Frodsham Solar

Applicant's Response to ISH2 Action Points

March 2026

Cubico
SUSTAINABLE INVESTMENTS

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1.0 INTRODUCTION

1.1 Purpose of this Document

1.1.1 This document provides the Applicant's responses to the actions identified by the ExA from the Issue Specific Hearings held on the 10th, 11th and 12th March 2026.

1.1.2 The responses are supported by a series of appendices and figures contained at the end of this document.

Table 1 – Applicant's Response to ISH2 Action Points

No	Party	Action	Deadline	Applicant's Response
1	Applicant	Elicit a letter from Cheshire Fire and Rescue Service (CFRS) to confirm: i. its position on the application; ii. whether CFRS has taken account of the resourcing implications associated with it responding to a BESS fire; iii. in light of interested parties' concerns relating to contamination risks from chemicals in the ground and the potential impacts on these from a BESS fire, the ability/ concerns of the service to deal with such contaminants being airborne.	4	The Applicant has contacted CFRS and requested responses on the three items listed by the ExA. At the point of this submission the Applicant had not received a response from CFRS.
2	Applicant	Update Outline Battery Safety Management Plan to cite latest guidance and to address typographical error in paragraph 3.2.12 of [REP3-027].	4	The **Outline Battery Safety Management Plan (oBSMP) [as updated alongside this submission]** has been revised to confirm that the plan is in accordance with the most recent version of the National Fire Chiefs Council Grid scale energy storage system planning - Guidance for fire and rescue service, which was published in December 2025 and formally adopted in February 2026. The typographical error at paragraph 3.2.12 has also been amended to refer to automatic.
3	Applicant / CWCC	Submit evidence of approved control mechanism which is in place in respect of ice build-up on the nearby wind turbines (condition 42 of the wind farm permission).	4	The Applicant has submitted the condition 42 discharge report (which includes a statement setting out the condition itself) and the approved ice throw report, contained at Appendix A.

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4	Applicant	Provide Health and Safety Executive's consultation response (i.e. its land use planning advice).	4	The response received from the Health and Safety Executive following Statutory Consultation under Section 42 of the Planning Act 2008 is provided at Appendix B. The Applicant has contacted the HSE to determine whether they have any further comments to make on the Proposed Development.
5	Applicant	Review Figure 1-6 [APP-105] and in particular the key to ensure that it includes all annotations (e.g. hatched areas) and that the names associated with the pipelines are relatable to the protective provisions in the draft DCO.	4	Figure 1-6 of Environmental Statement: Volume 3 Chapter 1 Figures has been updated to remove the hatched areas surrounding some of the utilities. A further update of this Figure will be provided at Deadline 5 to match the labels to the parties identified in the Protective Provisions.
6	Applicant	Respond on the suitability (having regard to surface condition, potential flooding, and availability) of access routes for emergency vehicles to attend a BESS fire, also having regard to National Highways' position regarding the use of bridges over the M56 motorway.	4	The main operational access route into the Site would also provide an emergency access route to the BESS and Substation Compound. This would be maintained in a condition that would allow access for light goods vehicles used to undertake the regular site inspections and regular maintenance works, as well as the route for larger vehicles used for more substantial periodic maintenance work. As such it would be of a condition suitable for emergency vehicles. Nonetheless, the **oOEMP [as updated alongside this submission]** has been revised to confirm that the on-site access roads shall be maintained to a standard that allows access by emergency vehicles. The **oOEMP** also confirms the condition of the access roads shall be reviewed annually throughout the operational period, and any necessary

No	Party	Action	Deadline	Applicant's Response
				improvements shall be documented within the Site's monitoring and maintenance records. The Applicant is engaging with CFRS to confirm if Brooks Furlong is required as an additional route to that. This will be done, in the context that having used the Main Access Route, there will be two directions in which the BESS Compound itself can be accessed (and thus accounting for prevailing wind variability). In the interim, the **oOEMP and OBSMP** have been revised to confirm that access via Brooks Furlong would be subject to National Highways first having been satisfied that it is appropriate for them to do so (and related amendments have also been made to National Highways Protective Provisions in the draft DCO).
7	Applicant	To update the OOMP to confirm that the angle and tilt of panels will be recorded, monitored and reported so as to avoid any scenario where glint and glare could occur to the M56.	4	Table 5-2 of the **oOEMP [as updated alongside this submission]** has been revised to require solar PV panels to be inspected annually to ensure they continue to comply with the angle parameters specified within Table 1 of the **Design Parameters Statement [EN010153/DR/7.1]**. Inspections would be recorded in accordance with Section 7 of the **oOEMP** and the records held in relation to the OEMP would be made available for the purposes of monitoring compliance where a request is made by Cheshire West and Chester Council.

No	Party	Action	Deadline	Applicant's Response
8	CWCC	To respond to the most recent edits to the CTMP, thus potentially resolving the issue regarding the construction access traffic plan for HGVs	4	In addition to the previous edits made to the **oCTMP [as updated alongside this submission]** the Applicant has also revised the **oCTMP** to include a plan of the proposed access route to the Site.
9	Applicant	To consider any revisions to Article 20 of the dDCO regarding aligning the 2 week period and the 'as long as reasonably necessary' terminology.	4	Amendments have been made to the draft DCO at Deadline 4 to achieve this.
10	Applicant	Investigate whether the weaver navigation can be a suitable alternative to mitigate the closure of the River Weaver.	4	The reach of the River Weaver extending from the confluence with the Weaver Navigation (east of Frodsham) to the Manchester Ship Canal (west of Frodsham) is effectively isolated for navigation purposes from the upstream sections of the River Weaver. This is due to the presence of the Sutton Sluices and the non-navigable Frodsham Cut, which prevent through navigation. Access into the Weaver Navigation from the River Weaver/Manchester Ship Canal is available via Marsh Lock. For leisure users with small mobile craft the Wevaer Navigation can be accessed from the slipway located at Runcorn Rowing Club, which is accessed via Cholmendeley Road. During the cable stringing operations users of the River Weaver located upstream of the proposed crossing location would continue to be able to access over 2km of

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				the River Weaver. Figure 1 of this report illustrates the features described above. On the basis of the above and the measures described within the oCEMP, it is considered that impacts on users of the River Weaver would be minimal.
11	Applicant	To confirm with the fire and rescue service if removing brook furlong would cause a problem to response times.	4	The Applicant has contacted CFRS and requested a response on this matter.
12	Applicant	Will give consideration as to when structural surveys could come forward (i.e. in the examination).	4	Given the conclusions in respect of fire safety above, the Applicant does not propose to carry out condition surveys in Examination. The DCO has been amended to provide for condition surveys to be carried out in the future, if necessary.
13	National Highways	Provide weight limits of the bridges.	4	n/a
14	CWCC	To explore the FWF planning permission for any emergency response plan and fire access, then to give details of any restrictive weight signage that might deter fire appliances from crossing.	4	n/a
15	Applicant	A simpler clearer plan to be provided showing existing paths to be closed/ stopped up and where the alternatives/ diversions would be delivered (with reference to article 13 of the dDCO).	4	Figures 2-1 to 2-5 contain a series of plans which illustrate in a non-technical fashion the proposed temporary closures and the management measures proposed to the Public Rights of Way that are temporarily affected during construction works, reflecting the details

No	Party	Action	Deadline	Applicant's Response
				of the closures shown on the **Street Works, Public Rights of Way, Vehicular Usage and Access Plans [as updated alongside this submission]**.
16	Applicant	To consider whether the detailed Public Rights of Way Management Plan needs to be directed to any body other than Cheshire West and Chester Council for approval (i.e. Peak and Northern Footpaths Society).	4	The Applicant does not consider it necessary to consult with any other bodies before submitting the detailed Public Rights of Way Management Plan. If deemed appropriate, the Council may consult with other non-statutory organisations as part of its approval process for submitted schemes.
17	Applicant	To provide a clearer definition of "phase" in respect of a timescale for repairing any damage to PRoW.	4	In order to avoid any ambiguity with the definition of 'phases' pursuant to Requirement 3 of the draft DCO, paragraph 5.1.3 of the **outline Public Rights of Way Management Plan (oPROWMP) [as updated alongside this submission]** has been revised to require any damage to the surfacing of PROW or permissive routes resulting from maintenance activities to be repaired as soon as reasonably practicable on cessation of the maintenance works that affects that section of PROW or permissive path. The requirement to repair damage resulting from maintenance works has also been included within Table 5-7 of the **oOEMP [as updated alongside this submission].**
18	Applicant	Explain clearly temporary closures where alternatives are not provided and justification as to why not.	4	There are three temporary closures of PROW where an alternative route would not be provided. • A 1 km section of RB40 and an adjoining 150 m section of RB106 will be closed to pedestrians and equestrians during construction working hours. There are no nearby PROWs offering a

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				reasonable alternative, the width of the access road forming RB40 is insufficient to allow a segregated pedestrian route, and the land adjacent to RB40 contains industrial facilities, woodland, and ditches, all of which prevent a parallel route from being provided. • To facilitate the construction of the proposed 132kV overhead line to Frodsham SPEN Substation, RB99 would be temporarily closed during working hours for up to 2 weeks. There are no nearby PROWs offering a reasonable alternative, and the overhead line crossing perpendicular to the route prevents a diversion in the immediate proximity of the closure from being provided. • Similarly, for the construction of the 132kV overhead line to Frodsham SPEN Substation, RB93 would be temporarily closed during working hours for up to 2 weeks. It is possible to re-route along Ship Street and onto FP81 via Weaver Lane to reconnect with FP93, allowing access to the remaining section of FP93. However, the River Weaver immediately north of FP93 and the perpendicular crossing of the overhead line prevents a diversion in the immediate proximity of the closure from being provided. Users affected by the temporary closure of RB98 and

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				RB103 will still be able to travel across the site via RB97 and RB101. This alternative route is shorter than the section of RB98 and RB103 that will be temporarily closed. The temporary closure will prevent a circular route from being taken during construction hours.
19	Applicant	Check and/ or amend the OPWRMP to ensure an initial condition survey of PRoW is undertaken prior to any development commencing on site, to establish a baseline from which any repairs etc would be made.	4	The **oPROWMP [as updated alongside this submission]** has been revised to require a condition survey to be undertaken prior to commencement of development or commencement of permitted preliminary works.
20	Applicant	Update the ODEMP to include clauses about notifying the Council about the future of permissive paths once the land is returned to landowners.	4	The **oDEMP [as updated alongside this submission]** has been revised to include a requirement for the final DEMP to set out the status of permissive paths once the land is returned to landowners.
21	Applicant	Provide a short note, together with an annotated plan, detailing the specific dwellings that may be affected by glint and glare along with a brief explanation of the level and duration of effect; and the consideration that was given to the traveller sites and the conclusions relating to the living conditions of the occupants of the traveller sites.	4	The **Environmental Statement: Volume 2 Appendix 4-3: Glint and Glare Assessment [as updated alongside this submission]** has been revised to include the details in respect of the travellers site. In respect of dwellings, the Executive Summary of that report sets out the summary of the impacts to dwellings. Section 6.4 of the study sets out a table setting out the results for each group of dwellings. In light of this, the Applicant has not submitted a separate note, as that would duplicate these two pieces of information.
22	Applicant	Update [APP-067] to remove legacy references to there being moderate glint and glare effects.	4	The **Environmental Statement: Volume 2 Appendix 6-4: Residential Properties [as updated alongside this submission]** has been revised to remove legacy

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				references and has been updated to reflect the nature of the glint and glare impacts experienced at the properties in the location described.
23	Applicant	Amend the draft DCO so that a requirement includes the submission and approval of details of an anti-reflective coating.	4	This amendment has been made to the DCO at Deadline 4 (and Natural England added as a consultee).
24	Applicant	Refine wording of the 'Applicable Design Parameter' for 'Design' on page 8 of [REP3-012] to clarify the angles of panels and the area to which the 5° difference relates.	4	The Design Parameters Statement [as updated alongside this submission] has been revised to clarify the angles of panels and the area to which the 5° difference relates. A key has also been added to the plan within the document.
25	Applicant	Review and update the Glint and Glare Assessment [APP-056] to address any discrepancies, for example paragraph 2.3.1 which says that panel tilt will be secured by the dDCO.	4	The **Environmental Statement: Volume 2 Appendix 4-3: Glint and Glare Assessment [as updated alongside this submission]** has been revised as requested.
26	Applicant	In the context of comments from the Council relating to the potential for a lifetime extension beyond the projected lifetime of the proposed development, explain why permanent land acquisition and rights are being sought for a time-limited scheme.	4	As noted at ISH2, the Applicant's position is that the Proposed Development is time limited by the DCO. Any 'repowering would require a planning decision to be made – either a change to the DCO or a new DCO, depending on policy at the time, and it cannot be necessarily assumed in the ES that the scheme will be re-powered. The Applicant's justification for seeking compulsory acquisition powers in a time-limited DCO are as follows (noting that in this case the Applicant has signed options with all bar one of the SADA landowners and so the use of such powers is hoped to be limited, subject to those options not being breached): • it is not possible in legal terms to compulsorily acquire

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				a lease, or some other form of acquisition save for rights (and the imposition of restrictive covenants). There is therefore no alternative compulsory powers available; • it is not possible to utilise powers such as temporary possession instead, as, in line with precedent in all DCOs, temporary possession powers are limited to, at maximum, the end of the period of one year beginning with the date of final commissioning of the part of the authorised development for which temporary possession of the land was taken (for construction), and for, for the operational period, "so long as may be reasonably necessary to carry out the maintenance of the part of the authorised development for which possession of the land was taken". It would be unprecedented to draft a DCO to allow for 'temporary possession' powers to extend for the lifetime of a scheme; • the use of compulsory acquisition powers has underpinned the development of all forms of energy generation (whether consented through DCO or otherwise), despite the fact that all energy projects are inherently not considered to be permanent – this is not just the case for solar projects; and • there is nothing in policy or legislative terms which require compulsory acquisition provisions to be time limited (whether full acquisition or in respect of rights). Parliament has clearly understood the benefit to project promoters (and the UK in terms of the

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				benefits of the project itself) of knowing that a project can be delivered with property certainty (both in terms of the land being available generally, and usable by the project) where voluntary agreements are not able to be reached. In light of the above, and the Applicant wishing to have that certainty to ensure a developable project to meet the Government's policy ambitions, it is appropriate for full compulsory acquisition powers to be sought as is set out in the application for the Proposed Development.
27	Applicant CWCC	In respect of the historic environment: i. provide a response to the December 2025 draft NPPF and any implications this might have in respect of the applicant's conclusions (action for the applicant but CWCC may comment if it wishes to); and ii. provide a tabulated summary or 'read across' of the applicant's and CWCC's conclusions in relation to the effects of the development using the same terminology as NPS EN-1 and the NPPF.	5	An update on this point will be provided at Deadline 5.

