



Frodsham Solar

Environmental Statement: Volume 2

Appendix 9-5: Consultation Responses

May 2025



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Table 1- Scoping Responses

| Consultee | Comment | Response |
|---------------------------|---|---|
| The Planning Inspectorate | The Applicant proposes to scope out water pollution from increased siltation during operation on the basis that impacts are unlikely to occur due to there being no exposed soils. Given the operational nature of the Proposed Development, the Inspectorate agrees to scope this matter out of further assessment. | Noted |
| The Planning Inspectorate | Paragraph 3.3.16 of the Scoping Report identifies that the underground grid connection option would be constructed by a combination of trench cut and backfilling, and Horizontal Directional Drilling (HDD) to navigate beneath the River Weaver. Further potential crossings of waterbodies are referred to in paragraphs 9.5.3 and 9.5.4 of the Scoping Report, but no further details are provided. The ES should describe the number, location and types of watercourse crossings required for the Proposed Development and assess impacts where there is the potential for significant effects to occur. Effort should be made to agree the approach and appropriate location(s) with the relevant consultation bodies and should drilling fluid be used in construction, a breakout plan should be produced, submitted and secured in the application. | <p><i>ES Vol 2 Appendix 2-1- Indicative Watercourse Crossing Schedule (inc. figures) [EN010153/DR/6.2]</i> identifies the indicative watercourse crossing points for the Proposed Development. All watercourse crossings and impacts of effects have been considered in the ES (section 9.9) and supporting WFD (<i>ES Vo 2 Appendix 9-2 - Water Framework Directive Assessment [EN010153/DR/6.2]</i>).</p> <p>The project is now not proposing to use HDD to cross beneath the River Weaver.</p> |
| The Planning Inspectorate | The Scoping Report proposes a 1km study area to identify water bodies and downstream receptors that could be affected by the Proposed Development. The Inspectorate considers that the ES should clearly define the study area based on the ZoI, the hydrology of the Site and potential for significant effects. Consideration of upstream receptors should also be included where appropriate. | Noted – study area is defined in Section 9.5 and considers receptors 1km upstream and downstream from the Site. |

| Consultee | Comment | Response |
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| The Planning Inspectorate | <p>The Site lies within an area benefitting from flood defences however, limited information has been provided regarding these defences.</p> <p>Additionally, the Scoping Report highlights the potential for ground and fluvial flooding should a failure of the Environment Agency (EA) pumping stations which serve Frodsham Marshes and Ince Marsh occur. The ES should locate, identify and describe the type of flooding and flood defences as well as any other assets which may have implications on flooding/flood risk, their condition and who is responsible for their maintenance. Impacts to/from these flood defences and assets should be assessed in the ES where there is the potential for likely significant effects to occur and their influence on the impacts to/from flooding should be described. This should take into account the most up to date climate change projections to inform a worst-case scenario, particularly in relation to breach events.</p> | <p>The supporting FRA (<i>ES Vol 2 Appendix 9-1 – Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]</i>) provides details of all flood defences.</p> <p>EA data has been used and updated by the Applicant to assess the risk of a failure of the linear flood defences (embankments) which protect the Site.</p> <p>EA data has been used to assess a ‘pumps off’ scenario for the EA Frodsham Marshes and Ince Marsh pumping stations.</p> <p>The FRA (<i>ES Vol 2 Appendix 9-1- Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]</i>) considers residual risks of defence / pump failure and details the mitigation measures which ensure the development would remain operation following a defence / pump failure event.</p> |
| The Planning Inspectorate | <p>The Inspectorate notes the Applicant’s intention to include a FRA as a standalone report to be included within the Technical Appendices of the ES. The FRA should be based on the requirements of the Environment Agency standing advice. This should include a description of how the Proposed Development satisfies the requirements of the sequential and exception tests, where relevant. The sequential test should consider alternative development sites in addition to locating the development in areas of the Site at lowest risk. The FRA should demonstrate that the Proposed Development includes suitable mitigation measures and flood resilient construction that will allow the development to remain operational for its 40-year lifespan. This</p> | <p>The FRA (<i>ES Vol 2 Appendix 9-1 - Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]</i>) adheres to EA requirements.</p> |

| Consultee | Comment | Response |
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| | includes confirming that all the flood sensitive equipment associated with the Proposed Development remains operational during a 0.1% event. Furthermore, the FRA should consider the surface water drainage/flood risk impacts that may occur off site and the potential of increased flood risk beyond the Site boundary. This should include consideration of the potential for the solar installation to increase the rate of runoff from the Site. The Applicant's attention is drawn to the comments from the Environment Agency (Appendix 2 of this Opinion) regarding the FRA. | |
| The Planning Inspectorate | Paragraph 9.4.22 of the Scoping Report lists the receptors identified from the baseline review which could be potentially susceptible to environmental effects from flooding and drainage during the construction, operational and decommissioning phases. Groundwater has been included as a receptor, but no reference has been made to any abstractions. Any potentially impacted permitted or private water supplies should be identified and included in the assessment where there is the potential for likely significant effects to occur. | Groundwater abstraction data has been extracted from EA (>20m3 per day) and Cheshire West & Chester Council (<20m3 per day). There is no EA registered, or private water abstractions located on the Site. |
| The Planning Inspectorate | The Applicant should consider the effects of vibration on the structural integrity of flood defences located on site. This should include consideration of all works with potential to act as vibration sources in proximity to the flood defences for all phases. The Applicant should ensure any potential interaction of impacts are assessed for this matter with appropriate cross-referencing to relevant ES chapters. | The design has included a 16m buffer from the River Weaver flood defences, which are the only substantial flood defence structures on the Site. There would be no impact piling and as such there would be limited vibration arising from the construction works. On this basis it is considered unlikely there would be any impact from the Proposed Development on the structural integrity of the flood defences from vibration. |

Table 2 – PEIR Consultation Response

| Respondent | Comment | Has this resulted in a change to the Scheme or the Applicant's evidence? | Applicant response |
|----------------------------------|---|--|--|
| Canal & River Trust | Respondent added that the respective chapter in the PEIR outlines incorporated mitigation and enhancement measures (including specific and detailed practice controls in the OCEMP) which provide a broad spectrum of controls aimed at protecting the waterways, which the Trust welcome. Respondent added that a robust firewater management process is proposed for the BESS, which would contain any potential contamination from the BESS compound and substation and prevent contaminated run off being released into the wider water environment, which the respondent welcomes. | No | The Applicant notes this comment. ES Vol 2 Appendix 9-1 - Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2] sets out the pollution protection measures proposed for the BESS. |
| United Utilities Water Ltd (UUV) | We wish to highlight a combined sewer overflow in the vicinity of your proposal. As part of our obligations under the Environment Act 2021, we have a significant programme of investment to progressively reduce spills from these assets. This is a massive undertaking which will be progressed over a number of investment periods. We request the opportunity to work with the developer to maximise the opportunity to remove surface water for the public combined sewer as part of these solar farm development. | No | The Applicant notes this comment The draft DCO [EN010153/DR/3.1] includes Protective Provisions to ensure UUV assets are protected |
| United Utilities Water Ltd (UUV) | Existing drainage systems are often dominated by combined sewers. This method of sewer infrastructure is a result of the time it was constructed, with combined sewers taking both foul and surface water. If there is a consistent approach to surface water management, it will help to manage and reduce surface water entering the sewer network, decreasing the likelihood of flooding from | No | No water from the site will discharge to the public sewer network |

