East Anglia ONE North and East Anglia TWO Offshore Windfarms

Applicants' Comments SASES Deadline 8 Submissions

Applicant: East Anglia TWO and East Anglia ONE North Limited
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Applicable to East Anglia ONE North and East Anglia TWO

Revision Summary				
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Description of Revisions			
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Glossary of Acronyms

AIL	Abnormal Indivisible Load
AIS	Air Insulated Switchgear
AO	Above Ordinance Datum
APP	Application Document
AS	Additional Submission
ATC	Automatic Traffic Count
CfD	Contract for Difference
dB	Decibel
DCO	Development Consent Order
DfT	Department for Transport
ES	Environmental Statement
ESC	East Suffolk Council
ESC	East Suffolk Council
ExA	Examining Authority
GIS	Gas Insulated Switchgear
HDD	Horizontal Directional Drilling
HGV	Heavy Goods Vehicle
Hz	Hertz
ISH	Issue
kV	Kilovolts
LLeq	Equivalent Continuous Sound Level
LMP	Land Management Plan
LOAEL	Lowest Observed Adverse Effect Level.
LpAFMax	Maximum sound level with A frequency
MW	Megawatt
NE	Natural England
NGET	National Grid Electricity Transmission
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
OCoCP	Outline Code of Construction Practice
OCTMP	Outline Construction Traffic Management Plan
OLEMS	Outline Landscape and Ecological Management Strategy
OLMP	Outline Landscape Management Plan
OODMP	Outline Operational Drainage Management Plan
PD	Permitted Development
PRoW	Public Right of Way
Q_{BAR}	Mean Annual Flood
RAG	Red Amber Green
SASES	Substation Action Save East Suffolk
SCC	Suffolk County Council
SOAEL	Significant Observed Adverse Effect Level.
SPR	ScottishPower Renewables
SuDS	Sustainable Urban Drainage System
SZC	Sizewell C
UK	United Kingdom

Glossary of Terminology

Applicants	East Anglia TWO Limited / East Anglia ONE North Limited
East Anglia ONE North project	The proposed project consisting of up to 67 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
East Anglia ONE North windfarm site	The offshore area within which wind turbines and offshore platforms will be located.
East Anglia TWO project	The proposed project consisting of up to 75 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
East Anglia TWO windfarm site	The offshore area within which wind turbines and offshore platforms will be located.

1 Introduction

1. The Applicants have responded to the following documents submitted by SASES at Deadline 8:

   - Responses to the Applicants' D7 Comments on SASES D5 Submissions (REP7-087);
   - ISH 11 submission – Flood Risk and Drainage (REP8-227);
   - ISH 12 submission – Noise (REP8-220);
   - ISH 13 submission – Traffic and Transport (REP8-223);
   - ISH 15 submission – draft DCOs (REP8-228);
   - CAH3 submission (REP8-221);
   - Comments on draft Outline Code of Construction Practice submitted at D7 (REP8-225);
   - Comments on VP5 PRoW submitted at D7 (REP8-230); and
   - Responses to Action Points ISH 10, ISH 11, ISH 12, ISH 13, ISH 14 & ISH 15 (REP8-224).

2. The Applicants have no further comments on:

   - ISH 10 submission – Health and Wellbeing (REP8-229); and
   - ISH 14 submission – Biodiversity (REP8-231).

3. This document is applicable to both the East Anglia TWO and East Anglia ONE North DCO applications, and therefore is endorsed with the yellow and blue icon used to identify materially identical documentation in accordance with the Examining Authority's procedural decisions on document management of 23rd December 2019 (PD-004). Whilst this document has been submitted to both Examinations, if it is read for one project submission there is no need to read it for the other project submission.

2 Comments on SASES' Deadline 8 submissions

2.1 SASES Comments on Applicants' D7 Responses to SASES D5 Submissions (REP7-087)

ID	SASES' Comment	Applicants' Comments
Post hearing submission (ISH5) – Bramford Comparison		
1	a. The Applicants dispute that Bramford is a brownfield location based on the fact that former farmland had to be acquired to develop the substation site. Bramford is an existing substation site which is the context in which the "brownfield" comment was made.	The substation at Bramford will not be developed on brownfield land, but on former farmland next to the existing National Grid Electricity Transmission (NGET) substation. Chapter 22 Land Use of the East Anglia THREE ES (paragraph 157) states that the total land take for the substation(s) will be 3.04ha (Table 22.2); this is Grade 2 agricultural land.
2	c. The Applicants indicate that Bramford and Friston are comparable in flood risk terms. They do not acknowledge the serious surface water flood risk at Friston as has been evident from the extensive hearings and submissions on this issue	Both the Bramford and Friston substation locations are within Flood Zone 1. The Environment Agency classifies Flood Zone 1 as being at low risk of flooding, having a less than 1 in 1,000 annual probability of river or sea flooding, hence the Applicants deem the Bramford and Friston substation locations to be comparable. Within the ***Outline Operational Drainage Management Plan*** (OODMP) (REP8-064), the Applicants evaluate the data which informed the Friston Surface Water Study (BMT, 2020) and show that the onshore substation and National Grid substation locations have no flood hazard risk. This is concluded using the depths and velocities of existing conveyance through the area. Despite this, the Applicants have committed to ensuring that the pre-development greenfield Q_{BAR} rate is not exceeded post consent, meaning there will not be any additional flows into the Friston Watercourse and therefore the Projects will not increase flood risk to the village of Friston. Indeed, the sustainable urban drainage system (SuDS) that the Applicants

ID	SASES' Comment	Applicants' Comments
		are proposing is likely decrease the flood risk to Friston by increasing infiltration within the Order limits as far as reasonably practicable.
3	d. The Applicants' answer seems to be suggesting there is some heritage comparability between Bramford and Friston. From the Applicants' response it is clear that the heritage impacts at Friston are far more severe than at Bramford not least the existence of a Grade II*listed building overlooking the substation site at Friston.	Several Grade II listed buildings are located within 500m of the Order limits of both East Anglia ONE and East Anglia THREE. Only one is affected by both projects. Chapter 25 Onshore Archaeology and Cultural Heritage of the East Anglia THREE ES (paragraph 130) states *"Some indirect impacts on the setting of the Grade II Listed Fidgeon's Farmhouse are anticipated at the proposed substation(s) location which is incorporated in its westerly views. This impact will occur throughout the operational life of East Anglia THREE, which its anticipated to be 25 years"*.
4	e. The Applicants find the comment "relative to Friston, Bramford is easily accessible by road" unclear. A cursory look at the map near Bramford shows the proximity of the A14 and that after leaving the A14 via a slip road only one junction needs to be negotiated before arriving at an existing access road to the substation site.	The Applicants note that the Chapter 27 Traffic and Transport of the East Anglia THREE ES identified potential significant impacts (for Pedestrian Amenity, Road Safety, Driver Delay and Impacts upon Local Routes), all of which can be reduced with appropriate mitigation to minor adverse impacts (see Table 27.23). Given the road network in Suffolk, the issues at Bramford are similar to those for the Projects, accepting that each project has unique issues.
5	f. The Applicants contest that Friston is a tourist destination. This is not the point being made which is that Friston is in an area where tourism is a key part of the local economy, although it should be noted that there is a significant number of second homes and holiday cottages in Friston - second homes weekend /holiday homes 21; Investment / holiday lets 31. The Applicants also show themselves to be very unfamiliar with the area by relying upon Expedia stating that *"a review of the Expedia pages for both locations (a natural potential starting point for visitors) shows similar places to visit including Snape Maltings, Sutton Hoo and Framlingham Castle, none of which are located close to either village".* Aside from the	As referenced in REP7-054, neither Friston nor Bramford are identified in the Expedia pages (a natural potential starting point for visitors) as places for tourists to visit within the area.

ID	SASES' Comment	Applicants' Comments
	fact that Snape Maltings is located close to Friston, the Applicants fail to mention the immediate proximity of the AONB, the beaches at Aldeburgh, Thorpeness, Sizewell, Dunwich, the RSPB nature reserve at Minsmere, the National Trust site at Dunwich Heath, the close proximity of the seaside town of Aldeburgh and village of Thorpeness plus other facilities attractive to visitors including the PRoW network, cycle routes and camping and caravan sites. Only a little farther afield are the towns of Southwold and Orford. This lack of knowledge after years of proposing developments in this area is disturbing.	
2.2 - Item 10 – Leiston Airfield, Harrow Lane, near Abbey Lane, Theberton - Leiston (Old) Airfield, Harrow Lane (two sites)		
6	For its East Anglia ONE project the Applicant used a 5km radius from Bramford NGET substation as its site selection investigation area, and this is consistent with NGET guidance as the distance within which reactive compensation for cable distance is not required at the NGET substation (see previous SASES submissions). National Grid Ventures (NGV) have taken a 5km radius approach to site selection for their projects and both the two sites near Leiston Old Airfield are documented for consideration in public NGV Nautilus material, with the Harrow Lane site (which has extensive tree screening) understood to have been suggested by a Local Authority. And of course Friston residential property at 250m is much closer to the proposed Grove Wood site than Theberton village is to the Leiston Airfield sites at 1km.. The Electricity Action 1989 does require project consideration of efficiency, coordination and economy but also (Schedule 9) proper regard for the preservation of a wide range of environmental features. SASES view is that the Applicant has failed to give sufficient weight to the value of the environmental damage potentially caused by substation construction at Grove Wood and that this should have been considered more broadly and	It is clear that the Applicant and SASES cannot agree on the substation site selection. This lack of agreement however does not alter the fact that a thorough site selection process has been undertaken and presented in ***Chapter 4*** of the **ES** (APP-052); has been the subject of extensive consultation through the Expert Topic Group; has been subject to a number of Public Information Days; and indeed, a dedicated Phase 3.5 consultation phase. The subsequent impact assessment has demonstrated that the environmental impacts of the Projects can be adequately mitigated, with a small number of residual significant effects in a very close proximity to the substations. The Leiston (Old) Airfield is not considered to be a viable site for the reasons set out in the ***Applicants' Comments on Substation Action Save East Suffolk's (SASES) Deadline 5 Submissions*** (REP7-054), and a distinction must be drawn between land which may be available (as proposed by SASES) and a viable site alternative. The Leiston (Old) Airfield is not a viable site alternative. In their representation, SASES neglect to discuss the requirement for a 400kV National Grid substation

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	in more detail in the context of the overall project efficiency and economy. The lack of investigation of possible cable route to Leiston Old Airfield was a choice for which the Applicant was responsible, with NGV having taken a more positive approach. SASES reiterates that it does not accept that the Grove Wood site is the most suitable of those available to the Applicant, and that the site selection investigation area was incorrectly restricted to sites in close proximity to the 400kV overhead lines when it is only the NGET substation itself that needs to be so located.	and a 400kV overhead line or underground cables (with ca. 100m construction swath) between the Leiston Old Airfield and the National Grid substation grid connection point, or indeed traffic impacts from the likely construction access through Yoxford and Theberton from the Projects alone or cumulatively with Sizewell C. The Friston site has been selected following a robust site selection process and is considered by the Applicants to be the most appropriate location for the onshore substations and National Grid infrastructure, where the environmental impacts of the Projects can be adequately mitigated. In circumstances where schedule 9 applies it relates to the project being brought forward .
2.5 Deadline 5 – BEIS OTNR Pathfinder Clarification Note		
7	SASES is concerned that the Applicants comments on Bipole cable technology are based on the original EA3 documentation which may no longer be fully applicable. The Discharge documentation for EA1 shown on page 24 of http://content.yudu.com/web/2it8t/0A4226m/CMS/html/index.html?page=24 clearly shows the cable configuration for EA3 as being that shown in Figure 1 below, with a total of three ducts/cables in one trench, which SASES understands to be indicative of a Bipole connection for the EA3 windfarm. The earlier EA1 and EA3 documentation did refer to Symmetric Monopole connections for EA3 using a trench configuration as shown in Figure 2, with two of the four trenches reserved for 'future projects' allocated to EA3, and each trench containing two ducts/cables as is understood appropriate for Symmetric Monopole. But following relaxation of the Regulation 29 requirement in the EA1 DCO the total number of trenches to be built by the	The drawings referred to in the East Anglia ONE discharge document, the Cable Method Statement, show typical trench layouts for East Anglia ONE and East Anglia THREE. East Anglia ONE is an HVAC-connected project and the drawing shows two trenches, each with three cables within ducts in a trefoil layout which has subsequently been built out. On the drawing the East Anglia Three project also shows three ducts in a single trench , two for DC cables and one spare duct. At the time of discharging the East Anglia ONE consent, East Anglia THREE had yet to be consented so the ducting arrangement proposed was designed as such to provide flexibility for future connection options. By way of clarification of the means of connection to be used, the Applicants confirmed in their Comments on Substation Action Save East Suffolk (SASES) Deadline 5 Submissions (Ref: Rep7-054) at Deadline 7

