Submission ID: S41BD5F92

Dear sir/madam
Please see attached our response letter regarding the Applicant's response to our relevant representation.

The Planning Inspectorate
Temple Quay House
Bristol
BS1 6PN

Our ref: XA/2025/100453/02-L01
Your ref: EN010153

Date: 22 December 2025

To whom it may concern

ENVIRONMENT AGENCY RESPONSE TO DOCUMENTS SUBMITTED AT DEADLINE 1.

FRODSHAM SOLAR PROJECT, FRODSHAM MARSHES

This response constitutes the Environment Agency's Deadline 1 response.

We have reviewed the Deadline 1 submissions, specifically 8.5 Response to Local Planning Authority and Statutory Environmental Body Relevant Representations [PD2-027], and other application documents that have been updated since submission.

Following our review, we have responded to the outstanding issues raised within our Relevant Representation [RR-024] (dated 26 August 2025, ref. XA/2025/100377/01-L01) in turn below.

For our response, we have provided the following appendices consisting of:

- Appendix A:
  - Our comments regarding the issues we raised in our Relevant Representation
- Appendix B:
  - Our advice to the Applicant regarding water quality
- Appendix C:
  - A summary of our position

Yours faithfully

[redacted]
Planning Specialist

Direct e-mail NITeam@environment-agency.gov.uk

APPENDIX A – Our comments regarding the issues we raised in our Relevant Representation

EA001
We are satisfied and consider this issue resolved.

We were concerned that we were not listed as a relevant authority for the approval of Requirement 11. (1) Surface Water Drainage Strategy.

The 3.1 Draft DCO - P03 (Clean) (1) [PD2-005] names us as a consultee for consultation on the approval of requirement 11. (1).

EA002
We are satisfied and consider this issue resolved.

We were concerned that we were not listed as a relevant authority for the approval of Requirement 11. (3) Construction Groundwater and Surface Water Management Plan.

The 3.1 Draft DCO - P03 (Clean) (1) [PD2-005] names us as a consultee for consultation on the approval of requirement 11. (3).

EA003
We are satisfied and consider this issue resolved.

We were concerned that environmental risks were not adequality manged for works occurring under preliminary works.

The requirements 12 and 17 of 3.1 Draft DCO - P03 (Clean) (1) [PD2-005] specifically state that a Construction Environment Management Plan will be required prior to the commencement of any phase of works, including permitted preliminary works. We feel confident that environmental risks associated with any remediation during preliminary works will be managed.

EA004
We are satisfied and consider this issue resolved.

We were concerned that there wasn't a sufficient unexpected contamination protocol for all the phases of the project. We requested specific wording to be input within the

outline CEMP, outline Operational Environmental Management Plan (OEMP) and the for the decommissioning phase.

We note that only the 7.5 Outline Construction Environmental Management Plan - P02 (Clean) [PD2-015] includes the unexpected contamination protocol wording we requested; the 7.6 Outline Operational Environmental Management Plan - P02 (Clean) [PD2-017] and the 7.7 Outline Decommissioning Environmental Management Plan - P02 (Clean) [PD2-019] does not include the wording. We strongly recommend that these documents are updated to include the appropriate wording. We will however, be able to request this wording in the full management plans in due course, as we are listed as a consultee for requirements 13 and 20 within the 3.1 Draft DCO - P03 (Clean) (1) [PD2-005].

EA005
We are satisfied and consider this issue resolved.

We were concerned that we were not listed to be consulted on any plans relating to proposed fencing in proximity to main rivers, as part of requirement 10 (fencing and other means of enclosure).

The 3.1 Draft DCO - P03 (Clean) (1) [PD2-005] names us as a consultee for consultation on the approval of requirement 10 (1)(2).

EA006
We do not consider this issue resolved.

We were concerned that Protective provisions for the protection of the Environment Agency were included in Schedule 23 of the draft DCO.

At this current time, we do not believe it's appropriate for the Environment Agency to engage in drafting protected provisions on this topic.

Due to the associated environmental risk, the need for greater scrutiny and direct enforcement, we do not agree to disapply these activities under Section 150 of the Planning Act 2008.

We believe that it would be more beneficial for the Applicant to engage with the Flood Risk Activity Permit (FRAP) process as soon as possible.

