SPR EA1N and EA2 PROJECTS

DEADLINE 2 - COMMENTS ON EXQ1 RESPONSES - 1.7 FLOOD RISK

Interested Party: SASES **IP Reference Nos.** 20024106 and 20024110 **Issue:** 6

1.7.1	EA	**Flood Risk Assessment (FRA)** Can you confirm that you are satisfied with the Applicant's general approach to the Flood Risk Assessment (FRA); in your response, please address the following matters: a) confirm that you are satisfied that the Applicant has applied appropriate climate change allowances to their assessment of flood risk; b) comment on SCC and ESC's view that "unless there is clear commitment to remove all impermeable areas	Environment Agency a)The Flood Risk Assessment (FRA) assessed the fluvial climate change impacts using the upper end allowance of 35% which is appropriate for development classified as 'essential infrastructure' with a lifetime of up to 2069. The proposed development has a stated lifetime of 25 years and an intended start date of 2023, resulting in a development lifetime until 2048. As such, we are satisfied that the fluvial climate change allowances are sufficient. The majority of the development, including the proposed onshore substation and National Grid infrastructure lie within Flood Zone 1. This is for both the present day scenario and with the addition of climate change allowances. The temporary works to cross the Hundred River watercourse will take place in Flood Zones 2 and 3, however the resulting permanent cable works will be underground, under the river, and therefore no longer at risk of flooding. Therefore there are no relevant climate change allowances to apply in this situation. b)The stated lifetime of the proposed development is 25 years, with an anticipated start date of 2023, and an expected lifetime until 2048. The climate change allowances presently used will be appropriate until 2069, which is 21 years beyond the stated lifetime. This provides	a)The EA response is limited to that of fluvial (river) flood risk assessment – in keeping with their mandate. The Friston watercourse only becomes a main river within Friston village i.e. beyond the footprint print of the site and the construction area. The EA has not therefore commented on the pluvial (run-off) flood risks that are problematic for Friston and worsened by the proposed development. The lack of comment or assessment of the pluvial climate change allowances should not be confused as EA satisfaction or acceptance – rather it is not in their remit/mandate to comment on the issue – it is for the LLFA to comment. This question therefore needs to be also directed to the LLFA to comment on climate change allowances for pluvial flood risk. b) As stated above, this is not within the EA mandate to state satisfaction about run-off climate change allowances – this is solely an LLFA issue.

	of the proposed development by 2069 then a climate change allowance of 40% should have been factored into the assessment instead of 20%" (see Section 42 Consultation Response dated 27 March 2019 of Appendix 20.1 [APP-494]);	an element of precaution should the development remain for longer than anticipated. However, it may be beneficial to assess the surface water flood risk and drainage scheme using the 40% allowance, to see what the resulting impacts would be. This would show whether the proposals would still be satisfactory, or whether the scheme would require alterations to ensure it did not increase flood risk elsewhere in this scenario.	It is self-evident that if 20% is to be used then the Applicant must agree to remove the hardstanding post-development. It is not uncommon place for such development platforms to be left after such sites are decommissioned and as such this concern of SCC/ESC is legitimate. 40% should be used if the Applicant will not give a legal agreement to remove the hardstanding.
c)	comment on the appropriateness of the methods proposed for works on and/or near to Main Rivers located with the study area, including the Thorpeness Hundred River and Friston Watercourse; and	c) The works proposed for the Thorpeness Hundred River include the crossing of the river using an open cut method. This will include temporary damming of the watercourse and either over-pumping of the water or temporary re-routing, to ensure that the original flow volumes and rates are maintained so as to ensure flood risk is not increased. The channel will then be reinstated to pre-commencement depths to maintain the capacity of the watercourse. This is considered appropriate, subject to the submission of further detailed plans and method statement. These will be required through the Flood Risk Activity Environmental Permitting process, and as part of the watercourse crossing method statement. The watercourse crossing method statement is to be submitted as part of the Code of Construction Practice (CoCP) under Requirement 22. The draft Statement of Common Ground (SoCG) (June 2020; Document Reference: ExA.SoCG-3.D0.V1) between the Applicant and the Environment Agency confirms that the Environment Agency are to be consulted on the preparation of the watercourse crossing method statement, and this will be noted in an updated Outline CoCP. The applicant has also agreed in the draft SoCG, to include in the final CoCP a commitment to not store materials:	c) The remit of the EA is limited to fluvial (river) flooding and proximity to Main Rivers. There are no works near the Main River section of the Friston Watercourse, only in its upper Watershed. These proposed works are not therefore within the EA mandate and this is why the EA is not commenting on them. A lack of comment on appropriateness does not mean the EA considers the works to be adequate – it means it is not for them to comment. We would recommend the FMP be developed now. It should form part of the strategy and measures to demonstrate flood risk can actually be mitigated. **Note the EA is only engaging on this question with respect to fluvial river flooding. It is not commenting on pluvial run-off risk above Friston because this is not part of its mandate.**