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| | sewers, the impact on residents and businesses, and the impact on the environment | | |
| United Utilities Water Ltd (UW) | <p>Whilst UU does all that it can to reduce the risk of flooding, there remains a residual risk, which is a source of flooding that should be considered in your Environmental Statement (ES). National policy is clear that flood risk from all sources, including sewers and reservoirs, must be considered in the delivery of new development.</p> <p>As such, it is important to ensure that the assessment of flood risk includes sewer and reservoir flood risk.</p> <p>It should be ensured that your proposed development does not result in an increase in flood risk from the public sewer or from reservoirs as a result of: i) any proposed new drainage connections to the public sewer.</p> <p>This is considered in further detail below; ii) as a result of any changes in land or property which could materially change existing flood risk, for example, by altering any existing exceedance flood paths of losses from the public sewer or a reservoir exceedance path; iii) by locating any above ground elements of your proposal in areas where there is an existing risk of sewer or reservoir flooding; or iv) as a result of any diversions / works to watercourses or existing sewers which could materially affect hydraulic performance and therefore change / increase any risk of flooding,</p> | No | Risk of flooding from all sources provided in ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]. No sewers within the site and as such there is a very low risk of sewer flooding to the Site. |
| United Utilities Water Ltd (UW) | <p>The proposed site for Frodsham Solar Farm is in a reservoir flood path.</p> <p>There are a number of reservoirs within and near to Cheshire West and Chester, each with its own reservoir flood zone, showing how far flood water would spread from the reservoir in the unlikely event that a reservoir failed.</p> <p>You should have regard to this risk.</p> <p>We request the opportunity to liaise with you so the site can be</p> | No | Risk of flooding from all sources, including reservoirs, is provided in ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]. |

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| | <p>appropriately considered against the above guidance. When looking at future development within a reservoir flood zone, we draw your attention to the advice within the National Planning Practice Guidance on Flood Risk and Coastal Changes.</p> <p>This states that the relevant decision maker will need to evaluate the potential damage to buildings or loss of life in the event of dam failure, compared to other risks, when considering development downstream of a reservoir.</p> | | |
| United Utilities Water Ltd (UW) | <p>The relevant decision maker will need to evaluate, in the Strategic Flood Risk Assessment (when applying the Sequential Test), how an impounding reservoir will modify existing flood risk in the event of a flood in the catchment it is located within, and/or whether emergency draw-down of the reservoir will add to the extent of flooding.</p> <p>For development within a reservoir flood zone, the developer should discuss their proposals with reservoir undertakers (such as UU Water) at the earliest opportunity to:</p> <ul style="list-style-type: none"> • avoid intensification of development within areas at risk from reservoir failure; and • ensure that reservoir undertakers can assess the cost implications of any reservoir safety improvements required due to changes in land use downstream of their assets. <p>Developer should be expected to cover any additional costs incurred, as required by the National Planning Policy Framework's 'agent of change' policy (paragraph 193). This could be through Community Infrastructure Levy or section 106 obligations for example.</p> <p>Further consideration of the implications of being located downstream of the reservoir exceedance path will be required through liaison with the reservoir operator as the cost of any mitigation measures could be material to the development of</p> | No | Risk of flooding from all sources, including reservoirs, is provided in ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]. |

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|----------------------------------|---|--|--|
| | the site. You will need to clearly reflect the need for the implications for the reservoir exceedance risk to be addressed and mitigated where necessary in the site-specific development considerations for the site. | | |
| United Utilities Water Ltd (UUW) | UU wishes to liaise with you to confirm the impact on any watercourses that interact with our assets to ensure that there are no detrimental consequences of these works in terms of asset operation, flood risk and changes to fluvial geomorphological processes. | No | No additional discharge of surface water will be made to watercourses. All discharge to be made at the greenfield runoff rate. The Site Drainage Strategy is provided in ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]. Schedule 13 of the draft DCO [EN010153/DR/3.1] sets out Protective Provisions to ensure UUW assets are protected |
| United Utilities Water Ltd (UUW) | We would be grateful if you can provide details of any drainage proposals in respect of both foul and surface water. This should include rates of discharge, volumes of discharge, points of connection, the nature and extent of any contaminants, and details of any necessary pre-treatment prior to connection to the public sewer. We request that you provide details of drainage during operation of the solar farm and during the construction period. We request further details of any approach for the storage and disposal of any hazardous fluids. We wish to understand whether there is any intention to connect such flows to our public sewerage network and to ensure any potential impact on water supply assets, including the groundwater environment, is fully considered and mitigated. | No | The Site Drainage Strategy is provided in ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]. Foul flows from site during construction will be tankered off site to a permitted wastewater treatment facility. No connection will be made to the public sewer from foul flows or surface water generated on site. |
| United Utilities Water Ltd (UUW) | We wish to emphasise that consistent with the principles of the hierarchy for the management of surface water in national planning policy and the obligations of the Environment Act 2021, no surface water will be allowed to discharge to the existing public sewerage system. Surface water should instead discharge to more sustainable | No | The Site Drainage Strategy is provided in ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]. No connection will be made to the public sewer from surface water generated on site. |

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| | <p>alternatives as outlined in the surface water management hierarchy.</p> <p>This will ensure the impact of development on public wastewater infrastructure, both in terms of the wastewater network and wastewater treatment works, is minimised.</p> <p>We adopt this position as surface water flows are very large when compared with foul flows.</p> <p>By ensuring that no surface water enters the public sewerage system, the impact on customers, watercourses and the environment will be minimised.</p> <p>Please note, UU is not responsible for advising on rates of discharge to the local watercourse system.</p> <p>This is a matter for discussion with the Lead Local Flood Authority and / or the Environment Agency (if the watercourse is classified as main river).</p> <p>There should be no land drainage, including dewatering proposals, discharged to the public sewer.</p> | | |
| United Utilities Water Ltd (UW) | <p>We request that surface water is only managed via SuDS which are multi-functional and at the surface level in preference to conventional underground piped and tanked storage systems.</p> <p>Wherever practicable, SuDS should be implemented in accordance with the CIRIA SuDS manual.</p> <p>Managing surface water through the use of SuDS can provide benefits in water quantity, water quality, amenity and biodiversity.</p> <p>If the applicant intends to offer wastewater assets forward for adoption by UU, their proposed detailed design will be subject to a technical appraisal by our Developer Services team and must meet the requirements outlined in 'Sewerage Sector Guidance Appendix C – Design and Construction Guidance v2-2' dated 29 June 2022 or any subsequent iteration.</p> | No | <p>The Site Drainage Strategy is provided in ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]. Sustainable drainage systems have been implemented for the BESS and Substation drainage. There are no proposals to offer any drainage assets to UU for adoption.</p> <p>The draft DCO [EN010153/DR/3.1] includes Protective Provisions to ensure UUW assets are protected</p> |

