



The Planning Act 2008

East Anglia One North (EA1N) and East Anglia Two (EA2) Offshore Wind Farms

Planning Inspectorate Reference: EA1N – EN010077, EA2 – EN010078

Deadline 7 – 4 March 2021

Comments of Suffolk County Council as Lead Local Flood Authority

1. Comments on responses to ExQ2 (if required)

1.1 Not applicable

2. Comments on any additional information/submissions received by Deadline 6

2.1 Outline Code of Construction Practice (REP6-003)

Para No.	SPR statement	SCC LLFA response
46 & 48	Where relevant, the measures listed in Paragraph X above will apply to construction works within areas identified as having an increased risk of surface water flooding.	This change is supported and welcomed by SCC
123	Where relevant, the measures listed in Paragraph 120 above will apply to construction works within areas identified as having an increased risk of surface water flooding.	Should this reference Paragraph 122, not 120?
138	Where there is sufficient space within the Order limits, further consideration of the benefits for the potential storage of rainwater for use in construction activities requiring a supply of water will be provided in the final Code of Construction Practice. Any solution will take into account the need to ensure capacity is provided within the construction phase surface water drainage system to accommodate future rainfall events.	SCC welcome the further consideration that will be given to storing and utilising rainwater for construction operations. However, this does not overcome the fundamental issue which SCC have continually raised (REP1-072 LA-05.12, REP 3-101, REP4-064, REP5-054, REP6-091) but is yet to be addressed; The Applicant must demonstrate there is sufficient space to implement their proposed mitigation during the construction phase within the Order Limits.

2.2 Outline Operational Drainage Management Plan (REP6-017)

Para No.	SPR Statement	SCC LLFA response
1	<p>As is normal for such nationally significant infrastructure projects, only on completion of the detailed design of the East Anglia TWO and East Anglia ONE North projects' onshore substations and National Grid substation; confirmation of the ground conditions and infiltration rates; and establishment of the catchment hydrological model, can the detailed design of the surface water management system be finalised.</p>	<p>What is the precedent for this being the 'normal' approach for Nationally Significant Infrastructure Projects?</p> <p>SCC LLFA have worked closely with SZC Co. on the development of design proposals for Sizewell C's temporary and permanent development. This has included SZC Co. undertaking infiltration testing to inform their design, evidenced with the following references (all from SZCO Co. DCO); AS-171, paragraph 3.1.33 AS-018, paragraph 9.3.14 APP-181, 4.2.3, 4.2.6</p> <p>Nonetheless, SCC have accepted that the Applicants do not have infiltration test results. This approach has been the Applicants' choice but requires them to follow a single approach of demonstrating they can deliver the proposed development whilst complying with national and local minimum infiltration design standards, to achieve an infiltration only solution within the Order Limits.</p>
2	<p>In the interim, the Applicants have assumed a worst-case scenario predevelopment greenfield discharge rate to the Friston Watercourse with no infiltration and have demonstrated within this Outline Operational Drainage Management Plan (OODMP) that sufficient space exists in the substation area to accommodate this</p>	<p>Statement highlighted yellow - This is only the worst-case scenario for the discharge to the Friston Main River. This is not the worst-case scenario in terms of potential land take.</p> <p>Statement highlighted red - Incorporation of infiltration should not simply 'complement' the discharge to Friston</p>

	<p>arrangement. Incorporation of infiltration measures will complement the discharge to the Friston Watercourse.</p>	<p>Main River. Infiltration must be prioritised and if deemed to be achievable and viable should be used to its maximum extent, as per CIRIA SuDS Manual, discussed in response to paragraph 6 below.</p>
6	<p>The proposed surface water drainage solution is in compliance with Suffolk County Council's sustainable drainage hierarchy (2018). Assuming a worst-case infiltration rate of 10mm/hr, an infiltration only design would be unviable for the Projects as the required 24hr half drain specification is not met. An additional secondary assessment has been undertaken at the request of Suffolk County Council, to consider an additional 1 in 10 year storm event 24 hours later to ensure sufficient storage can be provided. However, it is important to note that this also does not meet the required half drain time.</p>	<p>Statement highlighted cyan – SCC LLFA strongly dispute this claim. No justification has been provided by the Applicant for this statement. SCC justification for disagreement provided below.</p> <p>Statement highlighted yellow - Concluding that infiltration is not viable based on assumed infiltration rates is strongly disputed. The 10mm/hr rate is the lowest acceptable infiltration rate and therefore, the rate that must be used to establish space requirements for an infiltration only approach. This approach is necessitated due to a lack of infiltration testing by the Applicant. This approach is simply to determine space requirements. See response to paragraph 136 below for further comment on half drain time analysis.</p> <p>Statement highlighted red - The additional check of a 1 in 10 storm volume, following a 1 in 100 storm is again an exercise to determine space requirements. It is however an alternative methodology used to demonstrate there is sufficient storage capacity when half drain times cannot be met but a suitable infiltration rate has been achieved. Given this approach is demonstrated by the Applicant to be deliverable, it would be deemed as a design check 'pass' and is therefore not a reason to rule out infiltration.</p>