The 3.1 Draft DCO - P03 (Clean) (1) [PD2-005] still contains protective provisions for the Environment Agency. Therefore, we cannot resolve this issue.

EA007
We do not consider this issue resolved.

We have reviewed the following documents:

- 'Integrity of the New Bridges in Flood Event' by Waterco (ref. 14740-WCD-XX-XX-TN-S-001 rev.01, dated 15 October 2025)
- 'Proposed Crossing CP14 Elevation & Sections' by Waterco (ref. 14740-WCD-XX-XX-SK-S-002 rev.P02, dated 15 October 2025)
- 'Proposed Crossing CP22 Elevation & Sections' by Waterco (ref. 14740-WCD-XX-XX-SK-S-003 rev.P02, dated 15 October 2025)
- 'Crossing CP14 & CP22 Existing Section' by Waterco (ref. 14740-WCD-XX-XX-SK-S-004 rev.P01, dated 15 October 2025)
- 'Proposed Crossing CP17 Elevation & Sections' by Waterco (ref. 14740-WCD-XX-XX-SK-S-005 rev.P01, dated 15 October 2025)

In the interests of a practical and proportional position, we consider the proposed crossings on main rivers (i.e. CP14, CP17, CP22) to be acceptable. Crossings CP14 and CP22 would provide betterment as they will replace culverts with clear span crossings. The Applicant has proposed a localised lowering of the eastern bank for CP22. This ensures sustainable design which minimises the loss of flood storage volume for the most conservative of the design events (i.e., Mersey tidal). We are assured that it will not adversely affect flood risk (for the watercourse being crossed) in the operation phase as the abutment crest, which will be above the existing level, will tie into the existing bank levels with wing walls.

As part of the decommissioning phase, the Applicant has proposed to remove proposed crossings where there were no pre-existing crossings (i.e CP17). We agree with this approach. The Applicant does not propose to remove CP14 and CP22 during decommissioning, as they replace and provide betterment on existing crossings (culverts). We find this acceptable for CP14, but not for CP22, due to details relating to the embankment crest reprofiling and decommissioning.

As the crossing proposed for CP22 would involve reprofiling of the embankment crest, with no plan to decommission and reinstate the embankment, we are concerned that it may increase flood risk beyond the lifetime of the development. We would only allow this proposed design if there's a commitment to removing the crossing, and reinstating the embankment crest, during the decommissioning phase. If the Applicant does not wish to remove the CP22, then we'd require a new design to be submitted that doesn't involve altering the embankment crest.

To resolve this issue, we require a commitment within the outline Decommissioning Environmental Management Plan (DEMP) that crossing CP17 shall be fully removed, including all superstructure and subterranean elements of the structure. For CP22, if the current design is preferred by the Applicant, then we'd require the same commitment as for CP17, with the additional detail of:

- reinstating the embankment crest to its original pre-development condition and profile, including soil structure, vegetation, and hydrological characteristics, unless otherwise agreed in writing with the Environment Agency.

Regarding protective provisions, please refer to our response to issue EA006.

EA008

We do not consider this issue resolved.

Upon reviewing the Applicant's document 6.1 Environmental Statement: Volume 1 Chapter 9: Flood Risk and Surface Water [APP-042], we raised concern that post-construction water quality monitoring would be inadequate and the 7.6 Outline Operational Environmental Management Plan [APP-137] and 7.5 Outline Construction Environmental Management Plan [APP-136] should therefore be updated.

The Applicant has updated Table 5.4 of the 7.5 Outline Construction Environmental Management Plan [PD2-016] to state that surface water monitoring positions and parameters of testing shall be set out in the CEMP. However, we request that the 'Requirement for monitoring' column in Table 5.4 reflects that regular water quality measurements and samples will be required.

The Applicant should be aware that we additionally requested reference to a monitoring plan to be included in the 7.6 Outline Operational Environmental Management Plan - P02 (Tracked) [PD2018].

Table 5-4 of the 7.6 Outline Operational Environmental Management Plan - P02 (Tracked) [PD2-018] currently does not include specific reference to water quality monitoring. We request this be updated. This would provide us with the confidence that as the site completes construction, and transitions into operation, there will be no negative water quality impacts, and the relevant mitigations are performed as expected.