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| | <p>This is important as drainage design can be a key determining factor of site levels and layout.</p> <p>Acceptance of a drainage strategy does not infer that a detailed drainage design will meet the requirements for a successful adoption application.</p> <p>We strongly recommend that no construction commences until the detailed drainage design, has been assessed and accepted in writing by UU.</p> <p>Any work carried out prior to the technical assessment being approved is done entirely at the developer's own risk and could be subject to change.</p> | | |
| United Utilities Water Ltd (UUW) | <p>Without effective management and maintenance, SuDS can fail or become ineffective.</p> <p>As a provider of wastewater services, we believe we have a duty to advise the determining authority of this potential risk to ensure the longevity of the surface water drainage system and the service it provides to people.</p> <p>We also wish to minimise the risk of a sustainable drainage system having a detrimental impact on the public sewer network should the two systems interact.</p> <p>We therefore recommend that you include details of a management and maintenance regime for any sustainable drainage system that is included as part of the proposed development.</p> <p>Please note that UU cannot provide comment on the management and maintenance of an asset that is owned by a third party management and maintenance company.</p> <p>We would not be involved in the approval of the management and maintenance arrangements in these circumstances.</p> | No | Maintenance of the drainage system is detailed in the Site Drainage Strategy provided in ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]. |
| United Utilities Water Ltd (UUW) | <p>We request that you provide details of any water supply requirements for both construction and during operation as soon as possible.</p> | No | The Applicant notes this comment. A water main is located within the Site and is understood to be sufficient to supply the limited water required for the construction and operation of the |

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| | <p>If you require a water supply, the information should include details on rates of water supply required in litres per second and anticipated points of connection to the public water supply network.</p> <p>The details of water supply required should include details for any fire response purposes that may be necessary.</p> <p>For temporary related activities, such as construction compounds and workers accommodation, early consideration of any water supply requirements will also be required.</p> <p>If reinforcement of the water network is required to meet potential demand, this could be a significant project and the design and construction period should be accounted for.</p> <p>You will need to ensure that your ES fully considers any environmental impact of any water supply requirements.</p> | | Proposed Development. The Applicant has been in consultation with United Utilities about the water supply to the site to ensure the construction and operational requirements are suitably managed. |
| United Utilities Water Ltd (UUV) | UU requests that the assessment of potential environmental impact from ground conditions including any contamination, hazardous materials or dewatering fully considers the impact on our assets, water resources, water catchment land and water quality as a result of construction of the proposed development | No | The Applicant notes this comment. ES Vol 1 Chapter 10: Ground Conditions [EN010153/DR/6.1] assesses the potential for historic contamination and contamination which could arise from the Proposed Development, and considers impacts on utilities, groundwater, and surface water receptors. Mitigation measures are set out, and these are included within the Outline Construction Environmental Management Plan [EN010153/DR/7.5], Outline Operational Environmental Management Plan [EN010153/DR/7.6], and the Outline Decommissioning Environmental Management Plan [EN010153/DR/7.7]. |
| United Utilities Water Ltd (UUV) | If the applicant intends to receive water and/or wastewater services from UU they should visit our website or contact the Developer Services team for advice at the earliest opportunity. This includes seeking confirmation of the required metering arrangements for the proposed development. | No | The Applicant notes this comment. |

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| | See 'Contacts' Section below. If the proposed development site benefits from existing water and wastewater connections, the applicant should not assume that the connection(s) will be suitable for the new proposal or that any existing metering arrangements will suffice. In addition, if reinforcement of the water network is required to meet potential demand, this could be a significant project and the design and construction period should be accounted for. In some circumstances we may require a compulsory meter is fitted | | |
| Environment Agency | Climate Change Flood Modelling (Appendix 9-1: Flood Risk Assessment and Drainage Strategy, Paragraph 9.6.32 - 9.6.39 and Non-Technical Summary, Paragraph 2.1.6.) Issue The Ince and Frodsham modelling does not consider climate change. Impact The modelling does not represent flood risk throughout the lifetime of the development. Our approach is supported by Section 5.8.15 of EN-1 Overarching National Policy Statement for Energy, which states that Flood Risk Assessments (FRA) should consider a range of flooding events and be supported by appropriate data. Solution Carry out the modelling with a 67% increase in peak flow rate. | Yes | Updated assessment of the Ince and Frodsham modelling has been undertaken and includes consideration of climate change. Full details are provided in ES Vol 2 Appendix 9-4: Waterco Ince and Frodsham Technical Note [EN010153/DR/6.2] and ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]. |
| Environment Agency | Bridge and Cable Crossings of Watercourses (Non-Technical Summary, Paragraphs 2.4.118, 2.5, 3.2.2. Appendix 2-1 Indicative Watercourse Crossing Schedule. Table 2-9: Further associated development within the draft Order Limits in connection with the delivery of Work Nos 1 – 6. Figure 2-5j Indicative Permanent Watercourse Crossing.) Issue We are concerned with details of the proposed crossings, namely the: • the soffit level of the bridges • the potential | Yes | Detailed technical consideration of all crossing points has been made with full details provided in the ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]. No culverts proposed. All new or replacement access crossings over EA designated Main Rivers will comprise open span bridge structures with a soffit level set 600mm above the |