		"within Flood Zone 2 or Flood Zone 3 along the length of the onshore cable route, and to store spoil outside of the Hundred River flood plain", which should ensure no increase in flood risk elsewhere as a result of the works.	**Absence of comment does not mean absence of adequacy, just absence of mandate.**
		There are no development works currently proposed within the fluvial Flood Zones of Friston Watercourse. Any works within 8m of the watercourse to provide for a surface water discharge point from the substation site will require an Environmental Permit from the Environment Agency.	The SOCG with the EA relates only to Main Rivers and does not cover pluvial overland flow flood risk. The EA states in the SOCG the discharge rate leaving the site is the responsibility of the LLFA.
d)	comment on the adequacy and feasibility of the Applicant's proposed 'embedded' and residual mitigation measures detailed throughout the FRA [APP-496].	A 'Flood Management Plan' is to be prepared as part of the CoCP. Section 20.3.3 of the Environmental Statement (document reference 6.1.20) states that this will be developed in consultation with the Environment Agency and LLFA. The draft SoCG confirms that this will be noted in an updated Outline CoCP. d)The installation of cabling under the Main River watercourse using an open-cut trenching method is discussed, and considered appropriate, as outlined above. If non-main rivers (Ordinary Watercourses) are to be crossed with use of a temporary dam then a permit will be required from the Lead Local Flood Authority Suffolk County Council. A Flood Warning and Evacuation Plan will be produced for the temporary works at the Hundred River, to ensure that appropriate actions can be taken on receipt of a Flood Alert or Flood Warning. This should serve to ensure the safety of the personnel, the protection of the works, and that the river will be able to function correctly without an increase in flood risk.	

			The Applicants would refer the ExA to matters agreed in the Statement of Common Ground (SoCG) (ExA.SoCG-3.D1.V2) between the Applicants and the Environment Agency. The Applicants refer to Agreement Statement EA-205 which is marked as agreed with regards to the FRA (***Appendix 20.3*** (APP-496).	
1.7.2	The Applicant	**Main Rivers** Can the Applicant comment on concerns raised at consultation [APP-494] that the Main River through Friston has not been adequately identified or assessed? The Applicant should explain whether any regulated flood risk activities are proposed to take place on and/or near to any Main Rivers within the Friston watercourse catchment and clarify any associated permitting requirements.	The Applicants' FRA (***Appendix 20.3*** (APP-496)) identifies that within the study area there are two Main Rivers, namely the Thorpeness Hundred River and Friston Watercourse. The assessment presented in ***Chapter 20 Water Resources and Flood Risk*** (APP-068) has considered all parts of the Friston Watercourse catchment, from its source north of Friston to the downstream limit with the Long Reach (Alde Estuary). ES ***Figure 20.1*** (APP-265) was updated after section 42 consultation to clarify the Main River extent. The Applicants note that a flood risk activity permit may be required from the Environment Agency for works at locations in, under, over or within 8m of the Thorpeness Hundred River and Friston Watercourse. The onshore substations and National Grid infrastructure are identified as being located within the catchment of the Friston Watercourse, detailed within ***section 20.5.1.1*** of ***Chapter 20 Water Resources and Flood Risk*** (APP-068).	This question misses the point. The watercourse entering Friston village is not a Main River. If the question asked referred to an Ordinary Watercourse, the Applicant's response would be different. The Applicant is aware the Main River classification of relevance to the EA only commences in Friston Village and goes downstream. The Applicant knows they have no works within 8m of the Main River classification of the Friston Watercourse. The Applicant has restricted its response to just referring to the Main River. The upper watershed of the Friston Watercourse is not classified as a Main River but an Ordinary Watercourse which is the responsibility of the LLFA. The Applicant has failed in numerous ways to adequately assess the flood risk to Friston Village caused by the development in the upper watershed. See SASES Written Representation on Flood Risk in respect of the inadequacy of the Applicant's flood risk assessment.