We note that Table 5.4 of the 7.7 Outline Decommissioning Environmental Management Plan - P02 (Tracked) [PD2-020] states there will be "Regular water

quality monitoring to detect sedimentation and contamination impacts". Any water quality monitoring details should be consistent across the three phases of the project (construction, operation and decommissioning).

Advice to Applicant
For awareness, a monitoring plan should provide details of frequency, quantity, location and method of monitoring. A suggested frequency is monthly, starting six months prior to construction, ongoing throughout construction, and ending six months post construction. The locations should include monitoring upstream and downstream of any proposed surface water outfalls and water crossings.

Methods may include in-situ handheld devices or samples sent off to laboratories, it should not be limited to site walkovers, and visual inspections of the drainage water. Any water samples should be sent to a United Kingdom Accreditation Service (UKAS) accredited laboratory, and where applicable Monitoring Certification Scheme for Equipment (MCERTs) accredited testing must be carried out.

The results of laboratory analysis of water samples should be tabulated, recorded and be able to be provided to the Environment Agency if requested, or sent automatically in the event of a pollution incident.

EA009
We are satisfied and consider this issue resolved.

We were concerned that access and egress hadn't been sufficiently considered. Within the proposed site several land parcels are surrounded by watercourses and rely on vehicular crossings.

The Applicant has engaged with the Cheshire Joint Emergency Planning Team regarding access and egress to the site. We will defer to the Cheshire West & Chester Council and the Cheshire Joint Emergency Planning Team for their final view on whether there is safe access and egress in the event of a flood. We therefore consider this issue resolved.

We recommend that the finished floor level of safe refuge areas is raised to the H++ tidal scenario.

EA010 Flood Risk
We do not consider this issue resolved.

The Applicant has presented a report titled ‘Technical Note Integrity of New Bridges in Flood Event (dated 15 October 2025, ref.14740-WCD-XX-XX-TN-S-001) which considers uplift in the Mersey tidal event and impact from debris. In relation to uplift, the report suggests the following:

- Assumes a design flood level of 5.88m AOD;
- Assumes a bridge deck level between 5.3-5.8m AOD for CP14, CP17 and CP22;
- Based on initial calculation, for a concrete deck option, the self-weight of the bridge deck, and supporting steelwork would be sufficient in resisting the uplift forces on the bridge soffit determined in accordance with CD356 of the Design Manual for Roads and Bridges (DMRB) and Australian Standard AS5100.2 Bridge Design Part 2 Design Loads;
- An alternative open mesh steel grating deck design was considered, but has not been progressed in terms of detailed drawings presented.

Given that the design presented is the concrete option, and the Applicant complies with the above assumptions, then we consider the proposal acceptable in terms of operability during a flood event, in the context of debris impact and uplift for the watercourses which are to be crossed. However, we require the Applicant to confirm that the height of bridge decks will not fall below 5.3mAOD. This will ensure that assumptions in the report are correct.

The Applicant has not included a commitment to removing cables embedded in crossings within 7.7 Outline Decommissioning Environmental Management Plan - P02 (Tracked) [PD2-020]. Following decommissioning, it’s possible that we may need to remove crossings left in place to carry out maintenance operations on main rivers.

To resolve this issue, we require:

- a commitment to removing cables embedded in crossings during decommissioning;
- confirmation of the height of the bridge decks.

We are pleased to see in 7.6 Outline Operational Environmental Management Plan - P02 (Clean) [PD2-017] that the crossings will be inspected following a flood event.

EA011

We are satisfied and consider this issue resolved.

We were concerned that there were Insufficient flood risk management and monitoring measures within the CEMP, OEMP and DEMP.

Table 5-4 of 7.5 Outline Construction Environmental Management Plan [PD2-016] considers flood warnings. We find this acceptable.

Page 42 of 7.6 Outline Operational Environmental Management Plan - P02 (Clean) [PD2-017] States that flood assets will be inspected yearly, and crossings will be inspected following a flood event. We find this acceptable.

Tables 5-1 and 5-4 of 7.7 Outline Decommissioning Environmental Management Plan - P02 (Tracked) [PD2-020] state that flood warnings will be considered. We find this acceptable.