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| | <p>extension of existing culverts Impact The bridges may restrict future maintenance of the watercourse and works to flood assets. Culverts can lead to an increase in flood risk, have a risk of blockage, and pose a maintenance burden.</p> <p>Solution Alternative cable crossing options should be considered. The soffit levels of bridges should be raised 600mm above the design flood level. We recognise this may have knock on effects to the proposed development, and would encourage the developer to liaise with us further on this issue. Instead of installing / extending (existing) culverts, the applicant should consider installing a clear-span bridge crossing. Given that there are circa 25 crossings as part of this proposal, the applicant will need to model changes in flood risk from the proposed crossings.</p> <p>Our position on this is supported by paragraphs 2.10.87 and 2.10.88 of National Policy Statement EN-3, which state that: • culverting existing watercourses should be avoided • where culverting for access is unavoidable, applicants should demonstrate that no reasonable alternatives exist, and where necessary it will only be in place temporarily for the construction period.</p> | | <p>1% annual probability plus 67% climate change in-channel water level of the relevant watercourse.</p> <p>All new or replacement access crossings over designated 'Ordinary Watercourses' will comprise open span bridge structures with a soffit level set above the top bank level of the watercourse.</p> <p>The watercourse crossings will not reduce the channel capacity and as such will not impact on flood risk on site or elsewhere.</p> <p>Please see the Bridge Design Technical Note appended to the ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2].</p> |
| Environment Agency | <p>Construction Phase Flood (Non-Technical Summary, Paragraphs 3.2.5, 3.2.6, 2.4.169, 2.5.2, 2.5.9, 2.5.13. Table 2-7: 132kV Electrical Connection Design Parameters. Figure 2-1 Construction Compound and Access Track Layout. Table 9- 8: Significance of Construction Effects.)</p> <p>Issue A significant area of the site has been demonstrated to be at risk of flooding, and specific mitigations for these areas should be considered for the construction phase.</p> | Yes | <p>Assessment of construction phase flood risk is provided in the ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]. The majority of the site is flood free during the present day 0.5% annual probability tidal flood event. Areas at risk during this event are shown to have shallow depth flooding less than 150mm. Only construction compound 'East Compound 1' is shown within the present day 0.5% annual probability tidal flood extent.</p> |

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| | <p>It is unclear why the applicant has asserted that flooding during construction is unlikely (see Table 9-8).</p> <p>Impact There is a risk of flooding during the construction phase, which may jeopardize construction efforts, and increase flooding elsewhere. For example, the present-day tidal design event may inhibit safe access and egress to receptors on site during the construction phase.</p> <p>Solution The applicant should provide justification for assertions relating to the categorisation of construction phase flood risk significance. A sequential approach should be applied to the placement of the construction compounds (two main construction compounds, four secondary compounds, and two construction compounds north of the River Weaver) and mobile welfare units. East Compound 1, 2 and 3 (PEIR Volume 3 Figure 2-1) may be at risk of flooding, which should be avoided where possible.</p> <p>Additional comment As stated in section 2.5.2, the construction phase could last longer than the assumed 30-month programme assessed; therefore we would expect a conservative estimate of the construction phase duration, in the context of assessing flood risks.</p> | | <p>Construction compound 'East Compound 3' is partly located within the present day 1% annual probability fluvial flood extent, however the flood extent is marginal, and depths are less than 150mm. The majority of 'East Compound 3' is flood free during the 1% annual probability event.</p> <p>In order to reduce vehicle movements and ensure that materials and welfare (including health and safety and environmental protection equipment) are in close proximity to working areas, all compounds cannot be located solely in the western half of the site (in Flood Zone 1). Furthermore, during the period when the NBBMA is being constructed, which could occur at the same time as the construction of the array to the east of Brook Furlong, it is proposed that there will not be any construction works on Cells 1, 2 and 5. On the basis that compounds would be raised areas of stone placed on geomembranes, the surface of the compounds would be higher than the predicted flood depths of less than 150mm. As such the compounds would not be at risk of flooding.</p> <p>The actions detailed in the Flood Warning and Evacuation Plan (ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]) will be applied during the construction phase to ensure the safety of site users.</p> |
| Environment Agency | <p>Setbacks and Buffers (Chapter 1 Introduction, Paragraph 1.3.10, 2.4.29, 2.4.162, 9.8.23, Appendix 9-1: Flood Risk Assessment and Drainage Strategy.) Issue It is unclear whether setback/buffers are applicable to all phases of the development.</p> <p>Impact The proposed works may adversely affect flood assets (such as engineered embankments) and prevent access to the</p> | Yes | <p>Details provided within ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2].</p> <p>10m setback provided from 'fluvial' designated rivers within the site. 16m setback provided from the River Weaver 'tidal' flood defence assets. These would be maintained during construction and operation, other than where it is necessary to undertake temporary construction works within these buffers</p> |

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| | <p>flood assets for inspection, remediation and replacement during all phases.</p> <p>Solution Where possible, we would seek setback from the watercourses for all phases. We require clarity on the proposed setback distance, including where this is measured from, and where this is applicable to all watercourses within the Order Limits.</p> | | <p>e.g. to construct crossings, improvement works on PROW, cable crossing of the River Weaver.</p> |
| Environment Agency | <p>Submerged Modules / Remaining Operational (Appendix 9-1: Flood Risk Assessment and Drainage Strategy and Non-Technical Summary, Paragraph 6.6.12)</p> <p>Issue The applicant has suggested that some solar PV modules would be allowed to flood in extreme events. We would not consider it acceptable for solar PV modules to be submerged in the (tidal) design flood event. If electrical infrastructure in specific areas of the site is isolated, then it is no longer operational. EN-1 section 4.10.11 applicants should demonstrate that proposals have a high level of climate resilience built from the outset and should demonstrate how proposals can be adapted over their predicted lifetimes to remain resilient to a credible maximum climate change scenario.</p> <p>Impact The solar PV modules may no longer be operational during the design event and could inhibit flood flow routes. Our approach is supported by Section 5.8.9 of the National Policy Statement for Energy (EN-1), which states that the sequential approach should be taken regarding locating development within a site. If this cannot be done, then the development should satisfy both elements of the exception test,</p> | Yes | <p>Details provided within ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2].</p> <p>Solar module heights (and all other infrastructure) have been raised above the design flood level (River Mersey 0.5% annual probability plus upper end climate change tidal defended flood level) with a 630mm freeboard allowance provided in accordance with EA requirements.</p> <p>All solar modules will remain flood free during the design flood event and also during residual flood events i.e. a defence breach, and the credible maximum climate change scenario for fluvial and tidal scenarios.</p> |

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| | <p>particularly whether the development is safe for its lifetime.</p> <p>Solution The applicant needs to ensure that the site remains operational in times of flooding; this includes all solar PV modules being 600mm above the design flood level.</p> | | |
| Environment Agency | <p>Impermeable Areas (Chapter 1 Introduction, Paragraph 1.3.13. Chapter 2 Proposed Development, Paragraph 2.4.141, 2.4.152, 2.6.11.)</p> <p>Issue The applicant should ensure that proposed impermeable areas (such as the new public car parking area on Moorditch Lane and road matting) do not significantly increase the rate of runoff.</p> <p>Impact As the surface is impermeable, there would not exist natural processes to reduce the rate of runoff, such as interception and infiltration, leading to an increase in the rate of runoff. An increase in runoff rate can lead to an increase in fluvial flood risk.</p> <p>Solution Where feasible, we advise the applicant to include SuDS for all proposed impermeable areas utilising the SuDS Manual. Further consultation with the Lead Local Flood Authority (LLFA)/Local Planning Authority (LPA) on this matter is recommended to ensure a joined-up approach.</p> | Yes | <p>Details provided within ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2].</p> <p>Impermeable areas such as the public car parking area on Moorditch Lane will be formed from permeable materials.</p> <p>Attenuation and discharge at greenfield runoff rates is proposed at the BESS / Frodsham Substation Compound which would be impermeable.</p> |
| Environment Agency | <p>Flood Modelling Design event and 600mm Freeboard (Chapter 2 Proposed Development, Paragraphs 2.4.17, 2.4.18, 2.4.35, 2.4.39, 2.4.41, 2.4.48. Images 2-2, 2-3, 2-4. Figure 2-5a Indicative Solar PV Modules, Figure 2-5b Indicative String Inverter. Figure 2-5c Indicative Power Conversion Unit (PCU). Figure 2-5j Indicative Permanent Watercourse Crossing.</p> | Yes | <p>Details provided within ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2].</p> <p>Solar module heights (and all other infrastructure) have been raised above the design flood level (River Mersey 0.5% annual probability plus upper end climate change tidal defended flood</p> |