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28	Applicant CWCC	Provide: i. an updated Green Belt Assessment (Appendix A of the Planning Statement [APP-128]); and ii. a tabulated summary or 'read across' of the applicant's and CWCC's conclusions in relation to harms and benefits of the that the parties considered should be weighed in the 'green belt balance', taking account of CWCC's comment that it considers some of the benefits listed by the applicant to be mitigation.	5	An update on this point will be provided at Deadline 5.
29	NE	NE to provide a clear position in respect of the Mersey Estuary SPA and Ramsar site. In addition, and in respect of the qualifications it made it in response to Question 5.1.3 regarding adverse effects on integrity, provide a clear response setting out its position from scratch.	4	n/a
30	RSPB	RSPB to submit into the Examination its position on whether there would be adverse impacts on the integrity of the Mersey Estuary SPA and Ramsar site.	4	n/a
31	Applicant	Submit into the examination representation on case law relating to the definitions of 'mitigation' and 'compensation', with particular emphasis on how such would be considered under the Habitats Regulations Assessment.	4	The NBBMA is clearly mitigation and not compensation in the context of the Habitats Regulations and this position is agreed by Natural England. As noted at ISH2, the question of 'what is mitigation' vs 'what is compensation' is a different question under the Habitats Regulations, and is not simply a case of an application of the mitigation hierarchy in policy terms.

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				At a fundamental level, the NBBMA's role is to reduce the displacement effects caused by the loss of Functionally Linked Land ('FLL') caused by the Proposed Scheme, **to** the protected features of the SPA, i.e. the various protected bird species. The provision of the NBBMA does this, to enable a conclusion of no Adverse Effects on Integrity is able to be reached. It is only if that conclusion was not able to be reached, following the application of the mitigation, that the question of compensatory measures would be applied. This is a different position to if the Proposed Development was proposing development directly within the SPA, and thus directly affecting the integrity of the protected site itself. In such an instance, providing replacement habitat for the lost habitat would be considered compensation (as confirmed in *Briels v Minister van Infrastructuur en Milieu* (C-521/12) and *Grace and another v An Bord Pleanála* (C-164/17)). Case law is helpful in highlighting the different positions in this respect (and also by providing helpful analogies to the Applicant's proposals): In Lee Valley *Regional Park Authority v Epping Forest District Council [2015] EWHC 1471 (Admin)*, a High Court of Justice case, the facts concerned an application to construct a large glasshouse within 2km of a SPA. A small lake on the development site provided habitat that supported 2 SPA citation species (2 species of duck). The lake was not part of

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				the SPA but was nearby to it. As part of the scheme, it was proposed to remodel the lake and create a new additional storage pond to the north. The Court held that the correct approach to determining the mitigation/compensation question is to start with the protected nature conservation interest and the source of the anticipated possible effect. The following short but important paragraph from the Judgment should be noted: *[80] In this case, the SPA interest concerned was the Gadwall and Shoveler ducks. It was not a particular protected habitat type but, rather, the species which were the basis of the designation. The works (and the conditions related to timing) were designed to reduce and avoid harm to the interests of those birds. This was to be achieved by undertaking works when, as a result of the birds' migration, they were far less abundant, and implementing a scheme "providing an adequate extent and continuity of supporting habitat" to eliminate, avoid or reduce the likely significant effects. This was, in my view, clearly mitigation, not compensation.* *[81] Once one starts with an understanding of the protected nature conservation interest and the source of the anticipated potential effect, the distinction between the present case and that of, of [sic] instance, the case of Briels is clear. In Briels, the protected interest was a type of habitat which would be adversely affected, and the proposal was to*

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				create new areas of that habitat type. In that case, the new areas of habitat were not mitigation but were compensation for the impact on the habitat type, which was the nature conservation interest concerned. It was not, like the present case, a measure designed to eliminate, avoid or reduce the impact on the protected nature conservation interest in the first place. A similar approach was taken in a 2017 Northern Ireland appeal matter, *Re Murphy's Application for Judicial Review, 2017 WL 04865887*. In this case, the facts concerned a proposal to build a trunk road adjacent to (and out with) a SPA. The land on which the scheme was to be built was considered to be linked to the SPA for the protected species of whooper swan. Land take for the trunk road was proposed, which would result in a loss of grazing habitat for the swans as well as other aspects of disturbance. Mitigation measures were incorporated into the design, including entering into land management agreements and field size adjustment and amalgamation measures. Again, the Court distinguished the Briels judgment. The following brief but salient passage (our emphasis added) is worth noting: *38. In paragraph [28] of Briels the court concluded that a mitigation or protective measure is one which lessens the negative effects of a plan or project with the aim of ensuring that the integrity of the site is not adversely affected. A*

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				compensatory measure, by contrast, is one which does not achieve that goal within the narrower framework of the plan or project but seeks to counterbalance the failure to do so through different, positive effects in order to avoid a net negative effect. *39. That analysis requires one, therefore, to identify the selection feature at risk. In Briels the selection feature was purple moor grass. That feature was to be a direct casualty of the project. The suggestion that a net overall benefit could be achieved by the creation of a new habitat could not be guaranteed and that offended the precautionary principle.* *40. In this case the protected feature is the Whooper Swan. There is no direct impact on the protected feature. The foraging lands are not themselves a protected feature. The appropriate assessment and the Statement indicate that with the field amalgamation measures there will be no adverse impact on the protected feature. The measures in this case are aimed at avoiding or reducing any significant adverse effects on the protected feature. They are plainly mitigating measures.* The NBBMA involves protective measures to lessen the negative effects of the Proposed Development to the species that are protected, not the habitat. The mitigation measures are proposed on land outside of the SPA, in circumstances where a possible indirect effect on species (and not a habitat) within nearby SPAs had been identified. The effect is

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				'indirect' because no direct loss of a protected habitat is proposed. The focus is thus on the species rather than the habitat, and it is relevant that mitigation will be provided in advance of construction of the solar farm. It is therefore in line with the principles established by case law as to what should be considered to be mitigation for Habitats Regulations purposes. Avian Ecology have provided additional technical points to support this submission, as set out at Appendix E.
32	NE	NE to set out its position on what constitutes mitigation and compensation, and why it considers, in the HRA context, the proposals from the applicant are not to be viewed as compensation.	5	n/a
33	CWCC	CWCC to provide response on mitigation and compensation case law from the applicant.	5	n/a
34	NE and RSPB	NE and RSPB to watch the recordings for this session and respond, as necessary, to any comments on any matters that are felt necessary from any party making oral representations.	5	n/a
35	NE	Can Natural England confirm their position that, if a conservation body for NBBMA is not secured at the close of the examination (albeit with letters of support and intent), the position regarding AEoI would remain the same.	4	n/a

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36	Applicant	Confirm size of skylark mitigation area that ES conclusions are based on / provide correct figure. If 5.58ha is correct, amend the HRA to match and provide justification as to why 30ha reduced to 5.58ha between pre-app and application phases of the project.	4	The HRA has been updated at Deadline 5 to refer to the 5.58 hectare figure, which is the correct figure. The 30ha area was identified as potential land for skylark mitigation within the Preliminary Environmental Information Report at a point when the specific parcel of land to be used for mitigation had not yet been secured. The original mitigation strategy at the pre-application stage envisaged retaining the land in agricultural use and only providing 'skylark plots' within the worked fields. Having secured the land through negotiation, which included the ability to revert this land to grazing pasture in its entirety, the area of land for skylark mitigation was reduced to 5.58ha as this was considered sufficient (alongside retained areas and land use changes within the developed part of the Order Limits) to provide adequate mitigation to avoid significant effects on skylark populations. The **Environmental Statement: Volume 1 Chapter 8: Ornithology (APP-041)** identifies temporary and permanent loss of arable habitat and construction disturbance affecting breeding productivity as the key impact pathways, which the SMA (direct skylark mitigation) and NBBMA (indirect skylark mitigation supporting up to nine pairs) are designed to address by maintaining open landscape character, providing suitable nesting sward structure, enhancing invertebrate availability through planting across the Order Limits, and ensuring long-term meadow management throughout operation. The SMA is not intended to replace all 21

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				recorded breeding territories, but to deliver higher-quality, species-tailored meadow habitat that improves breeding productivity per pair using the SMA, supporting multiple breeding attempts across the season. Skylarks are anticipated to continue to use large parts of the Order Limits for foraging and at least the NBBMA will continue to be suitable for breeding. Mitigation for skylark is thus not solely contingent on the SMA alone, rather the SMA is provided to ensure the overall provision for the species is proportionate to predicted effects. This approach aligns with EcIA guidance, which emphasises that the assessor is to consider and maintain ecological processes and relationships, such as population dynamics, survival and reproduction rates, competition, predation, seasonal behaviours, and dispersal/genetic exchange, when predicting development effects.
37	Applicant	To reflect upon the requirement in the Five Estuaries OWF Order (Farmland Bird Compensation Strategy) and explain, with reference to the case law set out under action point 31 above, whether the proposed skylark mitigation strategy can be classed as mitigation.	4	The Applicant notes that the case law quoted in reference to ISH2 Action Point 31 is not directly relevant to the question of the Applicant's proposals in respect of skylarks. That is because the case law referenced there specifically refers to the meaning of mitigation and compensation under the Habitats Regulations. In the case of skylarks, the impacts being considered are not HRA impacts, as they relate to a species that is not a protected feature of the Mersey Estuary SPA.

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				In the case of the Proposed Development, the Skylark Mitigation Area (and the landscaping proposals within the OLEMP) are mitigation because they constitute on-site measures to reduce the effect of the Proposed Development to the skylarks. The impacts of the Proposed Development have been mitigated by well-established methods. The proposals will ensure that impacts to skylarks are either avoided or reduced as they will be able to locate themselves in areas away from solar panels, or the SADA more generally. The Applicant has specifically included land within the Order limits to achieve this, i.e. it has altered the project green infrastructure strategy to allow for it, thus fulfilling the second and third stages of the mitigation hierarchy. Compensation would involve 'offsetting' the impacts to skylarks – creating habitat offsite, some distance away to recreate conditions away from disturbance or injury. Such measures are only taken forward, where impacts are not able to be mitigated on-site (i.e. within the Order limits). The Applicant's approach is an accepted approach on solar projects (e.g. Mallard Pass and numerous TCPA projects). By contrast, the Five Estuaries project reference to 'compensation' in that DCO is because that applicant recognised that it could not and had not been able to mitigate impacts to skylarks and other farmland birds within the Order limits. This is noted in its response to the Secretary of State's consultation where the suggestion of the approach ultimately

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				taken in the made DCO was proposed, where that applicant stated: *"The Applicant assessed the impact on farmland birds in 6.3.4: Onshore Biodiversity and Nature Conservation [APP-086] and concluded that a significant adverse effect on two species (corn bunting (at a county level) and skylark (at a local level)) cannot be avoided. This is due to permanent direct loss of 6 hectares of arable farmland habitat at the substation and the impact over the wider area due to the provision of the screening planting that is necessary to make the development acceptable in landscape and visual terms. This screening planting will act to make the retained fields unattractive to those two species, which prefer to not nest in fields enclosed by trees.* *As required by the ES methodology and the mitigation hierarchy, the Applicant considered the provision of both mitigation and compensation pre-application. Provision of mitigation on site was not possible while meeting the landscape screening function requirement. The Applicant notes that both species, as shown in 6.6.4.2 Breeding Bird Survey-North of A120 [APP133] have been recorded in, and are known to use the wider area surrounding the substation. Given the site sits within a wider area used by these species , provision of offsite compensation was considered by the Applicant; however it was concluded that the impacts of providing this outweighed the impact being addressed"*

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				The Five Estuaries decision therefore does not depart from the position brought forward by the Proposed Development, which is line with established practice and understanding. Avian Ecology have provided additional technical points to support this submission, as set out at Appendix E. .
38	Applicant	Submit summary of the specific scientific/ academic papers evidenced in the oral representations of the applicant in relation to effects on skylark / appropriateness of skylark mitigation into the examination.	4	Appendix C provides the scientific/ academic papers cited in the oral representations.
39	Applicant, CWCC	Make any further submissions in respect of the interaction between any DCO and any permission for the Runcorn spur in respect of the concern relating to the NBBMA. Set out a logical and reasonable solution for resolving the differences (including Liverpool Bay CCS Ltd commentary as applicable) and for assessing the impacts if the Runcorn Spur Pipeline was to be delivered after the NBBMA had been established. Provide views on the logistics, pros and cons of imposing a Grampian-style requirement on the DCO preventing work beginning on the NBBMA unless and until the pipeline was laid and/ or the potential for a section of pipeline to be laid by the applicant. Also set out what powers the applicant, as landowner, would have on timing of the works of the Runcorn Spur (if approved).	4	As noted at ISH2, the Applicant has at Deadline 4 submitted a short note on the interactions of the two projects. This demonstrates that the pipeline would cause an impact to the NBBMA and, given that area forms mitigation for the Proposed Development, could cause effects to Functionally Linked Land and the birds that use it. To mitigate that effect cannot be controlled by the Applicant – the NBBMA is in place, the impact is to it, and so the only mitigation can be done by the pipeline project The Applicant does not accept, in principle, a DCO Requirement which requires that the Proposed Development cannot come forward (as, given the Applicant's commitments on phasing that is what would be caused by saying the NBBMA cannot come forward) until the pipeline works in that area have come forward.

