



East Anglia ONE North and East Anglia TWO Offshore Windfarms

Applicants' Responses to Examining Authority's Written Questions

Volume 12 – 1.10 Landscape and Visual Impact

Applicants: East Anglia ONE North Limited and East Anglia TWO Limited

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Applicable to East Anglia ONE North and East Anglia TWO







Revision Summary							
Rev Date Prepared by Checked by Approved by							
001	02/11/2020	Paolo Pizzolla	Lesley Jamieson / Ian Mackay	Rich Morris			

	Description of Revisions						
Rev	Description						
001	001 n/a n/a		Final for Deadline 1				





This document is supported by the following appendices:

Appendix number	Title
1	Overview Scale of Outline Landscape Mitigation Plan
2	East Anglia ONE Substation Detailed Design Document
3	Email Correspondence with Whale and Dolphin Conservation
4	Ecological Mitigation Works
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Glossary of Acronyms

AA	Appropriate Accomment
AADT	Appropriate Assessment
	Annual Average Daily Traffic
ADD	Acoustic Deterrent Devices
AEOI	Adverse Effect on Integrity
AIL	Abnormal Indivisible Load
AIS	Air Insulated Switchgear
ALC	Agricultural Land Classification
ALO	Agricultural Liaison Officer
ANO	Air and Navigation Order
AONB	Area of Outstanding Natural Beauty
APP	Application Document
AST	Assured Shorthold Tenancies
ATC	Automatic Traffic Counts
BCT	Bat Conservation Trust
BEIS	Department of Business Energy and Industrial Strategy
BMV	Best and Most Versatile
BoR	Book of Reference
BT	British Telecom
CA	Compulsory Acquisition
CCS	Construction Consolidation Sites
Cd	Candela
CfD	Contract for Difference
CIA	Cumulative Impact Assessment
CIEEM	Chartered Institute of Ecology and Environmental Management
CION	Connection and Infrastructure Options Note
COCP	Code of Construction Practice
dB	Decibels
DCO	Development Consent Order
DML	Deemed Marine Licence
DMO	Destination Management Organisation
DMRB	Design Manual for Roads and Bridges
EA	Environment Agency
EIA	Environmental Impact Assessment
EM	Explanatory Memorandum
EMP	Ecological Management Plan
ES	Environmental Statement
ESC	East Suffolk Council
ESCA	European Subsea Cables Association
ESDAL	Electronic Service Delivery for Abnormal Loads
ETG	Expert Topic Group
ExA	Examining Authority
ExQs	Examining Authority Examining Authorities First Written Questions
FID	Final Investment Decision
FRA	Flood Risk Assessment
GEART	Guidelines for the Environmental Assessment of Road Traffic
GIS	Gas Insulated Switchgear
GLVIA	Guidelines for Landscape and Visual Impact Assessment
На	Hectares
HDD	Horizontal Directional Drilling
HE	Historic England







HGV	Heavy Goods Vehicle				
HRA	Habitats Regulations Assessment				
ICPC	International Cable Protection Committee				
IPSIP	In Principle Site Integrity Plan				
Km	Kilometres				
kV	Kilovolt				
LAT	Lowest Astronomical Tide				
LCA	Landscape Character Assessment				
LCT	Landscape Character Type				
LiDAR	Light Detection and Ranging				
LIQ	Land Interest Questionnaire				
LLFA	Lead Local Flood Authority				
LMP	Landscape Management Plan				
LPA	Local Planning Authority				
LSE	Likely Significant Effects				
LVIA	Landscape and Visual Impact Assessment				
M	Metres				
MCA	Marine Coastguard Agency				
MCTC	Manual Classified Turning Counts				
MHWS	Mean High Water Sprints				
MMMP	Marine Mammal Mitigation Protocol				
MMO	Marine Management Organisation				
MoD	Ministry of Defence				
MoU	Memorandum of Understanding				
MW	Megawatt				
MWh	Megawatt Hours				
NALEP	The New Anglia Local Enterprise Partnership				
NATS	National Air Traffic Service				
NCTA	National Coastal Tourism Academy				
NE	Natural England				
NGET	National Grid Electricity Transmission				
Nm	Nautical Miles				
NPPF	National Planning Policy Framework				
NPS	National Policy Statement				
NSIP	Nationally Significant Infrastructure Project				
OAMP	Outline Access Management Plan				
OCTMP	Outline Construction Traffic Management Plan				
OFTO	Offshore Transmission Owner				
OLEMS	Outline Landscape and Ecological Management Strategy				
OMLP	Outline Management and Landscape Plan				
ORJIP	Offshore Renewables Joint Industry Programme				
OTP	Outline Travel Plan				
PD	Procedural Decision				
PEIR	Preliminary Environmental Impact Report				
PEMP	Project Environmental Management Plan				
PIL	Persons with an interest in Land				
PPG	Planning Practice Guidance				
PRoW	Public Right of Way				
PS	Policy Statements				
PTP	Port Travel plan				
PVA	Population Viability Analysis				
RAG	Red Amber Green				
RLoS	Radar Line of Sight				
	1				







RR	Relevant Representation	
RSPB	Royal Society for the Protection of Birds	
RTD	Red Throated Diver	
RWS	Rijkswaterstaat	
SAC	Special Area of Conservation	
SCC	Suffolk County Council	
SCCAS	Suffolk County Council Archaeology Service	
SCHAONB	Suffolk Coats and Heaths Area of Outstanding Natural Beauty	
SLVIA	Seascape, Landscape and Visual Impact Assessment	
SMP	Shoreline Management Plan	
SNS	Southern North Sea	
SoCG	Statement of Common Ground	
SoS	Secretary of State	
SPA	Special protected Area	
SPR	ScottishPower Renewables	
SSSI	Site of Special Scientific Interest	
STEM	Science, Technology and Engineering and Mathematics	
SuDS	Sustainable Urban Drainage System	
SZC	Sizewell C	
TCE	The Crown Estate	
TH	Trinity House	
TMZ	Transponder Mandatory Zone	
TP	Temporary Purchase	
TPO	Tree Purchase Order	
TWT	The Wildlife Trust	
UK	United Kingdom	
UKCP	United Kingdom Climate Projections	
UXO	Unexploded Ordinance	
VP	Viewpoint	
WQ	Written Question	
WR	Written Representation	
WSI	Written Scheme of Investigation	
ZTV	Zone of Theoretical Visibility	