ID	SASES' Comment	Applicants' Comments
	project was reduced to three, as shown in Figure 1, and this would seem to be incompatible with the use of Symmetric Monopole for EA3 as only one trench remains available for this project. The Bond Dickinson letter to BEIS of 27 June 2016 (copy below) clearly states on page 2 (SASES emphasis) that "*East Anglia ONE propose to lay six onshore cables, in two groups of three, within two trenches and three ducts within a further trench that will be used by East Anglia THREE when that project comes to lay its onshore cables.*" SASES has been unable to find any further details in the published EA3 documentation and would welcome clarification of the means of connection to be used by EA3. Figures 3 and 4 below, taken from a report prepared for Ofgem https:/www.ofgem.gov.uk/ofgempublications/59247/skm-report-calculating-target-availability-figures-hvdc-interconnectors.pdf support SASES understanding of the cabling requirements for HVDC Symmetric Monopole and Bipole. [all figures/documents referred to can be found here https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010078/EN010078-004646-sases%20deadline%208%20comments %20on%20SPR%20D7%20responses%20FINAL.pdf]	that East Anglia THREE proposes the use of symmetrical monopole HVDC technology. This remains unchanged. The projects referred to by SASES are transmission or interconnector projects, not offshore wind generation projects. The technology used for interconnectors differs to that for offshore wind and are therefore not comparable. SPR has recently engaged extensively with the HVDC supply chain globally to ascertain suitable HVDC designs and configurations that maximise transmission capacity for offshore wind generation. This has included spending significant sums with the supply chain in the early design phase. The Applicants are, therefore, very familiar with the grid technologies that are likely to be available for the construction of these projects. Offshore windfarms are complex infrastructure projects and the procurement requires a significant lead in time. There has to be a high level of confidence that the selected technology will deliver as predicted. There are no HVDC technologies that will be cost effective for the Projects.
8	NGESO has indicated to SASES that if Bipole technology is being used (this requires clarification of ID1 above) then subject to suitable converter design such that a single failure did not cause a loss of more than 1320MW of power, then 1700MW could be landed. Such a design is understood to be technically feasible either now or in the very near future.	

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	And in any case relaxation of the 1320MW limit to the 1800MW applicable to interconnectors is known to be under discussion within NGESO. In addition the note in Figure 4 of ID1 above confirms that with a Bipole Metallic Return configuration half capacity remains during cable or pole outages, which should ensure adherence to NGESO Infeed Loss limits with a 1700MW system. SASES view is that the principal objective of a Pathfinder should be to explore the limits of technology and regulation, and points out that SSE and NGET have recently announced two North East Scotland to North East England domestic Interconnectors, each with a power rating of 2GW, described as using Bipole technology. So the technology required for the suggested EA1N/EA2 Pathfinder should be within reach. https://www.sse.com/news-and-views/2020/11/power-firms-unite-to-deliver-underwater-energy-super-highway/ and https://www.spenergynetworks.co.uk/userfiles/file/RIIO-T2_Annex_4_-_Strategic_Reinforcements.pdf SASES continues to believe that there a realistic opportunity for creating an OTNR Pathfinder project as previously described, with a Bipole cable connection to SPR's existing substation land at Bramford and that this opportunity justifies serious consideration	

2.2 ISH11 Submission – Flood Risk and Drainage (REP8-227)

ID	SASES' Comment	Applicants' Comments
Implications of Latest Infiltration Basin Proposals		
1	The latest Outline Operational Drainage Management Plan (Outline Operational Drainage Management Plan - Version 03 24/02/21 REP6-017) includes a sketch figure showing an Option for infiltration basins (Wardell Armstrong Dwg ED11892-C-SK10 Infiltration Basin 10mm Per Hour Options Sketch)	The Applicants confirm this is correct.
2	Figure 16 SUDS Overlay attached to this Briefing Note overlays Dwg ED11892-C-SK10 (Outline Operational Drainage Management Plan - Version 03 24/02/21 REP6-017) on the latest OLMP Proposed Planting Plan (Figure 6 in Outline Landscape and Ecological Management Strategy (OLMP) V03 24/02/21 REP6-007) [figure found here https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010078/EN010078-004656-sases%20appendix%203%20to%20ISH%2011%20 submission.pdf]	The Applicants note Figure 16.
3	From Figure 16 it can be seen that the infiltration basins are considerably larger than the basins shown on the OLMP Proposed Planting Plan and would have the following consequences for the planting: • The triangular area of mitigation woodland located to the south west of the northern basin would have to be omitted. • Whilst a small strip of planting could be accommodated to the west of the northern basin it would need to allow access to the	The Applicants would note that they do not intend to develop the infiltration basins shown on Figure 16, in part for the reasons highlighted by SASES. For clarity, the figure in **Appendix 2** of the ***OODMP*** (REP8-064), which was used to create Figure 16, is indicative and was produced to demonstrate the basin sizes required for an infiltration only scheme based on a highly conservative infiltration rate. Other potential drainage options were additionally presented in the ***OODMP*** (REP8-064), however these have not been overlaid by SASES. The SuDS basins shown on the Outline Landscape Mitigation Plan (OLMP) presented within the ***Outline Landscape and Ecological Management***

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	embankments for maintenance purposes and would be constrained by the access road. • Access to the embankments for maintenance purposes would reduce the area for woodland planting along the southern and western edges of the southern basin. [figure found here https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010078/EN010078-004656-sases%20appendix%203%20to%20ISH%2011%20 submission.pdf]	***Strategy*** (OLEMS) (REP8-019) are based on the attenuation only scheme as described in the ***OODMP*** (REP8-064). As clearly stated in the ***OODMP*** (REP8-064) the Applicants intend to develop a SuDS that utilises the maximum amount of infiltration possible without increasing the basins footprints shown on the OLMP, whilst also considering factors such as landscape planting and ecological receptors.
4	The OLMP Proposed Planting Plan shows areas of tree planting within the infiltration basins. It is unclear why these have been introduced as they will require an overall enlargement of the area of infiltration basins. It is questionable whether trees in these locations and close to the edge of the basins would be compatible with the engineered structures of the Infiltration basins.	Please see response at ID3.
5	The OLMP V03 (REP6-007) was issued on the same date as the Outline Operational Drainage Management Plan - Version 03 (REP6-017) but does not reflect the proposed enlargement of the basins. This suggests that the landscape implications of enlarging the basins have not yet been considered.	Please see response at ID3.
6	The removal of the woodland from the southern and western edges of the northern infiltration basin will limit the effectiveness of the proposed mitigation in views from Footpath 17 which is located to the west of the proposed infiltration basins. The only LVIA Vp from Fp 17 is Vp 1. The grassed bund visible in the visualisation from Vp	Please see response at ID3.

ID	SASES' Comment	Applicants' Comments
	1 (EA1N Landscape and Visual Impact Assessment Addendum - Appendix 1 - Viewpoint 1 REP4-032) is the edge of the drainage basin. The visualisation shows no planting on the embankments and, as set out above, a maintenance access strip would need to be kept clear along the foot of the embankment, further limiting the planting.	
7	Further north on Fp 17 the space for mitigation planting is limited to a strip either side of the access road for the substations. This strip between the footpath and the access road is shown as 'Potential Early Core Woodland Planting' on Figure 3 OLMP General Arrangement (OLMP V03 24/02/21 REP6-007). However, this strip is not sufficiently wide to accommodate meaningful woodland planting and it is likely to have the appearance of a line of trees rather than woodland. The proposed changes mean that there is a similar strip on the eastern side of the access road and the space for the new planting will be limited by the need to include maintenance access for the embankment. This strip is also not sufficiently wide to be able to accommodate woodland of any significance.	The Applicants note that Footpath 17 runs to the west of the strip of proposed core woodland planting, which is to the west of the onshore substation access road. The width of core woodland planting at this location as shown on the OLMP is approximately 7m wide. Whilst the extent of planting is not expected to fully screen the view of the access road from Footpath 17 at this specific location, planting is anticipated to soften views of the access road. Furthermore, the utilisation of the onshore access road during operation will be infrequent and so encountering vehicles along the access road is considered to be unlikely. It should also be noted that the terminology used to describe the differences in planting refers to its species composition rather than its area, as explained in Paragraph 94 of the ***OLEMS*** (REP8-019). With regard to the proposed landscape planting east of the onshore substation access road, the Applicants note that the final ODMP will have regard to landscape planting to ensure sufficient visual screening of the onshore substations is achieved. However, it is also noted that the figure presented demonstrates the worst-case footprint for the National Grid substation. Should the National Grid substation footprint decrease at the detailed design stage, additional space will become available to accommodate SuDS basins and further planting (if required). The Applicants are therefore confident that meaningful woodland planting can be established within these specific areas and across the wider onshore substation location.

ID	SASES' Comment	Applicants' Comments
8	The Potential Early Core Woodland Planting ends just south of the overhead lines presumably due to the restrictions on planting under the overhead lines. This will allow open views from this section of Fp 17 towards the infiltration basin and the substations beyond.	The Applicants note the restrictions on planting beneath overhead lines and that it will not be possible to screen views of the onshore substations and associated SuDS basins from all points along Public Right of Way (PRoW) network within the immediate vicinity of the substations. Notwithstanding this , the Applicants consider that the propose landscape planting has had regard to the PRoW network and note that many views from the permanent PRoW diversions will be afforded screening of views of the onshore substations.
9	The embankments of both infiltration basins will now be close to and parallel with Fp 17 for approximately 350m. Previously only 80m of the southern basin was close to and parallel with Fp 17.	Please see response at ID3.
Implications for Impacts		
10	The new infiltration proposals will exacerbate the harm to the visual amenity of Fp 17. Fp 17 is the only remaining northbound footpath in the landscape to the north of Friston; an area of landscape that has been identified as having cultural, visual and recreational importance to the village of Friston. The new infiltration basins will: • Limit the amount of new woodland planting to the east of the access road • Bring engineered groundworks which cannot be planted closer to Fp 17 • Extend the length of engineered groundworks close to Fp 17 from 80m to 350m	Please see response at ID3.
11	Fp 17 is already very significantly affected due to proximity to the substations. Additionally, due to constraints there is a lack of existing vegetation where the footpath passes under the high	Please see response at ID8.