6 cont.		<p>Further justification of SCC LLFA position:</p> <p>If infiltration were found to be achievable and viable, with an infiltration rate of 200mm/hr, for example, there would be no question that an infiltration only approach could be pursued. However, the drafting of the current OODMP and the design solution being sought by the Applicants would bypass this option in favour of discharging to the Friston Main River. This does not comply with National Planning Policy Guidance.</p> <p>CIRIA SuDS Manual, industry best practice for SuDS design, explicitly states the surface water disposal hierarchy, as per NPPG, before going on to state <i>“as much of the runoff as possible (subject to technical or cost constraints) should be discharged to each destination before a lower priority destination is considered”</i> (pg 41, CIRIA C753, 2015). The applicant is in direct conflict with this statement from best practice and has not provided any technical or cost constraint justification for this approach. Indeed, the OODMP demonstrates that an infiltration only approach is technically feasible.</p> <p>These points were made comprehensively by SCC LLFA at Deadline 5 (REP5-054) as part of our ISH4 post-hearing submission. Specifically, section iv addressed sustainable drainage principles. This is a serious omission by the Applicant who has not sufficiently justified an approach which is contrary to national and local guidance & best practice.</p>
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		<p>Neglecting to prioritise an infiltration only approach has the potential to set national precedent that could harm the water environment. The purpose of infiltrating water is to recharge the underlying aquifer. The alternative is to put the water into watercourses and send this back out to sea, where this valuable resource is lost. We urge the Applicant to change their approach and the Examining Authority to consider the potential this approach has to set national precedent if permitted.</p>
7	<p>It is the Applicant's position therefore that the surface water drainage design at the substation location will incorporate infiltration elements, where possible, within an attenuation design with a connection to discharge at a controlled rate to the Friston Watercourse. This is in line with the drainage hierarchy and the detailed design of this system and is wholly appropriate for such nationally significant infrastructure projects. The degree to which infiltration is possible will be subject to ground investigations at the location of the onshore substations and National Grid infrastructure, land use and landscaping requirements. Percolation tests will be undertaken as part of the detailed design process to determine the underlying permeability and the feasibility of a combined infiltration / attenuation drainage design.</p>	<p>Statement highlighted yellow - As per SCC LLFA response to point 6 above, we strongly dispute this approach which does not comply with national or local guidance or best practice. Despite multiple requests, the Applicant has not provided any justification for their interpretation of the drainage hierarchy which is contrary to national and local guidance and best practice. This approach is wholly inappropriate for any development, including Nationally Significant Infrastructure which has the potential for more significant impacts.</p> <p>Statement highlighted red - The degree to which infiltration is used should not be subject to landscaping requirements. This is a prime example of why SCC LLFA are seeking to discharge requirement 41.</p> <p>Statement highlighted Cyan – SCC LLFA maintain that an infiltration only approach must be prioritised, as per SCC LLFA response to paragraph 6 above.</p>
8 & 15	<p>The final surface water drainage design will follow the below stages: a) Confirm the pre-development greenfield QBAR runoff rate, calculated through detailed</p>	<p>This approach is not supported by national or local guidance and has the potential to set a national precedent which is contrary to best practice, as per SCC LLFA response to paragraph 6 above.</p>

