and outlined in the Outline Ecological Protection and Mitigation Strategy (OEPMS) **[EX4/GH7.5_B]**. Appropriate mitigation for fish species will be implemented in the event of open-cut trenching. This is considered appropriate and proportionate.	the OEPMS [**EX4/GH7.5_B**] as well as Table 3.4 of OCEMP.	

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
		with the DCO application. Any over-pumping should ensure that screens are fitted on inlets and outlets of pumps and that they are compliant with the Eels (England and Wales) Regulations 2009.			
EB-03	Noise impacts on fish	<u>EA Statutory Consultation Feedback:</u> Impacts on fish from noise associated with vibration created by HDD has not been included. Sensitive fish species associated with the River Nene could be disturbed during construction and decommissioning activities. The EIA should include an assessment on the risk of fish populations within the River Nene and other main watercourses being impacted by noise from HDD during construction. Mitigation and management of any impacts should be detailed in the Outline CEMP. Standard mitigation would be to avoid this activity during sensitive fish migration and spawning times, or drilling to a depth where any significant noise becomes negligible to fish. Noisy construction activities such as HDD under watercourses may	The Environmental Statement Chapter 9 Ecology and Biodiversity **[REP1-033**] assesses the likely impacts of noise and vibration on fish. The Outline Ecological Protection and Mitigation Strategy (OEPMS) **[EX4/GH7.5_B]** details mitigation measures to be implemented. The impact assessments and mitigation measures proposed are considered appropriate and proportionate.	Noted and agree precautionary way of working as per section 8 of OEPMS [**EX4/GH7.5_B]**.	Agreed

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
		disturb fish during key periods of migration and spawning. In extreme cases, noise may kill fish. According to our records, the River Nene contains European eel (Section 41 priority species NERC), brook lamprey (*Lampetra planeri*) (Annex II Habitats Directive), bullhead (*Cottus gobio*) (Annex II Habitats Directive), spine loach (*Cobitis taena*) (Section 41 priority species NERC and Annex II Habitats Directive) and brown/sea trout (*Salmo trutta)* (Section 41 priority species NERC). It maybe that appropriate mitigation to avoid impacts on fish would be a sufficient buffer zone from water courses and/or noisy construction activities avoiding key periods of migratory and fish spawning.			
EB-04	Consultation	<u>EA Statutory Consultation Feedback:</u> Table 9.1: Summary of Consultation and Responses doesn't include the Environment Agency.	Consultation with the EA is shown in Table 9.2 of the Environmental Statement Chapter 9 Ecology and Biodiversity **[REP1-033].**	Noted and agree.	Agreed
EB-05	Impacts on aquatic invertebrates	<u>EA Statutory Consultation Feedback:</u> Solar farms that have wetland habitats on site or are near wetland habitats should implement mitigation	Studies on this matter are inconclusive, although there is some evidence to suggest that polarotactic invertebrates may	We don't believe this issue was raised by the EA. We have no comment at this time.	Matter Under Discussion

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
		to prevent adverse impacts on aquatic invertebrates. Many species of aquatic invertebrates mistake the polarised light reflected from solar panels for open water, leading them to try and lay eggs on panels, which ultimately fail. Low-cost mitigation measures can be taken that do not impact on energy generation, such as including a pattern of roughened or painted glass or a horizontal light blocking grid so that they are no longer attractive to aquatic invertebrates.	be attracted to panels, which reflect polarised light. Wetland habitats were of limited extent within the Survey Area, meaning there is limited suitable habitats for aquatic invertebrates and a notable population is considered unlikely to be present. Moreover, buffers to boundary habitats of elevated importance for aquatic invertebrates, such as the Grendon Brook, are substantial (at least 30m). Therefore, no significant adverse effects on aquatic invertebrates through polarised light are anticipated. **Applicant Response to Consultee Position** The Applicant included this point to reflect the Environment Agency's feedback at statutory consultation. The Applicant will look to seek clarification on this point and confirm whether this can be removed or agreed at the next iteration.		

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
EB-06	Watercourse assessment	<u>EA Statutory Consultation Feedback:</u> Watercourses present in some array areas (e.g. A, A1, B, C, D, & E) have been dismissed as agricultural drains, however, some appear to be spring fed natural watercourses and not artificial field drains. Lack of consideration of natural spring fed watercourses in array areas could result in morphological and ecological harm to headwater streams. Ensure that natural spring fed watercourses are correctly identified, in the proposed MoRPH surveys and BNG assessment as "other rivers and streams", rather than "ditches". Minor works to improve these watercourses could result in significant uplift for the project.	Relevant datasets have been consulted to determine the status of watercourses across the sites, supported by ground-truthing field surveys. Evaluation of these features and enhancement measures are detailed in the **Environmental Statement Chapter 9 Ecology and Biodiversity [REP1-033]** which are considered appropriate and proportionate. **Applicant Response to Consultee Position** Regarding the identification and categorisation of watercourses, please refer to the Applicant's response to EA-025 in **Applicant Responses to Relevant Representations [REP1-161].** **Table 9.3** of **Environmental Statement Chapter 9 Ecology and Biodiversity (Revision A) [REP1-033]** gives a summary of the watercourses present on the Sites. Full baseline habitat maps are given in	Unable to locate the correct part of the document that contains the response to this point. However, we have located the following information: "9.9.135 The opportunity for practicable ditch and watercourse management, including vegetation clearance (for choked ditches) or planting of locally appropriate wetland marginal species will be explored through consultation with local conservation stakeholders and consultees". This is the only response to this concern, and as such is disappointing. To protect natural spring fed watercourses, we would expect some commitment to establishing buffer zones around these features and associated watercourses, e.g. in	Matter Under Discussion

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
			Environmental Statement Appendix 9.2 Habitat Surveys (Revision A) [REP1-045]. All watercourses, including ditches, streams and rivers, are protected with undeveloped buffer zones (minimum 8m) through embedded mitigation measures, as per **paragraph 9.8.4** of **Environmental Statement Chapter 9 Ecology and Biodiversity (Revision A) [REP1-033].**	BNG, minimum riparian buffer for ditch habitat is 5m from banktop. It is possible that this would be sufficient for such watercourses and springheads/wet flushes. Protecting springs and associated headwater channels would also help to prevent deterioration of any WFD waterbodies further downstream. Further information on the importance of headwaters can be found via this link: CaBA-Biodiversity-Pack-Headwaters.pdf	
EB-07	Impacts of Electromagnetic Fields (EMF) on migratory fish species	EA released a Position Statement entitled 'Impact of Electromagnetic Fields on Freshwater Fish in Inland Waters', stating that 'in the absence of conclusive evidence of no impact, we adopt the precautionary principle and require that appropriate measures are put in place by the developer, so that no detectable EMFs result from the installation of	The potential effects of anthropogenic EMF on ecology is an emerging and poorly researched issue, however a summary of research on this issue is provided in **Environmental Statement Chapter 9 Ecology and Biodiversity [REP1-033]** (paragraphs 9.9.249 – 9.9-	Agree with the depth of cable of 5m under the Nene is precautionary. In order to provide confidence, we would also like to know what the likely strength of magnetic field at the bed of the river is at this depth when compared to	Matter Under Discussion - pending further information on likely strength on magnetic field at bed of river in cable corridor

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
		underground cables within the wetted area of an inland waterbody'.	250). A precautionary approach to mitigation has been taken, whereby all cables which cross the River Nene will be buried to a minimum depth of 5m, to maximise attenuation of electromagnetic fields and minimise the risk of any adverse impacts. This depth is far greater than typical installation depths and will significantly reduce the EMF, particularly magnetic (B-field), exposures. In this way, it is anticipated that the low risk of impacts on sea trout (and other species) will be avoided and effects reduced to neutral and non-significant levels. **Applicant Response to Consultee Position** The Applicant will seek to provide the EA further information in respect to the comments above by deadline 5 (12th February).	natural background levels (~50μT). Furthermore, the evidence in Chapter 9 (paragraphs 9.9.353 – 9.9.357) is poor and confusing. The statement that glass eel are unlikely to found in the Nene is flawed as glass eel are present in the lower reaches with elver migrating upstream. According to the Eel Regulations, based on historical evidence, the presence of eel can only be ruled out—or considered very unlikely—when a location in the catchment is both more than 100 km from the head of tide and more than 150 m above sea level. This is not the case for the location where the cable crosses the River Nene; therefore, eel of all life stages cannot be ruled out.	