No	Party	Action	Deadline	Applicant's Response
				That is because the benefits of the Proposed Development, supported by policy and being a project of critical national priority, which benefits from a Grid connection, should not be subject to the risk of being delayed to such an extent that it could mean that it misses its grid connection (and thus potentially losing the project altogether) or be in any event delayed indefinitely; particularly for a project where there is no certainty as to how it will be funded or if its end users have Government support. Furthermore, such an approach would be, fundamentally, punishing the Proposed Development for LBCCS not carrying out a proper HRA of its proposals. The precautionary principle is a fundamental underpinning of the HRA process, and that simply has not been followed by LBCCS, which has only assessed only one possible scenario, when there are other plausible scenarios. Put another way, the Applicant cannot see how it could be argued that it is 'beyond reasonable scientific doubt' that the After Scenario could not practically happen. It is for these reasons that the Applicant also considers that the ExA, in writing its recommendation, must be able to rely on the fact that CWCC will need to impose a condition which requires that LBCC cannot build the pipeline once the NBBMA is in place (as that is what their HRA is based on), which LBCCS would then need to vary

No	Party	Action	Deadline	Applicant's Response
				if that did occur, or a condition which will ensure that LBCC puts in place mitigation measures (either identified now, or through submission of a revised HRA/management plan) where the After Scenario arises. On the basis of the precautionary principle and considering the 'beyond reasonable scientific doubt' tests, without such measures being secured, CWCC would have to conclude that AEoI could occur, and thus planning permission could not be granted. As such, to discharge its HRA competent authority duties, CWCC will need to impose something that will mitigate in-combination effects that would arise in the After Scenario, as it cannot legally safely issue planning permission without those controls. Given that background, there can be no doubt that a condition that enables such controls to be brought forward passes the tests for planning conditions - there is not much more that can be said to be 'necessary', 'relevant to planning' and 'relevant to the development to be permitted' (being a development running through FLL) than ensuring no AEoI are caused to European sites. The Applicant is willing to make proposals to CWCC as to what an appropriate condition might look like, particularly to ensure that the other condition tests are met (one example might be: '*Prior to the commencement of construction, an updated assessment under the Habitats*

No	Party	Action	Deadline	Applicant's Response
				Regulations must be submitted to account for the latest position in respect of the baseline and understanding of the timescales of in-combination plans or projects), and in the context that case law is clear that you can have conditions that allow for detailed Habitats considerations to be left to a latter stage of multi-stage consent processes (*C G Fry & Son Ltd v SSHCLG* [2025] *UKSC 35* and *R (Wingfield) v Canterbury City Council [2019] EWHC 1974 (Admin),* following the logic of the Advocat General in ECJ Case C-6/04 *Commission v United Kingdom* [2005] ECR I-9017). However, the Applicant is conscious that ultimately the decision on wording will need to be CWCC's, that CWCC needs to be seen not to be favouring one specific development over another specific development, and ultimately that the decision may not take place until after the Examination is complete (noting, for example, that NE raised concerns in respect of this issue in December and LBCCS have yet to respond, which NE would then need to further comment on). The ExA will therefore need to make its recommendation on the basis that a condition of some form will be imposed, to ensure CWCC's statutory duties can be met and that no in-combination AEoIs can arise. The Applicant also considers that the logic of section 4.12 of NPS EN-1 can apply by analogy to these

No	Party	Action	Deadline	Applicant's Response
				circumstances. That section of the NPS makes clear that the Secretary of State should work on the assumption that the relevant other regulatory regimes applicable to projects (including 'biodiversity') will be properly applied and enforced by the relevant regulator, and that the Secretary of State should act to complement but not duplicate those regimes. The Applicant considers that the same logic should apply to CWCC – that it can be assumed that it will discharge its competent authority duties under the Habitats Regulations. In respect of the land position, it is the case that the Applicant has an option with the freeholder of the land; and within the option the Applicant's consent 'acting reasonably' is required if the freeholder wishes to grant another option (such as to LBCCS). That is the extent of the Applicant's control – as such it has limited, but not total ability to impact the timing of works on the pipeline. However, as noted at ISH2, a private agreement existing does not provide sufficient protection in planning/Habitats Regulations terms, as any private agreement can be varied without CWCC having any control or input to that variation. Reliance cannot therefore be placed on this mechanism. Similarly, the Applicant is open to discussions with LBBCS as to the early installation of the pipelines within the NBBMA as part of the construction of the NBBMA itself but clearly has not applied for consent to do so in its

No	Party	Action	Deadline	Applicant's Response
				application. As such, LBCCS would need to apply for that (and assess it/commit to it as a mitigation measure) as part of its planning consent and commit to pay the Applicant to install them on a schedule that works for the Applicant. However, it is not incumbent on the Applicant to proactively do this – the Proposed Development's planning benefits should not wait for LBCCS, and the pipeline is LBCCS' project, not the Applicant's. Equally, the Applicant considers that it may be difficult for the Council to 'require' LBCCS to do this, unless that was the basis of LBCCS' no AEOI conclusions, as that would mean LBCCS was being 'tied' specifically to the Proposed Development.
40	NE	NE to provide its position regarding disapplication of section 28E of the Wildlife and Countryside Act 1981.	4	Having met with NE on 2 March 2026, the Applicant understands that NE is agreeable to the disapplication of section 28E, and this will be reflected in the next iteration of the SoCG, to be submitted at Deadline 5.
41	NE and RSPB	Provide an opinion regarding whether the baseline ornithological surveys are complete/ sufficient enough for the applicant's conclusions to be robust.	4	n/a
42	Applicant	For the contaminated land specialist and fire specialist to confer together about the potential for ground-warming/ heating during a fire, the modelled temperatures likely to occur at various depths beneath and laterally from the BESS in the event of a fire, and the potential for any contaminants to be released and changed into higher toxic compounds. A short technical note to be provided on this.	4	Regardless of the findings which confirm the absence of these contaminants, further consideration regarding the hypothetical scenario of a battery fire have been considered. A literature search has identified that carbon tetrachloride will undergo thermal decomposition from a temperature of 400°c, whilst vinyl chloride is slightly higher at 450-550°c Under such temperatures, fires may release hydrogen chloride and carbon monoxide whilst the more toxic compound of phosgene is only produced at trace levels.

No	Party	Action	Deadline	Applicant's Response
				Arsenic has a boiling point of 613°c where it will transition from a solid to vapour phase. Consultation with the Applicant's Battery Safety Consultant has confirmed that in the unlikely event of a BESS fire, external surface temperatures (doors and walls) during a full burn will be <200°c when internal temperatures would be >1,200°c. Temperatures recorded at 60mm above the ground on target surfaces at a distance of 2.5m sees an average temperature of <70°c. over an 8.5 hour burn. A recent 6MWh test recorded temperatures taken at mid-section BESS target heights, where at height of 1.25m the maximum temperature was <170°c. In a range of recent BESS design full scale fire testing (2023-2025) external temperatures generated are typically 4-5 times higher at the top of the BESS unit compared to the base of the BESS unit. Peak Heat Release Rates generated during BESS full scale fire testing measured by heat flux sensors located 1m from the ground and located <2m from the BESS enclosure have recorded maximum heat flux measurements of <3.5kW/m2 compared to maximum peak heat flux measurements at the roof of BESS enclosures in the range of 30 kW/m2 - 80kW/m2 where flames exit safely through BESS enclosure venting systems. The high level thermal insulation capacity of BESS enclosures ensures that low level heat emissions will not compromise the structural integrity of concrete or provide any significant prolonged heating of any BESS area ground surface. Concrete can withstand several hours of prolonged heat radiation at 20kW/m2 and BESS full scale fire testing has demonstrated that heat radiation at ground levels will be <1kW/m2 demonstrating that there is no credible risk of

No	Party	Action	Deadline	Applicant's Response
				damage to concrete or risk of significant heat transfer at ground level within a BESS area. This information demonstrates that the literature-based values in which thermal decomposition for the contaminants of concern may occur would not be achieved in the event of a BESS fire. To provide further assurance in such a hypothetical scenario, reference is made to a recent Case Study in Ohio, United States of American where in 2023 a train carrying bulk chemicals including vinyl chloride derailed and caught fire. In this incident, the Environmental Protection Agency (EPA) website which included real-time air monitoring at 12 locations around the fire due to the concerns raised about thermal decomposition of vinyl chloride into hydrogen chloride and phosgene. Real-time monitoring of VOCs (including hydrogen chloride and phosgene) was undertaken from the day after the accident and over the period until the fire was extinguished, recorded concentrations were consistently below detection limits according to the summary. The above information further demonstrates the absence of a pollutant linkage – no source has been identified and even if it were present, there is no pathway due to absence of sufficient thermal transfer to the ground to achieve thermal decomposition. The contaminants of concern are not uncommon and where it is demonstrated through detailed investigation and if necessary further risk assessment under the LCRM process that an unacceptable risk exists, this can be mitigated through industry-standard remediation practices.

No	Party	Action	Deadline	Applicant's Response
43	Applicant	The applicant list all the chemicals mentioned by Interested Parties in the relevant representations. For each substance I would like the applicant to respond on 4 points: i) the potential toxicity and risk to human health and the environment from that chemical ii) the need for this proposed development to test for each substance iii) what testing has already been carried out and iv) what testing is planned for more detailed investigation phases.	4	Appendix D provides a summary of the information requested by the ExA.
44	CWCC, Cheshire Fire and Rescue, EA	Respond to the applicant's chemical summary note and the representations from Cllr Mrs Sumner (watch recording of today's event for details), and whether the risks are appropriately scoped and can be managed.	5	n/a
45	Applicant	To consideration alterations to the wording in Table 5 and paragraph 4.1.26 of the CEMP regarding 'significant' unexpected contamination and the applicant determining if remediation is necessary.	4	The wording in paragraph 4.1.26 of the oCEMP [as updated alongside this submission] has been amended to refer to levels exceeding general acceptance criteria, rather than using the term 'significant'. Table 5-5 has also been revised to confirm that the relevant planning authority (in consultation with the Environment Agency) should determine when remediation of identified unexpected contaminated land is necessary, not the Applicant, if the Applicant determines to undertake development in areas where unexpected contamination has been found.

No	Party	Action	Deadline	Applicant's Response
46	Applicant	To confirm the necessary guidance and standards for dealing with assessment and remediation of contaminated land appears across the management plans	4	The Applicant has updated Table 5-5 of the oCEMP, oOEMP and oDEMP to confirm that the assessment and remediation of contaminated land shall be undertaken in accordance with the requirements of Land Contamination Risk Management (LCRM) Guidance.
47	EA	Following a review of PRoW issues, the EA will include an update on flood risk activity permits in its forthcoming response.	4	n/a
48	Applicant and EA	Update management plans for bridge deck heights (bridge abutments and soffit levels) of 5.3m AOB in liaison with the EA. EA to confirm all acceptable with CP22 and CP17.	5	Table 5-4 of the oCEMP [as updated alongside this submission] as been amended to require the soffit of the main river crossings to be set at 5.3m Above Ordnance Datum unless agreed otherwise with the Environment Agency. The table already specified that abutments will be set 2m back from the bank and the design of the main river crossings will be subject to approval by the Environment Agency prior to construction pursuant to their Protective Provisions/a FRAP if disapplication is not achieved. The Applicant notes that the EA confirmed at ISH2 that it had no further comments in respect of CP17.
49	CWCC	To respond in writing to confirm the finished floor level of 6.52m AOD is acceptable for the refuge area	4	n/a
50	EA	To respond whether 6 months regularity for water quality monitoring and monthly thereafter would be sufficient to capture seasonal variations.	4	n/a

No	Party	Action	Deadline	Applicant's Response
51	Applicant	To update the flood evacuation plan with the measure from the CEMP regarding evacuation of materials stored in compounds in a flood event. To also confirm what it means by 'raised marginally' and how that has been accounted for in the flood risk methodology.	5	The Flood Warning and Evacuation Plan has been amended accordingly and also submitted at Deadline 4. Appendix F of this report provides an assessment of the effects of the construction compounds proposed in Flood Zone 3, demonstrating that they would not increase flood risk offsite during a flood event.
52	EA	Response to applicant's documents under action point 51.	6	n/a
53	CWCC	To update on the planning status of both traveller sites and the timescale for handling any related planning matters	4	n/a
54	Applicant	Summary of consultation undertaken with the traveller site, specific measures (if any) taken to engage with those parties and service of any notices under PA2008.	4	The Applicant can confirm that the following measures were employed in respect of the Travellers Sites during the pre-application period: • the Applicant undertook a site visit on the 4th July 2023 to make the Travellers aware of the proposals; • the organisations 'Traveller Movement' and 'Friends, Families and Travellers' were contacted in relation to providing advice on traveller communications, but no response was received; • similarly, the Council's Travellers Officer was contacted for advice but also did not respond; • site notices of the consultation were placed at the locations where the Travellers would walk across Brooks to travel to/from Frodsham (see Appendix 7 of the Consultation Report [APP-029]; and • both sites received a consultation postcard as

No	Party	Action	Deadline	Applicant's Response
				part of the core consultation zone.
55	Applicant	To refer to stakeholder management and consultation plan on the face of the dDCO. This includes amendments to the OCEMP to ensure consultation with the traveller sites.	4	These amendments have been made to the DCO/OCEMP.
56	CWCC	Confirm position regarding noise nuisance and issues with article 8.	4	n/a
57	Applicant	To review article 8 of dDCO with a view to reaching a mutually agreeable position when major replacement works are occurring.	4	The Applicant has reviewed the DCO and made small amends to better align the article with precedents. No reference is needed to 'maintenance' as the definition of 'maintain' in article 2 includes 'replace'.
58	CWCC	Council to confirm when the needs assessment for waste would come in and the weight the ExA should give to that document. Also to reflect on the waste policy position and the proposal's acceptability in respect of NPS EN-1 para 5.18.8.	4	n/a

Figures

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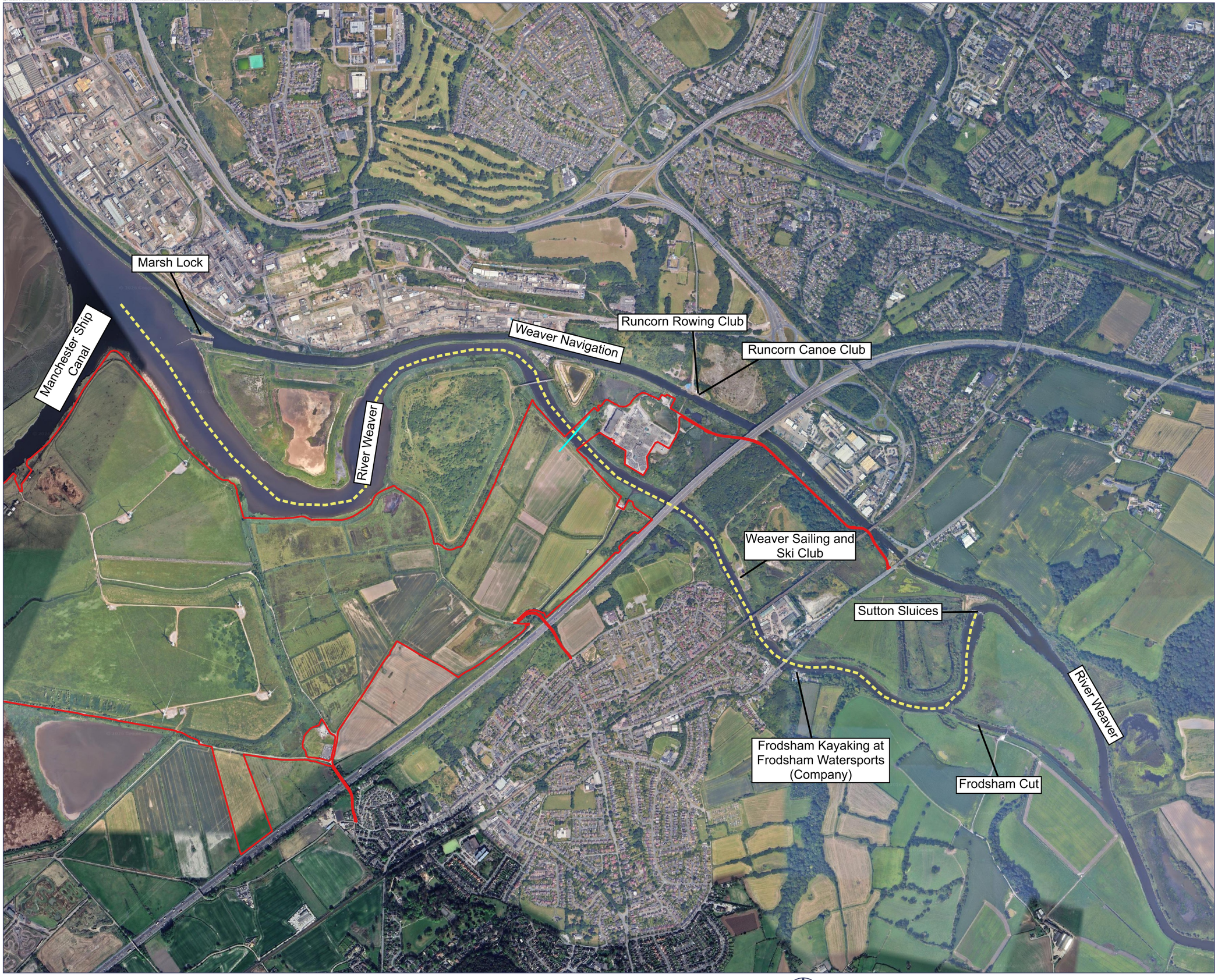