Glossary of Terminology

Applicants	East Anglia TWO Limited / East Anglia ONE North Limited
Cable sealing end compound	A compound which allows the safe transition of cables between the overhead lines and underground cables which connect to the National Grid substation.
Cable sealing end (with circuit breaker) compound	A compound (which includes a circuit breaker) which allows the safe transition of cables between the overhead lines and underground cables which connect to the National Grid substation.
Construction consolidation sites	Compounds associated with the onshore works which may include elements such as hard standings, lay down and storage areas for construction materials and equipment, areas for vehicular parking, welfare facilities, wheel washing facilities, workshop facilities and temporary fencing or other means of enclosure.
Construction operation and maintenance platform	A fixed offshore structure required for construction, operation, and maintenance personnel and activities.
The Councils	East Suffolk Council and Suffolk County Council
Development area	The area comprising the onshore development area and the offshore development area (described as the 'order limits' within the Development Consent Order).
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 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.
European site	Sites designated for nature conservation under the Habitats Directive and Birds Directive, as defined in regulation 8 of the Conservation of Habitats and Species Regulations 2017 and regulation 18 of the Conservation of Offshore Marine Habitats and Species Regulations 2017. These include candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation and Special Protection Areas.
Generation Deemed Marine Licence (DML)	The deemed marine licence in respect of the generation assets set out within Schedule 13 of the draft DCO.
Horizontal directional drilling (HDD)	A method of cable installation where the cable is drilled beneath a feature without the need for trenching.
HDD temporary working area	Temporary compounds which will contain laydown, storage and work areas for HDD drilling works.







Inter-array cables	Offshore cables which link the wind turbines to each other and the offshore electrical platforms, these cables will include fibre optic cables.			
Jointing bay	Underground structures constructed at intervals along the onshore cable route to join sections of cable and facilitate installation of the cables into the buried ducts.			
Landfall	The area (from Mean Low Water Springs) where the offshore export cables would make contact with land, and connect to the onshore cables.			
Link boxes	Underground chambers within the onshore cable route housing electrical earthing links.			
Meteorological mast	An offshore structure which contains metrological instruments used for wind data acquisition.			
Mitigation areas	Areas captured within the onshore development area specifically for mitigating expected or anticipated impacts.			
Marking buoys	Buoys to delineate spatial features / restrictions within the offshore development area.			
Monitoring buoys	Buoys to monitor <i>in situ</i> condition within the windfarm, for example wave and metocean conditions.			
National electricity grid	The high voltage electricity transmission network in England and Wales owned and maintained by National Grid Electricity Transmission			
National Grid infrastructure	A National Grid substation, cable sealing end compounds, cable sealing end (with circuit breaker) compound, underground cabling and National Grid overhead line realignment works to facilitate connection to the national electricity grid, all of which will be consented as part of the proposed East Anglia TWO / East Anglia ONE North project Development Consent Order but will be National Grid owned assets.			
National Grid overhead line realignment works	Works required to upgrade the existing electricity pylons and overhead lines (including cable sealing end compounds and cable sealing end (with circuit breaker) compound) to transport electricity from the National Grid substation to the national electricity grid.			
National Grid overhead line realignment works area	The proposed area for National Grid overhead line realignment works.			
	The substation (including all of the electrical equipment within it) necessary to connect the electricity generated by the proposed East Anglia TWO / East Anglia ONE North project to the national electricity grid which will be owned by National Grid but is being consented as part of the proposed East Anglia TWO / East Anglia ONE North project Development Consent Order.			
National Grid substation location	The proposed location of the National Grid substation.			
Natura 2000 site	A site forming part of the network of sites made up of Special Areas of Conservation and Special Protection Areas designated respectively under the Habitats Directive and Birds Directive.			
Offshore cable corridor	This is the area which will contain the offshore export cables between offshore electrical platforms and landfall.			
Offshore development area	The East Anglia TWO / East Anglia ONE North windfarm site and offshore cable corridor (up to Mean High Water Springs).			







Offshore electrical infrastructure	The transmission assets required to export generated electricity to shore. This includes inter-array cables from the wind turbines to the offshore electrical platforms, offshore electrical platforms, platform link cables and export cables from the offshore electrical platforms to the landfall.
Offshore electrical platform	A fixed structure located within the windfarm area, containing electrical equipment to aggregate the power from the wind turbines and convert it into a more suitable form for export to shore.
Offshore export cables	The cables which would bring electricity from the offshore electrical platforms to the landfall. These cables will include fibre optic cables.
Offshore infrastructure	All of the offshore infrastructure including wind turbines, platforms, and cables.
Offshore platform	A collective term for the construction, operation and maintenance platform and the offshore electrical platforms.
Onshore cable corridor	The corridor within which the onshore cable route will be located.
Onshore cable route	This is the construction swathe within the onshore cable corridor which would contain onshore cables as well as temporary ground required for construction which includes cable trenches, haul road and spoil storage areas.
Onshore cables	The cables which would bring electricity from landfall to the onshore substation. The onshore cable is comprised of up to six power cables (which may be laid directly within a trench, or laid in cable ducts or protective covers), up to two fibre optic cables and up to two distributed temperature sensing cables.
Onshore development area	The area in which the landfall, onshore cable corridor, onshore substation, landscaping and ecological mitigation areas, temporary construction facilities (such as access roads and construction consolidation sites), and the National Grid Infrastructure will be located.
Onshore infrastructure	The combined name for all of the onshore infrastructure associated with the proposed East Anglia TWO / East Anglia ONE North project from landfall to the connection to the national electricity grid.
Onshore preparation works	Activities to be undertaken prior to formal commencement of onshore construction such as pre–planting of landscaping works, archaeological investigations, environmental and engineering surveys, diversion and laying of services, and highway alterations.
Onshore substation	The East Anglia TWO / East Anglia ONE North substation and all of the electrical equipment within the onshore substation and connecting to the National Grid infrastructure.
Onshore substation location	The proposed location of the onshore substation for the proposed East Anglia TWO / East Anglia ONE North project.
Platform link cable	Electrical cable which links one or more offshore platforms. These cables will include fibre optic cables.
Safety zones	A marine area declared for the purposes of safety around a renewable energy installation or works / construction area under the Energy Act 2004.
Scour protection	Protective materials to avoid sediment being eroded away from the base of the foundations as a result of the flow of water.
Transition bay	Underground structures at the landfall that house the joints between the offshore export cables and the onshore cables.
Transmission DML	The deemed marine licence in respect of the transmission assets set out within Schedule 14 of the draft DCO.