ID	SASES' Comment	Applicants' Comments
	voltage power lines. Due to these constraints no significant planting is proposed in this area within the OLMP. In fact, the realignment of the most northerly power line and the introduction of an additional pylon has increased the area in which there are restrictions on planting. The effect of these constraints is very clear from the visualisations from Vp 5 which is located at the northern end of Fp17. There is a negligible reduction in visual impact even after 15 years	
Conclusion		
12	The new proposals for infiltration basins as set out on Dwg ED11892-C-SK10 (Outline Operational Drainage Management Plan - Version 03 24/02/21 REP6-017) will exacerbate the already significant harm to the visual amenity of the one remaining northbound PRoW to the north of Friston. They would further reduce the amenity of the landscape to the north of Friston as a resource for residents and visitors.	Please see response at ID3.

2.3 ISH12 Submission – Noise (REP8-220)

ID	SASES' Comment	Applicants' Comments
Operational noise		
1	Detailed explanations are provided in the attached submissions from Mr Thornely-Taylor. By way of summary in respect of operational noise matters, SASES emphasises: a. The evidence unequivocally points to very low background noise levels at relevant residential receptors in Friston. It is an "exceptionally quiet" area; b. When the measured background levels from SSR9 are taken into account, the BS4142 would indicate a rating level for SOAEL (background +10dB) at 28 dB LArTr and LOAEL (background +5dB) at 23 dB; c. Since these figures are very low It is right to take account of absolute sound levels. Considering this, and applying appropriate guidance, a noise limit of 30dB at relevant receptors is appropriate to meet the requirements of national policy	This is the first time within the Examinations that SASES has attempted to address the absolute sound level in accordance with Section 11 of BS4142:2014+A1:2019. The Applicants are grateful that SASES has now given its advice on this matter. SASES' proposed noise rating limit of 30dB is remarkably close to the rating limits of 31dB and 32dB proposed by the Applicants in Requirement 27 of the ***draft DCO*** (REP8-003). A difference of 1dB to 2dB is negligible in the context of adverse effects of noise at night. Furthermore, at Deadline 8, the Applicants updated the wording of **Requirement 12** of the ***draft DCO*** (REP8-003) and further updated the ***Substations Design Principles Statement*** (REP8-082) which states: *"Further discussion will be undertaken during the detailed design process to where the Applicant will seek to further minimise the operational noise rating level below the limits set out in Requirement 27 of the DCO and avoid any perceptible tones and other acoustic features insofar as these mitigation measures do not add unreasonable costs or delays to the Project or otherwise result in adverse impacts on other aspects of the environment (e.g. landscape and visual impacts). It is at this detailed design stage that determination of the final mitigation measures will be established".* This commitment to further minimise the noise rating level below the limits set out in **Requirement 27** of the ***draft DCO*** (REP8-003) as far as reasonable means that there is truly little difference between the Applicants and SASES on this matter, if at all. It is hoped that this will be acknowledged by SASES and the Applicants will be seeking confirmation as to whether it now accepts the proposed controls to limit and minimise operational noise.

ID	SASES' Comment	Applicants' Comments
2	Additionally, SASES notes the use of a separate low frequency noise requirement which was agreed to be appropriate for the Vanguard and Boreas proposals at Necton, together with the existing Dudgeon substation in the same location. The Applicants have not identified any reason why a similar low frequency noise requirement should not be imposed here. Indeed, their case on low frequency noise would suggest that such a requirement is acceptable.	This is the first time that SASES has proposed a limit of 32dB LLeq (15 minutes) in the 100Hz third octave band and it appears that it does so without any reference to expert evidence or recognised standards and guidance. SASES' argument is that it was considered at the Examinations of the Norfolk Vanguard and Norfolk Boreas DCOs. No further explanation is provided as to why a limit considered in a different DCO and in a different context would be appropriate to the Projects. The low frequency noise limit of 32dB LLeq (15 minutes) in the 100Hz third octave band is substantially different from that proposed by Mr Thornley-Taylor at ISH12, with further clarification at page 9 of ***Written Summary of Oral Case Issue Specific Hearing 12*** (REP8-097). In order to compare the values, it is necessary to compare them on an equivalent basis. The 32dB LLeq value is a liner level that is not A-weighted. At page 9 the 38dB LLeq level indoors is corrected by 10dB to convert the indoor level to an external level of 48dB. A 6dB correction is then recommended to allow for tonality *"were the noise to contain highly perceptible tonality"*, which it will not. This suggests an LLeq external level in the 100Hz third octave band of 42dB. This is 10dB higher than that now proposed by SASES. The ***Applicants' Position Statement on Noise*** (REP8-039) explains that Mr Thornley-Taylor's proposed low frequency limit should not be preferred because it is based upon an extrapolation to guidance which is inappropriate in itself for the situation relating to the onshore substations. Neither is it necessary as it is attempting to control a matter which is already addressed by BS4142:2014+A1:2019, which accounts for tones at 100Hz perfectly well as it has done since its inception. BS4142:2014+A1:2019 is the recognised standard and, as such, the limits set out in Requirement 27 of the ***draft DCO*** (REP8-003) and there is no need to supplement it with inappropriate guidance and fuzzy logic. It is for these reasons that the limit of 32dB LLeq (15 minutes)

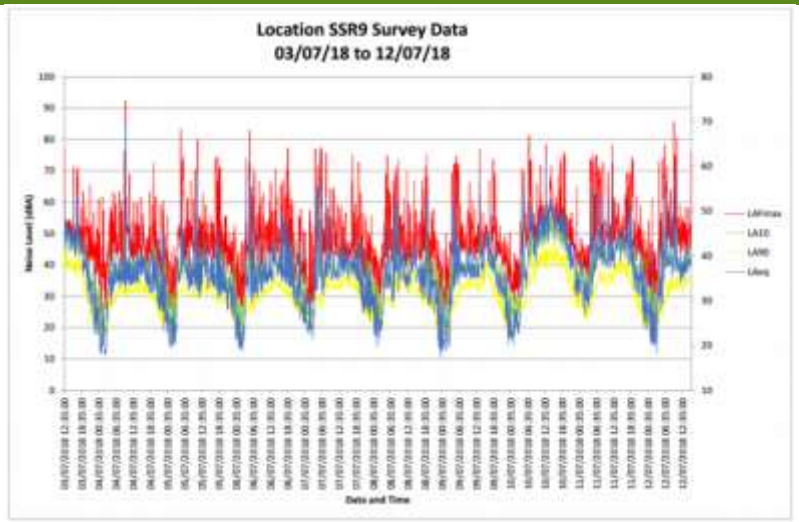
ID	SASES' Comment	Applicants' Comments
		in the 100Hz third octave band now proposed by SASES is not considered appropriate or necessary. The Applicants do not understand why SASES would suggest that its case *"on low frequency noise would suggest that such a requirement would be acceptable*." For the avoidance of any doubt, the Applicants consider that the proposed low frequency noise limit of 32dB LLeq (15 minutes) in the 100Hz third octave band is unnecessary, impractical and unreasonable and does not therefore meet the tests for the imposition of a DCO Requirement. The imposition of such a limit without any regard to the costs, engineering implications and other environmental considerations is plainly at odds with the relevant noise policies set out in the National Policy Statements. As mentioned, the Applicants updated the wording of Requirement 12 of the ***draft DCO*** (REP8-003) and further updated the ***Substations Design Principles Statement*** (REP8-082) at Deadline 8. Amongst other things, REP8-082 states that: *"Further discussion will be undertaken during the detailed design process to where the Applicant will seek to further minimise the operational noise rating level below the limits set out in Requirement 27 of the DCO and avoid any perceptible tones and other acoustic features"*. It is hoped that the measures proposed to avoid perceptible tones will overcome SASES' concerns about tonal noise at 100Hz. The Applicants will seek SASES's confirmation as to whether they now accept the proposed controls to limit and minimise operational noise.
3	It remains SASES's case that the Applicants cannot demonstrate that an appropriately set operational noise requirement can be achieved. That is because the Applicants continue to claim that it is unlikely that penalty for tonality will be applied when assessing the rating level at a	The ***Applicants' Position Statement on Noise*** (REP8-039) elaborates further how tonal noise and other acoustic features will be controlled and avoided. This should provide SASES with confidence that tones or other features will not be

ID	SASES' Comment	Applicants' Comments
	relevant receptor. SASES consider that a penalty is highly likely to be necessary. If it is, then the appropriate rating level cannot be achieved and there is no identified mitigation measure which could be applied to ensure that it is achieved.	highly perceptible so as to attract a 6dB correction in accordance with BS4142:2014+A1:2019. Mr Cobbing's observations would suggest that a 6dB correction would not be justified even at a listening position immediately adjacent to the perimeter of the onshore substations. Mr Baxter's observations confirmed that even during the quietest times of the night no tonal noise is likely to be audible at distances of more than 100m from the onshore substation.
4	The Examining Authority should recommend refusal of development consent if it is not satisfied that an appropriately framed operational noise requirement (i.e. one which would avoid significant adverse effects, and minimise other noise impacts) is not demonstrably achievable. These matters cannot be left to enforcement after the scheme becomes operational, because absent any evidence that further mitigation is achievable, enforcement would either (a) result in the operation having to cease (and thus the benefits of the schemes being lost) or (b) lead to an application to vary the noise limits out of necessity	The ***Applicants' Position Statement on Noise*** (REP8-039) shows how the rating level limits can and will be achieved. The provisions set out in the updated ***Substations Design Principles Statement*** (REP8-082) demonstrate how the design will be assured so as to meet the limits set out in **Requirement 27** of the ***draft DCO*** (REP8-003) and minimise further if it is reasonable to do so. The updated the wording of **Requirement 12** of the ***draft DCO*** (REP8-003) now contains provision: *"No stage of Work No. 30 may commence until written details of the specification of plant, and any noise mitigation proposed in respect of Work No. 30 together with updated modelling, have been submitted to and approved in writing by the relevant planning authority"*. This provision to approve the noise controls before works commence should overcome SASES' concerns about the achievability and enforceability of the ***draft DCO*** (REP8-003).
5	The Applicants have still failed to address the impacts of the impulsive noise created by switchgear switching. This may occur at night when it would certainly disturb sleep. They propose no controls	It is not appropriate to suggest that impulsive noise created by switchgear could give rise to a significant adverse impact. The Applicants address this matter in their ***Noise Modelling Clarification Note*** (REP4-043) where it was stated that the predicted maximum noise levels

ID	SASES' Comment	Applicants' Comments
	over this operation. At present this is an unmitigated significant adverse effect.	due to switchgear operating was 60.9dB LpAFMax and was further noted that this is below typical maximum noise levels measured at the monitoring locations during the night-time period. As the operation of switchgear is an occasional emergency operation such noise was not warranted further consideration. It is also worth noting that SASES' claim does not appear to be supported by any reference to expert evidence or recognised guidance. As the ExA is aware, Rupert Thornley-Taylor has been involved in the promotion of HS2. The HS2 Information Paper E20: Control of Airborne Noise from Altered Roads and the Operational Railway recommends a night period Lowest Observed Adverse Effect level of 60 LpAFMax (at the façade, from any nightly noise event). This value is derived from the World Health Organisation 1999 Guidance. The HS2 SOAEL value is 80 LpAFMax (at the façade, from more than 20 nightly train passbys), or 85 LpAFMax (at the façade, from 20 or fewer nightly train passbys). It cannot be suggested that an occasional or rare event just exceeding a recognised LOAEL value for event noise could be considered a significant adverse impact.
6	Paragraph 5.11.9 of EN-1 provides: "5.11.9 The IPC should not grant development consent unless it is satisfied that the proposals will meet the following aims: • avoid significant adverse impacts on health and quality of life from noise; • mitigate and minimise other adverse impacts on health and quality of life from noise; and	The controls set out in **Requirements 12** and **27** of the ***draft DCO*** (REP8-003) go well beyond the policy aims. The ***Expert Report on Noise*** submitted at Deadline 7 (REP7-041) confirms that no adverse impacts would be expected at a rating level of 35dB. The requirements go beyond that and limit the rating level to 31dB and 32dB. This is notably close to SASES' proposed limit of 30dB. The provisions set out in the updated ***Substations Design Principles Statement*** (REP8-082) commit the Projects to reducing the rating level further where it is reasonable to do so.