1.7.3	The Applicant	**Permits** Can the Applicant comment on the progress made to agree and secure any permitting requirements with the EA for flood risk activity, including noting any foreseeable reason for permits not being issued? If Letters of No Impediments have been issued or are issued during the Examination, the ExA requests that these are also submitted into the examination library.	The Applicants refer to Agreement Statement EA-203 in the SoCG between the Applicants and the Environment Agency (ExA.SoCG-3.D1.V2). Work No. 37 is within Flood Zone 3a & 3b, a functional floodplain. Until detailed assessment work and detailed design are undertaken, it is not possible to establish the precise nature of works required at Work No. 37, or in particular whether ground raising, re-profiling or construction of structures that may divert or affect flood waters will be required. The Applicants will consult the Environment Agency on the need for a Flood Risk Activity Permit for works within Work No. 37 prior to such works commencing. Such works are likely to be classified as 'essential infrastructure'. The Applicants and the Environment Agency agree that to address this matter the Applicants will undertake an FRA of works required within Work No. 37 as part of any future Environmental Permit application. The Applicants note that a flood risk activity permit may be required from the Environment Agency for works at locations in, under, over or within 8m of the Hundred River and Friston Watercourse. The onshore substations and National Grid infrastructure are identified as being located within the catchment of the Friston Watercourse, detailed within ***section 20.5.1.1*** of ***Chapter 20 Water Resources and Flood Risk*** (APP-068).The above points will be noted in an updated Outline Code of Construction Practice (CoCP) which will be submitted at Deadline 3. For clarity, the Applicants are not seeking letters of no impediment.	Permitting does require detailed design – which is why it usually occurs after planning consent. The Applicant is fully aware that there are no works within 8m of The Main River classification of the Friston Watercourse. Therefore EA FRA permits are unlikely to be required. EA permits will be required for water quality discharge, however. HOWEVER – permits will be required from the LLFA for impact on the Ordinary Watercourse – Land Drainage Consents. This is not identified here at all. The LLFA should also be trying to limit run-off rates and volumes to pre-development rates – which is usually Conditioned through the Planning Process. It is important this process is not circumvented by the DCO.
1.7.4	The Applicant	**Flood Risk Assessment (FRA)** The FRA was produced in October 2019. The ExA notes	The FRA in ***Appendix 20.3*** (APP-496) was carried out in accordance with EN-1 Overarching National Policy Statement (NPS) for Energy, National Planning Policy Framework (NPPF) (Ministry of Housing, Communities &	This question is directed to 'EA flood risk maps for rivers and the sea'. It is not referring to pluvial run-off in the upper catchment above Friston village.