Order Limits

Limit of navigable section of River Weaver downstream of Sutton Sluices

Proposed 132kV OHL Crossing Point

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Document

Deadline 4 Submission

Project

FRODSHAM SOLAR

Figure Number

Figure 1

Figure Title

River Weaver / Weaver Navigation Access

Scale

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Date

March 2026

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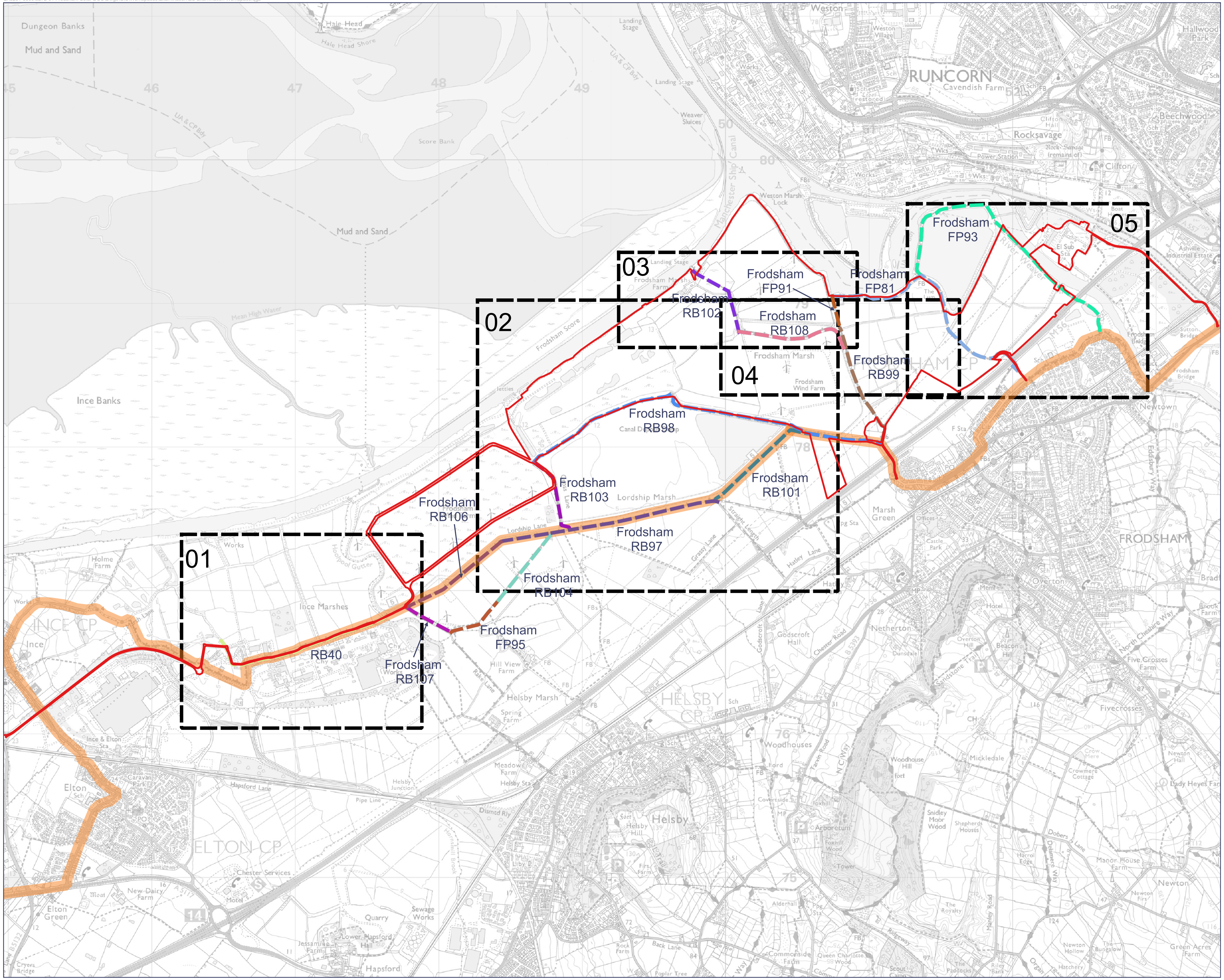

Order Limits

PROW in the Site Boundary

- Fodsham RB104
- Frodsham FP81
- Frodsham FP91
- Frodsham FP93
- Frodsham FP95
- Frodsham RB101
- Frodsham RB102
- Frodsham RB103
- Frodsham RB106
- Frodsham RB107
- Frodsham RB108
- Frodsham RB97
- Frodsham RB98
- Frodsham RB99
- Ellesmere Port/Neston RB40
- National Cycle Route 5

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Document

Deadline 4 Submission

Project

FRODSHAM SOLAR

Figure Number

Figure 2-1

Figure Title

Public Rights of Way - Closures and Diversions - Key Plan

Scale

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Date

March 2026

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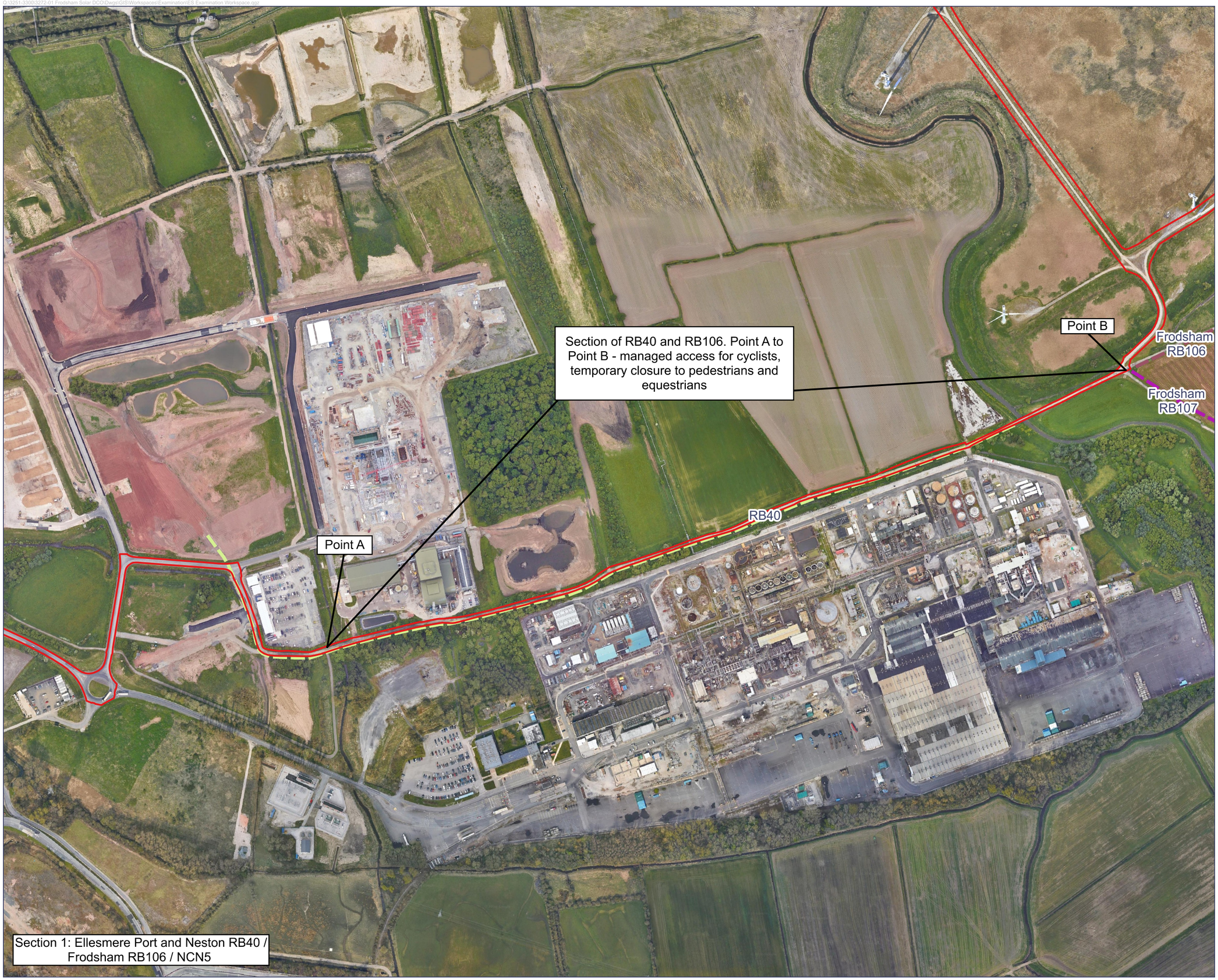

Order Limits

PROW in the Site Boundary

Frodsham RB107

Frodsham 106

Ellesmere Port/Neston RB40

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Deadline 4 Submission

Project

FRODSHAM SOLAR

Figure Number

Figure 2-2

Figure Title

Public Rights of Way - Closures and Diversions - Section 1: Ellesmere Port and Neston RB40 / Frodsham RB106 / NCN5

Scale

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Date

March 2026

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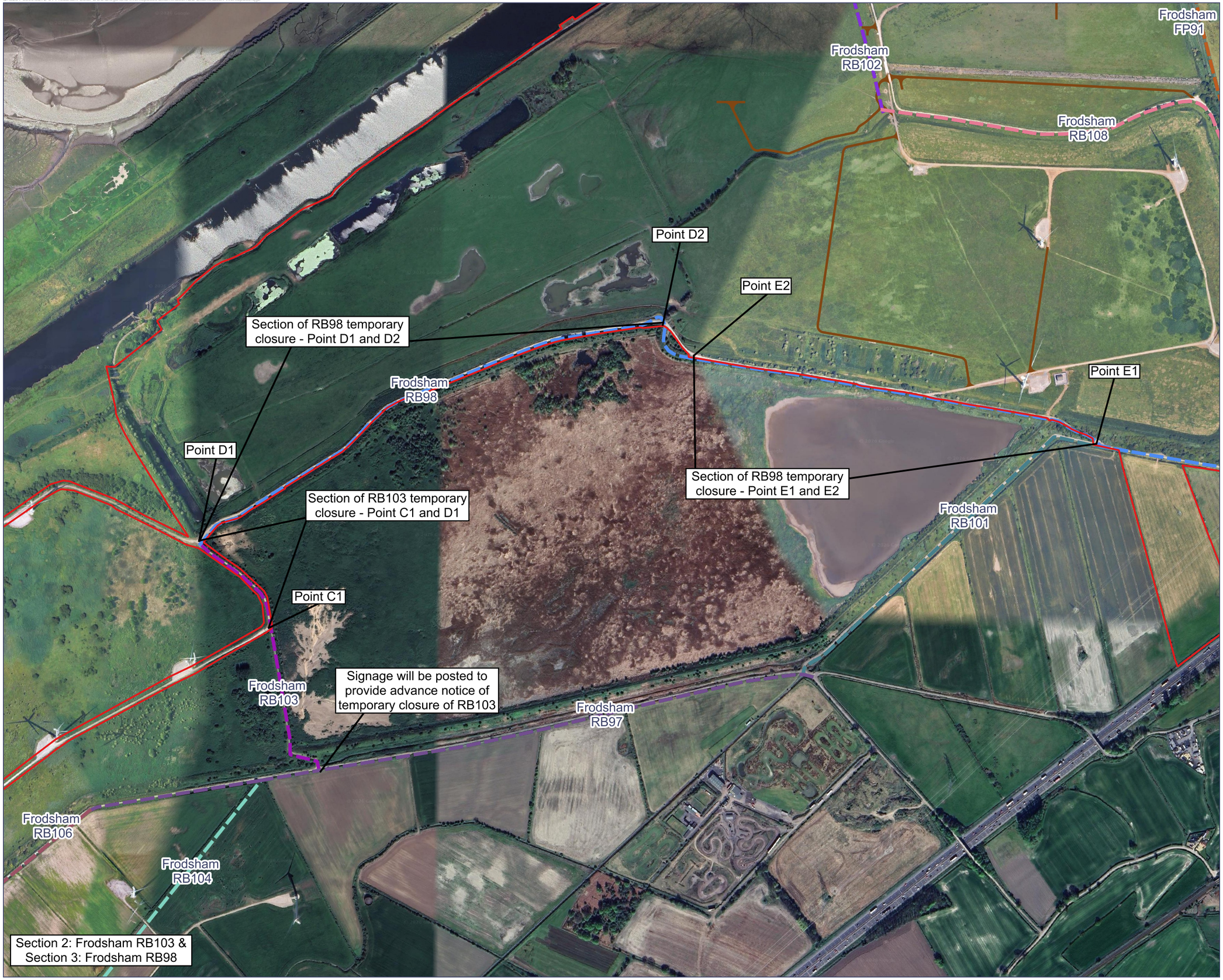

Order Limits

PROW in Site Boundary

- Fodsham RB104
- Frodsham FP91
- Frodsham RB101
- Frodsham RB102
- Frodsham RB103
- Frodsham RB108
- Frodsham RB97
- Frodsham RB98
- Frodsham RB99
- Frodsham RB106
- Proposed Access Track

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Deadline 4 Submission

Project

FRODSHAM SOLAR

Figure Number

Figure 2-3

Figure Title

Public Rights of Way - Closures and Diversions - Section 2: Frodsham RB103, Section 3: Frodsham RB98