	<p>hydrological modelling. This will become the maximum design discharge rate to the Friston Watercourse for events up to and including a 1 in 100 year (plus 40% to account for climate change) event, and will not be exceeded post-development;</p> <p>b) Confirm the pre-development infiltration rate in the area of the onshore substations and National Grid substation through percolation testing;</p> <p>c) Confirm the optimal SuDS basin(s) capacity using the above data. This will reflect the discharge rate to the Friston Watercourse; an appropriate infiltration rate; revisions to the substation infrastructure footprint and its detailed design; landscaping requirements; and the optimum use of land.</p>	<p>SCC strongly challenge these stages and maintain that an infiltration only option should be prioritised, with any option utilising a positive discharge only being explored if an infiltration only option is demonstrated to be unachievable or unviable.</p>
37	<p>The following guidance from the Construction Industry Research and Information Association (CIRIA) has informed the outline SuDS design for the onshore substations and National Grid infrastructure:</p> <ul style="list-style-type: none"> • CIRIA C753 SuDS Manual (Dec 2015); 	<p>Note that this is the document referred to in SCC LLFA's response to paragraph 6, above.</p>
Removed 37	<p>The final Operational Drainage Management Plan will include a topographic survey which validates the existing conditions</p>	<p>It is unclear why the Applicant has removed this statement without replacement.</p>
60	<p>There is a known (variable) risk associated with surface water flooding in proximity to the onshore substation and National Grid infrastructure, as discussed further in paragraph 63.</p>	<p>Is this the correct paragraph referenced? Surface water flood risk is discussed in more detail elsewhere in the document and would seem to be a more suitable reference?</p>
69	<p>SCC indicated via email (25th September 2020) that the return period for this rainfall event was equivalent to approximately a 1 in 42-year event.</p>	<p>This paragraph remains unchanged and is misleading, as per SCC LLFA representation at Deadline 4 (REP4-064),</p>

		response to REP3-046, paragraph 57 and Deadline 6 (REP6-091), response to REP5-011 ID 13.
75	To confirm the validity of the above description of the existing ground conditions, as provided in the BMT report, the final ODMP will include details of the scope, extent and findings of the soil surveys (as part of the surveys described under section 3.4) which are required to validate the existing conditions.	No surveys are described under Section 3.4.
77	Subsequently BMT developed a 2D model to investigate surface water runoff in the Friston catchment and the flooding to Friston in October 2019. The results of this modelling have been reviewed and considered within this OODMP and will be considered further to inform the drainage design for the onshore substations and National Grid infrastructure.	Where have the results of BMT (2020) Friston Modelling been reviewed and considered within the OODMP? Please provide exact references. There is no assessment of the outputs. There is no assessment of how the outputs impact the proposals. The OODMP simply reiterates information provided in the BMT report.
78	The final ODMP will be produced to include details of the scope and extent of the catchment hydraulic model required to validate the existing conditions, informed by a series of surveys including, but not limited to, those described in section 3 of this document	No surveys are described in Section 3. Section 3.5, titled 'ground investigations' largely assess groundwater flood risk, I suspect this is an error.
85	Runoff rates in Table 3.3 below are expressed using a method based on the Flood Estimation Handbook (1999) 2013 depth duration frequency (DDF) rainfall estimates (FEH 2013) produced by the UK Centre for Ecology and Hydrology. As requested by SCC, the Applicant has provided runoff rates using the FEH 2013 method as it ensures a conservative approach.	FEH methodologies are stated as preferable in CIRIA (C753) SuDS Manual, therefore SCC welcomes this change which utilises a more conservative approach.