		that the NPPG for the assessment of flood risk has been updated and revised in line with UK Climate Projections 2018 and a number of updates have been made to government guidance 'Flood Risk Assessments: Climate Change'. It is also noted that the EA flood risk maps for 'rivers and the sea in England and 'surface water in England' were updated in December 2019 whereas ES Chapter 20 refers to the 2012 flood zone maps. • Can the Applicant please explain what the implications of updated allowances/maps are for the assessment? The response should explain the extent to which any such updates would materially affect the conclusions reached in the FRA and ES.	Local Government, 2019), Planning Practice Guidance (PPG) for Flood Risk and Coastal Change (Ministry of Housing, Communities & Local Government, 2014), and the Environment Agency's Climate Change Allowance guidance (Environment Agency, 2016), which were all relevant at the time of the assessment and remain so. The reference to Environment Agency 2012 Flood Zone Maps in ***Chapter 20 Water Resources and Flood Risk*** (APP-068) is an error. ***Chapter 20 Water Resources and Flood Risk*** (APP-068) utilises the same Flood Zone information as the supporting FRA (***Appendix 20.3*** (APP-496)) and should be referenced as such. In the FRA it is noted that a data package was obtained from the Environment Agency in August 2018 and a review of the publicly available online Flood Zone information was also conducted. The then current version of the Flood Zone maps as well as those publicly available online at the time of the report (i.e. October 2019) were used within the assessment. The updated climate change guidance includes updated sea level rise allowances using UKCP18 projections, guidance on calculating flood storage compensation, how to use peak rainfall allowances to help design drainage systems and clarification on how to apply peak river flow allowances so the approach is the same for both Flood Zones 2 and 3. None of the updates to this guidance materially change the values to be used in terms of future impacts relevant to the project, namely there has been no change to river flow allowances or rainfall values that would alter the assessment. As such, the conclusions of the assessment remain unchanged.	The Applicant's response therefore focuses on the fluvial flood zones, fluvial flood risk, and fluvial climate change allowances none of which are relevant to the flood risk to Friston Village. The FRA produced in 2019 did not adequately consider, or even contain, details on pluvial flood risk maps. The climate change allowance for pluvial flood risk is not discussed in this section – although the LLFA has already challenged that used by the Applicant (see 1.7.1. b). See SASES Written Representation on Flood Risk in respect of the inadequacy of the Applicant's flood risk assessment.
1.7.8	The Applicant	**Foul drainage** Has the Applicant sought confirmation from Anglian Water in relation to capacity being present in the main	The Applicants have consulted with Anglian Water who advised of the process and recommended early engagement on any requirements for foul drainage. The Applicants have noted this advice and will engage with Anglian Water as soon as possible once its requirements for foul drainage are known. The preferred method for	SASES is not clear as to whether foul drainage i) directed through Friston and ii) if so, if the foul drainage in Friston has adequate capacity.

		sewer to accommodate any required discharges from the project? If so, can the Applicant provide evidence from Anglian water that such capacity is available or provide an update on the matter should agreement not be provided to date.	controlling foul waste would be determined during detailed design. It should be noted that the anticipated number of visiting staff is expected to be low. The requirements in relation to this are therefore likely to be limited.	Accordingly SASES reserves its position on this subject
1.7.10	SCC	**Existing drainage patterns** Please expand on the comments in your RR that the information within the FRA is not sufficient to determine how the proposed development would interact with existing drainage patterns. What information would you expect to see?	*SCC Lead Authority - Lead Local Flood Authority* For clarity, the Relevant Representation (RR) referred to the "information within the application", not specifically the Flood Risk Assessment (FRA). Whilst this does include the FRA, it also extends to the ES, Outline Code of Construction Practice (OCoCP) & OLEMS. To avoid repetition, the concerns with the OCoCP & OLEMS are found in response to question 1.7.11. The flooding of Friston in October 2019 provided SCC LLFA with evidence of multiple surface water flow paths surrounding Friston that are not shown accurately on EA National Mapping, despite the return period of the rainfall event being recorded as 1 in 40 (likely less due to a lack of historic rainfall records at rain gauge), thus well within the intended scope of this mapping. Subsequently, the Friston Surface Water Management Plan (SWMP) has been produced. The hydraulic model is more refined than the EA National Mapping and presents a more accurate baseline. On this basis, SCC LLFA cannot agree that an FRA based on superseded information is suitable. Given the recognition in the FRA of the historic surface water flooding issues experienced by Friston, it would have been prudent for the Applicants to have established a model themselves to have used as a baseline for the original assessment. Nonetheless, they have the SCC LLFA model and could	See SASES Written Representation on Flood Risk in respect of the inadequacy of the Applicant's flood risk assessment. FRA and supporting documents are completely inadequate on assessing and mitigating the pluvial run-off risk. The recent hydraulic model calibrated to the October 2019 event actually underestimates the observed pluvial flood risk on that date. The Applicant's FRA is totally inadequate with regard to pluvial flood risk in Friston.

assess the interaction of the proposed development with this new baseline.