Scale

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Date

March 2026

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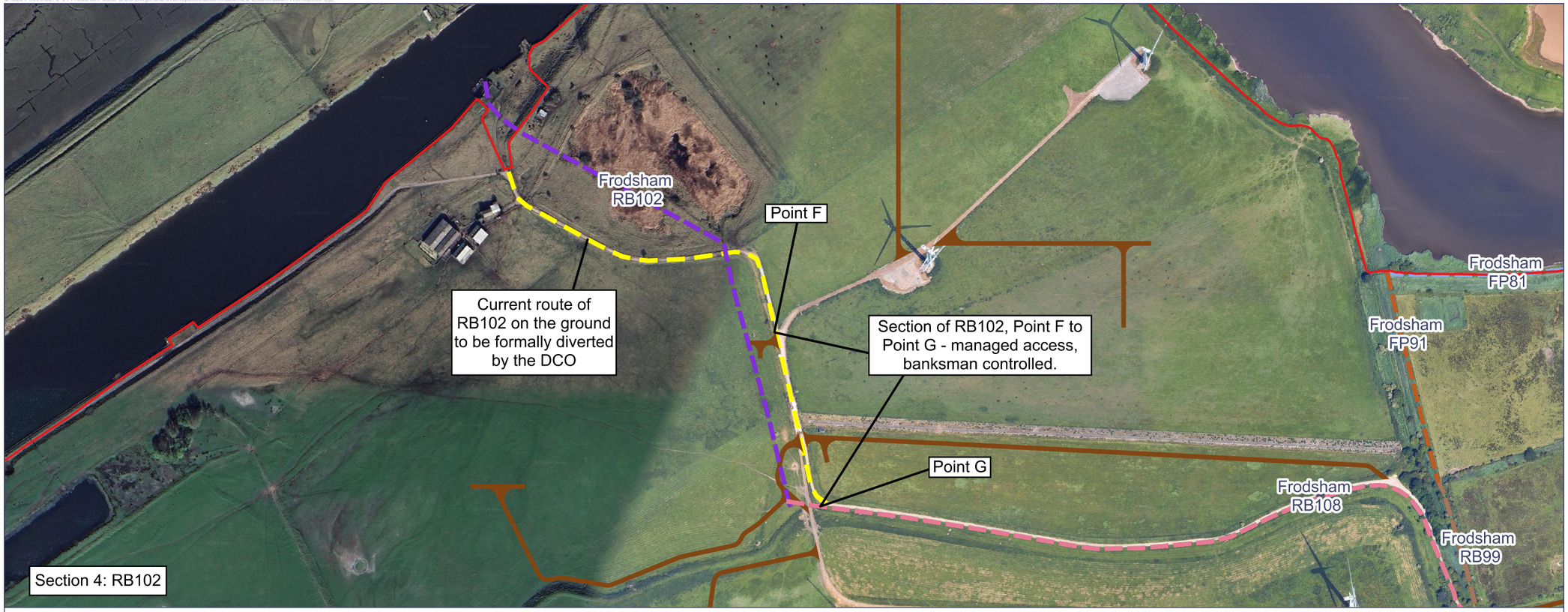

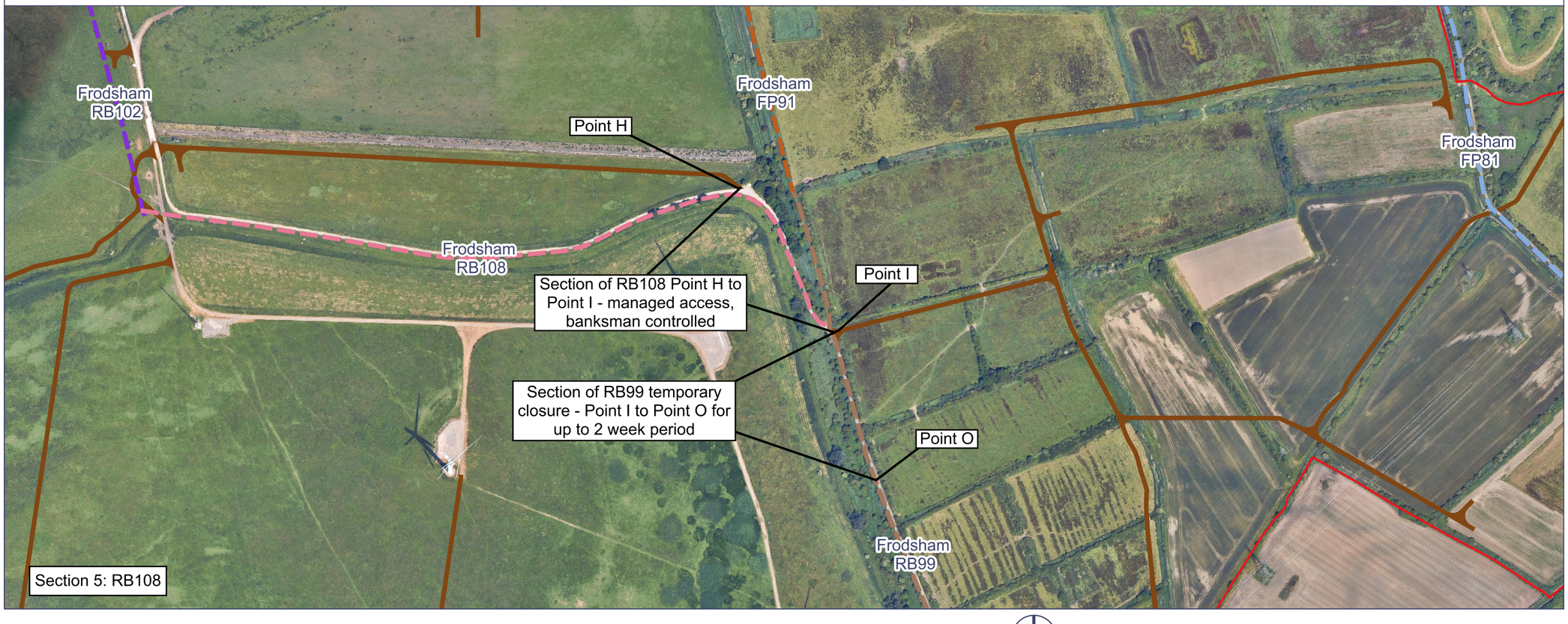

Order Limits

PROW in Site Boundary

- Frodsham FP81
- Frodsham FP91
- Frodsham RB102
- Frodsham RB108
- Frodsham RB98
- Frodsham RB99
- Proposed Access Track

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Document

Deadline 4 Submission

Project

FRODSHAM SOLAR

Figure Number

Figure 2-4

Figure Title

Public Rights of Way - Closures and Diversions - Section 4: RB102, Section 5: RB108

Scale

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Date

March 2026

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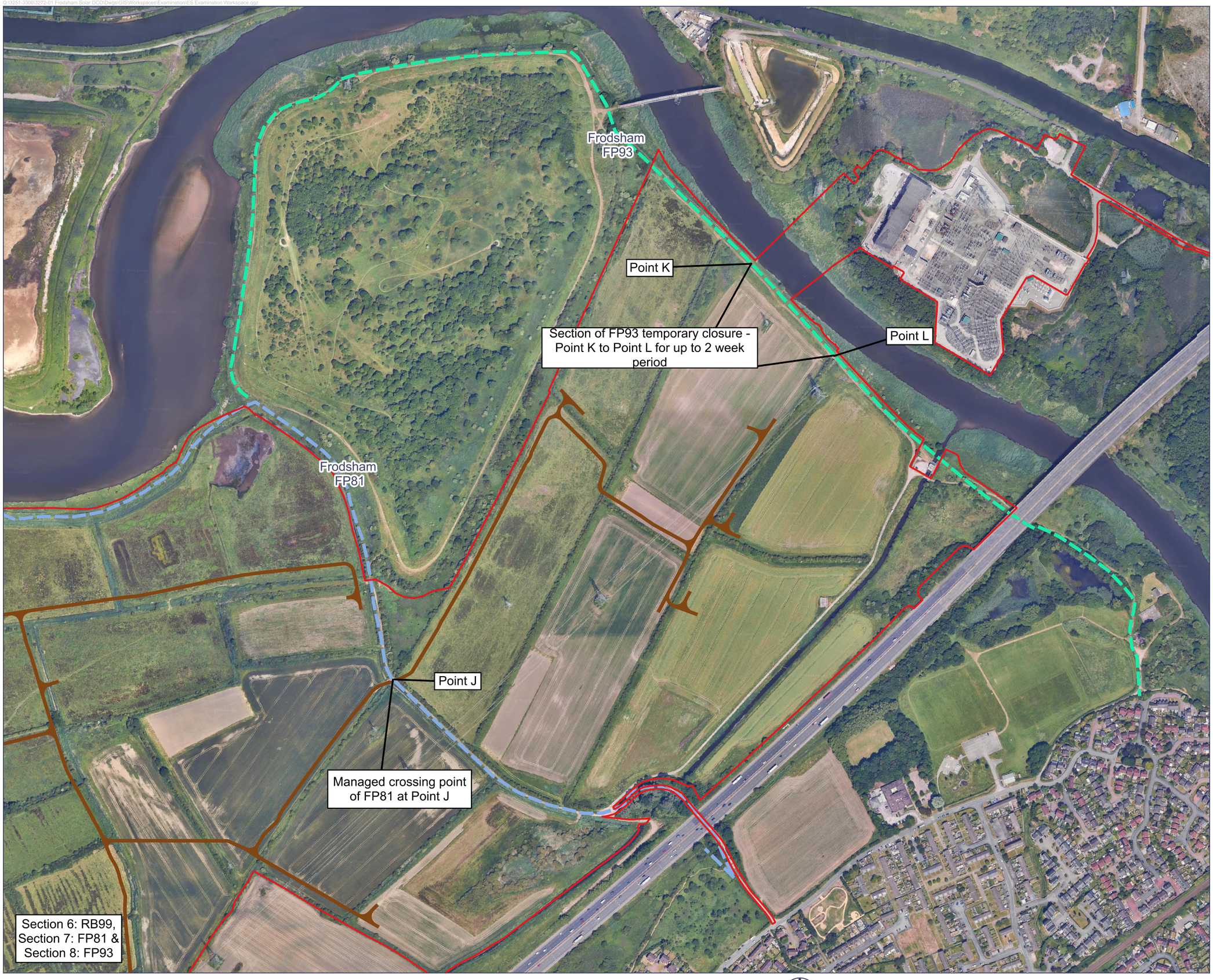

Order Limits

PROW in Site Boundary

Frodsham FP81

Frodsham FP93

Proposed Access Track

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Document

Deadline 4 Submission

Project

FRODSHAM SOLAR

Figure Number

Figure 2-5

Figure Title

Public Rights of Way - Closures and Diversions - Section 6: Frodsham RB99, Frodsham FP81 & Section 8: FP93

Scale

1:5000@A3

Date

March 2026

Appendix A: Frodsham Wind Farm Condition 42 Ice Throw Discharge Notice and Approved Report

Cheshire West & Chester Council

ADM002

Peel Wind Farms (Frodsham) Limited
c/o Mr Peter Rowe
Turley Associates
1 New York Street
Manchester
Greater Manchester (Met County)
M1 4HD

Development Management

Planning Service
Cheshire West And Chester Council

Civic Way Ellesmere Port Cheshire CH65 0BE
Tel: 0300 123 7027
Email: planning@cheshirewestandchester.gov.uk
Web: www.cheshirewestandchester.gov.uk

our reference:	your reference:	please ask for:	date:
14/05180/DIS		[redacted]	2 March 2015
		01244 977716	
		[redacted]	

Dear Peter,

Proposal: Discharge of conditions 41 (Shadow Flicker) and 42 (Ice Throw) (all in relation to planning permission 10/00597/DECC (Secretary of State's reference 12.04.09.109C) for application to construct and operate a wind turbine generating station of up to 60 MW (Section 36 of the Electricity Act 1989) (as amended by 14/01671/NMA and 14/5283/NMA)

Location : Frodsham Canal Deposit Grounds, Lordship Lane, Frodsham, Cheshire,

I am writing to you in relation to your letter of 9 December 2014 and the application for the approval of details in relation to the discharge of the above conditions:

Condition 41 (Shadow Flicker);

I can confirm that the following document:

- Frodsham Wind Farm Planning Condition 41: Shadow Flicker (Version 2) (Parsons Brinckerhoff March 2015)

is acceptable and is approved in accordance with condition 41 of the planning permission 10/00597/DECC (Secretary of State's reference 12.04.09.109C).

Condition 42 (Ice Throw);

I can confirm that the following document:

Cheshire West and Chester

Certified as being a true copy of a document received through Cheshire West and Chester
[redacted]

- Frodsham Wind Farm Planning Condition 42: Ice Throw (Parsons Brinckerhoff November 2014)

is acceptable and is approved in accordance with condition 42 of the planning permission 10/00597/DECC (Secretary of State's reference 12.04.09.109C).

I trust the above is sufficient for your records. Should you require any further information please contact me at the above number.

Yours sincerely

[redacted]

Principal Planning Officer

PARSONS BRINCKERHOFF

November 2014

FRODSHAM WIND FARM PLANNING CONDITION DISCHARGE

PLANNING CONDITION 42 - ICE THROW

Frodsham Wind Farm Limited

Final

Frodsham Wind Farm Planning Condition Discharge

Planning Condition 42 - Ice Throw

Prepared for
Peel Energy Limited
Peel Dome
The Trafford Centre
Manchester
M17 8PL

Prepared by
Parsons Brinckerhoff
Amber Court
William Armstrong Drive
Newcastle-upon-Tyne
NE4 6AS
0191 226 2000
[redacted]

CONTENTS

1 INTRODUCTION

1.1.1 Frodsham Wind Farm was consented under Section 36 of the Electricity Act 1989 on 19th October 2012. The scheme consists of 19 wind turbines, each not exceeding a height of 125 metres to tip height and associated infrastructure. 58 conditions were presented with the planning permission, of which condition 42 states the following:

> *Ice Throw*
>
> *Prior to the commencement of the Development, a scheme for mitigating risk of ice throw from the turbines shall be submitted to [and] approved in writing by the LPA and thereafter implemented in accordance with the approved details.*
>
> *Reason: To ensure the safety of residents and walkers.*

1.1.2 Ice can build up on wind turbine blades, as with any structure, when conditions of temperature and humidity are correct. Ice build-up is more likely on a stationery wind turbine, but can still occur when a wind turbine is operating. Ice that detaches from a turbine blade will typically fall when the turbine is stationery (known as 'ice drop', where the ice falls within the oversail area of the blades), or be 'thrown' from a rotating turbine.

1.1.3 The ice is loosened by centrifugal forces and is thrown off the rotor blades. The loosening ice can also drift off depending on wind direction and wind speed.

1.1.4 The risks of fatality from ice have been calculated around 3 orders of magnitude higher than from blade failure, as a consequence of the higher frequency of ice throw/drop[1], and as such, it is important that this risk is managed properly. The following report details how Peel Energy proposes to mitigate the risk of ice throw and ensure the safety of residents and walkers in the areas surrounding Frodsham Wind Farm.

[1] Advances and Case Studies in Wind Turbine Risk Assessments, MMI Engineering.

2 METHODOLOGY

2.1.1 Parsons Brinckerhoff has reviewed publically available information pertaining to the ice throw phenomenon and has derived a value for the potential distance that ice would be thrown from a turbine installed at Frodsham Wind Farm.

2.1.2 Sections 3 and 4 below confirm the adopted distance and presents the proposed mitigation measures for use at the site in order to reduce the risk of ice-throw related safety issues to members of public in and around the site.

3 SITE SPECIFIC CONDITIONS

3.1 Ice Throw Distance

3.1.1 Guidance produced by Garrad Hassan[2] determines that the maximum value for ice throw from a turbine at Frodsham Wind Farm would be 250m; however, a second report produced by Garrad Hassan and referenced within the Environmental Statement states that 'that the *typical range of ice-throw from turbines is approximately 140 m and that the typical range of ice drop is 37 m'.* This report uses the value of 250m as a worst case value. The following section details how this worst case will be mitigated to a negligible level in order to safeguard users of the buildings and Public Rights of Way (PRoW) present on site.