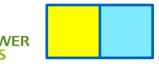
ExA. Question Ref.	Question addressed to			ExA. Question	Applicants' Response
1.10 Landsca	pe and Visual Im	pac	t		
1.10.1	The Applicant	1	2	The approach to landscape mitigation The OLEMS [APP-584] discusses the approaches to mitigation, concluding that a combination of hidden and integrated is appropriate. It is concluded that: "69. Woodland blocks to the south of the onshore substation and National Grid substation are intended to provide screening for the main visual receptors on the northern edges of Friston." Notwithstanding any conclusions that mneeight be made in respect of pylons and cables, LVIA VP 1 and 3 identify that at year 15 there is the potential for significant screening to be in-situ. However, montages from VP2 on the PROW appear to result in the infrastructure remaining relatively visible, even at year 15. a) Within the context of seeking to reflect historic field patterns, clarify the position in respect of mitigation planting in this location? Specifically, does it follow the hidden or integrated approach b) Do the indicated montages indicate that the proposed mitigation measures would be effective?	a) It is noted that the onshore substations remain relatively visible from VP2 on the Public Right of Way (PRoW) on the northern edge of Friston (off Church Road), even at Year 15. The 'hidden' and 'integrated' approaches are referred to in the <i>Outline Landscape and Ecological Management Strategy</i> (OLEMS) (APP-584) as overall landscape design concepts that guide the Outline Landscape Mitigation Plan (OLMP) (part of the <i>OLEMS</i> (APP-584)). Specifically, in respect of VP2 and the landscape to the north of Friston, the 'integrated' approach is more evident (i.e. the provision of some screening through a mix of woodland belts, tree lines and hedges, with some visibility of the onshore substations remaining available through the tree lines and above hedges/planted woodlands). This approach evolved as the preferred OLMP approach in this area through consultations with stakeholders, provided by the OLMP technical working group and Landscape and Visual Impact Assessment (LVIA) Expert Topic Group (ETG), seeking to be historically





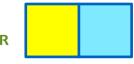
ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response
			appropriate and avoiding tree belts placed hard against the village edge / footpaths / farmsteads, in order to maintain the open agricultural setting of the village and limiting, insofar as possible, character change through the introduction of more extensive woodland in closer proximity to Friston (the 'hidden' approach, which may provide a greater degree of visual screening).
			b) The <i>OLEMS</i> (APP-584) mitigation measures are considered to reduce the visual effects but do not prevent / avoid visual effects entirely. The photomontages for VP2 (<i>Figure 29.14</i> (APP-405)) indicate more effective mitigation of the East Anglia TWO project substation and National Grid substation, which would be increasingly screened by layers of re-instated hedgerows, individual field boundary trees and woodland over time. It will mainly be the upper parts of the taller infrastructure and buildings within the onshore substation that will be visible, beyond and above the intervening woodland and hedgerows, with the lower infrastructure and ground level features screened. The East Anglia ONE North onshore substation would be more visible from VP2 (<i>Figure 29.14</i>





ExA. Question Ref.	Question addressed to			ExA. Question	Applicants' Response
					(APP-405)) and the mitigation less effective at screening the closer and more prominent taller infrastructure elements. The assessment noted that the mitigation would contribute to a reduction in the magnitude of change over the long-term, however this was not enough for the residual effect to become not significant. It is noted that an updated <i>OLMP General Arrangement</i> (APP-401) will be submitted to Examination at Deadline 3.
1.10.2	Any IP and the Applicant	1	2	A number of RRs raise concerns about the visual impact of development on Friston, with reference to the adequacy of mitigation. Is further mitigation required and what form might this take? Would additional planting of trees and hedgerows be an appropriate method to resolve this? What form might additional planting take?	The Applicants note concerns about the visual impact of development on Friston. The Applicants would highlight that these visual effects principally occur on receptors in a limited area on the northern edge of Friston (Church Road area) and the PRoW leading north out of the village, and to a lesser degree from the main area of the settlement developed slightly to the south from the church in the triangular shape of an infilled green. This main area of Friston is set back at greater distance from the onshore infrastructure than the dispersed northern edge of the village, separated by the village green (Viewpoint 6 – <i>Figure 28.18a-e</i>), areas of common land around St Mary's Church, modern housing on Church Road / Hillcrest and Friston House Wood and the





ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response
			Saxmundham-Aldeburgh Road (B1121) (<i>Figure</i> 29.21a-e).
			The Applicants note the potential to provide further mitigation of the visual effects of the onshore substations in views from the northern edge of Friston, such as VP2 (<i>Figure 29.14</i> (APP-405)). The Applicants considers that the form of this mitigation could include:
			 Additional planting of field boundary trees and hedgerows;
			 Additional 'covert' woodland block/belt planting at closer proximity to VP2 / Friston; and/or
			Subject to the availability of suitable material onsite, formation of soil formed earthworks to raise ground level contours in the area to the south of the onshore substations.
			The Applicants considers that in order for the visual effects to be notably reduced, or potentially avoided, over the long-term, more substantial woodland planting at closer proximity to Friston, as represented in VP2 (<i>Figure 29.14</i> (APP-405)), would be required. This could potentially take the form of 'covert' woodland blocks planted at strategic locations, or a more continuous woodland belt planting along the closest field boundary to the north of Church Road / the PRoW, visible in VP2 (<i>Figure 29.14</i> (APP-405))







ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response
			(rather than individual field boundary trees, as currently proposed). The former approach was proposed in the earlier drafts of the OLMP at Preliminary Environmental Information Report (PEIR) (PEIR <i>Figure 29.11</i>), however the landscape proposals evolved following PEIR in consultation with stakeholders to move the planting further north, to avoid such close-up planting, on the basis of preference to maintain the open agricultural setting of the village and its historical setting. The Applicants consider that additional planting of this form would be an appropriate method to further mitigate the visual impact of the onshore substations in views from the northern edge of Friston, while accepting that this approach may have an impact in itself in changing the 'open' landscape character and the historic setting of the village. On balance, and based on consultation feedback, the Applicants preferred the retention and enhancement of character, but recognise others may have different view. The Applicants have proposed the acquisition of sufficient land to provide this additional planting and if this were to be preferred, it could be required through the approval of the LMP.
			The Applicants consider that there is also potential for further mitigation through the formation of soil formed earthworks (i.e.