The submitted FRA identifies the surface water flow path north of Friston and acknowledges the interaction between this and
the proposed development. This flow path is associated with multiple existing ordinary watercourses, an offline storage/infiltration basin (which provide significant interception) and ultimately enters at the head of the Main River in Friston on Church Road. Whilst acknowledging the proposed developments interaction with this key flow path, the Applicants have not provided any further details on this matter or any potential mitigation. We acknowledge the Applicants have reserved an area for a potential additional flood relief basin, however it is not possible to determine the suitability of this proposal due to a lack of supporting information. SCC LLFA have a clear policy of not permitting the culverting of watercourses. Whilst Land Drainage Act consent is separate to the DCO process, it is important to understand the impact of the development on this key flow path in order to understand the associated impacts on surface water flood risk.
Given multiple flow paths are identified in the SWMP to the east of Friston and this is the route the cable corridor will take, the potential for interaction with previously unidentified surface water flows paths, particularly adjacent Grove Road, Friston, should be assessed.
We expect the residents of Friston to be included in the ESs as a receptor. This has currently been omitted by the Applicants on the basis that they have committed to not increasing flood risk. The cumulative impact during construction of an increase in sediment supply and any subsequent increase in flood risk, given the culverted nature of the watercourse in Friston, should also be assessed to determine any need for monitoring/maintenance of the Main River during construction.

The Applicant should use this new model as the basis to commence further assessment, not rely on it.

Agreed – there is direct hydraulic connection between the site and Friston Village.

The efficacy of this infiltration basin is completely unproven.

Agreed – Applicant has failed to consider increase in TOTAL flows leaving the site, and has failed to consider flow attenuation from the wider construction area.

See SASES Written Representation on Flood Risk – REQUIREMENT FOR PROVEN EFFECTIVENESS OF THE INFILITRATION BASINS

Agreed – See SASES Written Representation on Flood Risk

Absolutely – residents are the most vulnerable receptor

Agreed – CRITICAL POINT MADE HERE BY THE LLFA.

				Consistent with and stated in SASES Written Representation on Flood Risk
1.7.11	SCC, ESC	**Outline Code of Construction Practice (OCoCP) and Outline Landscape and Ecological Management Strategy (OLEMS)** Are you satisfied that there is sufficient information in the OCoCP to satisfactorily secure the SWDP and Flood Management Plan and within the OLEMs to secure the final SuDs?	*SCC Lead Authority - Lead Local Flood Authority* No, the Councils are not satisfied that either the OCoCP or the OLEMS provides sufficient security to secure later agreement. **Outline Code of Construction Practice** This document lists multiple mitigation options, some of which do not demonstrate an approach which prioritises the use of Sustainable Drainage Systems (SuDS), as per NPS EN-1. We are aware from the construction of East Anglia One (EA1) & East Anglia Three (EA3) cable corridor of problems encountered in the management of surface water that resulted in reactive, proprietary surface water drainage solutions (such as silt busters) being implemented. The EA were involved with this at the time. Our understanding is that this was caused by a lack of space available for SuDS (hence the use of proprietary products). The proposed developments do not demonstrably allocate space for SuDS along the cable corridor. We acknowledge the submission refers to areas where topsoil will be removed to facilitate basins, however it has not been demonstrated these basins; • • Can be accommodated within the redline boundary; • • Can be sized to manage 1:100 + CC; • • Can be designed to provide treatment; • • Can discharge surface water in a sustainable manner and in accordance with the surface water disposal hierarchy; and • Do not result in knock on impacts such as increasing the height of topsoil storage elsewhere	Agreed Agreed – See SASES Written Representation on Flood Risk – and our comments re the failure to consider the construction phase, both in terms of flow attenuation and the need for turbidity reduction/clarification, and sizing of adequate mitigation for the permanent works Agreed – See SASES Written Representation on Flood Risk