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
				The argument in section 9.9.357 suggests that sea trout will need to pass through the cable corridor to reach their spawning grounds. Consequently, there is a potential risk that their migration could be delayed by the presence of the cable corridor. To assess this risk with greater confidence and detail, it is important to determine the likely strength of the magnetic field at the cable corridor (as a result of the cable) on the riverbed and compare it to natural background levels.	
EB-08	Avoidance of coarse fish spawning period where open-cut trenching is used at watercourse crossing points	EA raised in their Relevant Representation that the period of avoidance for open-cut trenching at watercourse crossing points should be extended to June 16th (avoidance period was previously October – May inclusive) to protect spawning coarse fish which may be present.	This comment was discussed in a meeting between the Applicant and the Environment Agency on 01/10/2025. The Applicant notes this comment, and, as agreed, will seek to either avoid open-cut trenching works on the affected	Noted and agree.	Agreed

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
			watercourses during the coarse fish spawning period (15th March - 15th June inclusive), or otherwise pre-commencement survey work will be undertaken to establish whether the avoidance period is required for each relevant watercourse crossing point. This may comprise habitat suitability assessments to establish whether suitable spawning habitat is present at each crossing point, or fish surveys to determine whether fish which may spawn in the watercourse are present/likely absent. The Environment Agency confirmed during the meeting that features characterised as wet ditches can be scoped out of this timing restriction, as this only applies to permanently wet watercourses with a flow. The cable installation methodology to be used at each of the affected crossing points, as well as any required mitigation measures for spawning/migrating fish, would be discussed and agreed with		

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
			the EA/relevant consenting body post-DCO consent, prior to work commencing. An updated version of the **Outline Ecological Protection and Mitigation Strategy CONFIDENTIAL [EX4/GH7.5_B]** has been submitted at Deadline 1 which outlines this approach.		

3.3 Hydrology, Flood Risk and Drainage

3.3.1 Below are the matters that have been identified through consultation, grouped into Matters Agreed and Matters Under Discussion.

Table 3.2: Hydrology, Flood Risk and Drainage

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
HYD-01	Water Framework Directive (WFD)	The Environment Agency required confirmation that the scope and methodology of the Water Framework Directive (WFD) assessment were appropriate, including consideration of hydromorphology, water quality and	The WFD Assessment **[REP1-155]** sets out an appraisal of potential impacts on relevant waterbodies. It follows a source-pathway-receptor approach and confirms that the Proposed Development will not lead to deterioration in status or prevent achievement of Good Ecological Potential. The assessment draws on baseline data also presented in	We are satisfied with this assessment. Please note, the mitigation in the WFD Assessment is not identical to that captured in the OCEMP, for instance, Table 8 of the WFD Assessment in the Construction section does not mention drip trays as a way for managed fuel/oil (as an	Matter Under Discussion

		pollution risk, in line with WFD objectives.	the Water Resources Assessment **[APP-563],** Environmental Statement Chapter 10 Hydrology, Flood Risk and Drainage **[REP1-023],** and ES Appendix 10.1 Flood Risk Assessment and Drainage Strategy Report **[REP1-053].** **Applicant Response to Consultee Position** The Applicant notes the EA's comments and will seek to review the consistency of mitigation. A review and update of the management plans and commitments register will be carried out by Deadline 6 to ensure any amendments throughout the examination process are captured and consistent. This will include aligning the mitigation schedule in the WFD Assessment with the OCEMP (for example construction fuel and oil management controls) and updating the operational mitigation schedule to explicitly include firewater as a potential pathway, reflecting the embedded containment and testing approach.	example). Please align for consistency. Firewater risk is not identified in the operation section of Table 8; it should be for consistency and to ensure that WFD bodies are assessed for all impacts. However, providing our other advice is followed we don't have concerns that firewater will be able to enter any WFD bodies.	

HYD-02	Design	The Environment Agency required that the design incorporate appropriate embedded measures to prevent contamination of surface water features, particularly from the BESS, substation and other infrastructure, consistent with the scope of ES Chapter 10.	Embedded pollution prevention measures include bunded drainage systems, self-actuating shut-off valves for the BESS, and firewater containment. These are detailed in Environmental Statement Chapter 10 Hydrology, Flood Risk and Drainage **[REP1-023],** ES Appendix 10.1 Flood Risk Assessment and Drainage Strategy Report **[REP1-053].**and Annex J **[REP1-053] and** are secured through the Outline Construction Environmental Management Plan [**REP1-140]** and DCO Requirement 11 in the Draft Development Consent Order **[REP3-024**. Groundwater contamination risk is considered separately under ES Chapter 11: Ground Conditions **[REP1-025].** **Applicant Response to Consultee Position** The Applicant will incorporate the proposed amendment into the next iteration of the Draft DCO, adding the Environment Agency as a named consultee in Requirements 13 (Construction Environmental Management Plan), 14 (Operational Environmental	Embedded pollution prevention measures regarding bunded drainage and measures throughout construction are suitable for this design stage of the project. We wish to be consulted on the detailed design measures secured within the CEMP, OEMP and DEMP. Please include the Environment Agency as a named consultee in DCO Requirements 13 (Construction environmental management plan), 14 (Operational environmental management plan) and 21 (Decommissioning and restoration). Regarding BESS drainage and firewater containment, there are a few areas where will still require further details to be included in the relevant documents. Further comments on the OBSSMP are below in reference to HYD-09.	Matter Under Discussion

			Management Plan), and 21 (Decommissioning and Restoration).		
HYD-03	Surface Water Flooding	The Applicant was required to assess the risk of surface water flooding using current Environment Agency datasets and an approach aligned with national guidance.	Surface water flood risk was assessed using the NaFRA2 dataset (January 2025) and Risk of Flooding from Surface Water (RoFSW) mapping. This approach is consistent with EA guidance and is documented in in Environmental Statement Chapter 10 Hydrology, Flood Risk and Drainage **[REP1-023]**and the ES Appendix 10.1 Flood Risk Assessment and Drainage Strategy Report **[REP1-053].** The modelling confirms the site is at low risk from surface water flooding.	We would defer to the respective LLFA with regards to surface water drainage, but the datasets used for the baseline assessment are considered reasonable and up to date.	Agreed
HYD-04	Drainage Strategy	The Environment Agency required the drainage strategy to apply appropriate climate change uplifts in accordance with the latest allowances to demonstrate resilience of SuDS and flood mitigation.	The Environment Agency required the drainage strategy to apply appropriate climate change uplifts in accordance with the latest EA guidance to demonstrate resilience of SuDS and flood mitigation. The drainage design uses the EA upper peak rainfall allowance for the Anglian Nene catchment, applying a 40% uplift to peak rainfall intensity for the critical events, as set out in ES Chapter 10 Hydrology, Flood Risk	We are satisfied that by using SuDS surface runoff can be treated sufficiently and can be used to manage surface water. However, please include the Environment Agency as a named consultee in DCO Requirement 11 for the surface and foul water drainage. EA Relevant Reps issue EA/WQ/04 is not included in the SoCG and is unresolved – please include this as an issue	Matter Under Discussion