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| | <p>Appendix 9-1: Flood Risk Assessment and Drainage Strategy, Paragraphs 9.7.4, 9.7.12, 9.8.30, 9.8.31.)</p> <p>Issue The applicant has not used the most conservative design flood event to derive the design flood level. In this case, the tidal design event is more conservative than that of the fluvial design event (for example see 9.7.4 and 9.7.12). Notably there seems to be an inconsistency in the proposed tidal design flood level (see 9.7.12, Appendix 9-1: Flood Risk Assessment and Drainage Strategy pages: 25, 26, 30, and 39).</p> <p>Impact The proposal is not derived using the appropriate design flood level, and therefore hasn't adequately assessed flood risk to the site and elsewhere. Our approach is supported by Section 5.8.15 of the National Policy Statement for Energy (EN-1), which states that FRAs should consider a range of flooding events and be supported by appropriate data.</p> <p>Solution Baring the assessment of cumulative impacts of fluvial and tidal sources, with consideration of joint probability analysis being more extreme, we anticipate that the applicant utilises the level derived from the Upper End tidal hydraulic model for the defended scenario. Sensitive equipment should then be positioned with a 600mm freeboard above the design flood level.</p> <p>Bridge soffits, solar PV modules, combiner boxes, string inverters, and junction boxes need to be 600mm above the (tidal) design flood level. Centralised Inverters, transformers, power conversion units, standalone inverters finished floor levels need to be 600mm above the (tidal) design flood level. The applicant needs to clarify the tidal design flood level, and adjust the design as required. This may also influence the</p> | | <p>level) with a 600mm freeboard allowance provided in accordance with EA requirements.</p> |

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| | calculations relating to flood storage compensation, which should be updated. | | |
| Environment Agency | <p>Watercourse Crossings (Chapter 2 Proposed Development, Paragraph 2.4.152)</p> <p>Issue Temporary, pre-fabricated ditch crossings are proposed for use, with no detail provided regarding their form and installation. Permanent watercourse vehicular crossings are shown (figure 2-5j), but not temporary crossings.</p> <p>Impact Without an understanding of how the temporary crossings are designed, we are unable to determine a potential increase in flood risk.</p> <p>Solution We require more information about the proposed prefabricated bridges and whether these will be safe in a flood event.</p> | Yes | <p>Detailed technical consideration of all crossing points has been made with full details provided in the ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2].</p> <p>No culverts are proposed. All new or replacement access crossings over EA designated Main Rivers will comprise open span bridge structures with a soffit level set 600mm above the 1% annual probability plus 67% climate change in-channel water level of the relevant watercourse.</p> <p>All new or replacement access crossings over designated 'Ordinary Watercourses' will comprise open span bridge structures with a soffit level set above the top bank level of the watercourse.</p> <p>The watercourse crossings will not reduce the channel capacity and as such will not impact on flood risk on site or elsewhere.</p> <p>It is anticipated that the above permanent crossings would be installed first to allow construction access. As such, temporary bridges of different construction would not be required.</p> |
| Environment Agency | <p>Flood Flow (Chapter 2 Proposed Development, Paragraph 2.4.157, 2.4.159. Table 2-9: Further associated development within the draft Order Limits in connection with the delivery of Work Nos 1 – 6.)</p> <p>Issue Fencing is proposed in flood zones.</p> | Yes | <p>Detailed assessment of flood risk elsewhere as a result of the development (fencing, panel supports and other infrastructure) has been made through hydraulic modelling. Full details provided in ES Volume 2 Appendix 9-3: Waterco Hydraulic Modelling Report [EN010153/DR/6.2] and ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2].</p> |

| Respondent | Comment | Has this resulted in a change to the Scheme or the Applicant's evidence? | Applicant response |
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| | <p>Impact Fencing may impede flood flow routes.</p> <p>Solution The applicant should demonstrate that the solar panel permitter fencing will not increase flood risk elsewhere.</p> <p>Additional comment In a meeting with the applicant on 11 November 2024, we discussed floodplain compensation for the proposed scheme. The applicant has presented information on volume of storage lost because of the solar panel supports and other associated infrastructure. The applicant suggested that they would test the impact of solar panel supports within the hydraulic model. A similar approach could be taken for the permitter fencing. We acknowledge this will be difficult to test explicitly, however, this could be achieved using a flow constriction layer or elevated roughness approach. We welcome the opportunity to discuss this further with the applicant.</p> | | No off-site displacement of floodwater is caused by the development and flood compensatory storage is not required. |
| Environment Agency | <p>Drainage (Chapter 2 Proposed Development, Paragraph 2.4.145, 2.4.155. Table 2-9: Further associated development within the draft Order Limits in connection with the delivery of Work Nos 1 – 6.)</p> <p>Issue Stone access tracks are likely to become decreasingly permeable from compaction and repeated vehicular use.</p> <p>Impact May lead to an increase in the rate of runoff due to a reduction in void ratio and capacity for effective drainage, by forming an impermeable surface throughout the lifetime of the development. An increase in runoff rate can lead to an increase in fluvial flood.</p> | Yes | Considered in ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]. Stone access tracks will be subject to frequent maintenance and repair to mitigate impact of compaction. Filter drains are incorporated to intercept runoff. The LLFA have not raised any concerns with the use of permeable stone access tracks. |