Given the proximity of Friston and the known surface water flood risk, this approach is not satisfactory. For example, where the cable route crosses Grove Road, Friston, is a low point of the cable corridor with the contributing area from the east extending some 700m to the upper extent of the catchment. A cable corridor of 700m length, falling towards Grove Road, Friston, (which has known surface water flooding problems) with no demonstrably feasible method of managing and disposing of surface water in a sustainable manner is not satisfactory and has the potential to increase off site flood risk.	Agreed – See SASES Written Representation on Flood Risk
	Agreed
No details have been provided to demonstrate that the proposed Construction Consolidation Site's (CCS) required for the construction of the cable corridor and substations have a demonstratable method of managing surface water, including treatment. Indeed, the Applicants' response from Appendix 20.1 (pg 18), states the CCS's will not require their own SuDS ponds.	Agreed – See SASES Written Representation on Flood Risk
Appendix 20.1 (pg 19) & 20.6.1.1 state that there are no ordinary watercourse crossings on the cable route. This is contradicted by para 11 of Appendix 20.3. The mitigation options need to be site specific, for which the site characteristics need to be known. If indeed no ordinary watercourses are present and thus, all construction surface water must be infiltrated (in the absence of alternatives), the absence of infiltration testing is potentially problematic and at the very least leaves questions regarding feasibility of sustainable surface water disposal during construction.	Agreed – see comment on infiltration testing in SASES Written Representation on Flood Risk and lack of viability of water management schemes
It is also unclear how the proposed haul road/access roads will be sustainably drained.	Agreed – See SASES Written Representation on Flood Risk
Outline Landscape and Ecological Management Strategy	
It should be noted that we have requested the Applicants provide a specific Requirement relating to surface water	Agreed – See SASES Written Representation on Flood Risk – final landform design is not

management for the final SuDS as opposed to including this in the OLEMS, as was the case for EA1.
No information is provided in the submission to enable SCC LLFA to determine whether the proposed SuDS basins are sufficiently sized to manage the volumes of surface water generated by the proposed development. No other design assumptions such as impermeable areas served by the SuDS, design water depths, side slopes etc. are provided with the submission. In addition to this, as far as we are aware to date, the Applicants have not undertaken any infiltration testing.

Our understanding is that the Applicants intend to pursue a positive discharge to the Main River in Friston, regardless of infiltration results, the degree of infiltration would merely act as a contribution to reducing, but not removing the positive discharge. We have made it very clear to the Applicants that this is not an approach we support.

The purpose of the ***Outline CoCP*** (APP-578) is to outline the measures which will ensure compliance with relevant legislation and DCO requirements during construction of the Projects. Under Requirement 22 of the ***draft DCO*** (APP-023) the final CoCP must include a surface water and drainage management plan and a flood management plan, which must be approved as part of the CoCP by the relevant planning authority before works commence.

The Operational Drainage Management Plan will address all operational drainage measures and confirm the final SuDS designs. An Outline Operational Drainage Management Plan and an update to the ***draft DCO*** (APP-023) to reflect the need for submission and approval of an Operational Drainage Management Plan will be submitted at Deadline 3. The amendment to the ***draft DCO*** (APP-023) will also provide that the Operational Drainage Management Plan must accord with the Outline Operational

adequate for permanent surface water management scheme design, especially considering above ground volume of water to be stored, above the Friston Village in apparently non-engineered embankments

Agreed – See SASES Written Representation on Flood Risk

Agreed – See SASES Written Representation on Flood Risk

The pluvial flood risk to Friston resulting from the development clearly increases without mitigation, so proving mitigation is viable cannot be left to DCO compliance.
The SWMP and FMP have to be proven to be implementable and effective, else the development goes ahead and these Plans won't deliver adequate protection to Friston from flood risk.

The ODMP as per the SWMP and FMP have to be demonstrably deliverable – and currently they are not.

The DCO cannot be approved contingent on Plans which may not be deliverable, achievable or