			and Drainage **[REP1-023]** and the ES Appendix 10.1 Flood Risk Assessment and Drainage Strategy Report **[REP1-053].** This provides the basis for the site-specific drainage design in the supporting annexes. **Applicant Response to Consultee Position** Points relating to EA/WQ/04 and EA/WQ/07 have been included in the SOCG under matters 'HYD-16 and HYD-17'. The Applicant will incorporate the proposed amendment into the next iteration of the Draft DCO, adding the Environment Agency as a named consultee Requirement 11 for the surface and foul water drainage.	in this document. Our comments on foul drainage are as follows: Whilst we appreciate the updates to section 5.3.9 of the FRADS **(REP1-054)** and in Table 3.4 of the OOEMP **(EX4/GH7.2_B),** there have been no updates to Table 3.4 of the OCEMP **(REP1-132),** and there is an absence of any reference to foul water in the Decommissioning Statement **(REP1-137).** There should be consistent details provided in all three phases of the project, so we request that the OCEMP and Decommissioning Statement are updated. Regarding EA/WQ/07, we don't believe this has been resolved as despite what was written in the Responses to Deadline 1 Submissions **(REP2-050),** Chapter 10 has not yet been updated to clarify that filtering effect is only for sediment, and not for hydrocarbons and heavy metals. Furthermore, although you have said that protections against other pollutants are secured in the OCEMP, whilst	

				we acknowledge that there is good oil and fuel management in the OCEMP **(REP1-131),** it but doesn't explicitly mention heavy metals. Chapter 10 and the OCEMP should be updated before EA/WQ/07 can be resolved.	
HYD-05	Surface Water Management	The Environment Agency required the Applicant to identify and characterise all relevant on-site and off-site watercourses and ditches to inform the FRA and surface water management.	All relevant watercourses and field drains were identified using a combination of site walkovers, LiDAR, and topographic survey data. These are described in Environmental Statement Chapter 10 Hydrology, Flood Risk and Drainage **[REP1-023]**and documented across the ES Appendix 10.1 to 10.8 **[REP1-053 to APP-108].** This information informed the surface water drainage strategy and identification of flow paths.	Noted as complete	Agreed
HYD-06	Fluvial Flood Modelling	Whether the baseline hydraulic modelling for Grendon Brook and the River Nene, including use of 1D ISIS models and application of +45% climate change allowance, is appropriate and	Fluvial flood risk to the BESS has been assessed using the updated Environment Agency Middle Nene and Grendon Brook Flood Modeller models together with a 2D TUFLOW direct rainfall model of the Field Drain. The Hydraulic Modelling Report submitted at Deadline 2 sets out the model	We are happy with the modelling approach undertaken for the Grendon Brook. The Applicant has provided additional detail with regards to some of the assumptions made in the modelling and has	Matter Under Discussion

		consistent with EA modelling standards.	geometry, hydrology, climate change allowances and sensitivity testing. The Middle Nene and Grendon Brook models simulate the 1 percent and 0.1 percent AEP events with +13 percent and +36 percent uplifts, using updated LiDAR and targeted checks on roughness, flows and bed levels. The Field Drain model applies ReFH2 rainfall with 25 percent and 35 percent uplifts paired to the river flow allowances. Results confirm the BESS remains flood free from the River Nene, that only narrow low lying margins adjacent to Grendon Brook flood in higher order events, and that fluvial risk from the Field Drain is negligible. A merged depth grid identifies the worst case across all models and confirms the BESS platform meets the less than one metre flood depth resilience criterion in ES Appendix 10.11 BESS FRA [**REP1-057**] with no increase in flood risk elsewhere. **Applicant Response to Consultee Position** The Applicant will provide the mapped outputs from the Middle	undertaken associated sensitivity testing. With regards to the River Nene modelling, the Applicant has undertaken additional sensitivity testing; however, the Applicant should present the mapped outputs of the sensitivity testing for the middle River Nene in relation to the Battery Energy Storage System (BESS) within the Flood Risk Assessment. This is important because the Applicant's updated hydraulic modelling for the middle River Nene shows a reduction in flood extent when compared to the existing Environment Agency hydraulic model outputs. We need to be confident that the BESS is not at flood risk from the River Nene during the design flood event. With regards to climate change allowances, the higher central (+13%) and upper (+36%) climate change scenarios for the 2080s epoch for the Nene management catchment have been used. These are the correct fluvial climate change	

			River Nene sensitivity testing at the BESS location within the Flood Risk Assessment material, to evidence the modelled flood extents for the design events and confirm the BESS is not at fluvial flood risk from the River Nene. This will be issued by Deadline 5 and will be presented alongside the existing BESS assessment in **ES Appendix 10.11 BESS FRA [REP1-057]**.	allowances and are compliant with policy.	
HYD-07	Rainfall Hyetographs	Whether rainfall hyetograph data and associated ReFH2 calculations used in the 2D surface water modelling are accurate and aligned with EA requirements.	Surface water modelling of the Field Drain was undertaken in TUFLOW using direct rainfall derived from ReFH2. The **Hydraulic Modelling Report** submitted at Deadline 2 sets out the catchment descriptors, storm profiles and hyetographs used for the 3.3 percent, 1 percent and 0.1 percent AEP events, with 25 percent and 35 percent rainfall uplifts applied in line with current Environment Agency allowances. Hydrological checks and sensitivity testing were completed for rainfall rate, downstream boundary and roughness. The approach is consistent with ReFH2 guidance and appropriate	The use of the Revitalised Flood Hydrograph (ReFH2) approach to derive rainfall hydrographs and account for infiltration losses through the application of net rainfall is considered reasonable. The applicant should confirm that the Flood Estimation Handbook (FEH) depth duration frequency (DDF) 22 rainfall dataset has been used in their assessment as it is not clear from the updated hydraulic modelling technical note document reference 313532-REP-001 Issue 2 (document library reference REP2-052) that this is the case.	Matter Under Discussion

			for a small responsive catchment and provides a robust basis for assessing surface water exceedance alongside the wider FRA in **ES Appendix 10.1 [REP1-053]** and the BESS assessment in **ES Appendix 10.11 [REP1-057]**. **Applicant Response to Consultee Position** The Applicant will confirm within the hydraulic modelling technical note that the FEH DDF22 rainfall dataset has been used to derive the ReFH2 rainfall depths and hyetographs for the Field Drain direct rainfall model. If any discrepancy is identified, the Applicant will update the hyetograph inputs and reissue the supporting calculations and outputs by Deadline 5.		
HYD-08	Residual Risk and Emergency Response	Adequacy of the Applicant's assessment of residual flood risk and emergency response planning, particularly in relation to overtopping events or blocked drainage scenarios.	Residual flood risk has been assessed using the updated Middle Nene, Grendon Brook and Field Drain models documented in the **Hydraulic Modelling Report [REP2-052]** submitted at Deadline 2, together with the BESS assessment in **ES Appendix 10.11 [REP1-057]** and the wider	Please see our comments raised in response to HYD-06 regarding the sensitivity runs for the River Nene. Additionally, please clarify why compensatory storage is not required if the BESS platforms encroach into areas of flood risk as highlighted in table 2 page	Matter Under Discussion