EA012
We are satisfied and consider this issue resolved.

We were concerned that panel support frames could destabilise during times of flood, in turn increasing debris and flood risk to others.

The Applicant stated that “The panel supports will be designed so that they are structurally resilient to the estimated flood depths and velocities. The requirement to consider these factors in the detailed design will be confirmed within the oOEMP." We note that this requirement isn’t included in the 7.6 Outline Operational Environmental Management Plan - P02 (Clean) [PD2-017], but is instead included in 7.5 Outline Construction Environmental Management Plan - P02 (Clean) [PD2-015]. We interpret this to mean that panel foundations and the supports will be designed to be structurally resilient to the estimated flood depths and velocities. We find this acceptable.

EA013
We are satisfied and consider this issue resolved.

We raised concerns that Figure 2-5b and Table 2-2 of the 6.1 Environmental Statement: Volume 1 Chapter 2: The Proposed Development [APP-035] freeboard for string inverters were inconsistent. We required clarity for the freeboard height to be 600mm.

The Applicant updated the 8.5 Response to Local Planning Authority and Statutory Environmental Body Relevant Representations [PD2-027] to confirm 600m freeboard will be used for string inverters.

EA014 Flood Risk
We do not consider this issue resolved.

We were concerned that the above ground cable crossing of the River Weaver height was undefined. It was therefore unclear if there would be sufficient space for emergency works to flood defence assets.

A detailed technical drawing is required showing the:

- proposed arrangement, including cable sag;
- the horizontal / vertical offsets from the riverbank / flood defence on both sides of the river.

We have not been provided with drawings demonstrating the offset between the above ground cable and the flood defence asset.

EA015 Flood risk

For clarity, we have two separate issues that have developed after further discussions in relation to EA015. We have titled the issues as *EA015(a)* and *EA015(b)*.

We do not consider issue EA015 entirely resolved at this stage. EA015(a) is resolved, and EA015(b) is not resolved. Therefore, issue EA015 is not resolved, as we require EA015(b) to be resolved to close the matter.

EA015(a)

We are satisfied and consider EA015(a) resolved.

We were concerned that the Applicant proposed a water storage area on a flood asset.

The Applicant has confirmed the water storage wasn't on a flood asset.

EA015(b)

We do not consider this issue resolved.

In the *Additional comments* section of EA015 of our relevant representation, we were concerned the new walkways were proposed on the crest of a flood asset.

We have raised the following issue with the Applicant's project team in correspondence:

> To ensure flood asset safety, we require the Applicant to provide, as part of the CEMP (to be secured under Requirement 12 of the draft DCO), the following details specific to any works proposed within the vicinity of fluvial or tidal defences:
>
> - A comprehensive list and plan of all works proposed within:

    - 8 metres of any fluvial defence; and
    - 16 metres of any tidal defence
- Detailed drawings and specification of any works that would alter crest level, slope, profile, or composition of the flood assets (including cross-sections and materials)
- Construction methodology for all works within the buffer zones, including:
    - Sequence of works (including temporary works).
    - Plant and machinery to be used (and associated loading).
    - Access routes used.
- Assessment of loading implications (static and dynamic) from footpaths, viewing platforms/slots, plant, and any other structures on or adjacent to the crest, with justification that the flood asset structural stability is maintained.
- A planting plan showing exact locations and species of proposed trees/hedgerows and details of root protection measures (e.g., root barriers, structural soils, distance from crest) to avoid compromising asset stability and future maintenance.
- Confirmation that the proposed works will not inhibit future inspections, remediation or replacement of the flood asset, and specifying how access for maintenance will be preserved.
- Where relevant, details of protective measures to prevent erosion or washout associated with footpaths or viewing areas (e.g., surface treatments, reinforcement, drainage measures).

This wording needs to be included as a commitment in the outline CEMP for us to resolve issue EA015(b), and EA015 in its entirety.

EA016
We are satisfied and consider this issue resolved.

We were concerned that the Applicant was adding receptors into an area drained by Frodsham Pumping Station. Specifically, we were concerned the design flood used in modelling may not have been sufficiently conservative, if the pumping station's activities were incorporated into the model.