ID	SASES' Comment	Applicants' Comments
	• where possible, contribute to improvements to health and quality of life through the effective management and control of noise."	The ExA can have no hesitation that the policy aims have been more than met.
7	For the reasons summarised above, the Applicants have not demonstrated that the proposals will avoid significant adverse impacts on health and quality of life from noise. Accordingly, the NPS is clear that the Secretary of State "should not grant development consent"	Please see response at ID6.
Construction noise		
8	There has been further discussion between SASES and the Applicants after the ISH12 in respect of construction noise. A revised draft of the OCoCP is expected and will be reviewed and commented on further at Deadline 9.	Confirmation has been received that the updated ***Outline Code of Construction Practice*** (OCoCP) (REP8-017) is now agreed.
9	In those discussions, the Applicants' experts have agreed with SASES that no construction work should take place between 0700-0800 and 1800-1900. Those "shoulder" periods can be used for start up/shut down activities which do not involve construction. Since that position is now agreed for the OCoCP, the construction hours requirements (requirements 23 and 24) should be amended as requested by SASES to read in each instance: *"(1) Construction work for the [grid connection/transmission] works must only take place between 0800 hours and 1800 hours Monday to Friday and 0800 hours and 1300 hours on Saturdays, with no activity on Sundays or bank holidays, except as specified in paragraph (2).*	Confirmation has been received that the updated ***OCoCP*** (REP8-017) is now agreed.

ID	SASES' Comment	Applicants' Comments
Applicants ESC and SASES to provide final written positions explaining their technical position in relation to the assessment method and approach to background noise levels, reasons for the apparent differences of view and evidence in the technical literature upon which each view is based.		
10	The applicants appear now to accept that the night time background levels in the Friston area are low, although Colin Cobbing qualified this acceptance orally at ISH12 by saying that the very low noise levels occur in the middle of the night, citing the commentary on 8.1 *"General" in BS 4142 which states "Among other considerations, diurnal patterns can have a major influence on background sound levels and, for example, the middle of the night can be distinctly different (and potentially of lesser importance) compared to the start or end of the night-time period for sleep purposes. Furthermore, in this general context it can also be necessary to separately assess weekends and weekday periods".* However, while the diurnal patterns from the measurement survey are not reproduced in the ES, they can be found in the PEIR, and at the particularly quiet location SSR9 the lowest levels can be seen to occur just after midnight, and the background drops to low levels before midnight which for people who are not particularly early retirers is the start of the night time period rather than the middle of the night.	Matters relating to background sound levels are addressed further in the ***Applicants' Position Statement on Noise*** submitted at Deadline 8 (REP8-039).

ID	SASES' Comment	Applicants' Comments
		
11	The applicants found the background level at SSR9, not far from SSR3, to be 18 dBA. This being a low value the advice of BS4142 11 (1) to consider absolute the level of sound is relevant.	Matters relating to background sound levels are addressed further in the ***Applicants' Position Statement on Noise*** submitted at Deadline 8 (REP8-039), including those matters raised about SSR9.
12	While the applicants have not carried out the work necessary to determine the degree of tonality in the received sound, it is not in dispute that noise from substations includes single-frequency noise at 100Hz.	Matters relating to tonality have been addressed further in the ***Applicants' Position Statement on Noise*** submitted at Deadline 8 (REP8-039).
13	This matter was considered at the examination of the Norfolk Vanguard and Norfolk Boreas DCOs, and resolved in the Statement of Common Ground for both projects.	The proposed low frequency noise limit is considered at ID2.

ID	SASES' Comment	Applicants' Comments
	<table><tr><th>Topic</th><th>Norfolk Boreas Limited position</th><th>Breckland Council position</th><th>Final position</th></tr><tr><td>Approach to mitigation</td><td>The mitigation proposed (section 25.8.6.2 of ES Chapter 25 (APP238) will ensure the noise rating level (defined by BS4142) from the operation of the substation shall not exceed 35dB LAeq, (5 minutes) at any time at a free field location immediately adjacent to any noise sensitive location, and will ensure that noise from the operation of the substation shall not exceed a limit value of 32dB LLeq (15 minutes) in the 100Hz third octave band, at any time at a free field location immediately adjacent to any noise sensitive location.</td><td>Agreed</td><td>It is agreed by both parties that the mitigation proposed will achieve the appropriate noise rating level at the substation.</td></tr><tr><td>Wording of requirement(s)</td><td>The wording of Requirement 20 and 27 provided within the draft DCO (document refence 3.1 of the Application, APP-020) (and supporting certified documents) for the mitigation of impacts associated with noise and vibration are considered appropriate and adequate: "27. – (1) The noise rating level for the use of Work No 8A must not exceed 35dB LAeq (5 minutes) at any time at a free field location immediately adjacent to any noise sensitive location. (2) The noise rating level for the use of Work No. 8A must not exceed 32 dB LLeq (15 minutes) in the 100Hz third octave band at any time at a free field location immediately adjacent to any noise sensitive location."</td><td>Agreed</td><td>Agreed</td></tr></table>	
14	These conditions have been applied to the existing Dudgeon scheme at Necton and according to the applicant in the Norfolk cases have been taken forward through agreement with stakeholders as suitable to form the basis of DCO requirements for Norfolk Boreas independently, and cumulatively with Norfolk Vanguard	The proposed low frequency noise limit is considered at ID2.
15	A similar requirement to 27(2) in the Norfolk Vanguard and Norfolk Boreas dDCO for EA1N and EA2 would achieve the appropriate noise rating level at the substation. However, in the EA1N and EA2 case, consequent upon the very low background noise levels, the figure of 35 dB LAeq should be replaced by 30 dB LAeq.	The proposed low frequency noise limit is considered at ID2.

ID	SASES' Comment	Applicants' Comments
Final submissions are requested from the Applicants, ESC and SASES in respect of the 6dB correction proposed by SASES to address the tonal characteristics of operational noise (as suggested by BS4142) explaining whether this approach is justified and if not, why not.		
16	The applicants have not provided information to enable the correct conclusion to be reached as to whether a correction should be applied in the determination of the rating level LArTr. In the absence of such information the precautionary approach should be taken and 6dB should be applied in the assessment, and a valid environmental assessment must include a description of the mitigation measures required as a consequence, and a prediction of the residual effects after inclusion of the mitigation, together with an assessment of the residual effects against policy requirements, including those of EN-1.	Matters relating to tonality have been addressed further in the ***Applicants' Position Statement on Noise*** submitted at Deadline 8 (REP8-039).
17	Similar submissions are requested in respect of any other relevant characteristics of operational noise, including multiple sources and the possibility of interference patterns. BS 4142, in section B.2.2.1 "Spectral content (broadband and tonal sound)" acknowledges the occurrence of standing waves/interference patterns are present are advises consideration of the nature of the source and the influence of any nearby sound reflecting surfaces. In addition to the effect of reflecting surfaces, in this case interference will occur as a result of the presence of two similar sources with 100Hz content. Where sound from two sources of the same frequency occurs, there will be locations where the two signals are in phase, as a result of which pressure summation and not intensity summation determines the combined sound level. The prediction process used by the applicants carries out intensity sums of combined sources which yields an answer 3dB less than the result of pressure summation when the two sources are of equal level. This is a matter of fact rather than conjecture or opinion.	Matters relating to acoustic features resulting from interference patterns have been addressed further in the ***Applicants' Position Statement on Noise*** submitted at Deadline 8 (REP8-039).

ID	SASES' Comment	Applicants' Comments
18	BS 4142 also advises in B.2.2.1 "Gauge whether uncertainty could be significant when measuring sound at low and high frequency regions, e.g. below approximately 125 Hz or above 4 kHz respectively."	The Applicants submissions on noise at Deadlines 2 (REP2-011), 4 (REP4-043), 5 (REP5-022), 7 (REP7-041) and 8 (REP8-039) address how uncertainty has been addressed in the assessment and will continue to be addressed throughout the design process.
19	The prediction method used, which assumes flat ground surfaces, yields a large amount of sound attenuation in the frequency range around 100Hz. This will not occur if source heights are greater than those assumed, if the ground near the source turns out to be hard, or if atmospheric conditions mean that the effective source height is increased by velocity gradients, or light turbulence means that straight-line propagation paths do not occur. These effects are more important than is usually the case in BS4142 assessments because of the long distances involved. Atmospheric absorption is also significant in the prediction process, and different results are obtained according to the choice of temperature and humidity. The full range of possible conditions should be tested in the prediction model in order to yield an uncertainty range around the single-figure prediction results presented by the applicants. The applicant has not done this. The proposed plant should be designed in order to meet the noise requirements at the top end of the calculated uncertainty range.	The Applicants submissions on noise at Deadlines 2 (REP2-011), 4 (REP4-043), 5 (REP5-022), 7 (REP7-041) and 8 (REP8-039) address how uncertainty has been addressed in the assessment and will continue to be addressed throughout the design process. The various submissions demonstrate how the requirements of BS4142:2014+A1:2019 have been satisfied in full.

2.4 ISH13 Submission – Traffic and Transport (REP8-223)

ID	SASES' Comment	Applicants' Comments
Agenda Item 2 – AIL and HGV		
1	[redacted] on behalf of Suffolk County Council expressed serious reservations about the Applicants' proposals referring to them as the "least worst option" and expressing concerns about the resilience of the plans. This of course derives from the Applicants' inadequate site selection when in the RAG assessment they gave Friston a green rating in respect of accessibility1 . That has proved to be somewhat optimistic. The contrast with the existing Bramford substation site (indicated with the red pointer) could not be more stark as can be seen from the map below. Bramford is accessed from the A14, the major trunk road which links the container port of Felixstowe to the national motorway network. Traffic travelling from Felixstowe merely has to exit the slip road to join the B1113, the first part of which is dual carriageway. It then needs to proceed for a short distance until it turns right onto Bullen Lane which is the access road to the substation. No railway lines have to be crossed and only a single watercourse. Further the traffic does not need to pass through any towns or villages. As Councillor Fellowes of Aldeburgh Town Council noted, the delivery of AILs to this manifestly easily accessible location still caused serious problems.	The Applicants do not deem it appropriate to compare the Friston and Bramford substation sites as each underwent a rigorous site selection process to ensure that all receptors, including traffic flows and roads, were taken into consideration. It is important to note that the Red Amber Green (RAG) assessment considered the potential associated onshore cable route traffic impacts (in addition to substation traffic impacts). However, accepting that Bramford substation could lead to a 37km onshore cable route, the traffic (and other) impacts are anticipated to be greater than that of a Friston site. With regard to AIL routing, the challenge of securing passage over structures for a Special Order AILs is common to all highway routes irrespective of apparent accessibility. This was discussed at ISH13 and is reflected in the ***Applicants' Written Summary of Oral Case ISH13*** (REP8-098) (SCC refer to a temporary bridge being utilised to secure a similar weight Transformer AIL movement from Ipswich Docks over the A137 Wherstead Road Bridge spanning Belstead Brook). The ***Applicants' response to Suffolk County Councils Deadline 8 comments*** (document reference ExA.AS-6.D9.V1) sets out the comprehensive procedures the Applicants have followed to secure passage for both the preferred AIL port origin (Lowestoft) and the contingency port origin (Felixstowe). Highways England administer applications for Special Order AIL movements as agents for the Department for Transport. The Applicants' Statement of Common Ground with Highways England

ID	SASES' Comment	Applicants' Comments
		(REP8-117) confirms that the "… *the proposed routing of AIL movements associated with the Projects are acceptable*".
2	In terms of resilience, when the Applicants when questioned on the likelihood of equipment failure which may require delivery of AILs in the future, the best the Applicants could do in support of their proposition that equipment failure will not arise was that the transformers "were not designed to fail". Self-evidently nothing is "designed to fail" however the reality of the world is that equipment does fail. Furthermore if there are four items of a particular piece of plant then the likelihood of any one of those four items failing increases by a factor of four. These factors alone cause serious doubt on the viability of the Applicants AIL and HGV strategy.	The Applicants would reiterate their previous position that the transformers are designed not to fail and should not need to be replaced during the lifetime of the Projects. Any replacement would be due to an unplanned failure / emergency only and would be a rare event. This position applies equally to all transformers. The Applicants would also clarify that in the rare event of a transformer failure, the onshore substation will still function (at reduced capacity) using the remaining transformer.