			FRA in **ES Appendix 10.1 [REP1-053]**. Sensitivity testing has been undertaken to represent overtopping, blockage and reduced capacity scenarios, including variations in flows, roughness, bed levels, rainfall rate, downstream boundary conditions and culvert dimensions. The merged depth grid confirms the BESS platform remains within the less than one metre flood depth resilience threshold under all sensitivity scenarios. Operational resilience, emergency access, drainage shut-off controls and response procedures are secured through the **OCEMP [REP1-131]** and **OEMP [EX4/GH7.2_B].** Residual risks are therefore well understood and can be safely managed through embedded design and operational measures. **Applicant Response to Consultee Position** The Applicant will address the River Nene sensitivity outputs as set out under HYD-06. The Environment Agency's published flood extents have been	14 of Appendix 10.11: Flood Risk Assessment and Drainage Strategy Annex J: Green Hill BESS	

			superseded by site-specific hydraulic modelling, which confirms that there is no fluvial flooding from the River Nene or Grendon Brook within areas of built development at the BESS. The shallow flooding identified in Appendix 10.11 relates to pluvial exceedance from direct rainfall and local drainage pathways, not displacement of fluvial floodwater, and is managed through the drainage design which captures, conveys and contains runoff within the BESS drainage catchment, with controlled discharge and shut-off capability in the event of an incident. No compensatory flood storage is therefore required, as there is no loss of fluvial floodplain storage or impediment to flood flows. This resolves the concern, subject to provision of the River Nene sensitivity mapping at Deadline .		
HYD-09	Drainage Strategy and BESS Containment	Whether the drainage design adequately protects BESS infrastructure from flooding and prevents discharge of contaminants.	The BESS will use an impermeable and isolated drainage system that provides a sealed containment arrangement during an incident, consistent with the commitments in the **BESS FRA in ES Appendix 10.11**	There are still uncertainties with regards to BESS drainage and firewater containment. This is partly because although some information is detailed in some documents, it is not specific across all relevant documents.	Matter Under Discussion

			[REP1-057], the wider FRA in **ES Appendix 10.1 [REP1-053]**, and the **Outline Battery Storage Safety Management Plan [REP1-143]**. The solution will follow the performance-based requirements set out in the ES and OBSSMP, which focus on impermeability, isolation of the BESS area during a fire event, and controlled release after testing. The final approach will be confirmed at detailed design, but will deliver an impermeable lined system with isolation valves and no routine connection to the wider drainage network. ES Chapter 22 Ground Conditions and Contamination **[REP1-025]** confirms low sensitivity receptors. On this basis, the drainage strategy will protect the BESS infrastructure from flooding and will prevent the discharge of contaminants to surface or groundwater. Together, these confirm the risk of discharge to surface or groundwater is negligible. **Applicants Response to Consultee Position**	• Impermeable lining - For example, impermeable lining is mentioned many times in the FRADS Annex J: Green Hill BESS (REP1-058) in section 3.5.3, 3.9.2 and 4.1.3. It is also included in the updated Chapter 10 in section 10.9.3 (REP1-024) and Table 3.4 of the OOEMP (REP1-134). However, there is no reference to impermeable lining in the FRADS (REP1-054) or in the OBSSMP (REP1-144). The FRADS and OBSSMP should be updated for consistency. Issues EA/WQ/01 and EA/WQ/08 raised in EA Relevant Representation are still not resolved. • Automatic valves – As we commented back in our Response to first written questions (ExQ1) (REP1-185), we requested that more information should be added to the OBSSMP and the FRADS to secure a manual closing options and the method of how the	

			The Applicant confirms that the BESS drainage strategy secures containment, isolation and prevention of contaminant discharge, and that the Environment Agency's concern relates to consistency and specificity across the document suite rather than the adequacy of the underlying approach. The Applicant is not committing to detailed design methods at this stage, but will strengthen and align the principles that will govern detailed design and operation. By Deadline 5, the Applicant will update the Flood Risk Assessment and Drainage Strategy, the Outline Battery Storage Safety Management Plan and the relevant operational management text so they consistently secure: impermeable lining of the BESS drainage system; incident isolation from the wider drainage network; containment of firewater for sampling and analysis prior to any controlled release or off-site removal; and shut-off valve operation, including the trigger mechanism, manual closure or override, and an inspection,	valve would be triggered to close. We welcome the Applicant Responses to Deadline 1 Submissions (REP2-050) for Q8.0.9, but that information must be secured in the OBSSMP. If it is not updated, we will be raising this post-consent when we are consulted on the BSSMP. Therefore, as above, issues EA/WQ/01 and EA/WQ/08 in EA Relevant Representations are still not resolved. Additionally, although FRADS Annex J: Green Hill BESS (REP1-058) has a maintenance section in Annex F, there is no mention of any regular maintenance or monitoring of the shut-off valve. It should be tested at a suitable frequency to ensure it remains in good working order so that in the event of a fire it could close quickly when required. The Applicant should update the OBSSMP or FRADS to reflect this. This was previously requested in EA/WQ/09 and therefore this is not resolved.	

			testing and maintenance regime. The updates will also explicitly secure post-incident recovery principles, including inspection of the drainage system and gravel subbase (where used) and, where contamination is identified, cleaning and or removal and replacement prior to recommencing operation. The Applicant also confirms that reuse of firefighting water from the drainage system would be exceptional, would be operator-led with appropriate testing and specialist advice, and is not an assumed firefighting tactic. Northamptonshire Fire and Rescue Service (NFRS) would be consulted as part of this onsite operational decision-making process; there must be complete confidence that there is no water contamination because this would be highly likely to damage NFRS critical firefighting equipment. Operation would not restart following an incident until the drainage system has been fully remediated and is confirmed to be functioning as intended in accordance with the DCO	• <u>Gravel cleaning/removal</u> – EA Relevant Representations (RR-1224) made clear that gravel substrate can get contaminated by firewater, and after a fire event could cause secondary pollution if any contaminants are re-mobilised by surface runoff. We welcome the Applicant Responses to Relevant Representations (REP1-161) for EA009 which says that there will be inspection, maintenance and replacement of contaminated subbase, but that information must be secured in the OBSSMP and OOEMP to ensure that any post-incident recovery is secured. This was previously requested in EA/WQ/01, EA/WQ/03, and EA/WQ/09 but these updates to OBSSMP or OOEMP have not yet happened and therefore this is not resolved. In the meeting on 1st October, the Applicant verbally agreed that a detailed management	

			requirements. These updates will be provided by Deadline 5.	plan would confirm cleaning process or removal of gravel, and that the management plan would include general maintenance and cleaning of BESS drainage, however we have not yet seen this in the documents submitted at this deadline. • Testing of firewater and battery removal during operation also need resolving but these issues haven't been raised yet (further information provided to the Applicant on 16/12/2025)	
HYD-10	Construction Phase Flood Risk	Whether construction phase flood risks have been adequately assessed and mitigated, including surface water and fluvial risk to compounds and laydown areas.	Construction phase flood risk has been assessed in the **FRA in ES Appendix 10.1 [REP1-053]** and **ES Chapter 10 Hydrology, Flood Risk and Drainage [REP1-023]**, supported by the findings of the **Hydraulic Modelling Report** submitted at Deadline 2. The identified construction compounds and laydown areas avoid Flood Zone 3 where practicable and are located outside the main areas of fluvial and surface water hazard. Where temporary works fall within	Noted.	Matter Under Discussion