The Applicant confirmed that the design flood was based on a scenario where the pumping station isn't operational. Therefore, we consider the modelling to be conservative with respect to flood risk.

We strongly recommend the Applicant considers either financial contributions to improving or taking over ownership of Frodsham Pumping Station.

EA017
We are satisfied and consider this issue resolved.

We were concerned that it wasn't clear from the depth difference mapping whether the flood extent increased in any locations.

It was demonstrated by the Applicant's project team that the flood depth difference mapping was included. We are satisfied that this issue can be resolved.

EA018
We are satisfied and consider this issue resolved.

We were concerned that the modelling within 6.2 Environmental Statement: Volume 2 Appendix 9-1: Flood Risk Assessment and Drainage Strategy [APP-084, APP-085, APP-086, APP-087, APP-088] hadn't considered volume lost from new crossings.

Following review of the hydraulic modelling associated with 8.7 Hydraulic Modelling Report - P01 [PD2-030], we are content that the volume lost from new crossings has been considered.

EA019
We are satisfied and consider this issue resolved.

We were concerned that there was a lack of clarity of how long water would remain on-site, and potentially cut-off egress from the site.

The Applicant has engaged with Cheshire Joint Emergency Planning Team regarding access and egress to the site. We will differ to the Cheshire West & Chester Council and the Cheshire Joint Emergency Planning Team for their final view on whether there is safe access and egress in the event of a flood. We therefore consider this issue resolved.

We recommend that the finished floor level of safe refuge areas to be raised the H++ tidal scenario.

EA020
We are satisfied and consider this issue resolved.

We raised concerns that document 7.6 Outline Operational Environmental Management Plan [APP-137] risked chemical and fuel spills near sensitive water receptors during the operational phase.

The Applicant updated Table 5.4 of document 7.6 Outline Operational Environmental Management Plan [PD2-017], to include the appropriate measures to ensure chemicals and fuels are located a minimum of 10m from all watercourses, with bunded areas or site drainage system to prevent leaching of contaminants.

Advice to Applicant
We recommend that Table 5.5. is also updated for consistency, to ensure the measures protecting surface water and groundwater are compatible.

EA021
We are satisfied and consider this issue resolved.

We raised concerns in the 7.13 Outline Landscape and Ecology Management Plan [APP-144] that Canary Grass (Phalaris arundinacea) can become dominant along watercourses, and in some circumstances lower biodiversity of watercourses in the riparian zone.

We have reviewed document 7.13 Outline Landscape and Ecology Management Plan - P02 (Tracked) (1) [PD2-023], and the Applicant has removed Reed Canary Grass (Phalaris arundinacea) from proposed planting lists. We therefore consider this issue resolved.

APPENDIX B - Our advice to the Applicant regarding water quality

We wish to provide the Applicant and Examining Authority with updated technical advice regarding surface water and groundwater quality for the substation and Battery Energy Storage System (BESS).

We acknowledge that matters relating to the BESS were previously discussed during the pre-application phase, and our issues raised were resolved at the time. However, we have since gained a greater understanding of the impacts that BESS and substations may have on surface water and groundwater quality. It is therefore pertinent that we raise the following advice, to ensure that the Applicant is aware of all the potential impacts their proposal may pose to the water environment.

We are cognisant that it is a late stage in the process for us to be raising these comments. Therefore, to ensure we are being reasonable, we only raise these comments as recommendations.

Outline Decommissioning Environmental Management Plan
During decommissioning, the risk from sedimentation affecting watercourses and surface water quality, and contamination of groundwater and surface water from spills, leaks, or improper waste management are similar to the construction phase. Therefore, mitigation measures written into Table 5.4 of the 7.5 Outline Construction Environmental Management Plan - P02 (Clean) [PD2-015] should be consistent with the 7.7 Outline Decommissioning Environmental Management Plan - P02 (Clean) [PD2-019].

We recommend that the Applicant updates the outline DEMP to include mitigation measures such as a minimum buffer distance of 10 m from watercourses, and fuel, oil or solvents being stored in covered bunded areas.

We have also identified that Table 5.4 of the outline DEMP currently does not include any mention of potential impacts from foul drainage. We assume that it will be the same as during construction and operation phase, however we recommend that clarification is included in the outline DEMP.