ID	SASES' Comment	Applicants' Comments
		A transformer has a lead in time of a minimum of 12 months, affording ample time to agree a haulage strategy with the Police, Highways England and SCC should the need arise.
Agenda item 3(b) (d) &(f) – A12/A1094 Friday Street Junction		
3	Previous submissions have been made in respect of the signalling proposals for this junction the consequent congestion risks with knock-on effects of congestion and safety issues elsewhere – see paragraphs 23–29 of SASES Deadline 5 submission – Comments on Applicants deadline 4 submissions (REP5-097). Submissions have also been made in respect of the suitability of the A1094 to carry substantial volumes of HGVs.	Please refer to the ***Applicants' Written Summary of Oral Case Issue Specific Hearing 13***, Agenda items 2.2.3, 3.4 and 2.2.3.6 (REP8-098).
4	The Applicants and outline construction traffic management plan (REP6-009 (clean)) is inadequate in the following respects	No further comment.
5	Table 2.1 details the forecast HGV movements on a daily basis. However there is no analysis as to how long this Will continue. This is relevant to understanding the duration of the disruption (noise, application, congestion etc) will continue). Also it prevents any analysis as to whether substantial HGV movements will clash with peak visitor periods and the numerous events which take place in this part of East Suffolk.	The assessment considers the impacts of the worst case peak construction traffic demand for the Projects. However, details of the profile of HGV movements per month are also provided with ***Appendix 26.14*** (APP-540) and ***Appendix 26.23*** (APP-549). The Projects' assessment is based on a forecast worst case daily HGV demand of 270 two-way daily HGV movements during peak construction. To contextualise (with reference to ***Appendix 26.23*** (APP-549)) this demand is forecast to occur for one month only (month 34). For the total duration of the construction phase the average daily HGV demand is forecast to be at a much reduced 153 daily movements.
6	Paragraph 54 there should be no deliveries prior to 7 am in the morning or after 7 pm at night. Further (see third bullet) advice to drivers not to	The ***Outline Construction Traffic Management Plan*** (OCTMP) (REP8-021) defines construction HGV traffic operating outside of

ID	SASES' Comment	Applicants' Comments
	wait overnight is not sufficient. There should be an absolute prohibition on overnight waiting.	agreed hours or not parking in designated areas as a breach whereby corrective (enforcement) measures would be triggered.
7	Table 2.3 - measures adopted during events. The controls around "managing traffic demand during major events on the highway (e.g. bike races praise et cetera) and around public holidays is inadequate given the multiplicity of major events which take place in this part of Suffolk. Those events may not constitute "major events on the highway" but they do relate to result in very substantial increases in traffic. Given the years which the Applicants have had to develop these plans it is unsatisfactory that the OCTMP clearly indicates (see fourth box down on the right) that the Applicants are not aware when major events will occur, not least given the multiple representations made by residents and interested parties during both consultation and examination. It demonstrates the Applicants have failed to engage with the traffic issues specific to this area.	The ***OCTMP*** submitted at Deadline 8 (REP8-021) has been updated to clarify that this measure applies to major events that impact on the highway.
Agenda item 3(c) – Traffic in Aldeburgh and Leiston Assessment of Existing Environment : Traffic Surveys		
8	As stated at ISH13, the Applicants' assumptions about projected impact of Construction Traffic (including large numbers of HGVs) on existing rural roads in the locality was informed by Automated Traffic Counts (ATCs) of existing Annual Average Daily Traffic Flows. These were presented in the PEIR.	***Section 26.5.2*** of ***Chapter 26 Traffic and Transport*** of the ES (APP-074) outlines the comprehensive baseline data collection exercise undertaken to capture traffic flow data for all the key links within the onshore highway study area. This approach includes data collected from four separate sources, namely Automatic Traffic Counts (ATC) counts commissioned by the Applicants, ATCs and turning counts from SCC and traffic count data published by SZC. In addition to the data collection exercise, multiple site visits were undertaken to validate desk based information. ***Table 26.12*** of ***Chapter 26 Traffic and Transport*** (APP-074) includes a comparison of the baseline
9	The Applicants correctly indicated at ISH13 that traffic surveys are essential in order to determine a least worst project design, but would seem to have relied entirely upon ATC data without 'sanity checking' the results through 'eye ball' observation of actual traffic flows.	

ID	SASES' Comment	Applicants' Comments
10	A numerical distribution of vehicle types (by DfT class) should have formed the basis of SPR's analysis of 'present state' traffic flow and should have been presented in the PEIR, together with a forecast distribution by actual class of vehicle planned for use during the construction programmes. The absence of such analyses has been a major shortcoming in the Applicants' Traffic and Transport submissions.	Commissioned ATC traffic flows captured by the Applicants and also data captured by SCC and EDF Energy for SZC, and identifies that with regards to total traffic flows there is generally a good correlation between the datasets and with regards to HGVs that there is generally good correlation between the Commissioned ATCs, SZC forecast and SCC turning counts. The traffic and transport assessment adopts the Department for Transport (DfT) system to classify vehicles by type. The DfT system is a nationally prescribed traffic classification system, adopted by traffic count specialist suppliers. This classification system allows for direct comparison and validation of data across multiple data sources and projects as evidenced within ***Table 26.12*** of ***Chapter 26 Traffic and Transport*** (APP-074). It is reiterated that 96% of the Projects' peak HGV demand will be contained on designated Suffolk Lorry Distributor Routes.
11	Vehicles with Gross Weight in excess of 7.5 tonnes are at present a rarity on the quiet B class rural roads in the Substations and Cable Corridor area along which SPR intends to direct its HGV Construction traffic,	
12	On some of the quiet rural roads along which SPR intends to direct its HGV Construction traffic, vehicles with Gross Weight in excess of 7.5 tonnes are at present a rarity. The Applicants' PEIR ATC reports included DFT Class 5, type 2 R4 vehicles as HGV traffic.	
13	It has been accepted by DfT that Class 5 counts are notoriously inaccurate. Most vehicles counted in Class 5 are actually small transit type delivery vans and lorries under 7.5 tonnes gross weight.	
14	SASES anticipates that the majority of HGV traffic associated with EA2 construction having greatest impact on local communities would comprise Class 7, 35 tonne flat bed 4 axle flat bed lorries carrying aggregates etc. Consequently some of the PEIR forecast percentage increases in HGV volumes would be gross under estimates.	
15	SASES presented detail at ISH13 on an example taken from the PEIR. The Classified 24/7 ATC carried out by Royal Haskoning DHV at Traffic Count 5 from 3 June 2018 counted an AADT of 139 HGVs passing along B1122 at Aldringham. Through subsequent examination of this base data, SASES determined that 100 of those were type R2 / Class 5 and would	

ID	SASES' Comment	Applicants' Comments
	have in the main comprised local delivery vans, not HGV's as the general public understands the term. The Applicants' ATC Survey counted only 39 vehicles in classes 6 to 11, of which 23 were buses.	
Agenda Item 4(e) – Cumulative effects		
16	The Applicants have made no attempt to assess what the cumulative impact may be of further energy projects in particular the two NGV projects Nautilus and Eurolink. SASES have made previous submissions on this subject in particular the expansion of the National Grid substation at Friston, the fact that National Grid take a "standard approach" to substation design and the documentation issued by NGV showing landfall between Thorpeness and Sizewell with a cable route, some or all of which will follow the cable route proposed by the Applicants. A key document is the Nautilus Interconnector Briefing pack published by National Grid Ventures in July 2019.	The Applicants have considered the cumulative impact of the potential effects of extending the National Grid substation to accommodate future projects within the ***Extension of National Grid Substation Appraisal*** submitted at Deadline 8 (REP8-074).
17	Given the traffic analysis of the area (however flawed) carried out by the Applicants and given the experience of the developers with similar projects, there should be sufficient information available to conduct a cumulative impact assessment recognising that of course some assumptions would need to be made. It is not acceptable that no attempt whatsoever has been made to cumulatively assess traffic impacts not least on the A12 and at the Friday Street junction which will inevitably be used as the access to this area.	It is not known where National Grid Ventures will make landfall, the grid location they will choose, how they will manage their construction traffic or which converter station location or cable corridor they will adopt. Nevertheless, the Applicants have provided a high level cumulative traffic analysis of the area in **Table 3.1** of the ***Extension of National Grid Substation Appraisal*** (REP8-074). Within **Table 3.1** it is concluded that maintenance of any extensions would be accommodated within that currently proposed for the National Grid substation and therefore it is highly unlikely that there would be any change to the impacts assessed in ***Chapter 26*** of the **ES** (APP-074).
Agenda Item 5 - Any other business relevant to the Agenda - Stopping up of Streets		

ID	SASES' Comment	Applicants' Comments
18	The Applicants responded to ExQ1 on page 7 at para 1.6 Road Crossings [REP1-091] with a commitment regarding the Stopping Up of B1353 (Thorpeness Road), B1122 (Aldeburgh Road), Sloe Lane, B1069 Snape Road and Grove Road as follows: "The Applicants' design basis for the crossing of roads is to use traffic signal control to reduce traffic down to one lane, allowing works to be undertaken on the closed lane. Once completed, open and closed lanes will be reversed allowing works to be undertaken on the newly closed lane. This process will be followed on the five public roads that the onshore cable route crosses. The Applicants therefore do not consider that trenchless techniques are necessary to cross these roads". It not clear how this commitment that those roads and pavements would not be fully closed during construction is secured in the Draft Development Consent Order.	***Section 4.3*** of the ***OCTMP*** (REP8-021) includes details of the measures to ensure that the roads that need to be crossed by the onshore cables can remain open at all times. The ***OCTMP*** (REP8-021) is secured by Requirement 28 of the ***draft DCO*** (REP8-003).