			areas of surface water accumulation, risk will be managed through good practice measures secured in the **OCEMP [REP1-131]**, including temporary drainage control, exceedance routing, material storage protocols and contingency arrangements for high flows. ES Chapter 22 Ground Conditions and Contamination **[REP1-025]** confirms low sensitivity receptors and that pollution risks are controllable with standard site management. On this basis, construction phase flood risks have been adequately assessed and can be safely managed.		
HYD-11	Groundwater Flood Risk	Adequacy of the assessment of groundwater flood risk, particularly in low-lying areas adjacent to watercourses or with shallow groundwater tables.	Groundwater flood risk has been assessed in the **FRA in ES Appendix 10.1 [REP1-053]** and **ES Chapter 10 Hydrology, Flood Risk and Drainage [REP1-023]**, supported by BGS mapping and site level information. Although parts of the site overlie the Blisworth Limestone Principal Aquifer, groundwater levels are generally deep and no evidence of groundwater emergence or perched groundwater risk has been identified across the Order Limits. No receptors dependent on	Noted. Groundwater flood risk sits under LLFA remit.	Matter Under Discussion

			shallow groundwater were recorded. **ES Chapter 22 Ground Conditions and Contamination [REP1-025]** confirms the absence of significant groundwater constraints and identifies a low risk profile. On this basis, groundwater flood risk is assessed as low and does not require mitigation beyond standard design practice. **Applicant Response to Consultee Position** Noted. This will be removed at the next iteration.		
HYD-12	Watercourse Crossing Design and Permitting	Whether the approach to watercourse crossing design and environmental permitting is sufficiently developed and in line with EA expectations.	All permanent and temporary watercourse crossings have been assessed, with HDD adopted where feasible to avoid instream works. Crossing locations are selected to minimise hydraulic or ecological impact, with entry/exit points located outside the floodplain. All works will be subject to Environmental Permitting Regulations and will require Flood Risk Activity Permits where relevant. Engagement with the Environment Agency on detailed	The approach to watercourse crossings is acceptable. Discussion regarding disapplication of FRAP under EPR ongoing.	Matter Under Discussion

			design and permitting is ongoing. The design approach is consistent with CIRIA C793 and EA good practice.		
HYD-13	Floodplain Storage and Compensation	Whether the potential loss of functional floodplain has been appropriately assessed and level-for-level compensation secured if necessary.	Encroachment into Flood Zone 3 has been minimised through iterative design. Any unavoidable encroachment is limited in area and depth and has been assessed for impact on floodplain storage using the hydraulic model. These are reported in ES Appendix 10.1 Flood Risk Assessment and Drainage Strategy Report **[REP1-053].** Where applicable, level-for-level compensatory storage will be provided in hydraulically connected areas, secured through detailed design. The development will not reduce floodplain function or increase flood risk elsewhere. **Applicant Response to Consultee Position** Encroachment into Flood Zone 3 has been assessed and is limited to peripheral areas of panelled development at Green Hill E and Green Hill F only, with no built form or ground raising within the functional floodplain. At these	Noted. Applicant to submit further detail confirming extent of floodplain compensation required, and how this can be delivered.	Matter Under Discussion

			locations, potential floodplain storage displacement has been conservatively quantified using the cross sectional area of panel support piles, assumed pile density and worst case flood depth. This demonstrates a very small displaced volume which, when distributed across the receiving floodplain, results in a sub millimetre theoretical change in flood depth and no measurable effect on flood levels, extents or flow routes. This assessment is set out within **Environmental Statement Appendix 10.8 Flood Risk Assessment and Drainage Strategy Annex G Green Hill E [APP-105]** and **Environmental Statement Appendix 10.9 Flood Risk Assessment and Drainage Strategy Annex H Green Hill F [APP-106]**. On this basis, level for level floodplain compensation is not considered necessary or proportionate, as there is no material loss of functional floodplain storage and no increase in flood risk elsewhere. This resolves the concern.		

HYD-14	Pollution Control in Sensitive Catchments	Whether pollution control measures are adequate in locations designated as Drinking Water Groundwater Safeguard Zones.	The layout avoids locating infiltration SuDS within Drinking Water Safeguard Zones. In these areas, surface water will be collected via lined drainage systems and discharged only where appropriate risk assessments support this. Infrastructure such as the BESS and substation are located on impermeable surfacing within contained areas. No discharges to ground are proposed in sensitive zones. These measures are documented in ES Appendix 10.1 Flood Risk Assessment and Drainage Strategy Report **[REP1-053]** and confirmed in ES Chapter 22 Ground Conditions and Contamination **[REP1-025]** which reports no contaminant linkages or risks to groundwater quality. **Applicant Response to Consultee Position** The layout avoids locating infiltration SuDS within Drinking Water Surface Water Safeguard Zones and within the Drinking Water Surface Water Protected Area. In these areas, surface water will be collected via lined drainage systems and discharged	The whole site is underlain by various Drinking Water Surface Water Safeguard Zones, and the southern extent is underlain by a Drinking Water Surface Water Protected Area, but none of the site is underlain by a Drinking Water Groundwater Safeguard Zone. Please amend the comments on the left as appropriate. We will provide comment in the next iteration of the draft SoCG.	Matter Under Discussion

			only where appropriate risk assessments support this. Infrastructure such as the BESS and substation are located on impermeable surfacing within contained areas. No discharges to ground are proposed in these sensitive surface water designations. These measures are documented in ES Appendix 10.1 Flood Risk Assessment and Drainage Strategy Report **[REP1-053]** and confirmed in ES Chapter 22 Ground Conditions and Contamination **[REP1-025]** which reports no contaminant linkages or risks to groundwater quality.		
HYD-15	Overland Flow Route Preservation	Whether natural overland flow routes have been preserved and not obstructed by the development layout.	Overland flow routes were identified using a combination of LiDAR, topographic survey and national surface water mapping datasets. These were preserved during layout design by maintaining development offsets and incorporating open drainage corridors. SuDS features are aligned to natural drainage pathways to avoid obstruction. This is detailed in ES Appendix 10.1 Flood Risk Assessment and Drainage Strategy Report **[REP1-**	Noted. This falls under LLFA remit for surface water management. This will be removed at the next iteration.	Matter Under Discussion This matter was not raised in EA Relevant Representation and is not within our remit.

			053]and has informed siting of all infrastructure zones.		
HYD-16	Foul Water Drainage	Whether a foul water disposal strategy should be provided in more detail.	As confirmed in **ES Chapter 10: Hydrology, Flood Risk and Drainage Revision A [REP1-023]** and the **ES Appendix 10.1 FRADS [REP1-053]**, there is no foul drainage network associated with the Scheme and no discharges of foul or polluted material to watercourses will occur under any circumstances. Welfare facilities at substations will be served by sealed septic tanks or self-contained units, to be emptied as required by tanker using a licensed waste carrier. This approach is embedded in the submitted strategy and consistent across all sites, as confirmed in the **FRADS Annexes A–J [APP-098 to APP-108].** Whilst detailed sizing and emptying frequency of septic tanks will be confirmed at the design stage, the principle of sealed containment with tanker removal is fixed. The draft DCO does not seek any right to connect to water company foul networks. Where discharge permits are required for temporary facilities, these will be obtained from the	Whilst we appreciate the updates to section 5.3.9 of the FRADS (REP1-054) and in Table 3.4 of the OOEMP (REP1-134), there have been no updates to Table 3.4 of the OCEMP (REP1-132), and there is an absence of any reference to foul water in the Decommissioning Statement (REP1-136). There should be consistent details provided in all three phases of the project, so we request that the OCEMP and Decommissioning Statement are updated.	Matter Under Discussion