Outline Battery Safety Management Plan
We have recently re-reviewed the 7.8 Outline Battery Safety Management Plan [APP-139] (BSMP), and relevant Environmental Statement Chapters and Appendix, in light of internal reviews associated with BESS on solar sites.

We have the following advice to share. We recommend the Applicant considers and updates any relevant documents where necessary.

Permeable stone and lining at the BESS
Section 9.8.48 of 6.1 Environmental Statement: Volume 1 Chapter 9: Flood Risk and Surface Water [APP-042], and section 4.5.5. of the 7.8 Outline Battery Safety Management Plan [APP-139], state that the BESS will include a base of the permeable stone surfacing, which will be lined with an impermeable geotextile. Although, the impermeable lining will prevent any infiltration and protect groundwater, there is the potential for pollutants to attach to the surface of the permeable stone in the lined areas. These could be re-mobilised in surface water runoff, and enter the water environment, unless the containment areas are managed after an event. We are concerned that contaminants trapped in the permeable stone could be remobilised, and cause secondary pollution if valves are re-opened and drainage is reinstated, following a fire event.

We recommend that the Applicant provides a commitment, following a fire, to ensure there's cleaning of the stone surfacing, or its removal and replacement, before any drainage valves can be reopened. We note that section 4.5.7 of 7.8 Outline Battery Safety Management Plan [APP-139], states that the lagoon and drainage system would be cleaned before the valve from the firewater lagoon is reopened. We recommend that this statement is developed to be inclusive of the permeable stone substrate.

Further to the above, the section titled 'Surface Water Treatment' on page 37 of 6.2 ES Vol 2 Appendix 9-1 Flood Risk Assessment and Drainage Strategy 1 of 5 (Clean) - Revision 2 - Accepted at the discretion of the Examining Authority [AS-019] states that there will be "permeable surfacing within the proposed BESS compound and substation". We recommend that this is updated to include reference to impermeable lining, as a measure to protect surface waters and groundwater.

Automatic shutoff valve
We support the design discussed in section 9.8.51 of 6.2 ES Vol 2 Appendix 9-1 Flood Risk Assessment and Drainage Strategy 1 of 5 (Clean) - Revision 2 - Accepted at the discretion of the Examining Authority [AS-019], and section 4.5.8 of 7.8 Outline Battery Safety Management Plan [APP-139], which states that a shut off valve will be placed on the fire water lagoon outfall and will be automated (set in the off position when fire water sprinklers are activated). However, we recommend that the Applicant clarifies that the automatic shutoff valves will also include a manual override, in case the automation fails.

We note that 1.4.3 of 7.8 Outline Battery Safety Management Plan [APP-139],, sections vi and vii, discusses that equipment will be monitored and maintained to prevent equipment failure. We recommend that the automative shutoff valves are committed to have a specific maintenance programme, with clearly defined frequency of checks. This will guarantee that these remain operational at all times, and perform in the event of a fire.

Management of contained water after a fire
We have noted some inconsistencies between paragraphs regarding whether the Applicant is intending on discharging to watercourses, or tankering firewater offsite.

We recommend that the Applicant confirms which statement is correct, and amend relevant documents to ensure consistency:

- Section 4.3.6 of 7.8 Outline Battery Safety Management Plan [APP-139], states that the water contained by the valves will be tested and released or, if necessary, removed by tanker and treated offsite (in consultation with the relevant consultees at the time).
- Section 4.5.7 of 7.8 Outline Battery Safety Management Plan [APP-139], states that firewater held could be tested and either removed from Site via tanker to a suitable disposal / treatment facility, or treated onsite and reused as firewater provision.
- Section 9.8.52 of 6.1 Environmental Statement: Volume 1 Chapter 9: Flood Risk and Surface Water [APP-042] states that following a fire, contaminated flows will be collected from the fire water lagoon, and transported by tanker to an appropriate treatment facility.

In addition to the above, section 9.8.32 of 6.1 Environmental Statement: Volume 1 Chapter 9: Flood Risk and Surface Water [APP-042] states that surface water runoff from the proposed BESS compound will discharge to an adjacent watercourse. We recognise that this is in relation to drainage under “normal operations”, as opposed to during and following a fire. However, we recommend that the Applicant update this sentence, to clarify that any discharge will not be permitted in the event of a fire (dependent on outcomes on the above clarification).