87	<p>Currently, there are three natural depressions at the onshore substations and National Grid substation locations (as shown in Appendix 3 and Appendix 5) which act as natural water storage basins. At this stage of the Project's initial design, the Applicant proposes that one is relocated, and that two will remain where they are currently situated. However, subject to hydrological catchment modelling it has been raised that the existing depression adjacent to the substations (as shown in Appendix 3 and Appendix 5) may no longer fulfil its function and therefore its volume has been included within the SuDS design calculations in Section 6 and Section 7. This volume has been included as a worst-case scenario and will only be accounted for if the hydrological catchment modelling shows it to be necessary.</p>	<p>Whilst SCC welcome that the Applicant has sought to provide a solution to the issue identified by SCC LLFA in REP5-054, that the existing flood storage basin will be removed to facilitate the proposed access road, the proposed solution is not acceptable. The proposed relocated flood storage basin location is not acceptable to SCC LLFA as it does not serve the same extent of the catchment as the existing feature.</p>
103	<p>The Applicant notes that the application of the SuDS hierarchy (SCC, 2018) is an iterative process, dependent on site-specific conditions which will be applied to identify an optimal drainage solution, and not wholly based on the application of a single hierarchy measure as proposed by Suffolk County Council.</p>	<p>The SuDS hierarchy contained within local guidance is exactly the same as that provided in National Planning Policy Guidance. It is not an iterative process and the Applicant has provided no justification for this assertion. As per SCC LLFA's response to paragraph 6, above, this approach directly contradicts national best practice (CIRIA SuDS Manual) and has the potential to set a national precedent which could harm the wider water environment. We urge the Applicant to reconsider their approach.</p>
105	<p>In accordance with the SuDS hierarchy, the Applicant presents an assessment of the viability of an infiltration only design in section 6 with a subsequent assessment of an attenuation only</p>	<p>Presenting an assessment of an infiltration only approach cannot be deemed as compliance with the surface water hierarchy when the rest of the OODMP seeks to prioritise a discharge to the Friston Main River.</p>

	design in section 7. The final details related to the application of the SuDS hierarchy will be determined during detailed design.	
108	Drainage during the construction phase will be subject to a separate construction phase surface water and drainage management plan to be produced post consent under Requirement 22(2)(a) of the draft DCO (REP5-003).	Despite repeated requests in SCC LLFA's written submissions to the Examining Authority, the Applicant has still not attempted to provide details that demonstrate surface water drainage mitigation identified as necessary in the Environmental Statement can be accommodated within the Order Limits during construction.
110	When considering pre and post development surface water drainage the Applicant commits to the following: <ul style="list-style-type: none"> • There will be no increase in the existing pre-development greenfield runoff rates to the receiving Friston Watercourse catchment; • Any reduction or removal of existing storage depressions, if required, will be offset and accommodated within the final SuDS design; and • Existing watercourses and flow routes will be appropriately managed to ensure continued conveyance around the northern perimeter of the National Grid substation site. 	The Applicant must commit to prioritising infiltration, as per the surface water disposal hierarchy, discussed in SCC LLFA's response to paragraph 6, above.
114	Should there be a need for the permanent substation operational access road to be located over an existing surface water flood storage basin, either it will be relocated to an alternative suitable location (as shown in Appendix 3 and Appendix 5) or the existing volume reduction will be offset and accommodated within the final SuDS design.	The existing natural depression providing est 222m3 (from Drawing No. ED11892-C-SK10-G in Appendix 3) cannot be moved to the proposed location. The proposed location is served by a different extent of the hydraulic catchment and would therefore not be a like for like replacement of the existing flood storage area. This volume cannot be accommodated in the final SuDS design as this could result in greater volumes of water

		entering the basins than needs to be offset which could exceed the capacity of any proposed basin.
119 & 120	<p>119 - A new outfall pipe will be installed to manage runoff from the onshore substations and National Grid infrastructure to the existing Friston Watercourse in the vicinity of Church Lane.</p> <p>120 - It will be necessary to connect this pipe into the Friston Watercourse via a new connection and associated underground structure.</p>	The feasibility of a piped connection to the Friston Main River must be considered before it can be determined as a feasible solution to managing surface water. If it is not possible to achieve an engineered connection to the Friston Main River due to the shallow depth of the Main River and the necessity for any culvert to pass under Church Road, Friston, with sufficient pipe cover, this must be a material consideration. Discussion with the Highway Authority has confirmed they also have concerns about the feasibility of this connection.
136	<p>The Applicant notes SCC's comments at Deadline 3 (REP3-101) and Deadline 4 (REP4-064) regarding the need for an infiltration only design to achieve a half drain time of 24 hours under a 1 in 100 year plus 40% for climate change scenario. As shown in Appendix 2, when applying a Factor of Safety (FoS) of 10 to the parameters detailed in section 6.2, the drainage time is in exceedance of 7 days and therefore does not meet SCC's specification for an infiltration only design. Pre-construction ground investigations including infiltration testing will be conducted in order to determine whether the baseline infiltration rate is greater than 10mm/hr. This will inform the extent to which infiltration measures can be prioritised and incorporated into the final SuDS design as appropriate.</p>	When a suitable infiltration rate has been achieved but a half drain times of 24 hours cannot be met for 1 in 100 + CC, an alternative approach is to ensure there is sufficient storage provided for a follow up storm of 1 in 10 + CC. If sufficient storage is provided for the 1 in 100 + CC storm, followed by a 1 in 10 + CC storm after 24 hours, as has been demonstrated in this submission, this would be deemed as a design check 'pass'.
139	<p>It is considered unlikely that based on the 10mm/hr infiltration rate that the design could be developed to meet both the 24 hour half drain time</p>	It is misleading to draw this conclusion based on indicative worst acceptable design criteria, as per SCC LLFA response to paragraph 6, above.