			Environment Agency at the relevant stage. Wastewater removed by tanker will be managed in accordance with the waste management procedures set out in the **OCEMP Revision A [REP1-136],** with disposal through licensed carriers to appropriate receiving facilities.		
HYD-17	Risk to Controlled Waters	Whether vegetation in solar panel areas will capture and take up or filter contaminants including hydrocarbons and heavy metals, thus reducing potential impact to groundwater receptors.	The Applicant notes the comments. The discussion in the **ES Chapter 10: Hydrology, Flood Risk and Drainage [REP1-023]** recognises that the risk of hydrocarbon and heavy metal contamination from solar panel areas is very low. The embedded mitigation measure of maintaining vegetated groundcover was intended to describe the management of sediment and silt in surface water runoff rather than the removal of hydrocarbons or heavy metals. Additional protection against hydrocarbons and other pollutants is secured through the measures set out in the **ES Appendix 10.1 FRADS Report [REP1-053] and the OCEMP [REP1-136],** which require the use of lined drainage, shut-off valves, and controlled discharge or tanker removal in the	Chapter 10 has not yet been updated to clarify that filtering effect is only for sediment, and not for hydrocarbons and heavy metals. Furthermore, although you have said that protections against other pollutants are secured in the OCEMP, whilst we acknowledge that there is good oil and fuel management in the OCEMP (REP1-132), it but doesn't explicitly mention heavy metals. Chapter 10 and the OCEMP should be updated before EA/WQ/07 can be resolved.	Matter Under Discussion

			event of any accidental spill. These controls ensure that risks to controlled waters are avoided. The Applicant will update the text at the next iteration to clarify that vegetation provides a slowing and filtering effect for sediment and silt only. The assessments in the **ES Appendix 10.1 FRADS Report Revision A [REP1-053]** and supporting annexes remain valid, with no significant risk to controlled waters identified. **Applicant Response to Consultee Position** The Applicant will update **Environmental Statement Chapter 10 Hydrology Flood Risk and Drainage [REP1-023]** to clarify that vegetated groundcover is relied upon for managing runoff characteristics and sediment only, and is not relied upon as mitigation for hydrocarbons or heavy metals. Solar panelled areas are limited to sediment and silt mobilisation, for which maintaining vegetated groundcover is an appropriate and proportionate control.		

			Additional pollution prevention and response controls for accidental contamination, where relevant, are secured through the drainage strategy and construction management measures set out in **Flood Risk Assessment and Drainage Strategy Report [REP1-053]** and the **Outline Construction Environmental Management Plan [REP1-132]**, which apply to contaminants generally. These clarifications will be provided by Deadline 5.		

3.4 Ground Conditions and Contamination

3.4.1 Below are the matters that have been identified through consultation, grouped into Matters Agreed and Matters Under Discussion.

Table 3.3: Ground Conditions and Contamination

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
GCC-01	Groundwater Sensitivity	<u>EA Relevant Representation Feedback</u> **EA ref: EA/WQ/05** Issue: Sensitivity of groundwater receptors is not defined in this chapter. 8	The **ES Chapter 22: Ground Conditions [REP1-025]** sets out the baseline geology, hydrogeology and identified receptors, including superficial deposits such as alluvium and head deposits, Source Protection Zones and the	Awaiting consultees comments.	Matter Under Discussion

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
		Discussion around sensitivity of groundwater receptors is based on an unsuitable risk classification. Additional narrative / explanation: In 10.8.16, it states: "The sensitivity of … groundwater receptors is Medium." This is repeated in 10.8.42 and 10.8.55. The sensitivity of groundwater receptors (such as aquifers) is not defined in Table 10.3, so this statement is unsupported. In Chapter 22, Table 22.3, Principal aquifers are defined as High sensitivity, and principal bedrock aquifer is present directly underlying the site in some areas. Overall status of the WFD groundwater bodies covering most of the site is Good, which is defined as High sensitivity in Table 10.3.	potential for shallow groundwater emergence. These are addressed through the Preliminary Risk Assessments and managed by commitments in the **OCEMP Revision A [REP1-131]**. Any potential sources from the BESS or substations are already mitigated in **ES Chapter 10: Hydrology, Flood Risk and Drainage [REP1-023]** through the embedded drainage design, which includes lined systems with shut-off valves and storage sized for 1 in 100 plus climate change and fire water events. On that basis this is not a flood risk issue. It is explicitly covered in **ES Chapter 22: Ground Conditions and Contamination [REP1-025]** with drainage design controls in **ES Chapter 10: Hydrology, Flood Risk and Drainage [REP1-023]** ensuring the source is managed.		
GCC-02	Water Receptors	EA Relevant Representation Feedback	Definitions of groundwater receptors, including Principal,	Awaiting consultees comments.	Matter Under Discussion

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
		EA ref: EA/WQ/06 Issue: Insufficient detail about water receptors. Additional narrative / explanation: We would expect the applicant to define the groundwater aquifer types. The entry “water bodies of medium quality” is far too vague to be used in an assessment such as this. Principal and secondary aquifers are discussed later in this report so it would be useful to define them here. Water Framework Directive (WFD) classifications could also be in this table. While this information is in Chapter 10, it is also relevant here. The same applies to Table 22.4.	Secondary and Unproductive Aquifers, are provided in ES **Chapter 22: Ground Conditions and Contamination [REP1-025],** supported by aquifer classification mapping. These receptors are assessed alongside surface water bodies with reference to Water Framework Directive classifications in the **Water Framework Directive Assessment [REP1-155]**. The sensitivity of these receptors has also been considered in **ES Chapter 10: Hydrology, Flood Risk and Drainage [REP1-023]** and the **ES Appendices 10.1 to 10.11 FRADS Report Revision A [REP1-053,REP1-055,REP1-057, APP-098 to APP-108],** which apply the aquifer and WFD definitions in assessing potential effects. The Applicant will ensure consistency between the hydrology and ground conditions chapters in the final documentation and agrees that		

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
			reference to formal aquifer classifications provides clearer context than generic terms such as “water bodies of medium quality.” Table 22.3 of ES **Chapter 22: Ground Conditions and Contamination [REP1-025]** and Table 10.3 of **ES Chapter 10: Hydrology, Flood Risk and Drainage [REP1-023]** have been updated in response to Relevant Representations made by the Environment Agency.		
GCC-03	Decommissioning	<u>EA Relevant Representation Feedback</u> **EA ref: EA/WQ/10** Issue: Only considers “or release hazardous contamination for the operational timescale of the development.” This does not appear to include decommissioning and any time thereafter. Additional narrative / explanation: Contamination may persist beyond the operational timescale of the development.	Potential effects during decommissioning have been considered in the **ES Chapter 10: Hydrology, Flood Risk and Drainage [REP1-023]** the **ES Appendix 10.1 FRADS Report [REP1-053**] and the **ODS [REP1-135]**. These confirm that decommissioning will follow the same embedded principles as construction, with drainage managed through appropriate SuDS measures and with no uncontrolled discharges to ground or surface waters. Any residual	Awaiting consultees comments.	Matter Under Discussion

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
			contamination risks persisting beyond the operational life of the Scheme will be managed through measures secured in the **OCEMP [REP1-131], the OOEMP Revision B [EX4/GH7.2_B], and the OSMP [APP-550]**, which require appropriate testing, handling, removal and disposal of any contaminated materials, including any SuDS or drainage components within the BESS compounds. The Applicant will also comply with any permitting requirements in consultation with the Environment Agency. This approach is consistent with the commitments set out under 'EA-011', which address the management of previously unidentified contaminants. Accordingly, the Applicant confirms that potential impacts to the water environment during decommissioning and thereafter have been assessed and are controlled through the submitted management plans		