ExA. Question Ref.	Question addressed to			ExA. Question	Applicants' Response
					'bunding') to raise ground level contours in certain areas to the immediate south of the onshore substations, potentially to coincide with woodland planted areas, in order to provide further visual screening and increase the height of tree screening above existing ground levels although note that (to avoid transportation of material to site) this is subject to the availability of subsoil and top soil from the substation construction. It is noted that an updated <i>OLMP General Arrangement</i> (APP-401) will be submitted to Examination at Deadline 3.
1.10.3	The Applicant	1	2	Notwithstanding any responses to question 1.11.2, if it were considered that additional tree planting could have the potential to resolve concerns relating to visual impact and Friston, what would the impact of this be on: a) Land required to deliver and secure the long-term maintenance of such planting; b) Related impacts, particularly in relation to the setting of heritage assets.	The Applicants have the ability to refine the proposed planting within the Order limits subject to appropriate consideration of historic setting. An updated <i>OLEMS</i> (APP-584) which reflects any agreed changes to the landscaping layout will be submitted at Deadline 3.
1.10.4	The Applicant	1	2	The ExA note that while a more interventionist approach to visual impact (e.g. bunding) may have more impact on landscape character than the proposed developments they may achieve more in terms of reducing visual effects in the vicinity of the proposed substations.	The potential for more substantial landscape earthwork alterations (i.e. bunding) was considered as part of the project design process and discussed with the Councils. The potential for substantial landscape screening bunds was considered as potential further mitigation during the LVIA and modelled by the project civil







ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response
		a) Were more substantial landscaping alterations considered as a way to resolve visual impacts (i.e. bunding etc)? b) If so, why were they discounted, and what assessment took place of the balance between potentially altering landscape character more fundamentally and reducing visual effects?	engineers. The volume of sub-soil required for substantial screening bunds was found to be considerably greater than that generated by the formation of the substation platform, involving major earthworks operations, transportation of material from the full project area to the substation location and would require notable amounts of plant and time to construct. Major screening earthworks were discounted on this basis but were also considered likely to result in potentially intrusive effects on local landscape character and topography. A landscape bunding proposal with lower levels of landform alteration was considered, utilising the amount of surplus subsoil from cable route and substation works to the west of Aldeburgh Road. These bunding proposals potentially provided for a landscape bund to the south of the East Anglia ONE North substation and Sustainable Drainage Scheme (SuDS) basin, and/or to the south of Fristonmoor Farm / High House Farm to the north. This potentially provided an area for surplus subsoil to be used, with potential to raise the ground levels and screening potential provided for planting areas to the south of East Anglia ONE North substation. It did not, however, provide a full solution for the amount of excess topsoil generated from the project, due to the amount of topsoil generated





ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response
			from formation of the SuDS pond and onshore substations, together with the formation of the bunds themselves (as the topsoil needs to be stripped before forming the subsoil bund if they are to be planted with woodland). Further visual mitigation could take the form of appropriately designed landscape bunding to the south of the onshore substations.
			Alternatively, there is potential for the excess topsoil to be stockpiled in 3m high bunds (but not planted) beside the onshore substations for the lifetime of the project (and then used for reinstatement following decommissioning of the substations). This could also provide further visual screening; however such features have the potential to be incongruous in the local landscape and may have limiting screening potential in relation to the taller substation infrastructure.
			It was considered that the worst case scenario in terms of the EIA was the assumption of no landscaped earthworks / bunding and to have to transport excess materials offsite, and as such these assumptions were adopted in the LVIA.
			An updated OLEMS (APP-584) will be submitted to Examination at Deadline 3 after the Applicants have had the full opportunity to consider all of the Written Representations.





ExA. Question Ref.	Question addressed to			ExA. Question	Applicants' Response
1.10.5	The Applicant	1	2	Various references have been made [including, but not limited to RR-320, RR-322, RR-182] to the Rampion OWF onshore substation and it being of a lower height than is proposed within the proposed developments. a) Provide a commentary on this, focusing on, but not necessarily limiting a response to: • technology; • capacity; • scale (height/footprint); and • approach to design, including post consent requirements.	The Applicants note the comparisons with the Rampion offshore windfarm. The built capacity of the Rampion project was (400MW) compared to the East Anglia TWO project (900MW at the point of connection to the national electricity grid) and East Anglia ONE North project (800MW at the point of connection to the national electricity grid). Rampion was consented with a capacity of 700MW, which is comparable to the Projects. The Development Consent Order (DCO)¹ for the Rampion Offshore windfarm states; (2) No building comprised in Work No. 25 shall exceed 6 metres in height above existing ground level and nor shall it exceed a footprint of 560m2. (3) No external equipment comprised in Work No. 25 shall exceed 10.5 metres in height above existing ground Rampion utilises Gas Insulated Switchgear (GIS) within its substation design, this is also the case with the Projects. The difference in the maximum building and external equipment heights stated within the respective DCOs can be driven by a number of

¹ Rampion Development Consent Order: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010032/EN010032-001700-Rampion%20Development%20Consent%20Order.pdf





ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response
			factors. Of these, one key difference between Rampion and the Projects is the transmission voltage. The transmission voltage of the Projects would be 275kV. The transmission voltage for rampion is 150kV. A greater transmission voltage combined with the power rating of the respective transformers results in greater building and equipment heights being required. This is primarily for safety clearance reasons.
			The DCO for the Projects contains the following requirement;
			Detailed design parameters onshore
			12.—(1) No stage of Work No. 30 may commence until details of the layout, scale and external
			appearance of the onshore substation have been submitted to and approved by the relevant planning authority. Work No. 30 must be carried out in accordance with the approved details.
			(2) Any details provided by the undertaker pursuant to paragraph (1) must accord with the outline onshore substation design principles statement and be within the Order limits.
			The Applicants will continue to progress substation design matters including, post consent, through the discharge of this