	<p>and deliver other elements of the Project design including landscaping requirements and optimal use of the land. Therefore, an infiltration only scheme is demonstrated to be unviable due to neither assessment criteria achieving a 24 hour half drain time.</p>	<p>Half drain time criteria has been met, as per SCC LLFA response to paragraph 136, above.</p> <p>Statement highlighted yellow – This statement suggests that the Applicant is not willing to pursue an infiltration only option, that is demonstrated in this document as deliverable within the Order Limits, due to the impact on other design elements (such as landscape). As a result, the Applicant is seeking to utilise a sub-optimal solution, of discharging to Friston Main River. The national precedent this could set is discussed in SCC LLFA’s response to paragraph 6, above. Again, this further justifies SCC LLFA’s position that it should be the discharging authority for Requirement 41, to ensure that an optimal surface water drainage strategy is achieved, in compliance with national and local policy and guidance.</p>
140	<p>Unless the hydrological catchment modelling and the percolation tests, which will be undertaken post consent, conclude that an infiltration only design is feasible, this OODMP concludes that this is not a feasible solution.</p>	<p>It is assumed this conclusion is based on the section highlighted yellow, above, from Paragraph 139. This is despite the fact an infiltration only solution is demonstrated as achievable within the Order Limits and calculations are provided to pass half drain design checks, as per SCC LLFA response to paragraph 136, above.</p>
144	<p>As shown in Table 7.2, the estimated storage requirements for an infiltration only scheme is larger than the storage required for an attenuation only scheme. Appendix 4 provides detailed calculations of the above figures and Appendix 5 shows an indicative layout of the attenuation basins.</p>	<p>Statement highlighted yellow - If an infiltration only scheme was pursued, it is hoped that an infiltration rate greater than 10mm/hr (the worst acceptable) would be achieved, thus reducing storage requirements. Likewise, if infiltration is deemed unachievable or unviable, the detailed hydraulic model that the Applicant will develop as part of detailed design (as per para 150 & 151) could result in reduced discharge rates to the Friston Main</p>

		River, increasing attenuation storage requirements. The statement made by the Applicant is therefore, irrelevant.
152	Table 7.3 and Table 7.4 demonstrate that larger storage basins can be accommodated within the Order limits and in conjunction with the Outline Landscape and Ecological Management Strategy (updated version submitted at Deadline 6, document reference 8.7), should this be required.	<p>The sensitivity tests contained within Tables 7.3 & 7.4 are acceptable.</p> <p>SCC LLFA enquire why a similar sensitivity test has not been undertaken for an infiltration only option? The Applicant has been keen to rule out an infiltration only approach, due to potential impacts identified in paragraph 139 of this document and explained further in Applicants' Comments on SCC's Deadline 5 Submissions (REP6-027) ID 5. Whilst SCC LLFA maintain that an infiltration only solution should be pursued if proven to be achievable and viable, if this negatively influences the mitigation measures for other impacts, this needs to be clearly identified with supporting evidence (i.e., plans). If this is the case, the Applicant should explore options to relocate mitigation options (drainage, landscape or otherwise), to still achieve optimal mitigation. If this is proven not to be possible (with supporting evidence) a logical subsequent step would be for the Applicant to then determine at what point an infiltration only approach would not negatively influence the mitigation of other impacts. This could be presented as a 'threshold infiltration rate' at which point an infiltration only option could be achieved, without negatively influencing the mitigation of other impacts. If an infiltration rate were achieved between 10mm/hr and any identified threshold, a hybrid solution could be presented, with a restricted overflow to the Friston Main River in extreme rainfall events only. This potential approach could put options in front of the Examining Authority and Secretary of State,</p>