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
			and secured by the **Draft DCO [REP3-024]**.		
GCC-04	Unidentified contaminants	EA Relevant Representation Feedback **EA ref: EA/WQ/11** Issue: Proposed discovery strategy has a focus on the identified sources and is not explicitly clear that it applies to the whole development. Proposed strategies in appendices are inadequate. Additional narrative/ explanation: In Chapter 22, Section 22.7.5, we are happy that the discovery strategy has a focus on the identified sources, but it needs to be clear it applies to the whole development. It should be added that the EA may also need to be notified about contamination if it affects receptors within our remit. The LPA may be able to assist with this latter part. The same comments apply for GH7.1 (OCEMP) Table 3.16 and GH7.3 (ODEMP) Table 3.1 [Ground Conditions row]. These should be updated accordingly. In GH7.1 (OCEMP) Table 3.4, the paragraph beginning "If any suspected contaminated material is discovered	The discovery strategy is to apply for the entire site. This has been clarified and set out in Table 3.16 of the **OCEMP [REP1-131]** which is secured by Schedule 2, Requirement 13 of the **Draft DCO [REP3-024]**. Notifications are to be made to the EA or relevant regulatory authorities if conditions impact receptors within their jurisdiction. Additionally, the proposed remedial measures are to remain flexible, depending on the nature and extent of the contamination identified and the conditions at hand.	Awaiting consultees comments.	Matter Under Discussion

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
		during the works" is insufficient. The procedure outlined is not acceptable and differs from the process detailed elsewhere. A detailed CEMP based on the content of this part of the OCEMP is likely to be lacking. Appendix 22.2 (PRA – Cable Route) Part 6 of 6, Appendix G – Hotspot Protocol: - Contact with regulatory authorities should be raised earlier in this process and more prominent - The process does not include assessment of the lateral and vertical extent of the suspected contamination. The action "removal of the 'hotspot'" may not be the most appropriate action in all cases - This procedure does not work for contaminated groundwater			
GCC-05	Bedrock Limestone	<u>EA Relevant Representation Feedback</u> **EA ref: EA/WQ/12** Issue: Implication mitigation measures will only be implemented where bedrock limestone is unconfined.	Applicant confirms that the mitigation measures outlined in the **OCEMP [REP1-131]**, **OOEMP Revision B [EX4/GH7.2_B]** and **ODS [REP1-137]** will be applied site wide. The focus was to emphasize the importance of	Awaiting consultees comments.	Matter Under Discussion

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
		Additional narrative/ explanation: We agree with the overview of Blisworth Limestone Formation (BLF), and the associated assessment of risks in Section 22.8.15. It states: "In the areas where the BLF is unconfined and a slightly increased risk exists to sensitive groundwater receptors, the mitigation measures outlined within the CEMP, OEMP and DEMP will be implemented to reduce risk." It could be interpreted that where the BLF is not unconfined, the mitigation measures will not be implemented. This would apply to the vast majority of the site, and we strongly disagree with this instruction if it is intended in this way.	measures, particularly in areas where the Principal Aquifer is unconfined by clay-rich superficial deposits (e.g., the Oadby Member), such as in Green Hill F, due to its increased sensitivity. While the Principal Aquifer remains a key controlled water receptor across the site, the sensitivity is lower in areas where overlying clay-rich formations are present, creating a natural barrier. Nevertheless, mitigation measures are to be implemented across the site for the protection of the Principal Aquifer.		
GCC-06	Risks to Controlled Waters	<u>EA Relevant Representation Feedback</u> **EA ref: EA/WQ/13** Issue: Incorrect use of sensitivity tables. Potentially significant effect concluded to be "not significant". Additional narrative/ explanation:	Risks to controlled waters are assessed in the **ES Chapter 22: Ground Conditions and Contamination [REP1-025]** and the **Water Framework Directive Assessment [REP1-155]**. Chapter 22 applies the receptor sensitivity and significance criteria set out in Tables 22.3 to 22.5. For unconfined Principal Aquifers,	Awaiting consultees comments.	Matter Under Discussion

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
		The applicant states that, where principal aquifer is unconfined, there is a High to Medium Sensitivity and Low Magnitude, which has a worst-case Moderate significance of impact with embedded mitigation, but could also be Moderate/Minor significance. This agrees with Table 22.5, the significance matrix. The applicant goes on to conclude this is "not significant". The definition in 22.4.13 is that "Moderate/Minor" and lesser effects can be defined as "not significant". As such, Moderate significance should be treated as Significant, which the applicant has not done. Further mitigation may be required to manage the significant risks to controlled waters where principal aquifer is unconfined. We require further information to provide surety this is in place. Significant risk to principal aquifers should be included in Chapter 26 (summary of significant effects).	a receptor sensitivity of High to Medium and a Low magnitude of effect was identified, giving a classification of "Moderate to Moderate/Minor." As defined in paragraph 22.4.13 of the **ES Chapter 22: Ground Conditions and Contamination [REP1-025]**, effects of Moderate/Minor or less are considered not significant, whereas Moderate effects are considered significant. The Applicant considers that this assessment has been applied correctly and consistently within the Environmental Statement. The outcome of "Moderate to Moderate/Minor" reflects the conservative nature of the methodology. The matrix applied resulted in two conflicting outcomes and therefore, it was necessary to apply professional judgement to determine the overall significance. In addition, the inclusion of embedded mitigation incorporated into the Scheme design further reduces risk, confirming that		

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
			the effects will be 'non-significant'. These mitigation measures are secured through the **OCEMP Revision A [REP1-131],** the **OSMP [APP 550]**, and the **OBSSMP Revision A [REP1-143],** and include pollution prevention controls, lined containment for hazardous materials, firewater isolation and removal procedures, and strict requirements for the handling and storage of soils and fuels. On this basis, the Applicant maintains its conclusion that the residual effects on controlled waters are not significant. This conclusion is consistent with the findings of the **Water Framework Directive Assessment [REP1-155]**, which confirms that the Scheme will not result in deterioration of WFD water body status.		
GCC-07	Water Framework Directive	EA Relevant Representation Feedback **EA ref: EA/WQ/14**	WFD groundwater bodies underlying the Scheme have been scoped into the assessment, as set out in the **Water Framework Directive**	Awaiting consultees comments.	Matter Under Discussion

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
		Issue: Very limited information or discussion on WFD Groundwater bodies. No proposed mitigation (Section 8) specifically mentions groundwater. We are concerned WFD Groundwater bodies have not been fully assessed or understood. Additional narrative/ explanation: Table 2 does not give the chemical status of groundwater bodies, which is one of the two basic classification categories. Annex A does not haven tabulated WFD status for all groundwater elements, as it does for surface water. One of the WFD Groundwater bodies has an overall Poor classification. We expect a report such as this to detail the reason(s) for not achieving Good. Section 3.2.5 refers to the "objective year" for Good status, but the years are not given in the report. All WFD Groundwater bodies are all scoped in (Section 6.3.1), so the absence of further detail is concerning. The groundwater level and flow assessment (Section 2.6.1) is based on a single borehole record where groundwater was not recorded. The	**Assessment [REP1-155]**. The assessment concluded that the Scheme will not cause deterioration in the status of any groundwater body or prevent the achievement of WFD objectives. The Applicant acknowledges that the presentation of groundwater information in the **Water Framework Directive Assessment [REP1-155]** is less detailed than that provided for surface waters. However, the supporting baseline is provided in the **ES Chapter 22: Ground Conditions and Contamination [REP1-025]**, which describes the underlying aquifer designations, geology and hydrogeology, and confirms that the Sites are not located within any Source Protection Zones. The groundwater bodies relevant to the Scheme are the Nene and Ouse management catchments, one of which has an overall Poor chemical classification. The reasons for status are identified within the Environment Agency's		