3.1.2 Of the 19 turbines to be installed at Frodsham Wind Farm, six are more than 250m from PRoWs and six are between 140m and 250m from PRoWs on site. The ice throw and ice drop risk from these turbines is deemed to be negligible. The seven remaining turbines are within 140m of an onsite PRoW and the risk of ice throw/ice drop from these turbines is deemed to be minor.

3.2 Climatic Conditions

3.2.1 Parsons Brinckerhoff has reviewed meteorological data for the site covering the period October 2013 – August 2014. Temperature profiles were available from two sensors mounted at 3m and 75m on the on-site meteorological mast. The following results have been observed:

- The temperature dropped below 0°C at 3 metres above ground level on 14 days, over the course of the monitoring period of 325 days. This reflects 4.31% of the total time monitored.
- Incidents where the temperature dropped below 0°C at 3 metres above ground level were largely during the months of October to March inclusive, and between the hours of 11pm and 2am.
- At no point over the course of the monitoring period did the temperature drop below 0°C at 75 metres (around the hub height of the wind turbines) above ground level.
- The predominant wind directions were from the north-west and the south-west.

3.2.2 The above findings suggest the following:

- There is a low likelihood of ice forming on the wind turbine blades due to the climatic conditions on site. Temperatures monitored at the turbine hub height never fell below freezing and the marine environment present on site generally lends itself to slightly warmer and windier conditions.
- Periods of time where the temperature fell below freezing at ground level did not correspond with a subsequent drop in temperature at hub height. Periods where temperatures did reach freezing at ground level do not generally constitute times when pedestrian, or similar activity on site would be likely.

[2] Wind Turbine Icing and Public Safety – A Quantifiable Risk?, Garrad Hassan and Partners Ltd. [redacted]

- Ice build-up is typically accompanied by winds from the north-east quadrant which typically bring cold and wet weather[3]. Winds from this direction were rarely present on site.

4 PROPOSED MITIGATION

4.1.1 Modern day wind turbines are fitted with sensors that detect rotor imbalance and/or vibration. Rotor imbalance/vibration can occur as a result of ice build-up on one or more of the turbine blades and the turbine will shut down when the imbalance exceeds a pre-set level. Halting the turbine minimises the area of risk to the ground exactly below the turbine, where ice could still continue to fall, but would prevent ice throw.

4.1.2 All turbines will be fitted with ice detection technology.

4.2 Detecting Ice Accretion

4.2.1 Each wind turbine is able to indirectly identify ice accretion with its sensors. For this purpose, there are three different and independent ways of doing so:

- Detecting unbalances and vibrations

  Normally, ice accretes on rotor blades both irregularly and asymmetrically. These weight differences on the rotor blades cause an unbalance in the drive train when the rotor turns. This unbalance also affects nacelle and tower. The resulting vibrations are detected by the continuously operating, standard vibration monitors.

- Identifying implausible operating parameters

  Every important operating parameter is continuously recorded during turbine operation. The values for wind speed and output are compared to the set points in the control system. In case of ice accretion the aerodynamic profile of the rotor blades changes very fast. The actual output deviates from the set point output. The deviation may not exceed specified tolerances. This detection method "wind speed unequal to output" also works if the ice accretes regularly and symmetrically, i.e., no unbalances can be detected.

- Identifying different measured values of the wind sensors

  Each wind speed and wind direction are normally measured by a cup anemometer and an ultrasonic anemometer. The bearing of the cup anemometer is heated, however, ice can form on the cups. In case of ice accretion, the measured wind speed decreases. The ultrasonic anemometer is also heated. However, it still measures the correct wind speed as it does not have any moving or unheated parts. The measured values of the two anemometers are constantly compared. Greater or permanent deviations between the measured values indicate ice accretion.

4.2.2 If one of the three conditions occurs, the wind turbine is stopped and the respective fault is automatically reported to the remote monitoring team.

[3] Advances and Case Studies in Wind Turbine Risk Assessments, MMI Engineering.

4.3 In the Event of Ice Accretion

4.3.1 The wind turbine reacts to possible ice accretion with defined measures:

- The wind turbine is immediately stopped gently.
- Each stop of a wind turbine is reported automatically to remote monitoring. Among other information, the error message includes the cause of the fault.
- While any of these error statuses are pending, the wind turbine is secured against automatic restart. Thus, ice throw can be excluded.
- All events of the wind turbine (e.g., stops and restarts) are recorded in the logbook of the control system. The logbook is available for subsequent verification.
- After a stop due to ice accretion identification, the wind turbine can be restarted by remote monitoring. The wind turbine will not be restarted until the reason for the error message and the turbine parking is confirmed to have been resolved.

4.3.2 The risks from falling ice that can arise from a wind turbine at standstill are the same as those that can arise from any other building or tree. Ice throw is excluded by shutting down the wind turbine. Warning signs or adhesive labels can be installed on or near the turbine as a warning of falling ice.

4.3.3 In case of ice accretion and providing climatic conditions on site allow, the wind turbine can also be turned into a specified parking position. In this way the blades are not located directly above sensitive areas such as PRoW.

5 CONCLUSION

5.1.1 The findings outlined above demonstrate that the potential for ice build-up on the turbines to be installed at Frodsham Wind Farm is reduced dramatically by the climatic conditions on site.

5.1.2 Studies indicate that ice throw from turbines is usually less than 140m, with a worst case distance of 250m. A third of the turbines are more than 140m from public rights of way on site and a further third are more than 250m. The remaining turbines are within 140m of public rights of way onsite; however the mitigation measures outlined within this report ensure that any risk of ice drop or ice throw from these turbines is deemed to be negligible.

5.1.3 The wind turbines proposed will include technology that reduces the risk of ice throw by detecting ice accretion on the wind turbine blades and automatically brings the turbine to a standstill until such time as the wind turbine can be started again remotely once the icing event has passed.

Appendix B: HSE Pre-Application Consultation Response (dated 13th November 2024)

Health and Safety Executive

CEMHD Policy - Land Use Planning,
NSIP Consultations,
Building 1.2,
Redgrave Court,
Merton Road,
Bootle, Merseyside
L20 7HS.

HSE email: NSIP.applications@hse.gov.uk

info@frodshamsolar.co.uk

Dear Project Team

Date: 13 November 2024

PROPOSED FRODSHAM SOLAR (the project)
PROPOSAL BY FRODSHAM SOLAR LTD (the applicant)

Thank you for your letter of 5 November 2024 regarding the pre-application consultation for Frodsham Solar.

The following information is likely to be useful to the applicant.

HSE's land use planning advice

CEMHD5 Contribution to Consultation

1. With reference to the redlined ***Site Boundary*** shown on ***Figure 1.1 The Site Location*** **[https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010153/EN010153-000007-EN010153%20-%20Scoping%20Report.pdf]** sections of the proposed development fall within HSE public safety consultation zones associated with a number of Major Accident Hazard Pipeline(s) and Major Accident Hazard Installation(s).

2. It would appear that the location of Control Room(s), Construction Compound(s) and the like are yet to be fixed, consequently HSE is currently not in a position to provide an indication of its' statutory Land Use Planning advice. However, as a general point HSE will not advise against a proposed development, providing the proposed development does not introduce populations, either permanent or temporary, into any of HSE's public safety consultation zones which are assigned to individual Major Accident Hazard Installation(s) and/or Major Accident Hazard Pipeline(s). For more information, please refer to HSE's Land Use Planning Methodology, which can be found at https://www.hse.gov.uk/landuseplanning/methodology.htm

3. Please note if at any time a new Major Accident Hazard Pipeline, is introduced or existing Pipeline(s) are modified prior to the determination of a future application, then the HSE reserves the right to revise its advice.

4. Likewise, if prior to the determination of a future application, a Hazardous Substances Consent is granted for a new Major Hazard Installation or a Hazardous Substances Consent is varied for an existing Major Hazard Installation in the vicinity of the proposed project, again the HSE reserves the right to revise its advice.

Would Hazardous Substances Consent be needed?

5. The presence of hazardous substances on, over or under land at or above set threshold quantities (Controlled Quantities) may require Hazardous Substances Consent (HSC) under the Planning (Hazardous Substances) Act 1990 as amended. The substances, alone or when aggregated with others, for which HSC

is required, and the associated Controlled Quantities, are set out in both The Planning (Hazardous Substances) Regulations 2015.

6. Hazardous Substances Consent would be required if the proposed development site is intending to store or use any of the Named Hazardous Substances or Categories of Substances and Preparations at or above the controlled quantities set out in schedule 1 of these Regulations.

Explosives sites

CEMHD 7's response is no comment to make as there are no HSE Licensed explosive sites in the vicinity of the proposed development.

Electrical Safety

No comment from a planning perspective.

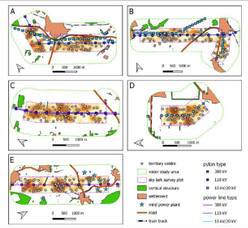
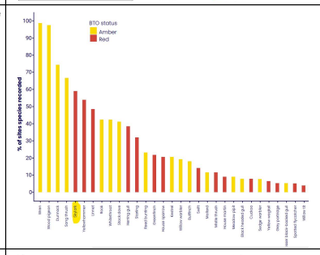
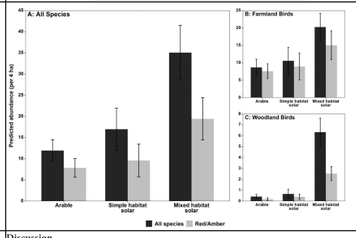
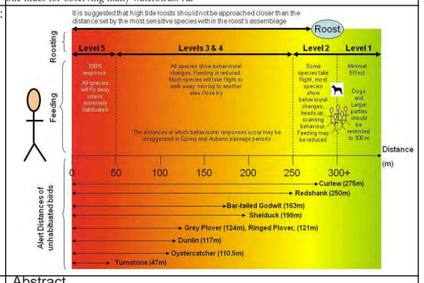
At this time, please send any further communication on this project directly to the HSE's designated e-mail account for NSIP applications at nsip.applications@hse.gov.uk . We are currently unable to accept hard copies, as our offices have limited access.

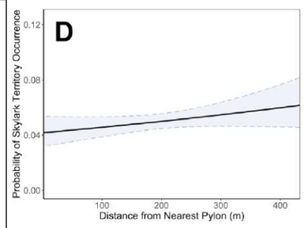
Yours sincerely

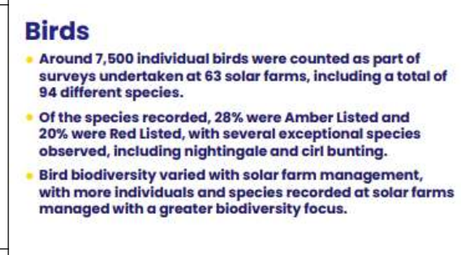
CEMHD4 NSIP Consultation Team

Appendix C: Scientific papers referenced in ISH2 relating to ornithology

Documents list

Hearing ref:	Topic/Summary	Literature	Page/Figure Number if relevant
viii. lake effect and the reliance on the use of an anti-reflective coating	Glint and Glare/Collision with flight paths No reference of glint and glare/impacts to flight paths	Natural England (2017) Evidence review of the impact of solar farms on birds, bats and general ecology 2016 (NEER012). Available at: https://publications.naturalengland.org.uk/publication/6384664523046912 **Page 17**	In summary, little scientific evidence exists that demonstrates a direct impact of solar PV on birds. It is likely that different avian species are likely to be affected differently by solar developments, dependant on the habitat within and around a solar PV development, the spatial requirements of a given species (e.g. flocking species such as pink-footed goose *Anser brachyrhynchus* that require large areas to host the flock) and the foraging behaviour of a given species. Until further scientific evidence is accrued to support any positive or negative impacts of solar farms on birds, we recommend that developments should be considered on a site by site basis with consideration given to 1) the habitat available prior to the development, 2) the habitat that will co-occur with the development and 3) the potential for attraction to polarotactic insect species (i.e. is the development close to a water body).
ii. Size and location (Skylark)	Skylark- powerlines are unlikely to lead to significant habitat reduction for the Skylark that would impact local populations.	Klaus S, Liew JH, Müller C, Jechow B. Collateral damage of the energy transition? Investigating the avoidance of powerlines by the Eurasian Skylark Alauda arvensis in a German agricultural landscape. Bird Conservation International. 2025;35:e6. doi:10.1017/S0959270925000036) **Figure 4 and Figure 5 (Pages 4 and 5)**	
ii. Size and location (Skylark)	Solar Energy UK - well-managed solar farms can significantly enhance biodiversity while supporting renewable energy goals. Skylark- Species recorded across the highest number of sites (71%)	Solar Energy UK (2025) Solar Habitat 2025. Solar Energy UK. Available at: https://solarenergyuk.org/wp-content/uploads/2025/04/SEUK-Solar-Habitat-2025-3.pdf (Accessed: 27 February 2026). **Pages 5 and 33**	
Biodiversity (birds, inverts mammals etc.) in general	solar farms can benefit biodiversity in arable-dominated landscapes, especially when managed with biodiversity (birds) in mind.	Copping, J. P., Waite, C. E., Balmford, A., Bradbury, R. B., Field, R. H., Morris, I., & Finch, T. (2025). Solar farm management influences breeding bird responses in an arable-dominated landscape. Bird Study, 72(3), 217–222. https://doi.org/10.1080/00063657.2025.2450392 **Figure 2, page 4**	
3b iii. potential ecological impacts to the Non-Breeding Bird Mitigation Area (NBBMA) from construction and operational traffic and i. potential impact of additional PRoWs	support for the hypothesis that birds respond to cars at shorter distances. The wide taxonomic breadth of species investigated suggests that this principle may be broadly applicable, at least in waterbirds.	Guay, P.-J & McLeod, Emily & Taysom, A.J. & Weston, Mike. (2014). Are vehicles 'mobile bird hides'? A test of the hypothesis that 'cars cause less disturbance'. Victorian Naturalist. 131. 150-153. **Page 152**	**Discussion** Few general principles are available to help explain FID in regard to environmental or internal factors (Weston *et al.* 2012), and here we have shown that the 'cars cause less disturbance' hypothesis has at least broad, and possibly universal, relevance across species. From a conservation management perspective, in no case were cars associated with longer FIDs, suggesting that at the WTP cars are effective mobile hides for observing many waterbirds. Ad-
3b iii. potential ecological impacts to the Non-Breeding Bird Mitigation Area (NBBMA) from construction and operational traffic and i. potential impact of additional PRoWs	Literature review and data synopsis for disturbance on waterbirds and a sensitivity analysis.	Cutts, N.D., Phelps, A., & Burdon, D., 2009. Construction and waterfowl: Defining sensitivity, response, impacts and guidance. Report to Humber INCA. Institute of Estuarine & Coastal Studies, University of Hull. **Figure 3. Page 33.**	
3b iii. potential ecological impacts to the Non-Breeding Bird Mitigation Area (NBBMA) from construction and operational traffic and i. potential impact of additional PRoWs	Overall, motor vehicles consistently caused shorter flight-initiation distances (FID) than humans on foot, indicating birds tolerated closer approaches from vehicles.	McLeod, E.M., Guay, P-J., Taysom, A.J., Robinson, R.W. & Weston, M.A. (2013) Buses, Cars, Bicycles and Walkers: The Influence of the Type of Human Transport on the Flight Responses of Waterbirds. PLOS ONE, 8(12), e82008. Available at: https://doi.org/10.1371/journal.pone.0082008 **Abstract of Study (Page 1)**	Abstract One way to manage disturbance to waterbirds in natural areas where humans require access is to promote the occurrence of stimuli for which birds tolerate closer approaches, and so cause fewer responses. We conducted 730 experimental approaches to 39 species of waterbird, using five stimulus types (single walker, three walkers, bicycle, car and bus) selected to mimic different human management options available for a controlled access, Ramsar-listed wetland. Across species, where differences existed (56% of 25 cases), motor vehicles always evoked shorter flight-initiation distances (FID) than humans on foot. The influence of stimulus type on FID varied across four species for which enough data were available for complete cross-stimulus analysis. All four varied FID in relation to stimuli, differing in 4 to 7 of 10 possible comparisons. Where differences occurred, the effect size was generally modest, suggesting that managing stimulus type (e.g. by requiring people to use vehicles) may have species-specific, modest benefits, at least for the waterbirds we studied. However, different stimulus types have different capacities to reduce the frequency of disturbance (i.e. by carrying more people) and vary in their capacity to travel around important habitat.