ExA. Question Ref.	Question addressed to			ExA. Question	Applicants' Response
					requirement and the production of a final substation design.
1.10.6	The Applicant	1	2	It is noted [APP-077] that up to 0.9ha of woodland north of Fitches Lane will be felled as part of the onshore cable construction. It is the ExA's understanding that the Applicant has committed to reducing the onshore cable route to 16.1m at this point in combination for both proposed projects, to retain as many trees as possible at this location. a) Confirm that this understanding is correct or provide clarification if not. It is not clear to the ExA if the reinstatement for this section of the proposed works would be new planted woodland (reinstatement) or heathland established over the onshore cables and woodland planting along the outer edges b) Confirm the details for the proposed mitigation for the removed area of woodlands north of Fitches Lane c) If mitigation would be proposed heathland, assess the landscape effects, including assessing the likely visibility to receptors, of providing a 16.1m strip (dependent on answer to part a)) of fairly open heathland in the middle of an existing woodland? d) Would woodland planting along outer edges be a realistic proposition given the future potential impact of the roots of the proposed trees?	 a) The Applicants have committed to reducing the onshore cable route to 16.1m per project, and where both projects are constructed in parallel to 27.1m in total. This mitigation is to retain as many trees as possible at this location. b) Proposed mitigation for the removed area of woodland north of Fitches Lane is set out at para 175 of <i>Chapter 29 LVIA</i> (APP-077): "This section of cable route will be reinstated through the establishment of heathland over the onshore cables and further woodland planting along the outer edges of the onshore cable route, outside a minimum offset distance from the onshore cables". In addition, the ecological mitigation area at Works No. 24 is provided within the Applications to accommodate a replacement woodland block (in additional to other ecological mitigation if identified as being required preconstruction). c) Heathland re-creation could be carried out by stripping the surface soil horizon to





ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response
		ES Appendix 29.3 [APP-567], section 29.3.1 states that the magnitude of change to the perceived landscape character in the vicinity of this woodland, at 5 years post construction, once the replanted areas have established, is assessed as being low and the impact is not considered significant. e) Explain why 5 years is considered enough time for mitigation measures to establish themselves and for the impact to change from significant (during the first year) to not significant after 5 years? f) Bearing in mind question c), if the proposal is to establish a strip of heathland along the onshore cable route, do you consider such mitigation measures to be sufficient to achieve such a reduction in impact?	remove nutrients; acidifying soil and introducing seed of heather and other key heathland species in the form of cut brash. This would emphasise a more natural feel along the cable route and would provide more effective mitigation than grassland / scrub. Project alone effects of the East Anglia TWO project are assessed in para 240 (construction) and 252-253 of APP-077 (operation) and of the East Anglia ONE North project in para 238 (construction) and 250-251 of APP-077 (operation). Cumulative landscape and visual effects of the construction of the onshore infrastructure at land north of Fitches Lane are assessed in <i>Table 29.13</i> of APP-077 and operational effects are assessed at <i>Table 29.14</i> and paragraphs 213 to 216.
			d) Woodland planting is proposed outside a minimum offset distance from the onshore cable route (given the need to avoid trees rooting into ground above or close to the onshore cables). Planting constraints with regards to the onshore cable route are shown in the <i>OLEMS</i> (<i>Plate 3.4</i>), which illustrates that most deciduous trees can be planted from a distance of 6m from the cables and





ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response
			shrubs between 3m to 6m. Given the indicative cable trenching arrangement shown in <i>Plate 6.19</i> of <i>Chapter 6</i> (APP-054), planting of deciduous trees would likely need to be kept to the outer edges of the 16.1m cable corridor and potentially to one side (nearest the receptors on Fitches Lane), with a graded edge to smaller shrubs and shallower rooting species nearer to the cable route. Hedgerows can be planted across the cable route, which could form effective screening for pedestrians / road users along Aldringham Road.
			e) 5 years was considered to be approximately when the combination of heathland vegetation along the onshore cable route and re-instated woodland along the edges of the onshore cable route would have become established and combine to provide re-established naturalised ground-cover along the cable route and therefore mitigate the significant effects identified at construction.
			f) It is considered that such mitigation measures (combined with further woodland planting along the outer edges of the onshore cable route, outside a





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					minimum offset distance from the onshore cables and the retention of an undisturbed buffer between Fitches Lane and Works No. 20, are sufficient to achieve a reduction in impact on landscape character and visual amenity, although it is noted that this form of mitigation will achieve a reduction in impacts increasingly with duration as the trees grow and provide denser cover along the outer edges of the onshore cable route. The landscape character in this area is mainly experienced from the PRoW along Fitches Lane, where existing woodland has been retained (<i>Figure 6.7e</i> (APP-102)) between the receptor and the heathland strip, which together with the further planting proposed along the edge of the existing woodland, is considered to provide a sufficient reduction in impact. The Applicants note the potential for hedgerow planting across the cable route, which could form effective screening for pedestrians / road users along Aldringham Road.
1.10.7	The Applicant	1	2	ES Chapter 29 [APP-077], paragraph 19 states that offsite highway improvements are part of the onshore preparation works which will take place prior of the	a) Yes, these are the works referred to. However, they are not pre-





ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response
		commencement of main construction. It is set out that detailed assessment of these works does not form part of the assessment of construction impacts. It is also considered that these works would be undertaken in consultation and in accordance with the requirements of the local Highways Authority as per the dDCO. Paragraph 21 states that the offsite highway improvement will have a small footprint, temporary nature and limited intrusive elements and therefore it is not considered by the applicants that they will give rise to landscape and visual impacts. a) Clarify that "offsite highway improvements", means Works No. 35 to 37 as listed in the dDCO (Schedule 1 – Approved Works)? If so, the dDCO allows for widening of highways and vegetation clearance. b) Explain how these works are unlikely to give rise to landscape and visual impacts? c) Explain the rationale behind excluding these works from the assessment?	commencement works, but works in their own right. This is an error. b) The works are described in section 6.7.3.3.2 of Chapter 6 Project Description (APP-054) as follows: • A1094 / B1069 junction (Snape Road junction: • Localised widening / creation of overrun areas; • Temporary moving or socketing of street signs; and • Temporary moving of street furniture. • A12 / A1094 junction (Friday Street junction): • Temporary moving or socketing of street signs; and • Temporary moving of street furniture. • Marlesford Bridge: • Structural works to accommodate Abnormal Indivisible Loads; • Temporary laydown area to facilitate structural works; • Temporary alternative routeing of PRoW (reference: E-387/009/0) • Temporary moving or socketing of street signs; and





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			• Temporary moving of street furniture. The offsite highway improvements will not require a notable quantity of plant and equipment and the works, including vegetation clearance, will have a small footprint, largely within the existing highway boundary. Given the relatively small footprint and temporary nature of these works, and the limited intrusive elements, along with adherence to best practice detailed in section 29.3.3 and the OLEMS (APP-584), it is considered that the offsite highway improvements will not give rise to a material landscape and visual impact. Given the distance of these works from the onshore development area, there are no pathways for additive impact with the wider works (i.e. no intervisibility).
			c) As discussed above, given the scale of these works and the distance of them from the rest of the onshore development area, it was considered that there was no material impact or pathway for impact additively with the wider works. The works are described in section 29.3.1 as justification for screening them out from further assessment (APP-077).