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| | Solution Assuming appropriate ground conditions swales are likely to be needed. Further consultation with the LLFA / LPA on this matter is recommended to ensure a joined up approach. | | |
| Environment Agency | <p>Phasing of Works (Chapter 2 Proposed Development, Paragraph 2.5.3, 2.5.4. Appendix 2-2 Indicative Construction Phasing and Resource Schedule.)</p> <p>Issue Flood storage compensation is not proposed to be completed before construction of components.</p> <p>Impact Increased flood risk to third parties.</p> <p>Solution Flood storage compensation is needed as part of the proposal, and should be completed before the construction of components which require flood storage compensation.</p> | Yes | <p>Detailed assessment of flood risk elsewhere as a result of the development (fencing, panel supports and other infrastructure) has been made through hydraulic modelling. Full details provided in ES Volume 2 Appendix 9-3: Waterco Hydraulic Modelling Report [EN010153/DR/6.2] and ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2].</p> <p>No off-site displacement of floodwater is caused by the development and flood compensatory storage is therefore not required.</p> |
| Environment Agency | <p>CEMP / OCEMP (Non-Technical Summary, Paragraph 5.2.2, 6.2.11, 6.6.15. Appendix 2-3: Outline Construction Environmental Management Plan. Table 5-9: Summary of the construction mitigation and management measures)</p> <p>Issue The CEMP/OCEMP should contain a comprehensive list of mitigations to ensure that flood risk is managed safely during the construction phase.</p> <p>Impact If the proposed mitigations are insufficient, then the construction phase could be vulnerable to and increase flood risk.</p> <p>Solution We require a comprehensive list of mitigation measures, to ensure they are sufficient to safely manage flood risks during the construction phase.</p> | Yes | <p>The draft DCO [EN010153/DR/3.1] includes Protective Provisions to ensure EA flood defence assets are protected.</p> <p>The outline Construction Environmental Management Plan (oCEMP) [EN010153/DR/7.5] includes provisions for the matters raised by the EA.</p> |

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| | <p>We would advise consideration of the below within the CEMP.</p> <ul style="list-style-type: none"> • Vibration: Realtime vibration detection adjacent to flood assets to ensure that vibration is within safe limits and agreed thresholds for action and remediation. • Scaffolding: If using scaffolding, then fix boards in place. • Flood Warnings / Alerts: Sign up for flood warnings and alerts with works to stop and site made safe and evacuated during a flood event. • SuDS: Temporary SuDS should be provided for all impermeable surfaces. • Debris: Measures to prevent debris entering the watercourse during a flood event. • Surveys: Where works are proposed close to a flood defence, we will require a survey to better understand it's geometry, condition, composition, structure, etc. Where possible the survey should be corroborated by as-built drawings. • Buffer: There should be an appropriate buffer from the watercourse which could be demarked by Heras fencing, this helps to ensure no adverse effects to the watercourse and flood assets | | |
| Environment Agency | <p>Use of Third-party Data (Chapter 9 Flood Risk, Drainage and Surface Water, Paragraph 9.3.1)</p> <p>Issue The use of third-party data for the assessment of flood modelling.</p> <p>Impact Flood modelling will not assess the full extent of flood risk of the proposed development.</p> <p>Solution The applicant should provide evidence of any modelling checks, subsequent updates and document these in</p> | Yes | <p>EA data / models used in the modelling assessment have been reviewed and updated by the Applicant where required.</p> <p>Full details provided in ES Volume 2 Appendix 9-3: Waterco Hydraulic Modelling Report [EN010153/DR/6.2], ES Vol 2 Appendix 9-4: Waterco Ince and Frodsham Technical Note [EN010153/DR/6.2], and ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2].</p> |

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| | <p>the FRA model reporting. All our models are built for our own specific purposes and are made available as is. It is the responsibility of all applicants to ensure that the models are fit for their intended purposes and in line with the following government guidance: • https://www.gov.uk/guidance/using-modelling-for-flood-risk-assessments • https://www.gov.uk/government/publications/river-modelling-technicalstandards-and-assessment/river-modelling-standards-who-theyre-for-andhow-to-use-them • https://www.gov.uk/government/publications/river-modelling-technicalstandards-and-assessment If modelling is used to support an application, then it will need to be reviewed and confirmed as meeting the above standards.</p> <p>Additional comment Please be aware that: • Environment Agency models are not designed to assess third-party developments. The applicant should not assume that the model is suitable for assessing the flood risk associated with the proposed development. It is the applicant's responsibility to assess the suitability of a model for the project.</p> | | |
| Environment Agency | <p>Ince and Frodsham Pumping Station (Chapter 9 Flood Risk, Drainage and Surface Water, Paragraph 9.6.27)</p> <p>Issue The proposal adds receptors into the catchment drained by the Ince and Frodsham pumping station.</p> <p>Impact This creates an additional burden on these facilities (Pumping Stations).</p> <p>Solution Form a contingency plan for the Ince and Frodsham pump failure scenario (which includes access to temporary</p> | Yes | <p>Schedule 13 of the draft DCO [EN010153/DR/3.1] includes Protective Provisions for the EA to ensure access to the Ince and Frodsham Pumping Station is maintained.</p> <p>ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2] provides details of flood risk from a failure of the pumping station (very low risk to the development).</p> |

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| | <p>pumps), with the consideration of the tidal design flood event. Additionally, discussions should be held regarding financial contributions or asset ownership to help with the maintenance burden or future options to decommission the assets, noting the proposal is dependent on the Ince and Frodsham pumping stations.</p> <p>Additional comment Our position is supported by the following:</p> <ul style="list-style-type: none"> • Section 5.8.15 of EN-1 Overarching National Policy Statement for Energy which states that FRAs should: o “consider both the potential adverse and beneficial effects of flood risk management infrastructure, including raised defences, flow channels, flood storage areas and other artificial features, together with the consequences of their failure and exceedance.” • Policy DM40 of the Cheshire West and Chester Local Plan Policies (2019) which states that FRAs must show: o “there is no adverse effect on the operational functions of any existing flood defence infrastructure.” o “proposed resistance/resilience measures designed to deal with the current and future risks are appropriate”. | | |
| Environment Agency | <p>Surveys (Chapter 9 Flood Risk, Drainage and Surface Water, Paragraph 9.5.2, 9.6.1, 9.6.20, 9.6.22. Appendix 9-1: Flood Risk Assessment and Drainage Strategy.)</p> <p>Issue It is unclear if flood defence crest heights have been derived from a topographic survey, LiDAR data, or the Environment Agency's asset data. The eastern section of the proposed development is heavily reliant on the flood defence system, and it seems the applicant is relying on third-party data to assess the condition of these flood defences (e.g., page 10 and 11 of the FRA).</p> | Yes | <p>Full details are provided in ES Volume 2 Appendix 9-3: Waterco Hydraulic Modelling Report [EN010153/DR/6.2] and ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2].</p> <p>Crest heights have been derived from LiDAR and verified by site specific topographical survey of the flood defences. Flood defence condition surveys of the River Weaver defences have been undertaken and are appended to ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]. The defences are considered to be in 'fair' condition.</p> |