2.5 ISH15 Submission – draft DCOs (REP8-228)

ID	SASES' Comment	Applicants' Comments
Agenda Item 2		
1	It was noted that the Applicants had not entered into discussions with SASES since earlier ISHs. SASES noted that it would make further submissions in writing on points of detail, but sought to identify certain broad points which remained unaddressed.	Noted.
2	The comments of Suffolk County Council in respect of "onshore preparation works" were endorsed.	The comments raised by Suffolk County Council (SCC) in respect of "onshore preparation works" were resolved with SCC following ISH15 by way of an update to **Requirement 32** of the ***draft DCO*** (REP8-003) to refer to onshore preparation works. This is reflected in the ***draft DCO*** (REP8-003) that was submitted at Deadline 8.
3	On specific provisions, SASES noted: a. Article 4: the power to maintain should be constrained to the development as constructed, rather than to the envelope assessed in the ES. b. Article 7: SASES is disappointed that the Applicants have not adopted SASES's proposed changes to this article, and specifically the requirement to use best practicable means to avoid causing a nuisance through the operation of the proposed development. Given that the Applicants have accepted the need for s 61 consents in the construction phase, which will necessitate a demonstration of best practicable means, there is no reason why such means should not be required throughout the operation. c. Article 27(11)(a): SASES is concerned to ensure that this provision covers maintenance outside of the maintenance periods specified, as anticipated through the measures in the OLEMS and the OODMP. This should be reflected on the face of the Orders. SASES remains concerned	a. The Applicants disagree and consider the power to maintain to be entirely appropriate as drafted and in line with existing precedent. b. The defence to statutory nuisance is an important one for NSIP projects. A nuisance action could stop the works or the operation. If the nuisance defence were stated to be the same at that in the underlying legislation the defence would serve no purpose. There are compensation consequences for having the defence available and the Article is justified having regard to the very important role that the substations would play in the transmission of a large volumes of renewable electricity. c. Whilst the Applicants acknowledge the comments made by SASES, the Applicants have retained reference to 10 years within Article 27(11) in respect of the maintenance of any tree or shrub for which a 10 year replacement planting period applies in order to provide those with an interest in the land sufficient certainty as to the maintenance periods under this article of the DCO. Where trees or shrubs require to be replaced

ID	SASES' Comment	Applicants' Comments
	about the achievability of the required growth rates and the workability of the "adaptive planting regime". SASES also have further comments on the OLEMS and the OODMP set out at the end of this submission. d. Schedule 1: i. SASES remains deeply concerned about the specified power output of 100MW. The generating stations are proposed to make a greater contribution to renewable energy generation. If this is not secured, the benefits of the possible generating capacity cannot be weighed in favour of the proposals. Since the figure is materially lower than the minimum provided for in the Crown Estate agreement for lease, there is no reason why this figure should not be increased; ii. SASES is concerned about the power to widen roads in paragraph (a) of the associated development with Works 6 to 37. General road widening has not been assessed and may cause harm. e. Requirements: i. SASES maintains that additional requirements are needed to limit the use of the operational access road to use in association with the proposed development to avoid other, unassessed, effects arising from its use; ii. Similarly the use of the cable sealing end compounds (CSECs) should be constrained to the authorised development and not permit the use of that infrastructure for other projects; iii. The changes to requirement 12 are welcomed. However: 1. The CSECs need to be addressed in the design principles document;	beyond this 10 year period in line with the adaptive management proposals, SPR will secure the necessary rights to do so. d.(i) It is not necessary, or appropriate to specify the capacity of the Projects on the face of the ***draft DCO*** (REP8-003). All relevant parameters are specified within the ***draft DCO*** (REP8-003) and are linked to what has been assessed within the environmental statement. Output capacity is not a relevant parameter and does not require to be specified on the face of the DCO. The approach taken in the draft DCO reflects that in the very recent Hornsea Three Offshore Wind Farm Order 2020. The reference to above 100MW is a reference to the NSIP threshold in the Planning Act not the likely gross electrical capacity of the Projects. On the basis of the evidence presented it is submitted that the balance should be against the likely scale of electrical output (i.e. 800MW for East Anglia ONE North and 900MW for East Anglia TWO). This being one of the positive benefits. The CfD auctions are now so competitive that the generator has to maximise the output to the grid technology. This drives delivery to the higher end of the transmission capacity created. That is how bidders are achieving strike prices just above the £40/MWh. In addition, the White Paper has confirmed the Government's commitment to considerably expand the levels of generation that will be supported through the CfD auction round process. This further supports the likelihood that the capacity that is brough forward will be close to the likely scale of electrical output (i.e. 800MW for East Anglia ONE North and 900MW for East Anglia TWO). Without prejudice to the Applicants' position that specifying a minimum capacity on the face of the DCO is not necessary or appropriate, should the Secretary of State consider such a parameter to be necessary in the circumstances then the Applicants would suggest inserting a minimum capacity figure of 600MW to reflect the minimum installed capacity

ID	SASES' Comment	Applicants' Comments
	2. The 16m height parameter for the CSECs is incorrect. This height relates only to the gantries, and this should be made clear to prevent far larger structures than have been assessed coming forward; 3. The heights in requirement 12 should refer to both finished ground levels and AOD figures, to ensure that the development remains within the assessed envelope; iv. Requirements 23 and 24 have been addressed separately in submissions relating to noise. The Applicants now accept that construction works should only take place between 0800 and 1800 on weekdays; and 0800 to 1300 on Saturdays. This should be reflected in the requirements. The submissions by ESC in respect of the "emergency" works are adopted; v. Noise requirements are addressed in ISH12 and related submissions; vi. Requirements 38 and 43 are still inadequate to address the broad concerns about the delivery of multiple NSIPs by multiple undertakers including NGV. There is still no provision to deal, for example, with the sharing of responsibility for landscape and flood mitigation provisions. It is unclear how responsibilities under the requirements will be shared between the two generating station undertakers and National Grid. If the National Grid substation was to be built under a non-Scottish Power DCO, as is envisaged by requirement 38, there is no explanation as to how works such as landscaping and drainage which are required for the National Grid substation will be delivered, as it is possible that the grid connection works will be commenced under that other DCO before the Applicants' works. It is highly regrettable that these matters remain unaddressed so late in the examination. Further	specified in the Agreements for Lease with The Crown Estate. Albeit, it should be noted that the intention is for the projects to generate more than this (i.e. 800MW and 900MW, as stated above). d.(ii) Schedule 1, Part 1 provides the description of the authorised development. It is not a power. Article 12 provides the necessary power to alter streets and also contains the necessary controls (e.g. requirement to consult with the street authority in respect of the alteration of streets that are specified in Schedule 5 of the ***draft DCO*** (REP8-003) or consent of the street authority in respect of the alteration of other streets). e.(i) The Applicants disagree and do not consider that any further requirements are necessary or appropriate in respect of Work No. 34. The Applicants responded to this point in the ***Applicants' Comments on SASES' Deadline 1 Submissions*** (REP4-023). e.(ii) The Applicants do not consider it to be appropriate to constrain the use of works as suggested by SASES. The cable sealing end compounds are controlled by the requirements of the ***draft DCO*** (REP8-003) to the extent considered relevant and appropriate. e.(iii) 1. The cable sealing end compounds have been incorporated into the ***Substations Design Principles Statement*** (REP8-082) submitted at Deadline 8. e.(iii) 2. Requirement 12(9) has been amended to clarify that 16m is the maximum height of the overhead line gantries comprised within the cable sealing end compounds and a maximum height has been specified for all other electrical equipment forming part of the cables sealing end compounds. e.(iii) 3. Requirement 12 specifies the maximum heights by reference to finished ground level. The ***Substations Design Principles Statement***

ID	SASES' Comment	Applicants' Comments
	there remains the broader point about ensuring that the delivery of both projects is coordinate to minimise the construction period and the disturbance caused by it. This is a practical issue for the delivery of these projects which has not been addressed by the Applicants save for in the very limited way in these requirements.	(REP8-082) includes the AOD figures and paragraph (5) of requirement 12 requires the details of the scale and external appearance of the onshore substation, national grid substation and cable sealing end compounds to accord with the Substations Design Principles Statement. Both the height above finished ground level and height above AOD are secured. The Applicants therefore do not consider that it is necessary for requirement 12 to specify both figures e.(iv) The Applicants have agreed updated wording for Requirements 23 and 24 with ESC and this is reflected in the draft DCO submitted at Deadline 8. Within the ***Outline Code of Construction Practice*** (REP8-017) the Applicants have committed to core working hours of 0800 hours to 1800 hours on weekdays (excluding bank holidays) and from 0800 hours to 1300 hours on Saturdays, subject to some exceptions specified within the ***OCoCP*** (REP8-017), however the period between 0700 hours and 0800 hours Monday to Saturday and between 1800 hours and 1900 hours on weekdays is required for start-up and close-down of activities in order to maximise productivity within the core hours. The Applicants therefore do not agree that the construction hours specified in Requirements 23 and 24 should be amended however the final Code of Construction Practice must accord with the OCoCP and therefore the management of construction hours, as set out within the OCoCP, is secured through **Requirement 22** of the ***draft DCO*** (REP8-003). e.(v) Noted. See Applicants' comments at section 2.3. e.(vi) The Applicants strongly disagree with the comments made and consider that the requirements of the ***draft DCO*** (REP8-003) provide the necessary controls. The requirements relate to the Project as a whole and therefore include the National Grid Infrastructure within their scope. This enables a holistic approach to be taken to landscaping and drainage and the future management and maintenance of landscaping and drainage is

ID	SASES' Comment	Applicants' Comments
		secured through the relevant requirements and associated plans. The undertaker is responsible for compliance with the requirements and should any powers be transferred under the DCO, the transferee will be subject to the same restrictions, liabilities and obligations as would apply if those powers were exercised by the undertaker. Failure to comply with a requirement of the DCO is a criminal offence. There are therefore appropriate controls in place. The approach adopted in the Applications is the preferred approach advocated in paragraph 4.9.2 of NPS EN-1. This is very supportive of a single application which ensures an integrated approach and is consistent with the holistic regime established in terms of the Planning Act.
4	In respect of operational land (Article 33) and the existence of permitted development rights, the Applicants' response to SASES's written submissions is not accepted. The legal submissions do not address the matters raised in SASES's written submissions. SASES is not concerned with OLE, but with the substation sites. When the land which is authorised for permanent acquisition is acquired by an undertaker it will operational land for the purposes of s 263, since it will be held for the purposes of that undertaking, and it will be deemed to benefit from a specific planning permission. "Operational land" is not limited to land within a compound fence line but could include all land which may, on detailed design, be within the fence line. Further it is capable of including land which is held for the purposes of supporting the use of those substations, or indeed mitigating their effects.	See ***Written Summary of Oral Case Issue Specific Hearing 15*** (REP8-101).
5	If the Applicants maintain that operational land should only be regarded as that land within the final compound fence lines, then the DCOs should reflect this. At present, Article 33 applies to all land which benefits from development consent, which includes the entirety of the land identified for permanent acquisition. This could be corrected by stating: "For the	The Applicants have set out in their detailed submissions the appropriate interpretation of operational land within the relevant legislation. There is no necessity for further refinements within the ***draft DCO*** (REP8-003).

ID	SASES' Comment	Applicants' Comments
	avoidance of doubt, no land outside the fenced areas of the compounds for Works 30, 38 and 41 shall be regarded as operational land."	
6	SASES further adopts ESC's position that the very broad permitted development rights should be restricted within the fence lines of the compounds. This is justified because of the particular sensitivities of the Friston site in terms of landscape, flood risk, noise, heritage and other factors. The permitted development rights in question would, for example, permit the extension of a building by up to 1,000 square metres. ESC's proposed requirement is therefore fully justified and it should be imposed. It would not prevent the maintenance of the substation sites, which would be expressly authorised by Article 4 of the dDCOs.	The permitted development (PD) rights are restricted by the limitations on EIA development and the further conditionality imposed on the rights themselves. It is notable that the site does not meet any the sensitivity exclusions within the Town and Country Planning (General Permitted Development) (England) Order 2015 itself. In effect SASES are suggesting that PD rights which are available within a National Park should not be available in respect of a site which is adjacent to an existing 400 kV double circuit overhead line.
Comments on maintenance provision of the OLEMS and the OODMP		
7	In response to SASES' submissions in respect of the scope and duration of the obligations to maintain landscaping and drainage in the DCO (landscaping - requirement 15 and drainage - requirement 41) the Applicants have referred to the Outline Landscape and Ecological Management Strategy ("OLEMS") in respect of landscape and the Outline Operational Drainage Management Plan ("OODMP") in respect of drainage.	The Applicants confirm this is correct.
8	Whilst there have been some improvements in the maintenance provisions in both of these documents they still fall short given the importance of both landscaping and drainage systems to mitigate the serious landscape impacts and flood risk impacts which will be caused by the projects should they be consented.	The Applicants contest this statement as they have committed to a SuDS which prioritises infiltration where practicably possible and have committed to maintaining or reducing the current greenfield Q_{BAR} rate. The Applicants have proven that there is no existing flood hazard risk to the onshore substation and National Grid substation locations through analysis of the Friston Surface Water Study (BMT, 2020).