		<p>to consider as part of the planning balance, alongside options to relocate mitigation, rather than the approach the Applicant is currently taking, which seeks to rule out infiltration only based on indicative infiltration rates.</p> <p>SCC LLFA maintain that an infiltration only option should be pursued if infiltration is found to be achievable ($\geq 10\text{mm/hr}$) and viable. The development should have considered space requirements for SuDS as part of feasibility design, alongside the incorporation of other mitigation measures. The Applicant should seek to utilise additional space for SuDS elsewhere within the Order Limits if unacceptable impacts on other mitigation is identified.</p>
161	<p>As discussed in Section 6, although an infiltration only scheme is currently proving unviable due to the infiltration rate assumed, infiltration will be incorporated into the final drainage scheme as far as practicably possible. As outlined in Section 7, although an attenuation only scheme is viable, it is not the Applicant's position that an attenuation only scheme will be adopted. Instead, the Applicant looks to implement a hybrid scheme which incorporates both, in line with the SCC hierarchy, whilst committing to limiting the outfall discharge rates to that of the pre-development greenfield runoff rate. This connection to the surface water body (i.e. Friston Watercourse) additionally allows for design flexibility which will be influenced by pre-construction infiltration</p>	<p>Statement highlighted yellow – See SCC LLFA response to paragraph 6, above. Also, as per SCC LLFA response to paragraph 152, above. Rather than rule out infiltration based on worst-case scenario design assumptions, SCC LLFA would like to see the Applicant undertake sensitivity testing to determine what <u>they</u> deem to be an achievable infiltration rate, rather than ruling out infiltration only from the outset.</p> <p>Statement highlighted red – See SCC LLFA response to paragraph 6, above.</p>

	testing, detailed design of the onshore substations, National Grid infrastructure and the operational surface water drainage system itself.	
Plate 9.1	See submission	This diagram does not allow for an infiltration only design, contrary to national and local guidance and best practice, as per SCC LLFA response to paragraph 6, above.
References		Given the considerable discussion on the surface water disposal hierarchy it is noted that no reference is made here to the National Planning Policy Guidance, which sets out the surface water disposal hierarchy.
	SuDS Infiltration Design Calculations	Design top area is stated as 1m deep, freeboard top area is stated as 1.3m deep. However, Design storage depth is listed as 0.7m with design freeboard + 0.3m (1.0m deep). These two statements are contradictory, which has been used for the calculations? 1 in 100 + CC + 1 in 10 + CC water depths for each basin, based on calculations are; SPR substation = 0.858m NG substation = 0.99m This complies with national and local guidance and best practice. This does not match the water depths annotated on the drawing in Appendix 3, SCC assume these need to be corrected to mirror the calculations provided?
	Appendix 3, Drawing No: ED11892-C-SK10-G	Existing natural depression providing est 222m ³ cannot be moved to proposed location. The proposed location is served by a different extent of the hydraulic catchment and would therefore not be a like for like replacement of the existing flood storage area.
	Appendix 4	Calculations meet national and local design guidance and best practice

2.3 Applicants' Comments on Suffolk County Council's Deadline 5 Submissions (REP6-027)

ID No.	SPR Statement	SCC LLFA response
4	<p>The Applicants can confirm that in accordance with the representation from SCC at Deadline 5 (REP5-054), the SuDS Infiltration Note (REP4-044) has been incorporated into the Outline Operational Drainage Management Plan (ExA.AS-1.D6.V3), which has been submitted at Deadline 6. Within this document, for the infiltration only approach the storage required for an additional 1:10 storm event 24 hours after a 1:100 storm event has been calculated and presented. As described in the Outline Operational Drainage Management Plan (ExA.AS-1.D6.V3), which has been submitted at Deadline 6, the Applicants have calculated an infiltration only scheme to be unviable with the current infiltration rate applied – 10mm/hr – as per SCC guidance. Additionally, the Applicants would like to highlight that an infiltration only scheme will require larger SuDS basins which will subsequently affect factors such as ecology and landscaping. Preconstruction ground investigations will be undertaken during detailed design to determine whether the baseline infiltration rate is greater than 10mm/hr. This will inform the extent to which infiltration measures can be promoted and incorporated into the final SuDS design.</p>	<p>SCC LLFA welcome the incorporation of the SuDS Infiltration Note within the Outline Operational Drainage Management Plan.</p> <p>Statement highlighted yellow – See section 2.2 of this document, which responds to the Applicants' submission of a revised Outline Operational Drainage Management Plan (REP6-017) at Deadline 6. Specifically, response to paragraph 6 addresses this issue.</p> <p>Statement highlighted red - See section 2.2 of this document, which responds to the Applicants' submission of a revised Outline Operational Drainage Management Plan at Deadline 6. Specifically, response to paragraphs 139 & 152 addresses this issue.</p>
5	<p>The Applicants accept the surface water disposal hierarchy and are not implying that a different standard should be set for national infrastructure projects. However, the Applicants deem an infiltration only scheme likely to be inappropriate</p>	<p>Statement highlighted yellow - See section 2.2 of this document, which responds to the Applicants' submission of a revised Outline Operational Drainage Management Plan at Deadline 6.</p>