			Drainage Management Plan. This is separate to the ***OLEMS*** (APP-584).	effective, because the DCO requires them to be effective. Sufficient work has to be done now to demonstrate the ODMP is viable. That information does not currently exist.
1.7.12	The Applicant	**Sustainable Urban Drainage Systems** How is the Applicant confident that the attenuation ponds can be accommodated within the order limits? What preliminary site investigations have taken place? Have any preliminary hydraulic calculations been calculated?	The Applicants will submit an Outline Operational Drainage Management Plan at Deadline 3. This report will demonstrate that the attenuation ponds can be accommodated within the Order limits. Calculations were undertaken to confirm this and were based on precautionary methods and the worst-case scenario (in terms of both climate change and rainfall events).	The efficacy of the drainage plan has to be proven now. It cannot be left to a later date to demonstrate the ponds will fit inside the Order Limits. What if they do not? The data does not currently exist to undertake these calculations – specifically infiltration rates are absent. This statement is factually incorrect. See SASES Written Representation on Flood Risk
1.7.13	The Applicant/ SCC	**Adoption and maintenance** Paragraph 5.7.10 of NPS EN-1 states that the DCO or any associated planning obligations should make provision for the adoption and maintenance of any SuDs, including any necessary access rights to the property. It does not appear that such details have been included with the application. a) Do you take responsibility for maintaining the	*SCC Lead Authority - Lead Local Flood Authority* SCC as LLFA do not adopt SuDS. In accordance with the SuDS adoption hierarchy, the option of Anglian Water (AW) adoption would be preferable, although we are not aware of the Applicants engaging in discussions with AW or whether AW would deem the SuDS on this development eligible for adoption. The only other feasible option is for the Applicants to take on the adoption themselves or appoint a management company on their behalf. Our expectation is for the Applicants to maintain the SuDS serving their substations. The SuDS serving the National Grid infrastructure and access road should be adopted and maintained by National Grid. This is on the basis that the National Grid infrastructure could remain on site beyond the lifetime of the	The failure of adequate SUDS management is becoming a better recognised issue across the planning process, and the increasing reluctance of wastewater utilities to take these structures on. Agreed – this is the logical management option.

		drainage for the lifetime of development and if so how is this secured and enforceable through the DCO? b) What would be the council's preferred adoption arrangements?	EA1N & EA2 substations, thus if they were removed and the Applicants no longer had any infrastructure on site, it would not be appropriate for them to have responsibility for maintenance of SuDS serving the access road or National Grid substation. Applicant Response The Applicants have committed to maintaining the Projects' site drainage system during the operation phase of the Projects. This is outlined in the Outline Operational Drainage Management Plan, which the Applicants will submit at Deadline 3. A new requirement will be included in the ***draft DCO*** (APP-023) which requires the Operational Drainage Management Plan to be submitted to and approved by the relevant planning authority. This requirement will also provide that the Operational Drainage Management Plan must accord with the Outline Operational Drainage Management Plan, and be implemented as approved.	But what about the post-operational phase? Unless all hardstanding and infrastructure is removed then these need to be maintained in perpetuity. See earlier comments about the ODMP and when it needs to be agreed – i.e. it has to be demonstrably viable pre DCO.
1.7.16	The Applicant	**Friston** Several RRs express concerns relating to recent flooding events in Friston. a) Has any work been undertaken to identify drains within the site? b) What assessment has been made of the tributaries and drains in this vicinity, and how is it proposed to ensure that the construction and operation of the substation and associated infrastructure	*SCC Lead Authority - Lead Local Flood Authority* The Friston Surface Water Management Plan, produced by SCC LLFA, identifies ordinary watercourses north of Friston. As highlighted in our response to 1.7.11, the submission contains contradicting statements on the extent of ordinary watercourses within the red line boundary and the potential project interface with these ordinary watercourses. Applicant Response	Pluvial flood maps exist in the public domain which identify storm run-off routes across the upper watershed above Friston including the proposed project site construction area and footprint. The SCC has produced documents which also contain this information – See SASES Written Representation on Flood Risk Site walkover surveys by SASES confirm actual flow routes to be considerably more complex than those apparent from remote sensing techniques alone.