ID	SASES' Comment	Applicants' Comments
		Additionally, the Applicants have commited to implemnting a 10 year adaptive management scheme for woodland planting within Works No. 33. This addresses previous concerns raised by ESC and SCC (the Councils). The Applicants refer to the ***SoCG with East Suffolk Council and Suffolk County Council***, in which the majority of matters relating to mitigation have been agreed (REP8-114).
OLEMS		
9	The relevant obligations are set out in section 4.2 of the latest version (REP6-006/7). When considering the adequacy of these provisions it has to be remembered that the efficacy of landscape mitigation is almost entirely dependent on the growth rates relied upon by the Applicants. SASES, East Suffolk Council and others have commented on the optimistic nature of those growth rates and SASES has relied upon the report of Jon Rose Associates (which is located at the end of REP1-365). In essence it is SASES' view based on expert advice that these growth rates will not be achieved and therefore the mitigation will not be effective even with the proposed "adaptive planting management scheme". This scheme is briefly described in paragraph 161 but no objectives are specified. These are to be agreed at a later date. This is highly unsatisfactory. The objectives should be driven by the requirement at a minimum that the planting should achieve the growth rates assumed in the Environmental Statement so that the landscape mitigation set out in the Environmental Statement is delivered. Failure to achieve such objectives should be acknowledged to be an extremely serious matter and the Applicants should be obliged to do everything which is necessary or desirable to ensure that such growth rates are achieved.	The Applicants maintain the position that the landscape mitigation proposed is sufficient to offset the Projects' impacts and that the predicted growth rates presented in the ***OLEMS*** (REP6-007) are realistic and achievable, SASES presents no evidence to prove otherwise. It is entirely normal for adaptive planting management schemes to be specified and refined during detailed design. The Applicants also note that the suggestion of an adaptive management scheme for the woodland planting originated from the Councils, who have since agreed that the effective and robust implementation of the adpative management scheme will deliver the required growth rates, as set out wihtin the ***OLEMS*** (REP6-007) (see statement LA-13.26 of the ***SoCG with East Suffolk Council and Suffolk County Council*** (REP8-114)).
10	The concern partly arises due to the significantly lower rainfall in East Anglia compared to other parts of the country. Although the Applicants	The Applicants have analysed the last 20 years of precipitation data from East Suffolk (Ipswich) (as presented in REP6-063). The Applicnats have

ID	SASES' Comment	Applicants' Comments
	included on their response to ExQ2 2.10.9 at Deadline 6 rainfall figures for Ipswich there is no analysis as to whether such rainfall is sufficient. Further the Applicants did not include any comparative data for England and the UK. Historic data are available on this Met Office website. https://www.metoffice.gov.uk/research/climate/maps-and-data/uk-climateaverages/u134xcy4j	concluded that when looking at the average, which is broadly consistent over the long term, precipitation will be sufficient to ensure the growth of newly planted and established trees. However, the Applicants have additionally committed to ensuring that the final Landscape Managment Plan (LMP) includes provision for the implementation of adequate watering of newly planted and established trees during the aftercare period, mitigating the potential impacts of low rainfall. This is set out within the ***OLEMS*** (REP6-007).
11	The data indicate the following average annual rainfall figures. Lowestoft – 619.9mm East Anglia – 624mm England – 793mm UK – 1154mm	Noted.
12	As can be seen average rainfall in East Anglia is significantly below that for England and substantially below that for the United Kingdom. Arithmetically, as the average numbers for England and the UK include the East Anglia figures, the rainfall in the remainder of England and the UK is higher than 793 mm in England and 1154 mm in the UK, and the rainfall in East Anglia relatively lower.	The average rainfall for East Suffolk (Ipswich) has proven sufficient to adequately water both newly planted and established trees, meaning the England / UK rainfall comparison holds no significance. However, the Applicants have additionally committed to ensuring that the final LMP includes provision for the implementation of adequate watering of newly planted and established trees during the aftercare period, mitigating the potential impacts of low rainfall. This is set out within the ***OLEMS*** (REP6-007).
13	It is welcomed that the Applicants now accept that maintenance is a continuous obligation. However in paragraph 170 the Applicants have referred to the "lifetime of the onshore substation and/or National Grid substation". It is not clear what "lifetime" means in this context. Lifetime	The Applicants have always acknowledged that maintenance is a continuous obligation. The reference to 'lifetime' relates to the period until the infrastructure is decommissioned, as per **Requirement 30** of the ***draft DCO*** (REP8-003).

ID	SASES' Comment	Applicants' Comments
	should not mean operational lifetime as it is possible that the structures will remain in the landscape even when they cease to be operational. Therefore it needs to be clarified that lifetime means for so long as the any of the structures associated with the projects remain in the landscape.	
OODMP		
14	The relevant obligations are set out in section 5.4 of the latest version of this plan (REP6- 017/18). There is a similar point to that made in relation to landscape maintenance. Currently inspection and maintenance is limited to the operational phase of the projects (para 123). However the flood risk caused by the projects is caused by the structures being in the landscape, not whether they are operational. So as with landscaping, the inspection and maintenance of the drainage systems should continue for as long as those structures exist in the landscape thereby causing a flood risk.	Please see response at ID13.
15	Further SASES' view is that the SuDS basins will be of such a size that they will be subject to the requirements of the Reservoir Act. Whilst these are legal requirements they should be referred to in the OODMP to the effect that if the drainage systems are subject to the provisions of the Reservoir Act then the maintenance regime will accord with the requirements of the Act.	The Reservoir Act is discussed in Paragraph 134 of the ***OOMDP*** (REP8-064), which notes that: *"as none of the proposed detention basins will be larger than 25,000m3 or are currently designed to be raised above the surrounding ground level, they will not fall under the Reservoirs Act (1975). Nevertheless, they will be appropriately designed in line with current standards and undergo regular inspection and maintenance by a suitably qualified engineer"*.

2.6 CAH3 Submission (REP8-221)

ID	SASES' Comment	Applicants' Comments
1	SASES did not attend CAH3 although [redacted] did attend in a personal capacity as an Affected Person. In addition a number of SASES members were listening to the hearing on the livestream. SASES wishes to make submissions in relation to the 70m wide cable corridor (the subject of Action Point 3), Broom Covert (the subject of Action Point 7) and Reasonable Alternatives (the subject of Action Point 9). However in relation to these matters SASES would like to see the responses of the Applicants to these Action Points before making submissions to ensure it fully understands the Applicants' position. In addition SASES makes the following submission.	Noted, the Applicants will review SASES submissions which should be made at Deadline 9, in line with the Rule 8 letter (PD-036).
Agenda items 5 a) vi) and 6 c) vi) : Works accesses at Aldringham		
2	The Applicants referred at CAH3 and in Section 1.3 on page 1 of EA1N & EA2 Project Update Note' [REP7-042] to the maximum width of works at the River Hundred crossing having been reduced from 50m to 34m, but does not make clear that should both projects go ahead that would be 2 x 34 = 68m. The Project Update Note is confusing in this respect in that its title refers to both projects. The same comment applies to EA1N & EA2 Project Update Note [REP3- 052] 2.2 on page 6.	This Applicants consider the information presented is clear, given the frame of reference for the reduction is clearly stated (i.e. reduction from 50m, which was the original onshore cable route width for each project). Within the ***Project Update Note*** (REP7-042) the Applicants are therefore comparing the original onshore cable route width to the reduced onshore cable route width for each project.
3	Evidence that the maximum width would be 68m may also be found in the Applicants' Outline Watercourse Crossing Method Statement [REP6-041], Section 4.8 : Onshore Cable Route Width which is explicit at para 64: "Since submission of the Application, the Applicant has reduced the working width of the onshore cable route where the cables cross the Hundred River from 50m to 34m per project. This working width applies for a distance of 40m from the Hundred River's western bank and eastern bank (the Hundred River Crossing buffer)".	This Applicants consider the information presented is clear and has been made in a consistent way throughout the Examinations. The ***Outline Watercourse Crossing Method Statement*** (REP6-041) states: *"Since submission of the Application, the Applicant has reduced the working width of the onshore cable route where the cables cross the Hundred River from 50m to 34m* ***per project****."*

ID	SASES' Comment	Applicants' Comments
		Presenting this on the basis refered to by the SASES (i.e. two projects), the onshore cable route for both projects has been reduced from 100m to 68m. The Aplicants also note the committment in the Outline Watercourse Crossing Method Statement states *"*Subject to ground conditions, the design of the Hundred River crossing will seek to minimise the width of the onshore cable route as it passes the Hundred River in order to minimise the need to remove vegetation (including trees) within this area.*"*
4	The Applicants' documentation and their responses to questions posed by ExA's Mr Rigby at CAH3 Session 3 (at Video Recording time 33:13 to 47:34) were confusing as to whether the reduced width of 34 m refers to each project or both projects. Draft DCO Requirement 12 and paras 23 and 75 of Statement of Reasons [REP7-013] for each project both refer to a 34 metres width being required for that one project. The Applicant has variously mentioned the purpose for such wide separation as to make sufficient room for construction vehicle turning and to facilitate cooling of cables during the Operation phase. It is not clear why such a large spacing of the cable ducts is required only at the watercourse. A width of 68m is 250% wider than the maximum width commitment of 27.1m for the cable route at the Aldeburgh Road pinch point, just a few metres away and would seem excessive for vehicle turning purpose.	See above regarding the onshore cable route width. The Applicants consider that SASES is misrpresenting the information presented within these documents. The Applicants have never stated that the spacing of the onshore cables is driving the 34m width, rather it forms part of the 34m width. The requirement fo the 34m width is to accommodate safe working at the Hundred River and allow safe means of access for construction vehicles and personnel. The 27.1m onshore cable route width to the west of Aldeburgh Road does not require a facility for vehicle turning as vehicles can exit either via the Aldeburgh Road or via Snape Road. Vehicles between the Hundred River and Aldeburgh can only exit towards the Aldeburgh Road, meaning any such vehicles must have a turning area to avoid the need for reversing along the onshore cable route or reversing onto Aldeburgh Road.