	<p>for the onshore substations and National Grid infrastructure site for two reasons:</p> <p>1) Applying the current infiltration rate, an infiltration only scheme will require the SuDS basins to be increased to a size that will subsequently affect other factors such as ecology and landscaping.</p> <p>2) A commitment has been made to not increase the Mean Maximum Flow Rate (QBAR) rate above pre-development levels, meaning if a hybrid scheme is adopted, the receiving watercourse will not be impacted.</p> <p>The Applicants appropriately apply the surface water disposal hierarchy within the updated Outline Operational Drainage Management Plan (ExA.AS-1.D6.V3)</p>	<p>Specifically, responses to paragraphs 139 & 152 address this issue.</p> <p>Statement highlighted red – This is incorrect and justification for SCC LLFA’s position was provided at Deadline 5 as part of our post hearing submission to ISH4 Agenda item 4.d.iv. This is covered again in section 2.2 of this document, which responds to the Applicants’ submission of a revised Outline Operational Drainage Management Plan at Deadline 6. Specifically, response to paragraph 6 addresses this issue, including reference to CIRIA SuDS Manual, which is considered industry best practice and with which the Applicants are in direct contradiction.</p> <p><u>This direct conflict between surface water drainage infrastructure and landscape justifies SCC’s position in requesting to be the discharging authority for Requirement 41.</u></p>
6	<p>Updated infiltration figures have been appended to the Outline Operational Drainage Management Plan (ExA.AS-1.D6.V3), which has been submitted at Deadline 6. These figures demonstrate that an appropriate 300mm industry standard freeboard has been adopted within the updated design.</p> <p>When the Applicants undertake ground investigations and the detailed design process specifics such as the location of connection points and their feasibility will be confirmed.</p>	<p>Statement highlighted yellow – Surely the feasibility of a connection to the Friston Main River must be considered before it can be determined as a feasible solution to managing surface water? If it is not possible to achieve an engineered connection to the Friston Main River due to the shallow depth of the Main River and the necessity for any culvert to pass under Church Road, Friston, this must be a material consideration.</p>
7	<p>The Applicants welcome SCC’s view that discharge to Friston Main River must be included in the design options.</p>	<p>Statement highlighted yellow – This is not justification for failure to comply with the surface</p>