does not worsen the flooding in this area?	The existing hydrological context of Friston is discussed in the Applicants' Outline Operational Drainage Management Plan which is due to be submitted at Deadline 3. This includes consideration of existing drains on site and drainage off site via tributaries. Embedded mitigation in relation to surface water runoff and flood risk is presented within ***section 20.3.3*** and ***Table 20.3*** of ***Chapter 20 Water Resources and Flood Risk*** (APP-068). Issues pertinent to construction phase drainage, including consideration of surface water runoff, will be managed through the implementation of the CoCP which must accord with the ***Outline CoCP*** (APP-578) which will be re-submitted at Deadline 3. An Operational Drainage Management Plan will be prepared and submitted to the local planning authority post-consent. The submission and approval of the Operational Drainage Management Plan will be secured through a new requirement which will be added to the ***draft DCO*** (APP-023). The Operational Drainage Management Plan will secure measures which limit discharges to a controlled rate (equivalent to the greenfield runoff rate) and ensure that any redirected overland flow routes do not cause an increase in offsite flood risk. The Applicants will submit an Outline Operational Drainage Management Plan at Deadline 3. The Applicants refer to Agreement Statement LA-06 in the Applicants SoCG (ExA.SoCG-2.D1.V2) with the Councils. Flood events in the Friston area, resulting from overland flow, that occurred during late 2019 – early 2020 was a result of multiple flow paths and not a direct result of surface water runoff from land associated with the proposed site of the onshore substation or the National Grid infrastructure	So this information and evidence base does not currently exist for review as part of this DCO process. These mitigation measures have already been identified (SCC, GWP, SASES) as not being proven to be viable. The CoCP has already been challenged as being unreliable by SCC and SASES. These matters cannot be left for later evaluation. The construction phase, operational phase and closure phase drainage schemes all have to be proven to work now. See earlier comments. The ODMP has to be demonstrably viable now – this is not currently possible – and not post-consent. These discharge rates have to be agreed now – as these determine the flood risk. TOTAL flows must also be considered, given existing flows from the site already cause flooding in Friston, i.e. any increase in water volume will also result in increased flood risk unless proven otherwise. There are direct hydraulic links between the site area and Friston village. The area of the site forms a substantial part of the catchment draining through the village. The run-off from the proposed site area will enter the village and run-off from this area will have contributed to the 2019-2020 floods. Increasing the run-off leaving the proposed site area will increase flood risk in Friston.

				See SCC comments and SASES Written Representation on Flood Risk
1.7.20	East Suffolk Drainage Board	**Impact Assessment Methodology** The SoCG [AS-049] states that the impact assessment methodologies used for ES Chapter 20 are not agreed. Please can you provide further details on your concerns relating to the impact assessment methodologies?		The impact assessment methodology is self-evidently flawed, as highlighted by SCC, in the Applicant failing to consider pluvial FRA in any meaningful way and solely focussing on river (fluvial) flooding.
1.7.21	The Applicant	**National Flood and Coastal Erosion Risk Management Strategy for England** The above strategy was published in July 2020. Can the Applicant please explain what, if any, implications the publication has for the application? The response should explain the extent to which any such updates would materially affect the conclusions reached in the FRA and ES.	The Applicant notes the publication of the updated National Flood and Coastal Erosion Risk Management Strategy for England in July 2020, and also that this was formally adopted on 25 September 2020 with supporting documents uploaded to the government online portal. The updated Strategy sets out the long-term delivery objectives for the next 10 to 30 years, but also includes shorter term, practical measures that Risk Management Authorities (RMA) should take working with partners and communities. It is important to note that this has been recently adopted and, as a framework document, it will take some time for RMAs to translate this into their own local policy and guidance before ensuring its practical delivery within communities and with other interested parties. However, the principles of the updated Strategy focus on climate resilience and, within the context of this Project, ensuring that infrastructure is resilient to future flooding and how this will be delivered by all parties.	

The principles of climate resilience etc. are not new to the updated Strategy, rather they have been reviewed and refined. As such these are already fundamental factors that are considered within the FRA (***Appendix 20.3*** (APP-496)) and ***Chapter 20 Water Resources and Flood Risk*** (APP-068).

As a Nationally Significant Infrastructure Project, it is important to ensure that the design of the project is resilient to future flood risk and coastal erosion. This has been considered within both the FRA and the ES ***Chapter 20*** (APP-068) using current guidance including the current Environment Agency guidance on climate change, which is based on UKCP18 and LLFA guidance / requirements related to drainage.
On this basis, while the updated Strategy provides guidance and a revised focus on flood risk and coastal erosion, the guiding principles contained within it, in relation to climate resilience for infrastructure into the future, are already fundamental considerations within the FRA (***Appendix 20.3*** (APP-496)) and ***Chapter 20 Water Resources and Flood Risk*** (APP-068). It is therefore the Applicants' view that the updated Strategy does not materially affect the conclusions reached in the FRA (APP-496) and ES (APP-068).

The FRA has to consider not only the flood risk to the project but also the flood risk resulting from the project.

Self-evidently the Applicant has failed to follow the requirements of the LLFA, as demonstrated by their responses and comments in this document and their findings of the FRA and flood risk mitigation measures to not be adequate for pluvial flood risk reduction to Friston Village.