2.7 Comments on Draft Outline Code of Construction Practice Submitted at Deadline 7 (REP8-225)

ID	SASES' Comment	Applicants' Comments
Introduction		
1	SASES refers to the comments it made on the Outline Code of Construction Practice which the Applicants submitted at Deadline 6 which were attached to SASES' Deadline 7 submission at appendix 2 (REP7-089). Since Deadline 7 a number of changes to the OCOCP have been under discussion including in relation to working hours, Section 61 COPA and the increase in the distance to receptors from 75m to 100m. SASES in addition makes the following specific comments.	Noted. Between Deadline 7 and Deadline 8 the Applicants have engaged with SASES and updated the ***OCoCP*** (REP8-017) in light of feedback received, including measures for core working hours and expanding the additional mitigation area from 75m to 100m.
Specific comments		
2	Flood Management – Comments on this element of the OCoCP are set out in the post ISH 12 submission also submitted at Deadline 8.	The Applicants assume SASES' comment should refer to their post-hearing submission for ISH11 on Drainage and Flood Risk, although cannot see any comments specifically relating to construction phase flood management within that document. However, the Applicants do note that the ***OCoCP*** (REP8-017) was updated at Deadline 8 with further measures regarding construction phase drainage management.
3	Appendix 1 – this new section sets out the principles to be adopted for pre-construction works. SASES would like the Applicant to agree that the principles of the OCoCP will apply to all works carried out whether pre-construction or construction works, including the application for S61 notices as agreed at the recent ISH 12.	The Applicants maintain that the nature, extent and duration of the onshore preparation works do not warrant the level of controls secured through the ***OCoCP*** (REP8-017). The approach to applying controls for the onshore preparation works through individual onshore preparation works management plans has been agreed with the Councils (please refer to the ***Statement of Common Ground with East Suffolk Council and Suffolk County Council*** (REP8-114)).
4	Paragraph 9.1.101 & 105 – this paragraph is now suggesting acoustic barriers will only be used at receptor sites close to HDD locations. SASES	The Applicants note that spoil stockpiles will be generated as a result of the excavation of the onshore entry / exit pit for the HDD drill. Using the

ID	SASES' Comment	Applicants' Comments
	do not like the suggestion of using spoil to create bunds to reduce noise. This will be unsightly and is likely to create additional airborne dust and particulate emissions as a result of wind whipping. SASES asks that the Applicant amends the OCoCP accordingly.	spoil arisings as bunds around the working areas to provide further attenuation of construction noise is deemed to be a more constructive and efficient use of the material available on site. The bunds will only be in place on a temporary basis for the duration for which the entry / exit pits are required to facilitate HDD drilling operations. Following removal of the drill rig and installation of the cable ducts, the entry / exit pits and any other excavation would be infilled with the material comprising the bunds.
5	Paragraph 105 states that acoustic barriers will be used only 75m from receptor sites (to be amended to 100m). Fixing acoustic barriers to a fence will need to be set at a significant height. It should be clarified in requirement 17 of the DCO (Fencing and other means of enclosure) that acoustic barriers fall within this requirement.	The Applicants do not consider it necessary to amend Requirement 17 of the ***draft DCO*** (REP8-003) to reflect the use of temporary, removable acoustic barriers on fencing along the onshore cable route. The ***OCoCP*** (REP8-017) clearly says the Applicants *"will install temporary noise barriers"* (emphasis added). The strength of this commitment is clear and must be reflected within the final CoCP; the Applicants consider the mechanism for securing this commitment through the final CoCP to be appropriate and proportionate.
6	Community Website – SASES requests as part of the OCoCP that the Applicant sets up a community website for the local areas affected by these projects in relation to preconstruction and construction works and added as a condition within the OCoCP which would assist in community relations whilst working alongside the Applicant's named Community Liaison Officer. It could also have the facility to make direct contact with the Applicant's Community Liaison Officer to make suggestions, post concerns and to post the dates of community events where noise would affect funerals, weddings and village fund raising events at Friston as well as other affected villages and receptor sites along the cable corridor. SASES respectfully requests a website is given serious consideration to	**Appendix 3** of the ***OCoCP*** submitted at Deadline 8 (REP8-017) details the Community Engagement Activity undertaken for East Anglia ONE. As the Applicants have a successful, proven model it is proposed to be replicated for both East Anglia ONE North and East Anglia TWO during the construction period. Further measures will be adopted prior to commencement.

ID	SASES' Comment	Applicants' Comments
	help improve community relationships based on serious concerns that construction works will run over many years.	
7	Working hours – It is understood working hours will be reduced to 0800 – 1800 Monday to Friday and 0800 – 1300 on Saturdays in accordance with the approach used for HS2.	Noted. The ***OCoCP*** (REP8-017) was updated at Deadline 8 with provisions for core working hours to be between 0800-1800 Monday to Friday and 0800-1300 on Saturdays.
8	Paragraph 10.2.19 – speed of traffic along the cable corridor to be a max of 10 mph within 75m of receptor sites and 15 mph elsewhe	The Applicants do not consider it necessary to further reduce the speed limit along the haul road, and that the different speed limit proposed for locations within the Order limits that are within 100m of properties used as dwelling-houses (increased from 75m) demonstrates additional controls for the closest noise sensitive receptors.
9	Paragraph 107 - The ExA asked those attending ISH12 whether there are any particularly sensitive receptors near the Hundred River (other than those in Fitches Lane) that require particular monitoring measures. The property Riverwood in Gipsy Lane is particularly vulnerable owing to its close proximity to cable corridor activities on its east side and the Hundred River Watercourse crossing on its north side. Prior to the 2018 EIA it was decided that CCR9 would be located on the west side of the property. Possibly at that early stage the high volume of HGV traffic forecast to be travelling along the B1122 towards landfall site was perceived to be a major source of noise disturbance. The Traffic Management Plans were revised prior to DCO submission and the main source of construction noise at Gipsy Lane would be to the east and north. We propose the following sentence is appended to 9.1.2 Onshore Cable Route Construction Noise Control, paragraph 107. "A priority review of the location of Cable Corridor receptor CCR9 in Gipsy Lane to be undertaken with a view to its being located for monitoring purposes on the north-east side of that house. In its present position it is	The Applicants note that the Riverwood property on Gipsy Lane is within the 100m sensitive working area buffer as presented on ***Figure 1***, ***Appendix 2*** of the ***OCoCP*** (REP8-017) and would therefore benefit from the additional mitigation measures set out within ***Section 9.1.3***. Precise monitoring locations will be agreed with the Councils and set out within the Construction Phase Noise and Vibration Management Plan prepared and approved post-consent prior to the commencement of the onshore works, pursuant to **Requirement 22** of the ***draft DCO*** (REP8-003). Where a requirement for monitoring is agreed with the Councils, surveys will aim to install monitoring equipment at the façade of the receiving property closest to the source of construction noise.

ID	SASES' Comment	Applicants' Comments
	shielded from the major sources of anticipated construction noise by the house itself."	

2.8 Comments on VP5 PRoW submitted at D7 (REP7–062)

ID	SASES' Comment	Applicants' Comments
EA1N Figure 29.37 - Viewpoint 5 Public Rights of Way, near Moor Farm (with National Grid GIS Substation) REP7-062 **New Visualisations from Vp 5**		
1	Visualisations from LVIA Vp 5 have now been prepared to show the GIS National Grid (NG) substation. (EA1N Figure 29.37 - Viewpoint 5 Public Rights of Way, near Moor Farm (with National Grid GIS Substation) REP7-062) These can be now be compared with the visualisations previously submitted from LVIA Vp 5 (EA1N Landscape and Visual Impact Assessment Addendum - Appendix 5 - Viewpoint 5 REP4-036) which show the AIS NG substation. The following paragraphs set out the key issues raised by a comparison of the two sets of visualisations.	Noted.
2	The AIS NG substation extends further to the west and contains a complex array of equipment, close to Vp 5 and also clearly visible from Fp 17 which runs south from Vp 5. This complex array of equipment is absent from the GIS NG substation.	The Applicants note and agree that the Air Insulated Switchgear (AIS) National Grid substation extends further to the west and has an array of external equipment that is absent from the GIS National Grid substation.
3	Currently there are no proposals to plant within the area released by the smaller GIS NG substation. Although this area, to the north of the western substation, is outside the area restricted by the pylons, the extent of possible planting is already reduced by the location of the northern infiltration basin in this area.	The Applicants note there are currently no proposals in the ***OLMP*** (REP8-019) to plant within the area immediately adjacent to smaller GIS National Grid substation. This is due to the project design flexibility required in the ***OLMP*** (REP8-019) to accommodate the footprint of the AIS National Grid substation. The Applicants would highlight the proposed planting to the west around the SuDS basin and to the east at Laurel Covert.
4	As there is no additional planting proposed alongside the GIS NG substation, the reduction in the footprint allows views towards the western SPR substation beyond. Consequently, there is no significant reduction is the overall extent of the view that it occupied by substation equipment. The land released by the use of a GIS NG substation could accommodate	The Applicants note that the smaller GIS National Grid substation footprint allows views towards the western onshore substation beyond, which could be screened by further planting if a GIS National Grid substation is taken

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	further planting and it could also allow for a redesign of the infiltration basin that is informed by potential landscape and visual effects. Despite the lack of additional planting there is a small reduction in visual intrusiveness as some of the visible equipment is further away from the viewpoint.	forward. Nevertheless, the Applicants note that SASES considers there is some reduction in visual effect for the National Grid GIS substation.
5	REP7-062 includes 4 additional images (compared to REP4-036) that have the NG substation at the centre of the field of view. They are helpful as in the earlier visualisations the NG substation site is located at the 'join' between the two images; two images are necessary to order to encompass the horizontal spread of the whole substation complex when viewed from this location. The buildings within the AIS station, in particular are split by the join and so it is not easy to determine whether there is increased visual intrusiveness as a result of the larger GIS building.	The Applicants welcome that the four additional images in REP7-062 (compared to REP4-036) are helpful in order that the National Grid substation can be viewed at the centre of the field of view. The two x 53.5 degree photomontages are intended to be printed and viewed 'back to back' so that the full extent of the proposals can be viewed across the 'join' between the two images. Unfortunately, this is a practical limitation of the photomontage production for development at close range extending over 53.5 degrees of the field of view, without going to a wider 90 degree field of view, which would not accord with visual representation guidance (Landscape Institute, TGN 06/19). The Applicants would suggest that one can simply flick between the two photomontage images showing the GIS and AIS substations to the left and right of the view, in order to appreciate the difference in visual effect.
6	In order to properly understand the differences between the visual impacts of the AIS and GIS NG substations from Vp 5 it would be helpful for the ExA to have a comparative set of images for the AIS NG substation; similar to the final four images in REP7-062. These visualisations should be presented in a single document in which the GIS visualisations alternate with the equivalent AIS images. This would not require any additional modelling.	The Applicants consider that the differences between the visual impacts of the AIS and GIS National Grid substations from Viewpoint 5 can be understood by viewing the two x 53.5 degree photomontage images provided in ***Figure 29.37 Viewpoint 5 Public Rights of Way, near Moor Farm*** (GIS) (REP7-062) and ***Landscape and Visual Impact Assessment Addendum - Appendix 5 - Viewpoint 5*** (AIS) (REP4-036). The Applicants provided photomontages showing two x 53.5 degree field of view images from Viewpoint 5 in response to earlier comments from SASES which identified that part of the western sealing end compound was not shown in the single 53.5 degree view from this viewpoint.

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Conclusion.		
7	The GIS NG substation is visually less complex than the AIS substation and would remove an area of complex equipment that is proposed to be located close to Vp 5 and Fp 17. This would result in a small reduction in visual intrusiveness, although it would also reveal views of the western substation to the south. There would be a greater reduction in visual intrusiveness if the land released by a GIS substation was planted and the infiltration basins realigned.	The Applicants note and agree that the GIS National Grid substation is likely to be visually less complex than the AIS National Grid substation and would not require equipment to be located as close to Viewpoint 5 and Fp17. The Applicants note potential to provide further screening of the western onshore substation in views from the north with further planting, if a GIS National Grid substation is taken forward. However, the project design flexibility is required in the ***OLMP*** (REP8-019) to accommodate the footprint of the AIS National Grid substation, which includes proposed planting to the east and west.

2.9 Responses to Action Points ISH 10, ISH 11, ISH 12, ISH 13, ISH 14 & ISH 15 (REP8-224).

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ISH15 Action Points		
1	Action Point 10 - Requirements on noise – the Applicants have yet to share their technical conclusions with SASES. SASES has drafted revised noise requirements which are set out in its noise submission	The Applicants held a joint meeting on 23rd March 2021 with the noise experts from SASES and ESC to discuss the construction noise matters arising from the hearing.