ExA. Question Ref.	Question addressed to			ExA. Question	Applicants' Response
1.10.8	The Applicant	1	2	ES Chapter 29, paragraph 41 [APP-077] and the OLEMS, paragraph 81 [APP-584] contains the assumptions used for vegetation growth rates. These predictions have been used in the production of the photomontages, illustrating the effectiveness of the planting at year 15. It is stated in the OLEMS (paragraph 84) that heights of taller trees at 15 years post planting are based on an assumption of planting 60cm cell grown plants, with an average annual growth rate of 30cm per year for the first 5 years and 50cm per year for the next 10 years. These assumptions are based on guidance produced by IEMA in 2019. As such the growth rates reported in the OLEMS and the LVIA chapters are a "rule of thumb" to establish growth rate without considering local conditions. ES Chapter 29, paragraph 68 states that the magnitude of change (for both landscape and visual impacts) is assessed at 15 years post planting which results in the assessment of residual impact significance. This is based on the assumption that the planting will be successful at the growth rates provided at paragraphs 81 – 84 of the OLEMS. It is therefore unclear whether this can be considered a worst case scenario in term of assumed growth rates for the purpose of the EIA. Various representations, including from the County Council, ESC and Friston PC also consider that the assumed growth rates are not reasonably justified in the	The Applicants consider that the growth rates outlined are appropriate and achievable. With regards to mitigation planting, as set out in section 3.5.4 of the OLEMS (APP-584)), assumed growth rates are based on relevant guidance from the Institute of Environmental Management (IEMA), research of relevant published literature and plant nurseries, and are comparable to precedents established by other Nationally Significant Infrastructure Projects (NSIPs). The Applicants held ETG meetings in which growth rates were discussed with the local planning authority (Table 3.1 of the OLEMS (APP-584)). Section 3.5.4 of the OLEMS (APP-584) provides information on the assumed growth rates of trees utilised for landscaping. However, the Applicants are further investigating how appropriate and achievable the applied growth rates are and remains in consultation with the Councils on this matter through the SoCG process. Further information, including a selection of revised photomontages, will be submitted at Deadline 3.





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				prevailing local conditions given local soil and climatic conditions. The ExA note the applicants' comments on the RRs [AS-036]. a) Explain the confidence it has in the growth rates for proposed planting assumed for the purposes of the assessment and in the photomontages provided? b) To what extent have these assumptions taken into account the specific growing conditions, including local conditions of soil, drainage, and climate, for relevant species at any particular location? c) What effect would a more cautious approach to growth rates have on the submitted montages? The use of professional judgement should be clearly stated and explained.	
1.10.9	The Applicant	1	2	Various references are made around pre-construction planting in the LVIA [APP-077] and OLEMS [APP-584], including but not limited to paragraphs 70, 85 and 86 of the OLEMS Explain how such planting would be secured by the DCO and how it would be approved.	The Applicants propose that the detail of any 'early planting' to be undertaken is set out in an updated <i>OLEMS</i> (APP-584). The Applicants are in discussion with the Councils regarding the nature of any early planting to be undertaken. Early planting undertaken after commencement of construction will be defined within a Landscape Management Plan (Requirement 14 of the <i>draft DCO</i> (APP-023) and submitted to the relevant planning authority for approval. This early planting will accord with the <i>OLEMS</i> (APP-584). For early planting undertaken prior to construction and therefore prior to approval of the Landscape





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					the relative to the control of the c	gement Plan (Requirement 14 of the <i>draft</i> APP-023)), the Applicants will consult with evant planning authority on the location of rly planting and the species to be planted to the early planting commencing, and in burse will ensure that this early planting is corated within the Landscape Management ubmitted to the relevant planning authority proval. This early planting will accord with LEMS (APP-584).
1.10.10	The Applicant	1	2	ES Chapter 29, paragraph 52 [APP-077] (Section 29.3.4 Monitoring) states that where monitoring is proposed in regard to maintenance of any proposed planting this is described in the OLEMS [APP-584]. However, the OLEMS paragraph 311 (section 9) states that the requirement for, and final appropriate design and scope, of monitoring will be agreed with the LPA and included within the relevant management plan(s),	d)	This matter remains under discussion with the local planning authorities. The <i>OLEMS</i> (APP-584) will be updated to reflect the measures being discussed currently by the Applicants and the local planning authorities. This will be submitted to the Examinations at Deadline 3.
				submitted for approval to discharge relevant DCO requirements, prior to construction works commencing. The OLEMS does not provide any indication of the management provisions for all tree and shrubs, should planting fail. a) Explain what measures are in place to identify and address failure or below assumed growth rate performance within the proposed planting design? If no such measures exist is the applicant content that the	е)	The Applicants will have ongoing management responsibilities for the planting (including trees and hedgerows) around the onshore substations and National Grid substation; and within Works No. 24 (being replacement tree belt). These responsibilities will focus on safety management and general good practice (such as thinning) for such
				such measures exist is the applicant content that the		practice (such as thinning) for such planting. The <i>OLEMS</i> (APP-584) will bupdated to provide further information







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				assumptions applied in the ES support this potential outcome b) What are the management provisions for all tree and shrub planting types from year 5 onwards, and the proposed end date for management activities? Explain how any such provisions would be secured in the DCO, or suggest amendments to ensure that they are.	this matter and will be submitted to the Examinations at Deadline 3. Hedgerows within the onshore cable route will revert to landowner management at the end of the management period.
1.10.11	The Applicant	1	2	What additional mitigation measures have been considered (other than as contained within the OLEMS) and if others were considered, why have none been proposed?	As described in the Applicants' response to ExA Question 1.10.2, additional measures were considered to mitigate the visual effects of the onshore substations in views from the northern edge of Friston. This included consideration of woodland block / belt planting at closer proximity to Friston and the formation of soil formed earthworks to raise ground level contours in the area to the south of the onshore substations.
					Woodland block / belt planting at closer proximity to Friston (which was proposed at PEIR) was not ultimately proposed in the submitted <i>OLEMS</i> (APP-584) in preference of maintaining the open agricultural setting of the village and its historical setting, which was a key aspect of the stakeholder feedback provided by the OLMP technical working group and LVIA ETG during consultation.
					Substantial landscape screening bunds were considered but discounted on the basis of the volume of material required involving major