	<p>The Applicants disagree that discharge to Friston Main River should be a secondary option because the Applicants have committed to ensuring that the predevelopment QBAR rate is not exceeded post development. Within the updated Outline Operational Drainage Management Plan (ExA.AS-1.D6.V3), which has been submitted at Deadline 6, the Applicants demonstrate an understanding of and compliance with the surface water disposal hierarchy. The Applicants acknowledge that infiltration is the first hierarchy measure to consider and propose to design a surface water management scheme which incorporates infiltration. However, attenuation and subsequent discharge to the Friston watercourse is also accounted for as the Applicants note there are other constraints to the design, including ecology and landscaping, and that appropriate infiltration rates have yet to be determined. The Applicants are committed to ensuring that discharge from the proposed development would be limited to the pre-development QBAR rate up to and including the 1:100 year plus 40% climate change event.</p>	<p>water disposal hierarchy, contained within the National Planning Policy Guidance and discussed further in section 2.2 of this document, which responds to the Applicants submission of a revised Outline Operational Drainage Management Plan at Deadline 6. Specifically, response to paragraph 6 addresses this issue, including reference to CIRIA SuDS Manual, which is considered industry best practice and with which the Applicants are in direct contradiction.</p> <p>Statement highlighted red – The OODMP should consider infiltration only as option 1. Attenuation and discharge should be considered as option 2.</p> <p>The potential negative influence of an infiltration only option on mitigation measures required for other identified impacts is discussed further in section 2.2 of this document, which responds to the Applicants' submission of a revised Outline Operational Drainage Management Plan at Deadline 6. Specifically, response to paragraph 152.</p>
8	<p>The Applicants refer to the response provided at Deadline 4 (REP4-025) whereby there is a commitment to the application of industry best practice. The Applicants acknowledge that the risk associated with surface water flooding is relevant both during construction and operation. Flood risk in the longer term (i.e. during operation) has been set out in the updated Outline Operational Drainage Management Plan (ExA.AS-1.D6.V3), which has been submitted at Deadline 6. The Applicants note that there are</p>	<p>Whilst the points made by the Applicant are noted, this does not progress the matter any further. The Applicant has still not demonstrated that mitigation measures can be implemented within the Order Limits during construction to mitigate the potential increase in off-site flood risk identified in the Environmental Assessment.</p>

	<p>a number of factors that will determine the mitigation options available during the construction phase. These will be defined at detailed design and include infiltration rates, final layout, proposed construction method and construction phasing / programming. All of these factors will determine the appropriate surface water drainage mitigation to be implemented and as such will be addressed in the Construction Method Statement to be secured under Requirement 22(2)(h) of the draft DCO (REP3-011) which must be submitted to the relevant planning authority for approval prior to construction as well as within a construction phase surface water and drainage management plan will also be submitted for approval as part of the final CoCP in accordance with Requirement 22(2)(a)</p>	
9	<p>The Applicants acknowledge that the infiltration rate adopted is a worst case scenario and commits to infiltration / percolation tests to establish the actual infiltration rate post consent. Pre-construction ground investigation and infiltration testing will determine the extent to which infiltration components can be incorporated into the final SuDS design. The Applicants do not deem it appropriate to undertake infiltration tests at this stage and consider it unusual for nationally significant infrastructure projects to do so. The secondary assessment of a 1:10 year storm event 24 hours after a 1:100 year storm event (both incorporating an allowance of 40% for climate change) has been undertaken and presented in the updated Outline Operational Drainage Management Plan (ExA.AS-1.D6.V3) which has been submitted at Deadline 6.</p>	<p>With reference to ID 5 of this response, all developments in Suffolk are expected to submit infiltration testing results with any planning application, as per the table provided in Section 3 of Appendix A to the Suffolk Flood Risk Management Strategy.</p> <p>Furthermore, this approach is not at all unusual for NSIPs. This is discussed further in section 2.2 of this document, which responds to the Applicants' submission of a revised Outline Operational Drainage Management Plan at Deadline 6, specifically SCC LLFA's response to paragraph 1.</p> <p>Nonetheless, the lack of infiltration testing has facilitated the need to work with worst-case acceptable infiltration rates, hence the worst-case</p>

		scenario infiltration only design, which is a consequence of the lack of infiltration testing. This is entirely the Applicants' choice but further justifies why it would be illogical to rule out infiltration only based on an approach required due to the Applicants' own decisions which required this approach.
13	The Applicants note that there are a number of factors that will determine the surface water drainage options available during the construction phase, such as ground permeability, proximity of existing drainage channels/pits. These will be defined at detailed design, including infiltration rates, final layout, proposed construction method and construction phasing / programming. The concept design for the Projects differ from East Anglia ONE in that the Applicant has allowed for temporary SuDS within the onshore cable route by the relocation of sections of soil stockpiles. All of these factors will determine the appropriate surface water drainage mitigation to be implemented and as such will be addressed in the construction phase surface water and drainage management plan which must be submitted for approval as part of the final CoCP in accordance with Requirement 22(2)(a).	Whilst the points made by the Applicant are noted, this does not progress the matter any further. The Applicant has still not demonstrated that mitigation measures can be implemented within the Order Limits during construction to mitigate the potential increase in off-site flood risk identified in the Environmental Assessment.

3. Responses to any further information requested by the ExAs for this deadline

3.1 Not applicable