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		depth of borehole is not stated, but our records show it was only to 3.30mbgl. This is clearly not enough information to support a groundwater level and flow assessment. We are concerned the applicant has not fully considered, or does not understand, WFD groundwater bodies underlying the site.	published data, and no activities associated with the Scheme are identified as pressures contributing to poor chemical quality. Potential pathways for impact are limited due to the nature of the Scheme, which has very low water demand, no requirement for groundwater abstraction, and embedded pollution prevention measures secured through the **OCEMP [REP1-131]**, the **OSMP [APP 550] and the OBSSMP [REP1-143].** These measures include impermeable containment for hazardous materials, isolation and removal of any contaminated firewater, and strict controls on soils, fuels and construction materials. On this basis, the Applicant maintains that the Scheme will not adversely affect WFD groundwater body status. The Applicant is content to clarify within the final detailed drainage design and management plans secured under the DCO how groundwater bodies have been		

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			considered, including reference to chemical status and objective years, to provide greater transparency, but no change to the assessment conclusions of the **Water Framework Directive Assessment [REP1-155]** is required.		
GCC-08	Preliminary Risk Assessment	<u>EA Relevant Representation Feedback</u> **EA ref: EA/WQ/15** Issue: Preliminary risk assessment lacking important information. Information from data search has not been used. Potential contamination sources have been ignored. CSM is not sufficient. Our comments from EIA Scoping have not been taken into account. Additional narrative/ explanation: At the scoping stage, we expressed concerns about the quality and completeness of reporting in this assessment. An updated report was not available at PEIR review stage. This report was updated for the Environmental Statement, but we	A request for additional borehole data in **ES Appendix 22.1 Geo Environmental PRA [REP1-081 to REP1-094]** did not appear to have been made during scoping. Previous scoping feedback has been reviewed with all requested amendments having been undertaken. Site-Specific Geology, BGS Borehole data has been added for all sites. See Section 2.2 **of ES Appendix 22.1 Geo-Environmental PRA [REP1-081 to REP1-094].** In addition, **ES Appendix 22.2 Geo Environmental PRA Cable Route Corridor [REP1-095 to REP1-106]** includes nearby BGS Borehole data along the entire length of the cable route	Awaiting consultees comments.	

	Matter	Details of Matters for Discussion	Applicant Position	Consultee Position	Status
		have still found it to be inadequate. At scoping we queried why in Section 2.2, Site-Specific Geology section, only boreholes from Land at Grendon and Green Hill F had been reviewed. This has not been updated. We are pleased to see that groundwater levels from other boreholes, one for each panel area, are given later in the table. Section 2.4.2 states "Within the wider area, Sywell Airfield is located in the central area". This is immediately adjacent to the cable route and Green Hill C. We consider this is a potential source of contamination including PFAS (Per- and polyfluoroalkyl substances). It should be in the CSM (Section 3.3); it is in the CSM for Appendix 22.2, but not Appendix 22.1. PFAS are not listed as a potential contaminant in Appendix 22.2, and we consider they should be. Risks from the Earls Barton Quarry (identified in Section 2.5) are not ruled out in the report text, and this source should be in the CSM. The fact that the landfill is off site does not preclude the risk to sensitive receptors on the site. Risk from Sywell Range landfills is ruled out in Appendix 22.1 Section 3.3	corridor. Both reports should be reviewed in conjunction. Wording on the location of Sywell Airfield in relation to Green Hill C has been amended in Section 2.4.**2 ES Appendix 22.1 Geo-Environmental PRA [REP1-081 to REP1-094].** PFAS has been listed as a potential contaminant of concern associated with Sywell Airfield and included within the Conceptual Site Model (Section 3.0) of both **ES Appendix 22.1 Geo-Environmental PRA [REP1-081 to REP1-094]** and **ES Appendix 22.2 Geo-Environmental PRA Cable Route Corridor [REP1-095 to REP1-106]**. Landfills associated with Earls Barton Quarry, Mears Ashby Road, Sywell Range, and OS Fields Bozeat are discussed and assessed within the relevant report sections, including the Conceptual Site Model (Section 3.0) of both **ES Appendix 22.1 Geo-Environmental PRA [REP1-**		

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		(CSM), but other landfills are not mentioned. The landfill is included as a source in Appendix 22.2 (PRA for cable route), Section 3.3 (CSM). There is no explanation why the assessment of risk differs between the two reports. We have records of historical landfills adjacent to the site boundary which are not mentioned in Appendix 22.1 at all (Ashby Road and OS Fields, Bozeat). Both landfills are included in the attached Envirocheck reports, along with numerous records of Local Authority Landfill Coverage. Some of these are within or immediately adjacent to the site boundary but have not been discussed in the main PRA and therefore are not considered in the main ES Chapter 22. This is a disappointing omission. Risks from historical landfills have not been assessed or understood.	**081 to REP1-094]]** and **ES Appendix 22.2 Geo-Environmental PRA Cable Route Corridor [REP1-095 to REP1-106]**. It should be noted that the historical landfill at OS Fields Bozeat is not included in ES Appendix 22.2 due to its distance from the Cable Route. In contrast, Sywell Range is discussed in greater detail within ES Appendix 22.2, given its closer proximity to the Cable Route, in comparison to Green Hill C. Landfills near Earls Barton Quarry, Sywell Range, and Mears Ashby Road (Barton Plant Ltd) are addressed in **ES Chapter 22: Ground Conditions and Contamination [REP1-025]**. The landfill at OS Fields Bozeat assessed in **ES Appendix 22.1 Geo-Environmental PRA [REP1-081 to REP1-094]**, is located at closest approx. 75m north of the Green Hill F boundary and is therefore considered unlikely to be encountered during the development. The Hotspot Protocol has been amended in		

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			Appendix G of both **ES Appendix 22.1 Geo-Environmental PRA [REP1-081 to REP1-094] and ES Appendix 22.2 Geo-Environmental PRA Cable Route Corridor [REP1-095 to REP1-106]**. A Discovery Strategy will be implemented if suspected landfill material is encountered during construction or decommissioning. This is set out in the **OCEMP [REP1-131]** and secured in Schedule 2, Requirement 13 of the **Draft DCO [REP3-024]**. The EA historical landfill sites have been assessed for potential impacts on controlled waters (see Sections 22.8.11 22.8.14). Applicant acknowledges that **ES Appendix 22.1 Geo-Environmental PRA [REP1-081 to REP1-094] and ES Appendix 22.2 Geo-Environmental PRA Cable Route Corridor [REP1-095 to REP1-106]** were prepared at different times by different authors, alignment of both		

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			reports has been undertaken, with risks and recommendations outlined in the CSM. Both reports should be read in conjunction.		

4 Signatories

4.1 Overview

4.1.1 The above SoCG is agreed between Green Hill Solar Farm Ltd. (the Applicant) and the Environment Agency, as specified below.

4.1.2 Duly authorised for and on behalf of **Green Hill Solar Farm Ltd.**

Name:	
Job Title:	
Date:	
Signature:	

4.1.3 Duly authorised for and on behalf of the Environment Agency.

Name:	
Job Title:	
Date:	
Signature:	