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| | <p>Impact The proposed crossing designs and hydraulic modelling may have inaccurate assumptions if there has not been a level survey of the flood defences. There may be insufficient residual-life in flood defences, which protect the proposed development throughout the design-life (40 years of operation).</p> <p>Solution We request the applicant carry out condition surveys, to ensure that there is sufficient residual life within the flood defences which will protect the proposed development.</p> | | All infrastructure is designed to be flood-free in the event of a defence breach. |
| Environment Agency | <p>Residual Flood Risk (Chapter 9 Flood Risk, Drainage and Surface Water, Paragraph 9.7.7, 9.7.10, 9.7.14)</p> <p>Issue The applicant has not demonstrated how they will safely manage residual flood risk.</p> <p>Impact Safely manage residual flood risk to the proposal from the assessed breach scenarios (tidal and fluvial).</p> <p>Solution Adjust the proposal as required to ensure that residual flood risk is being managed safely and provide further explanation.</p> | Yes | <p>Full details provided in ES Volume 2 Appendix 9-3: Waterco Hydraulic Modelling Report [EN010153/DR/6.2] and ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2].</p> <p>A Flood Warning and Evacuation Plan has been prepared and is provided within ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2].</p> <p>All infrastructure including the solar modules are designed to be flood free in the event of defence breach.</p> |
| Environment Agency | <p>Flood Storage Compensation (Appendix 9-1: Flood Risk Assessment and Drainage Strategy. Table 5 – Summary of Flood Displacement (1% AEP plus 67% CC Defended Event)</p> <p>Issue The applicant has assumed the less conservative fluvial design flood event rather than the tidal design flood event.</p> | Yes | Detailed assessment of flood risk elsewhere as a result of the development (fencing, panel supports and other infrastructure) has been made through hydraulic modelling for both fluvial and tidal events. Full details are provided in ES Volume 2 Appendix 9-3: Waterco Hydraulic Modelling Report [EN010153/DR/6.2] and ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]. |

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| | <p>Impact Inaccurate calculations due to an underestimate of the design flood level. Therefore, flood risk may increase elsewhere and to thirds parties.</p> <p>Solution The applicant should use the more conservative tidal design flood event in assessing flood storage compensation.</p> | | No off-site displacement of floodwater is caused by the development and flood compensatory storage is not required. |
| Environment Agency | <p>BESS Risk to Groundwater (Chapter 10, Section 10.7, Paragraph 10.7.5)</p> <p>Issue The report details the design of the Battery Energy Storage Systems (BESS) drainage strategy. It is not clear whether the system will be automated with a backup system in place in case of power failure.</p> <p>Impact The current BESS drainage design may pose an unacceptable risk to groundwater.</p> <p>Solution The oEMP must include a detailed drainage plan which demonstrates, in the event of an emergency, that contaminated firewater can be adequately contained within the site, to ensure that there is no discharge of polluted water to ground or surface water bodies. Additional comment The National Fire Chief's Council has published detailed guidance on recommended fire protection measures for BESS sites. We recommend the applicant refers to this when designing the scheme: Grid Scale Battery Energy Storage System planning – Guidance for FRS (nfcc.org.uk)</p> | Yes | ES Vol 1 Chapter 2: The Proposed Development [EN010153/DR/6.1] describes how in the event of an emergency where firefighting water was required, a valve would be automatically engaged to isolate the compound and prevent any run-off draining from the Site. Measures for safeguarding of groundwater quality are detailed in the outline Operational Environmental Management Plan (oOEMP) [EN010153/DR/7.6]. This includes the BESS being lined with impermeable geo-textile to prevent infiltration to groundwater and the drainage outlet from BESS fitted with shut-off valve to prevent discharge of water to the wider water environment in the event of a fire. |
| Environment Agency | Construction Consumptive Water Supply (Appendix 2.3 oCEMP, Section 2.6.3, Table 5-4 and Table 5-10) | No | There is a water main which runs into the Site, which would be used to supply water for the construction, including for potable and domestic uses. The Applicant has consulted with United Utilities, and no issues have been raised in relation to the |

| Respondent | Comment | Has this resulted in a change to the Scheme or the Applicant's evidence? | Applicant response |
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| | <p>Issue Sources to supply consumptive water uses have not been specified for the following: • dust suppression • bentonite clay mixing and HDD operation • concrete production • wheel wash • potable and domestic uses.</p> <p>Impact Water demand for these activities in projects of this scale should not be underestimated. This could result in unforeseen permits being required at construction commencement, if the water company cannot provide it.</p> <p>Solution We recommend early engagement with the water company to establish security of supply. We also recommend that a basic water supply strategy is provided with the oCEMP outlining quantities, locations and sources of water to supply the activities included (but not limited to) those listed above. Additional comment These activities may not require treated water, and it is unclear if water is to be used from local groundwater or surface water sources. It is inferred that water tankers and bowsers described are to be provided/filled by the local water undertaker or the water supply will be from mains connection.</p> | | <p>security of supply. The Applicant will continue to liaise with United Utilities in advance of construction works. Non-potable water resources are also available, e.g. water pumped from the Manchester Ship Canal.</p> |
| Environment Agency | <p>Dewatering and Consumptive Uses of Water (Appendix 2.3 oCEMP, Section 2.6.3, Table 5-4 and Table 5-10)</p> <p>Issue Consumptive uses of groundwater and surface water on site is ambiguous.</p> <p>Impact The use of dewatering water for other consumptive uses will change the type of licence required and affects how it will be determined and issued.</p> | No | <p>The Applicant notes this comment. The outline Construction Environmental Management Plan (oCEMP) [EN010153/DR/7.5] includes for the for ther provision of a Construction Groundwater and Surface Water Management Plan (GWSWMP) which includes the need to details the requirement for abstraction licences, also included in the Other Consents and Licences Statement [EN010153/DR/5.5].</p> |

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| | <p>Solution We recommend the Abstraction licensing strategy for the catchment is reviewed and used to inform a water supply strategy which includes all water requirements of the construction (and operational) phase. This provides a basic options appraisal for the use of public water supply, local SW or GW sources of supply and/or the use of stored dewatering water.</p> <p>Additional Comment The oCEMP states that any wastewater that is produced during the construction phase from activities such as dewatering, will be disposed of in accordance with relevant legislation, and will not be discharged directly to surface or foul drains without appropriate licences in place. It also states where practicable, utility supplies will be taken from main supply utility connections; however, where this is not possible, utilities will be provided from temporary facilities, such as local wastewater storage.</p> | | |
| Environment Agency | <p>Watercourse Crossings (Chapters 7, Section 7.3 and 7.7, Paragraph 7.7.1)</p> <p>Issue The creation of 17 new permanent watercourse/ditch crossings and the upgrading of eight existing crossings.</p> <p>Impact Poorly designed river crossings can lead to the loss or damage of plants, animals and their habitats, and create a barrier to the movement of fish and other wildlife.</p> <p>Solution Follow the good practice guide linked below. Apply for Flood Risk Activity Permits (FRAPs) in advance.</p> | Yes | <p>Detailed technical consideration of all crossing points has been made with full details provided in the ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2].</p> <p>No culverts proposed. All new or replacement access crossings over EA designated Main Rivers will comprise open span bridge structures with a soffit level set 600mm above the 1% annual probability plus 67% climate change in-channel water level of the relevant watercourse.</p> <p>All new or replacement access crossings over designated 'Ordinary Watercourses' will comprise open span bridge</p> |