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			earthworks operations and the potentially intrusive effects of bunding on local landscape character and topography.
			As noted in the Applicants' response to ExA Questions 1.10.2 and 1.10.4, additional planting in the form of 'covert' woodland blocks / belts closer to Friston could be considered as appropriate further mitigation, along with the potential for appropriately designed landscape bunding to the south of the onshore substations.
			The use of some faster growing but non-native tree species in the proposed planting mixes was also considered (as proposed at PEIR), with the potential to provide some faster tree growth and earlier screening in key areas, but was discounted in consultation with the OLMP technical working group, in favour of planting exclusively with native woodland species for biodiversity benefits. The Applicants are willing to discuss this further with the Councils.
			The use of larger sized standard or feathered tree stock selection for planting within woodland areas was considered (potentially in smaller numbers in key areas), as a way of creating more expedient visual screening. The current <i>OLEMS</i> (APP-584) proposals favour planting of younger, smaller trees (whips) which increase the chance of initial success of plant establishment, subsequent







ExA. Question Ref.	Question addressed to			ExA. Question	Applicants' Response
					growth and overall success of the OLMP planting scheme.
					Mitigation planting was considered in a number of other areas, however the planting proposals needed to take account of the constraints provided by existing and proposed underground and overhead line connections. Larger scale woodland mitigation planting to the north of the National Grid substation was considered, for example, but discounted due to constraints of the existing and proposed overhead line infrastructure.
					Re-instatement of historic field boundaries through hedgerow planting is proposed as part of the OLMP. Further re-instatement of more historic hedgerow field boundaries in line with the smaller sized historic field pattern was also considered immediately to the north / north-east of the National Grid substation but discounted on the basis of agricultural landowner requirements for farming practices.
					It is noted that an updated <i>OLMP General Arrangement</i> (APP-401) will be submitted to Examination at Deadline 3.
1.10.12	The Applicant	1	2	ES LVIA Chapter 29, paragraph 180 [APP-077] states that while the Ancient Claylands LCT is sensitive to changes from large scale development, the visual containment of the LCT by extensive woodland blocks,	a) The Applicants would largely agree with the description of the existing woodland but would expand this description as follows. The woodland in the vicinity of





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		tree belts and hedges reduces the susceptibility of this LCT to changes arising from the onshore infrastructure. The Conclusions of the chapter (paragraph 266) reaffirm that the proposed onshore substations and National Grid infrastructure is located within a landscape with extensive mature woodland of large scale. The OLEMS [APP-584] states that the Outline Landscape Management Plan (OLMP) would seek to be historically appropriate. The ExA note from submitted plans the woodland in the vicinity of the proposals largely consists of Laurel Covert, Grove Wood, and trees to the east of Friston House. a) Do you agree with the description of the existing woodland? b) If so, do you maintain that such woodland amounts to 'extensive' woodlands blocks? c) What would be the adverse effects of creating large areas of new 'Covert' woods to shield the proposals in terms of landscape character? Has any assessment taken place of any such effects? d) Would such new Covert woods be historically appropriate given the stated local characteristic of a network of small-scale fields to the north of Friston, with strong hedgerow field boundaries and scattered mature deciduous field boundary trees? If so, why, or if not, why not?	the proposals largely consists of Grove Wood and Old World Wood (an ancient woodland), Laurel Covert (19th century plantation) and Friston House Wood, but also includes woodland at Fristonmoor Covert and a smaller unnamed wooded 'covert' on western side of the PRoW trackway. Other 'covert' woodlands are located beyond this immediate vicinity (such as Long Covert and New Covert). b) The Applicants consider that ancient and plantation woodland is a significant feature within the landscape around the onshore substations, owing to the effect of many blocks of woodland scattered throughout the area. The combination of the above named woodlands (Grove Wood, Old World Wood, Laurel Covert, Friston House Wood, Fristonmoor Covert and the smaller unnamed wooded 'covert') cover a combined area close to 210,000m² (21ha) and contributed most to the description of the existing woodland as 'extensive' in the local context. Due to the combination of these woodlands, the landscape does feel extensively and well wooded, and this is reinforced by the network of tall hedges, hedgerow trees and field boundary





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			vegetation which are often present and form a significant component of the tree cover. These characteristics are all recognised in the Landscape Character Type (LCT) descriptions for the Ancient Estate Claylands LCT. The Applicants note that following the overhead line east to west from the edge of the AONB, it is the largest area of woodland near to the overhead line with potential for screening of the onshore infrastructure. In reviewing the <i>OLMP General Arrangement</i> (APP-401) for submission at Deadline 3, the Applicants will consider the opportunity for additional woodland planting whilst respecting the historic setting of the listed building in the area.
			c) The Applicants would note the site benefits from existing screening provided by 'covert' woods and Grove Wood. This is evident in the photomontages for VP7 (<i>Figure 29.19b</i> (APP-410)), VP11 (<i>Figure 29.23c</i> (APP-414)) and VP12 (<i>Figure 29.24b</i> (APP-415)). The Applicants also note inclusion of characteristic 'covert' woodland blocks in the <i>OLEMS</i> (APP-584) to the north near Moor Farm and Little Moor Farm. Previous assessments of woodland





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			blocks / belts in closer proximity to Friston indicated that further visual mitigation could be provided by creating areas of new 'covert' woods closer to Friston to shield the proposals, however consultations with the OLMP technical group indicated that in the area north of Friston, the reinstatement of historic field boundaries, fill gaps and introducing field boundary trees to provide layered screening was preferable to large scale woodland planting close to the village, in order to allow the agricultural setting of Friston to be retained. In reviewing the OLMP General Arrangement (APP-401) for submission at Deadline 3, the Applicants will consider the opportunity for additional 'covert' woods to shield the proposals.
			d) Given the network of small-scale pre 18 th century field enclosures to the immediate north of Friston, their greater historic relevance and historic absence of large woodlands in these fields, the Applicants considered that the introduction of new woodland blocks would be historically more appropriate further to the north, nearer to the onshore substations and Grove Wood, as proposed in the <i>OLEMS</i>