Our preference is the removal of any contained firewater offsite. If any contained water is proposed to be released, it may be subject to a water discharge activity permit, and should be discussed further with the Environment Agency. Information is available at: Discharges to surface water and groundwater: environmental permits - GOV.UK

Testing of contaminated firewater
Sections 4.3.6 and 4.5.7 of 7.8 Outline Battery Safety Management Plan [APP-139] mentions testing of contaminated fire water. Specifically, section 4.3.6 states “Pollution analysis will always be conducted before removing from site (if polluted) or releasing into drainage systems, if safe to do so.” We acknowledge that details of the sampling methodology, locations and analytical parameters will be determined post-consent and established in the detailed BSMP and OEMP. However,
we recommend that the Applicant updates the oBSMP to include further details of what testing is being proposed in the event of a fire. Testing is important to provide information of the quality of water that has been contained during, and after, a fire. It

will ascertain if it contains any contaminants and the level of risk posed to the water environment.

For advice, we expect that water samples would be taken when safe to do so. These samples would then be sent to a UKAS accredited laboratory for analysis, using UKAS and MCERTS accredited methods (where applicable). The water samples should be checked against the list of hazardous substances in the surface water pollution risk assessment guide: Surface water pollution risk assessment for your environmental permit - GOV.UK

Battery Removal
We recognise that section 2.6.11 of 7.8 Outline Battery Safety Management Plan [APP-139] states that a post-incident recovery plan shall be developed, which will include the method of removal and disposal of damaged equipment, including batteries. We recommend that sections 3.2.13 and 3.2.16 of the 7.8 Outline Battery Safety Management Plan [APP-139] are updated to include details of how batteries may be removed, and replaced, as part of the maintenance during the development's lifetime. We are pleased that there are details of a "fire watch", and that removed batteries will be stored on impermeably lined surfaces, and are covered. However, if locations for this activity could be identified on site plans, this would be welcome.

Emergency Response Plan
We note that 1.4.3, section viii, and 4.4.3 of the 7.8 Outline Battery Safety Management Plan [APP-139] recognises that a BESS system and site-specific Emergency Response Plan (ERP) will be developed at the detailed design stage. We recommend the ERP includes informing any downstream river/groundwater abstractors in the event of a fire, should impacts to surface water and/or groundwater occur. This will ensure that Environment Agency incident response personnel are made aware of this as a priority. All relevant incident response parties should be made aware of the ERP and provided with immediate access to it.

Substation drainage
We have recently re-reviewed the outline OEMP, as well as the outline BSMP and relevant chapters of the Environmental Statement. This in light of internal reviews associated with substations on solar sites. We have the following advice to share, which we recommend the Applicant considers and update any relevant documents where necessary.

We recommend that the Applicant outlines the committed design mitigation to prevent contaminants from substation plant. This mitigation would prevent substation plant containing hazardous chemicals, such as oil transformers, from releasing contamination to the surface water drainage system, from both spills and leaks

during operation and any fire events. The drainage arrangements around the substation are not adequate in the event of a substation fire, especially if they contain transformers that rely on oil as a cooling and insulating medium.

Details regarding firewater management are captured in the 7.8 Outline Battery Safety Management Plan [APP-139], however in relation to the BESS only, not the Substation. Therefore, we strongly recommend that further details regarding the drainage management at the substation are included in the 7.6 Outline Operational Environmental Management Plan [APP-137].

Permeable stone and lining at the Substation
It is unclear if the Substation will be impermeably lined to contain any contaminants that could be spilled during operation, or mobilised in the event of a fire. Suitable lining, and sealed drainage systems, are important to prevent any contaminants reaching groundwater or surface waters via runoff. We recommend that the Applicant confirms whether the Substation will be impermeably lined.

It is unclear if the Substation will also have any permeable stone, like the BESS. We recommend the Applicant clarifies this detail. We note that the section titled 'Surface Water Treatment' on page 37 of 6.2 ES Vol 2 Appendix 9-1 Flood Risk Assessment and Drainage Strategy 1 of 5 (Clean) - Revision 2 - Accepted at the discretion of the Examining Authority [AS-019] states that there will be "permeable surfacing within the proposed BESS compound and substation". However, we know that this is inconsistent with other documents and have already recommended that this is updated.