Appendix D: Chemicals mentioned by Interested Parties in the relevant representations and explanation of risk to human health and the environment

Determinant	i) Potential Toxicity and Risk to Human Health & Environment	ii) The need for this Proposed Development to test for each substance	iii) What testing has already been carried out	iv) What testing is planned for more detailed investigation phases
	Information regarding the predominant exposure pathways and derived human health assessment values have been taken from the LQM/CIEH S4UL Guidance. EQS values for controlled waters as published by the Environment Agency have been referred to. These are values which have been used in the existing assessments as already been provided in the Stage I Geo-Environmental Assessment.		*Multiple rounds of investigation have been undertaken, and these have been summarised in the Stage I Geo-Environmental Assessment. A summary is presented for the testing of each determinant within each sampled media and the range of concentrations reported.*	*It was discussed in ISH2 Agenda Item 3G(ii) further testing will be undertaken across the Site as part of the additional works to inform the detailed design of the development. No specific sampling proposals have been made although it is envisaged that any testing will be consistent with that already undertaken. Any additional investigation including testing will be subject to confirmation via a written proposed scope of works or Ground Conditions Investigations and Assessment Strategy which will be subject to approval by both CWaCC and the EA.*
Arsenic	Arsenic is a heavy metal and universally present in both natural and made ground soils. Typically, concentrations are higher in made ground owing to the presence of anthropogenic inclusions which can contain elevated arsenic such as ash, clinker and slag. The predominant exposure pathway within a commercial land use scenario is soil and indoor dust (95.3%), dermal contact-indoors (1.9%) and dermal contact-outdoors (2.8%). <u>Human Health</u> The GAC for a commercial land use is 640 mg/kg <u>Controlled Waters</u> The EQS (AA) for estuarine and coastal waters is 25 µg/l (adopted for groundwater) and for Freshwater is 50 µg/l (adopted for surface water)	Arsenic is a standard contaminant which forms part of routine test suites for both natural and made ground soils. Whilst included as part of general test suites for the dredging deposits and natural soils within the wildfowlers area, it has not been identified as a potential contaminant of concern from the Stage I Desk Study. No specific sources of arsenic contamination have been identified.	<u>Frodsham Wind Farm (2014)</u> • Soil = 13 samples (11.7-62.8 mg/kg) • Soil Leachate = 2 samples (18.8-28.1 ug/l) <u>Cell 3 (2024)</u> • Soil = 7 samples (21-63 mg/kg) • Soil Leachate = 8 samples (27-37 µg/l) • Groundwater = 7 samples (0.52-22.9 µg/l) • Surface Water = 8 samples (7.02-230 µg/l) <u>Wildfowlers Land (2024)</u> • Soil = 10 samples (4.3-17 mg/kg) <u>BESS (2025)</u> • Soil = 16 samples (32.4-46.4 mg/kg)	It is expected that the standard heavy metal suite (which includes arsenic) which has already been undertaken on the site through the various phases of site investigation will continue as part of the standard test suite for soils, groundwater and surface water as part of detailed investigation phases.
Vinyl Chloride	Vinyl Chloride is a colourless, flammable gas at room temperature and easily	No potential sources of vinyl chloride have been identified on the Site	<u>Cell 3 (2024)</u>	Testing of VOC Target List Compounds (which includes both vinyl chloride and carbon tetrachloride)

Determinant	i) Potential Toxicity and Risk to Human Health & Environment	ii) The need for this Proposed Development to test for each substance	iii) What testing has already been carried out	iv) What testing is planned for more detailed investigation phases
	evaporates from soil and surface water. It is a manufactured substance and does not occur naturally. It has a distinct sweet odour. The predominant exposure pathway within a commercial land use scenario is 100% inhalation of indoor vapour. For a POS_{resi} scenario this is 74.7% ingestion of soil and outdoor dust, 20.1% inhalation of outdoor vapour, 2.6% dermal contact-outdoor, 2.3% dermal contact-indoor and 0.3% inhalation of dust. <u>Human Health</u> The GAC for a commercial land use is 0.059mg/kg or 3.5 mg/kg for POS_{resi} <u>Controlled Waters</u> There is no EQS for Vinyl Chloride, instead a stringent Drinking Water Standard (DWS) of 0.5 µg/l.	throughout the robust assessment undertaken to date under the LCRM approach to the investigation and assessment of contaminated land. This has included a detailed Stage I Desk Study, review of historical site investigation records, current preliminary site investigations and consultation with both the EA and CWaCC Contaminated Land Officer. Testing of vinyl chloride has been undertaken to assess the unfounded claim made by Councillor Sumners that waste materials (which have included the compounds of vinyl chloride and carbon tetrachloride) have been dumped within the vicinity of the proposed BESS and that there is a risk that in the unlikely event of a fire, these contaminants could change under thermal reaction into more toxic substances. There has been no evidence to date (either within the area of the BESS or wider dredging deposits) that waste materials have been dumped, Concentrations have vinyl chloride within soils have been confirmed to be present below analytical detection limits and therefore below human health GACs.	• Soil = 5 samples (<0.005 mg/kg) • Groundwater = 2 samples (<3 µg/l) <u>BESS (2025)</u> • Soil = 16 samples (<0.002 mg/kg)	will be included as part testing suites for the detailed ground investigations. Whilst such a detailed scope of investigation will be produced post-DCO, it is likely that testing for VOCs will not form part of the generic testing suite but will be more selective to include: • Soils where elevated photoionization detector (PID) readings indicate the presence of organic volatile compounds and/or where sweet odours indicative of vinyl chloride and carbon tetrachloride. • Part of routine testing suite for detailed investigation in and around proposed BESS to allow further risk assessment and if necessary remedial recommendations to be made. This approach is consistent with that of LCRM (Stage 1 Risk Assessment) and the source-pathway-receptor model (or contaminant linkage) where the scope of site investigation should be refined based on the preliminary conceptual site model.
Carbon Tetrachloride	Carbon Tetrachloride is a clear, colourless liquid at room temperature with a distinctive sweet odour. It can occur naturally but its presence within the environment is mainly associated with anthropogenic inputs.	No potential sources of vinyl chloride have been identified on the Site throughout the robust assessment undertaken to date under the LCRM approach to the investigation and assessment of contaminated land.	<u>Cell 3 (2024)</u> • Soil = 5 samples (<0.005 mg/kg) • Groundwater = 2 samples (<3 µg/l)	Testing of VOC Target List Compounds (which includes both vinyl chloride and carbon tetrachloride) will be included as part testing suites for the detailed ground investigations.

Determinant	i) Potential Toxicity and Risk to Human Health & Environment	ii) The need for this Proposed Development to test for each substance	iii) What testing has already been carried out	iv) What testing is planned for more detailed investigation phases
	The predominant exposure pathway for a commercial land use is 78% inhalation of vapour (indoor) and 21.9% inhalation (background. For a POS_{resi} scenario, this is 78% ingestion of soil and indoor dust, 8.4% inhalation of background, 2.8% dermal contact (outdoor), 2.4% consumption of homegrown produce and attached soil, 0.3% inhalation of dust (indoor) and 0.2% oral background. <u>Human Health</u> The GAC for a commercial land use is 2.9 mg/kg or 890 mg/kg for POS_{resi} <u>Controlled Waters</u> The EQS (AA) for estuarine and coastal waters is 12 µg/l (adopted for groundwater) and for Freshwater is 12 µg/l (adopted for surface water)	This has included a detailed Stage I Desk Study, review of historical site investigation records, current preliminary site investigations and consultation with both the EA and CWaCC Contaminated Land Officer. Testing of carbon tetrachloride has been undertaken to assess the unfounded claim made by Councillor Sumners that waste materials (which have included the compounds of vinyl chloride and carbon tetrachloride) have been dumped within the vicinity of the proposed BESS and that there is a risk that in the unlikely event of a fire, these contaminants could change under thermal reaction into more toxic substances. There has been no evidence to date (either within the area of the BESS or wider dredging deposits) that waste materials have been dumped, Concentrations have carbon tetrachloride within soils have been confirmed to be present mostly below analytical detection limits and significantly below human health GACs.	<u>BESS (2025)</u> Soil = 16 samples (<0.004-0.023 mg/kg)	Whilst such a detailed scope of investigation will be produced post-DCO, it is likely that testing for VOCs will not form part of the generic testing suite but will be more selective to include: • Soils where elevated photoionization detector (PID) readings indicate the presence of organic volatile compounds and/or where sweet odours indicative of vinyl chloride and carbon tetrachloride. • Part of routine testing suite for detailed investigation in and around proposed BESS to allow further risk assessment and if necessary remedial recommendations to be made. This approach is consistent with that of LCRM (Stage 1 Risk Assessment) and the source-pathway-receptor model (or contaminant linkage) where the scope of site investigation should be refined based on the preliminary conceptual site model.

Appendix E: Response to Skylark Mitigation Area (SMA) - Mitigation vs Compensation

avianecology

a. Suite 3C, Walnut Tree Farm, Northwich Road, Lower Stretton, Cheshire, WA4 4PG
t. 0843 506 5116 | w. www.avianecology.co.uk | e. enquiries@avianecology.co.uk

Response to Skylark Mitigation Area (SMA) - Mitigation vs Compensation

The Skylark Mitigation Area (SMA; 5.58 ha) and the Non-breeding Bird Mitigation Area (NBBMA; 53.31 ha) are both classed as mitigation within the mitigation hierarchy, not compensatory measures. Note that Natural England have confirmed to the Applicant thatthe NBBMA is considered as mitigation and not compensation in the context of the Habitats Regulations Assessment [**Responses from Natural England are to be submitted in D4**].

In the context of Environmental Impact Assessment (EIA), mitigation and compensation are defined as follows as per CIEEM (2018; last updated 2024[1]):

- Mitigation- *Negative effects should be avoided or minimised through mitigation measures, either through the design of the project or subsequent measures that can be guaranteed – for example, through a condition or planning obligation.*
- Compensation - *Where there are significant residual negative ecological effects despite the mitigation proposed, these should be offset by appropriate compensatory measures.*

1. Measures implemented in advance of impact (avoidance/minimisation)

The SMA and NBBMA are secured for implementation prior to the commencement of construction (delivered prior to impact). Habitat establishment and management prescriptions will therefore be operational before any disturbance or habitat loss occurs as detailed in the Outline Landscape and Ecology Management Plan [**REP3-014**] and Outline Non-breeding Bird Strategy [Appendix B of **REP3-014**]. Their function is to ensure suitable nesting and foraging habitat is available in advance of works so that breeding opportunity is maintained and breeding output is enhanced for skylark.

This is fundamentally different from compensation, which addresses harm after a residual adverse effect has been accepted, which was not identified within the Environmental Statement (**APP-041**). The purpose of the SMA and NBBMA is considered preventative and avoidance of residual impacts at a local level for skylark.

It is also important to note that the SMA will be in place prior to the NBBMA works commence, which are timed to avoid impacts on wintering birds (i.e. summer implementation). The sequencing reinforces the avoidance function of the hierarchical process as detailed in the Outline Construction Environmental Management Plan [**REP3-020**].

2. Direct alignment with the identified impact pathway

The Environmental Statement (**APP-041**) identifies the relevant impact pathways as:

- Temporary and permanent loss of arable habitat;
- Construction disturbance affecting breeding productivity.

The SMA (direct mitigation for skylark) and NBBMA (indirect mitigation for skylark; and currently supports up to 9 pairs) are specifically designed to address those pathways by:

- Maintaining open landscape character;
- Providing appropriate sward structure for nesting;

[1] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and
Marine version 1.3. Chartered Institute of Ecology and Environmental Management, Winchester

- Enhancing invertebrate availability for chick provisioning (which includes planting throughout the Order Limits[2]); and
- Securing long-term meadow management throughout the operational lifetime.

The SMA is not presented as replacing the entirety of 21 recorded (possible to probable breeding) territories across the Order Limits. Rather, it provides higher-quality breeding habitat (managed meadow grassland tailored to the species-specific needs) than the existing baseline sub-optimal arable land, thereby supporting improved breeding productivity per pair (which will breed several times across the breeding period[3]). The focus of the SMA is maintenance of ecological and ornithological function and enhancement of breeding output successes.

The above is recognised in EcIA guidance where ecological processes and relationships are recognised as aspects of ecological structure and function to consider when predicting the impacts and effects as a result of a development i.e. (Box 17[4]) *population dynamics – population cycles, survival / reproduction rates, competition, predation, seasonal behaviour, dispersal / genetic exchange*.

3. Precautionary assessment and no residual significant effect

The mitigation package provided as part of the Frodsham Solar has been assessed on a reasonable worst-case distribution of possible and probable territories. When the SMA, NBBMA, and retained/enhanced suitable areas within the Order Limits are considered together cumulatively, sufficient breeding opportunity remains available, and success outputs will be enhanced through available and managed area for breeding and planting to increase foraging. It is important to highlight that historic[5] and more recent literature[6] support the above statement.

Accordingly, the ES (**APP-041**) concludes that no significant residual adverse effect on breeding skylark.

Note that compensation would only arise should a significant residual effect remains after mitigation and that is not the case in this instance.

4. Secured and embedded in the Proposed Development design

The SMA and NBBMA are secured through the oLEMP [**REP3-014**] and oNBBMS [**REP3-014**]. Both of which form part of the long-term operational land management strategy and are integrated into the scheme design up to 40 years.