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| | <p>Further engagement with us should be pursued on the design and location of crossings.</p> <p>Additional comment Engineering in the water environment: good practice guide – River Crossings, 2nd Edition, November 2010. SEPA.</p> | | <p>structures with a soffit level set above the top bank level of the watercourse.</p> <p>The watercourse crossings will not reduce the channel capacity and as such will not impact on flood risk on site or elsewhere. Channel banks will be retained, maintaining habitats.</p> |
| Environment Agency | <p>Safe Access and Egress Route (Non-Technical Summary, Paragraph 2.2.7, 3.3.1, 3.3.3 and 3.3.4. Appendix 2-1: Indicative Watercourse Crossing Schedule. Figure 2- 2 Indicative Operational Site Layout. Figure 2-4 Public Rights of Way and Permissive Paths and other Recreational Routes. Appendix 9-1: Flood Risk Assessment and Drainage Strategy)</p> <p>Issue The proposal consists of circa 25 crossings, excepting CP 25 (see Appendix 2-1: Indicative Watercourse Crossing Schedule) all of these are within Flood Zone 3. The Order Limits contain Public Rights of Way, and during operation, access is required for routine maintenance, the replacement of equipment, habitat management, and farming activities.</p> <p>Impact We have significant concerns about safe access and egress during a flood event (tidal rather than fluvial as this is more conservative). There is a risk to receptors during the design flood event. It is possible that access routes (see Figure 2-2 Indicative Operational Site Layout) within the design flood extent may become flooded making them unsafe.</p> <p>Solution The applicant should demonstrate safe access and egress during the design flood event. Consultation should be</p> | Yes | <p>A Flood Warning and Evacuation Plan has been prepared and is provided within ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2].</p> |

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| | <p>undertaken with the LLFA/local authority, to ensure a joined-up approach across the site as the proposal brings new receptors into an area of flood risk.</p> <p>Additional comment It is possible that parcels of land may be cut-off and that dry islands could form, preventing safe egress for receptors on site during a range of flood events up to the design flood. Within Appendix 9-1: Flood Risk Assessment and Drainage Strategy, the applicant has considered evacuation for the design fluvial event, but not for the design tidal event. It seems that Brook Furlong could be flooded in the design tidal event. We would recommend further discussion on this matter with the LLFA / local authority.</p> | | |
| Liverpool Bay CCS | It is noted that the Runcorn Spur Pipeline Proposed Development is not referenced within Chapter 9: Flood Risk, Drainage and Surface Water and Chapter 10: Ground Conditions and potential cumulative impacts in terms of flood risk and surface water drainage, ground conditions will be assessed in the ES. | Yes | This chapter (Chapter 9: Flood Risk, Drainage and Surface Water) has been updated with reference to cumulative effects with consideration made of the Runcorn Spur Pipeline. |
| Cheshire West and Chester Council | The methodology for alternative site assessment has merit, in that it considers pros and cons across a wide range of topic areas e.g. Table 2.1. However, in doing so, the sequential assessment in terms of flood risk is subsumed to an extent by other considerations. The Council would normally expect a more focussed flood risk sequential assessment dealing with a site's suitability in terms of flood risk. Para 2.3.7 identifies that in terms of flood risk, Option A (i.e. the proposed site) fails to perform as the superior option. | No | The Sequential Test has been addressed within the ES Vol 2 Appendix 3-1: Alternative Site Assessment [EN010153/DR/6.2] and ES Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [EN010153/DR/6.2]. In accordance with para 5.8.9 of NPS EN-1 it has been demonstrated that it is not possible (taking into account wider sustainable development objectives), for the project to be located in areas of lower flood risk |
| Cheshire West and | Flood Risk, Drainage and Surface Water Please refer to the comments under Chapter 3. Alternatives and Design Evolution. | Yes | The Applicant notes this comment and design changes (design levels) have been made following receipt of EA comments. |

| Respondent | Comment | Has this resulted in a change to the Scheme or the Applicant's evidence? | Applicant response |
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| Chester Council | <p>It is expected that a bespoke FRA would accompany the DCO application, including a sequential assessment in relation to flood risk along with an appropriate Exception Test.</p> <p>CWCC's Lead Local Flood Authority's (LLFA) comments on the PEIR are provided: "No significant impacts are identified during construction, operation or decommissioning which we are in agreement with subject to the proposed mitigation measures incorporated into the detailed design and construction method of working as outlined in the PEIR which include:</p> <ul style="list-style-type: none"> • Pollution risk management • Open span structures method for watercourse crossings (temporary and permanent) • Piling risk assessment • Surface water drainage comprising infiltration for arrays and permeable surfacing for access roads • Design levels of the electrical components to be set at 6.34m AOD but areas will still be allowed to flood with isolation from substation allowing other arrays to continue to operate. • Transformers installed outside of flood risk areas where possible or raised above 6.34m AOD on concrete piled foundations. • Flood warning in place ensuring no maintenance operation to take place during flooding with remote switch off of components. • BESS drainage system to incorporate cutoff to ensure no pollution risk in event of fire suppression. <p>The detailed drainage design will need to consider the impact of compacted ground as part of the arrays and potential overland flow routes to ensure these are maintained within the site with no offsite impacts.</p> <p>Consideration also needs to be given to any changes in ground levels and proposed impact on overland flow routes.</p> <p>Any new outfalls or ordinary watercourse crossings (temporary and permanent) will require Land Drainage Consent and updated location plan, structural drawing and method of</p> | | |

| Respondent | Comment | Has this resulted in a change to the Scheme or the Applicant's evidence? | Applicant response |
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| | <p>construction is required at detailed design stage. A detailed construction environmental management plan based on submitted Outline CEMP including surface water management during construction should be provided for review to manage mobilisation of sediment and release of hydrocarbons and other pollutants into watercourses." Other comments: The Applicant is advised to contact CWCC's Emergency Planning team in preparation of the DCO application with regard to flood warnings. (See further comments in relation to Emergency Planning under Other Matters further below). Consideration ought to be given to whether there is scope to mitigate impacts of severe flooding with regard to avoidance or other means of attenuation to avoid (or reduce) the need to raise the development's height in areas at risk of flooding. Design to provide additional climate resilience, including but not limited to, management of fluvial and surface water flows during high rainfall events should be considered.</p> | | |