As commented above regarding BESS, for the substation we recommend that any stone substrate used and lining should be committed to being thoroughly cleaned (or removed and replaced, if substrate is used) as part of the post-incident measures, before normal drainage resumes.

Automatic shutoff valve
We note that section 2.4.175 of 6.1 Environmental Statement: Volume 1 Chapter 2: The Proposed Development [APP-035] and section 9.8.32 of 6.1 Environmental Statement: Volume 1 Chapter 9: Flood Risk and Surface Water [APP-042] states that it is proposed to discharge surface water from the BESS compound and Frodsham Solar Substation to an adjacent watercourse, limited to greenfield runoff rate. We recommend that the Applicant clarifies whether the Substation will have an automatic shutoff valve, to be closed in the event of a leak/spill during operation, or in the event of a fire at the substation. As commented above in relation to the BESS, this automatic valve should also have a manual override and will require sufficient maintenance.

Management of contained water after a fire

The section titled ‘Drainage’ on page 42 of 6.2 ES Vol 2 Appendix 9-1 Flood Risk Assessment and Drainage Strategy 1 of 5 (Clean) - Revision 2 - Accepted at the discretion of the Examining Authority [AS-019] states that “Fire water will be managed within the BESS compound, and substation and will not be released to the wider water environment”. However, it is unclear what management of any contaminated water from the substation site is committed to. We recommend that the details of containment and disposal of any potentially contaminated water at the substation are consistent with the BESS. Please refer to the comments above regarding the BESS, and ensure that the outline OEMP is updated to reflect this for the substation.

Testing of contaminated firewater
We recommend that the details of testing of any potentially contaminated water at the Substation should be consistent with the BESS. Please refer to comments above and ensure that the outline OEMP is updated to reflect this.

Transformer type
In addition to the comments above, we recommend that the Applicant commits to using a dry-type transformer, which does not contain flammable oil. This can decrease the risk of fire at a substation.

Substation design during operation
Even if a dry-type transformer is used, and the risk of a substation fire is significantly lowered, the equipment at the substation still has a risk of leaks or spills. Therefore, we recommend that the Applicant provides more detail of the hazardous and polluting substances anticipated to be present within Substation plant and equipment, including transformer type, and the design and operational measures to contain these substances. These include:

- Secondary containment systems such as double-skinned tanks and bunding;
- Leak detection and level monitoring systems;
- Bund water management;
- Oil water interceptors/separators in the drainage system.

Oil containment must be in accordance with the Control of Pollution (Oil Storage) Regulations 2001 and the Applicant should employ best practice pollution controls for oils and other hazardous and polluting substances. Further information available here: Pollution prevention for businesses - GOV.UK

Water Framework Directive
We requested the WFD Assessment is updated, however we are yet to see any changes to this and therefore this item on terminology remains an unresolved recommendation.

Invasive species treatment
We noted that the HRA discussed herbicide application for the management of an invasive weed. We welcome the update seen in Table 5.3 of the outline OEMP.

APPENDIX C – EA Summary of Position

Subject	Relevant Rep Reference	Deadline 1
Water Quality	EA001	Issue Resolved
Water Quality	EA002	Issue Resolved
Groundwater and Contaminated land	EA003	Issue Resolved
Groundwater and Contaminated land	EA004	Issue Resolved
Flood Risk	EA005	Issue Resolved
Flood Risk	EA006	Not Resolved
Flood Risk	EA007	Not Resolved
Water quality	EA008	Not Resolved
Flood Risk	EA009	Issue Resolved
Flood Risk	EA010	Not Resolved
Flood Risk	EA011	Issue Resolved
Flood Risk	EA012	Issue Resolved
Flood Risk	EA013	Issue Resolved
Flood Risk	EA014	Not Resolved
Flood Risk	EA015	Not Resolved
Flood Risk	EA016	Issue Resolved
Flood Risk	EA017	Issue Resolved
Flood Risk	EA018	Issue Resolved
Flood Risk	EA019	Issue Resolved
Water quality	EA020	Issue Resolved
Biodiversity	EA021	Issue Resolved