5. Relevance of Other Development (Five Estuaries[7])

[2] Solar Energy UK (2025) Solar Habitat 2025. Solar Energy UK. Available at: https://solarenergyuk.org/wp-content/uploads/2025/04/SEUK-Solar-Habitat-2025-3.pdf (Accessed: 2nd March 2026).
[3] BTO – British Trust for Ornithology (n.d.) Skylark. Available at: https://www.bto.org/learn/about-birds/birdfacts/skylark (Accessed: 2 March 2026).
[4] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine, Version 1.3 (updated 2024), Chartered Institute of Ecology and Environmental Management, Winchester
[5] Montag, H., Parker, G., & Clarkson, T. (2016) The Effects of Solar Farms on Local Biodiversity; A Comparative Study. Clarkson and Woods and Wychwood Biodiversity
[6] Solar Energy UK (2025) Solar Habitat 2025. Solar Energy UK. Available at: https://solarenergyuk.org/wp-content/uploads/2025/04/SEUK-Solar-Habitat-2025-3.pdf (Accessed: 27 February 2026).
[7] Department for Energy Security and Net Zero (2025) Secretary of State decision letter: Five Estuaries Offshore Wind Farm (EN010115). Available at: https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010115-002035 SoS%20Decision%20letter.pdf (Accessed: 2 March 2026)

It is therefore incorrect to equate the mitigation implemented for Frodsham Solar with the Five Estuaries development where:

- Permanent loss of territories was accepted;
- No direct habitat replacement was considered sufficient to offset breeding loss at the project Site;
- No species-specific mitigation was secured;
- A significant residual adverse effect remained; and
- Compensation is provided as a result of the above, outside of the "Site", which include six plots secured for 10 years[8] (yet to be formally submitted).

6. Conclusion

In this case (Frodsham Solar), the mitigation hierarchy and prediction of impacts have been appropriately and proportionately applied. The SMA and NBBMA are secured to operate, avoid and (or) reduce impacts before they materialise and to maintain breeding function and success throughout construction and the operational period (up to 40 years) which is not just limited to the SMA alone.

Accordingly, they are mitigation measures, not compensatory offsets, and the comparison drawn by the Interested Parties at the Hearing dated 25th February 2026 is not considered relevant to the Proposed Development.

[8] Five Estuaries Offshore Wind Farm Ltd. (2024) Environmental Statement: Volume 6, Part 3, Chapter 4 – Onshore Biodiversity and Nature Conservation (Revision B, Tracked). Five Estuaries Offshore Wind Farm. Available at: [redacted] (Accessed: 3 March 2026).

Appendix F: Construction Compound Flood Risk Impact Note

Project:	Frodsham Solar	**Scheme No:**	14740
Subject:	Construction Compound Flood Risk Impact	**Revision:**	01
Client:	Frodsham Solar Limited	**Date:**	05/03/2026
Doc Ref:	14740-Construction Compound Flooding Note-01		
Author:	Aled Williams BSc (Hons) MCIWEM C.WEM		

Introduction

This Note has been prepared to clarify the position on flood risk to the construction compounds and potential impact on flood risk elsewhere from marginal raising of ground levels in the location of the construction compounds associated with Frodsham Solar.

The location of the construction compounds is shown in Figure 2-1 of APP-106 (Environmental Statement: Volume 3 – Chapter 2 Figures).

In terms of any land raising associated with the construction compounds, this will involve a limited increase in ground levels of up to 100mm associated with the compacted gravel surfacing. A cross section showing the indicative surfacing arrangement of a typical construction compound is provided as Figure 1:

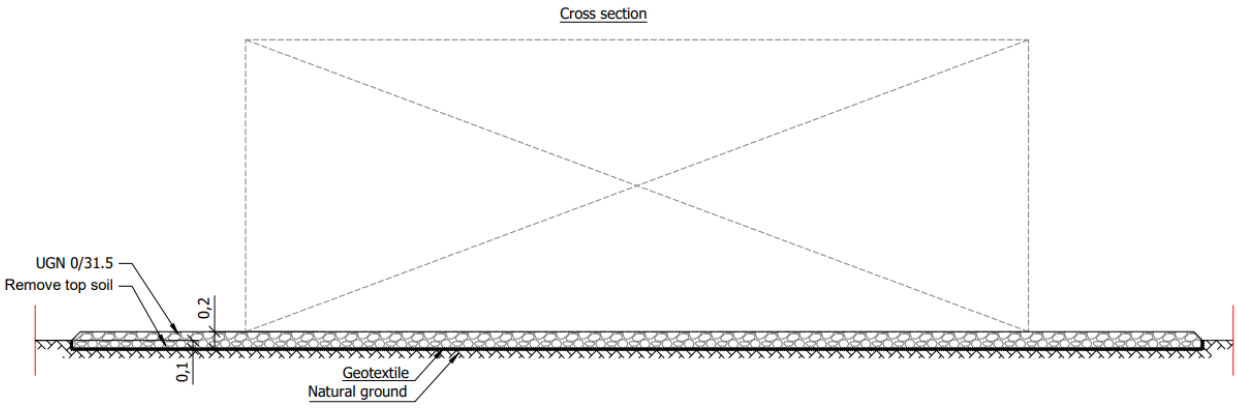


Figure 1: Indicative Construction Compound Cross Section

Flood Risk

This section details the flood risk to the location of the construction compounds. With reference to the Construction Compound and Access Track Layout (Figure 2-1 of APP-106), the following construction compounds are shown within Flood Zone 3:

- East Compound 1
- East Compound 2
- East Compound 3

The Flood Zone 3 designation on the Environment Agency Flood Map for Planning (Rivers and Sea) represents an

undefended flood event, meaning all linear flood defences are removed. To represent the accurate flood risk to the construction compounds, Waterco have undertaken hydraulic modelling of the present-day scenario for the following events:

- River Mersey Tidal 0.5% Annual Exceedance Probability (AEP) Defended Event
- River Weaver Fluvial 1% AEP Defended Event

Full details of the hydraulic modelling and model results are provided in the following documents:

1) **EN010153/DR/6.2 Modelling Report**
   ES Vol 2 Appendix 9-3: Hydraulic Modelling Report – Part 1 of 4 - APP-090
   ES Vol 2 Appendix 9-3: Hydraulic Modelling Report – Part 2 of 4 - APP-091
   ES Vol 2 Appendix 9-3: Hydraulic Modelling Report – Part 3 of 4 - APP-092
   ES Vol 2 Appendix 9-3: Hydraulic Modelling Report – Part 4 of 4 - APP-093

2) **EN010153/DR/8.7 Hydraulic Modelling Report Addendum P01 PD2-030**

3) **EN010153/DR/6.2 Flood Risk Assessment and Drainage Strategy -** EN010153/DR/6.2
   ES Vol 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy – Part 1 of 5 AS-019
   ES Vol 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy – Part 2 of 5 AS-021
   ES Vol 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy – Part 3 of 5 AS-023
   ES Vol 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy – Part 4 of 5 AS-025
   ES Vol 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy – Part 5 of 5 AS-027

This Note focuses on flood risk from the River Mersey and River Weaver. There is no flood risk identified to the location of the construction compounds from the watercourses within the site, or the Manchester Ship Canal.

Tidal Mersey Risk

Figure 2 shows the flood extent and depths during the defended 0.5% AEP tidal Mersey event. The present-day event has been assessed as it best resembles the flood risk to the site during the construction phase. As shown in Figure 2, East Compounds 2 and 3 are outside of the 0.5% AEP flood extent and the risk of tidal flooding is very low. East Compound 1 is located within the flood extent. The maximum estimated water level in the location of East Compound 1 during the 0.5% AEP tidal event is 4.87m AOD. Existing ground levels in the location of East Compound 1 vary from 4.68m AOD to 4.72m AOD. Flood depths up to 190mm are therefore estimated.

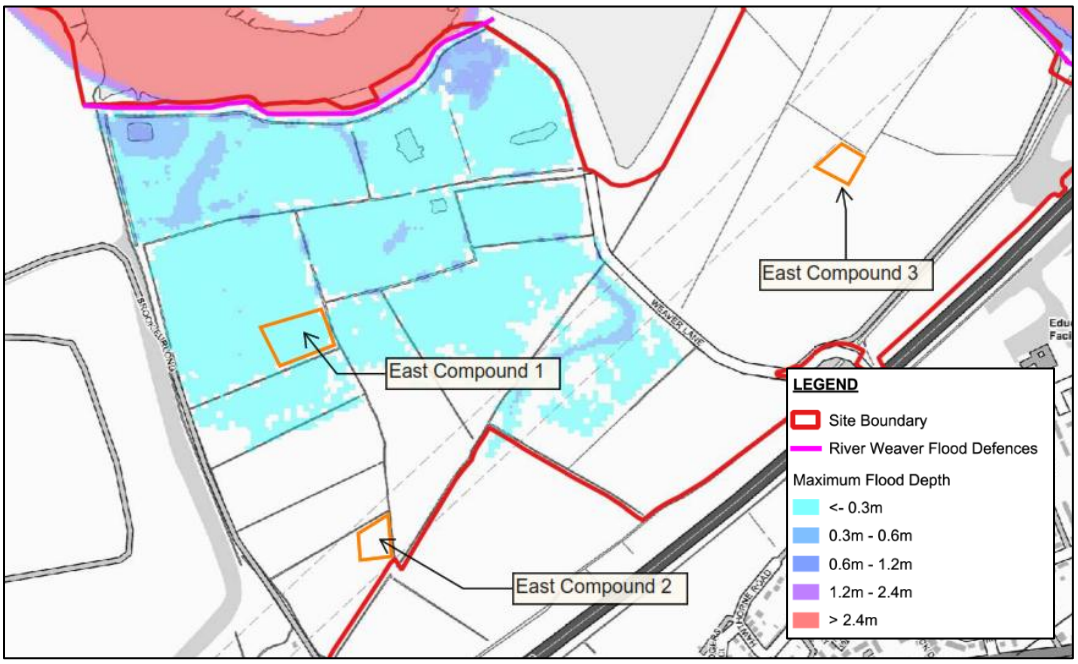


Figure 2: Tidal Mersey 0.5% AEP Present Day Tidal Event – Flood Depths

River Weaver Fluvial Flood Risk

Figure 3 shows the flood extent and depths during the defended present day 1% AEP River Weaver Fluvial event. As shown in Figure 3, East Compounds 1 and 2 are outside of the 1% AEP flood extent and the risk of fluvial flooding is very low. East Compound 3 is located partly within the flood extent. The maximum estimated water level in the location of East Compound 3 during the 1% AEP fluvial event is 4.89m AOD. Existing ground levels in the location of East Compound 3 vary from 4.58m AOD to 5.04m AOD. Flood depths up to 310mm are therefore estimated in the lower northern extent of the compound. The southern extent of East Compound 3 is flood free.

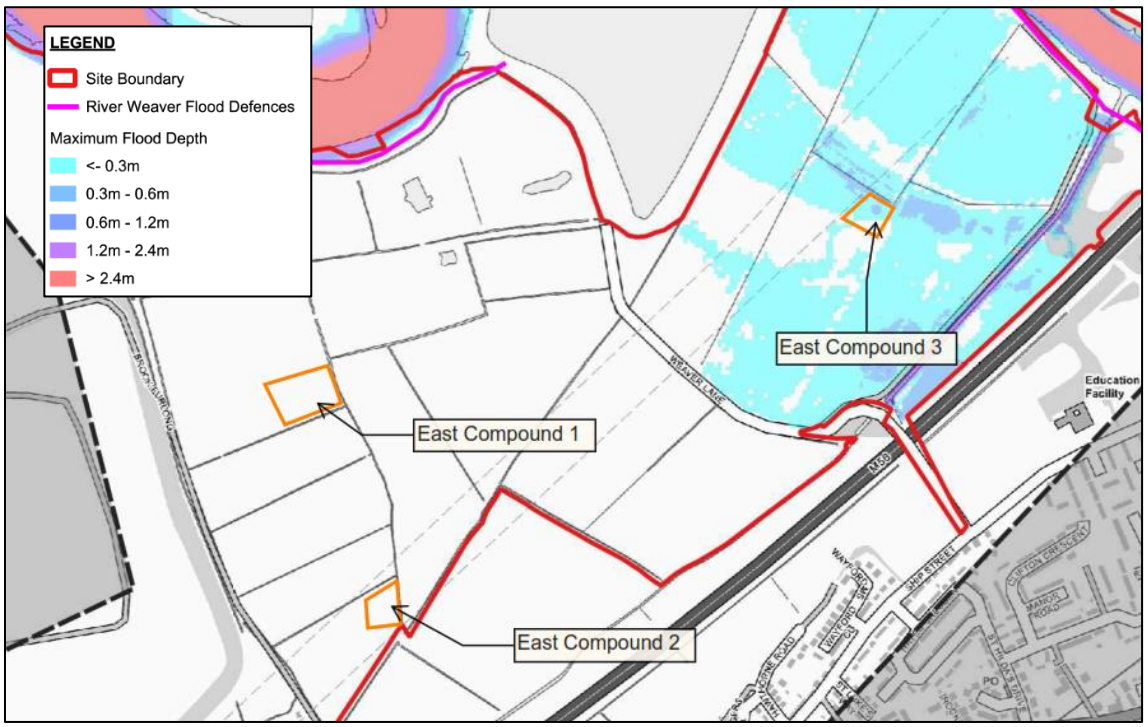


Figure 3: Fluvial Weaver 1% AEP Present Day Fluvial Event – Flood Depths

Impact on Flood Risk Elsewhere

East compound 1 covers an area of 3,200m². Based on minimal ground raising of 100mm, the compound could displace up to 320m³ of flood storage during the 0.5% AEP present day tidal event (displacement calculated by multiplying area by the height of ground raising).

East compound 3 covers an area of 2,500m² with approximately 2,000m² of the compound within the 1% AEP present day fluvial flood extent. Based on minimal ground raising of 100mm, the compound could displace up to 200m³ of flood storage during the 1% AEP present day tidal event (displacement calculated by multiplying area by the height of ground raising).

The impact of the marginal land raising in the location of the construction compounds has not been factored into the hydraulic modelling. Based on the limited flood extent on site during the present day 1% AEP fluvial and 0.5% AEP tidal events, any potential impacts on flood risk from the marginal land raising would be limited to land adjacent to the construction compounds within the site (no off-site impacts).

The Hydraulic Modelling Report and its addendum (EN010153/DR/6.2 Modelling Report EN010153/DR/8.7 Hydraulic Modelling Report Addendum) considers impact on flood risk elsewhere from a result of the development by including an allowance in the development scenario model for:

- Raising a 10m x 10m model cell by 0.6m at the location of each watercourse crossing (21 new or replacement crossings in total). This represents up to 1,260m³ of flood water displacement (volume based on area of site raised, equating to 2,100m², and ground raising of 0.6m).

- Raising 14no. 10m x 10m model cells above flood levels to represent floodplain displaced by proposed structures (fence posts, module piles etc.). This equates to removal of 1,400m³ of storage from the floodplain (volume based on area of site raised, equating to 1,400m², and an average flood depth of 1m).

Overall, the modelling undertaken has considered a combined 2,660m³ of floodplain displacement and concludes that the minimal displacement does not result in an increase in flood risk off-site (no increase in flood risk elsewhere). The impact of the floodplain displacement is constrained within the site.

The proposed construction compounds could displace a maximum of 320m³ (maximum potential displacement during any one event). As the hydraulic modelling has shown that displacement of 2,660m³ of flood water has no impact on flood risk elsewhere, it can be concluded that the 320m³ of floodplain displacement from the construction compounds would not increase flood risk elsewhere.