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						(APP-584), where the character has already been altered as a result of agricultural / field boundary changes in the post-war period. The position of Friston House Wood is however noted, which is on the immediate edge of the village and provides visual containment to the visual amenity of dwellings in this Church Road / Hillcrest area. As noted in response to previous questions, the Applicants consider that additional planting in the form of 'covert' woods closer to Friston, would be an appropriate method to further mitigate the visual impact of the onshore substations in views from the northern edge of Friston, while accepting that this approach may have an impact in itself in changing the 'open' landscape character. In reviewing the <i>OLMP General Arrangement</i> (APP-401) for submission at Deadline 3, the Applicants will consider the opportunity for additional covert woodland planting whilst respecting the historic setting of the listed building in the area.
1.10.13	The Applicant, Natural England	1	2	ES Chapter 29, paragraph 180 [APP-077] sets out that the susceptibility of the Ancient Claylands LCT is reduced as the landscape is influenced by the presence of the existing double row of high-voltage overhead	a)	As stated in paragraph 180 of ES Chapter 29 (APP-077), on balance the LCT is assessed as having a medium- high sensitivity to changes arising from





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		transmission lines, with changes experienced in the context of existing electrical infrastructure and large-scale elements. However, there is a clear difference between a double row of high level largely see through transmission lines when compared to the proposed extent and density of ground level infrastructure. a) To what extent do you consider that the susceptibility of the Ancient Claylands LCT to change is reduced by the presence of the existing overhead transmission lines? b) Compare and contrast in landscape character terms the existing effects of the overhead transmission lines and the proposed substation development. To Natural England: Do you agree with the applicant's assessment of the susceptibility of the Ancient Claylands LCT to changes arising from the proposed developments?	the onshore infrastructure. The presence of the double row of high-voltage overhead transmission lines and associated pylons is described as a mitigating factor, because they (in particular the pylons) form notable visual elements in the local setting of the landscape between the village of Friston and Fristonmoor and due to their large vertical scale and form. They are considered to exert an important influence on the way that the landscape is experienced, such as from the PRoWs to the north of Friston which pass directly under the double row of high voltage overhead pylons and electrical lines (VP1 – <i>Figure 29.13a</i> (APP-404)); forming large scale elements crossing the view south from Fristonmoor to Friston (VP5 – <i>Figure 29.17a</i> (APP-408)) or in forming a backdrop to views of Friston village (VP9 – <i>Figure 29.21a</i> (AAP-412)). These components notably influence the present-day aesthetic and perceptual (scenic) qualities of the landscape and therefore influence its sensitivity to changes arising from the proposed onshore infrastructure.







ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response
			electrical lines on landscape character arise from the vertical scale / form of the pylons and linearity of the route/electrical lines crossing the landscape. In the area north of Friston, the route of the pylons and electrical lines does not follow a straight line passing the landscape, but instead turns at the deviation towers near Peartree Farm. Its deviated route increases its encompassing / surrounding influence on the local landscape character of the onshore substations location because the pylons are situated both to the west, north and north-east of the substation area.
			The existing pylons are of much larger vertical scale than the proposed substations (up to 59.2m above ground level), and in terms of vertical scale have a greater visual prominence, with a wider zone of visibility; although their high level and wide spacing means that they tend to be perceived as being above the human scale and traversing the landscape, rather than 'within it', when compared to the proposed footprint and density of lower height, ground level substation infrastructure.







ExA. Question Ref.	Question addressed to	ExA. Question	Applicants' Response
			The influence of the high voltage overhead pylons and electrical lines on landscape character is noted as a form of visual intrusion in the Suffolk Coastal Landscape Character Assessment (LCA) (2018). Although not specifically referring to the area north of Friston, but more generally describing their influence on the Estate Sandlands and Estate Claylands LCTs, it notes the "double row of giant pylons", as being "detracting features passing north of Aldringham" and as having a "substantial negative impact in the more open areas", and that they "distort the sense of scale within the landscape". It also notes "views of 20th century development are less attractive, especially when oversailed by the pylons"; and as being "dominant where they sail overhead" but that "away from their corridor they are often not seen owing to effect so many parcels of woodland".
			The visual containing influence of woodland around the onshore substations is noted in the ES <i>Chapter</i> 29 (APP-077), which together with the relatively lower height of the substation infrastructure proposed, results in a relatively contained geographic extent of





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						effects (within approximately 1.0km) but with effects on the character of this local landscape being of high magnitude and significant, primarily due to the introduction of large-scale buildings and complex electrical infrastructure, increasing the influence of development components in the landscape, as described in ES <i>Appendix 29.3</i> (APP-567) <i>section 29.3.1</i> .
1.10.14	The Applicant	1	2	ES Chapter 29, paragraph 185 [APP-077] notes that in views from areas where the onshore substation and National Grid substation will be visible, Grove Wood and Laurel Covert would provide visual containment in terms of the spread of development and vertically, since these woodlands are higher than the onshore substation and National Grid infrastructure. a) Would significant vertical containment be provided from viewpoints from all orientations given the orientation and positioning of the proposed infrastructure and Grove Wood and Laurel Covert, to the east of the proposals? b) How much vertical containment would be provided in relevant views given the open and visually unconstrained nature of much of the proposed infrastructure when set against a green backdrop? Would any such containment be reduced in winter?	a)	The Applicants would note that Grove Wood / Old World Wood and Laurel Covert provide full visual screening of the onshore substations in views from the east, as evident in the photomontages for VP7 (<i>Figure 29.19d</i> (APP-410)) and VP12 (<i>Figure 29.24d</i> (APP-415); in views from the north-east as evident in VP11 (<i>Figure 29.23d</i> (APP-414) and from the south-east, as evident in VP13 B1069 Snape Road (<i>Figure 29.23d</i> (APP-414). In views from areas where the onshore substations and National Grid substation will be visible, yes, the Applicants consider that Grove Wood / Old World Wood and Laurel Covert would provide visual containment in most orientations, as a result of its spread as a backdrop





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			and its vertical height, including views from the west, such as VP8 (<i>Figure</i> 29.20d (APP-411), north-west such as VP5 (<i>Figure</i> 29.17d (APP-408)) and south such as VP2 (<i>Figure</i> 29.14b (APP-405)).
			b) In views from areas where the onshore substations and National Grid substation will be visible, such as those from the north and west referred to above, Grove Wood and Laurel Covert would provide visual containment as a backdrop to the development (i.e. it does not screen the onshore substations, but the woodland is viewed 'behind' the onshore substations, forming a wooded envelope at the back of the onshore infrastructure, with vertical height and horizontal spread of the woodland generally being above and behind the height and footprint of the substations). The provides a containing effect, despite the substations being visible, which would otherwise not occur in a more open landscape and which was a key consideration in the site selection process.
			As described in ES Chapter 29 , paragraph 266 (APP-077) the effects assessed in the LVIA and shown in the





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					photomontages are based on a seasonal worst-case in terms of the level of screening provided by existing and proposed vegetation during winter. Visual containment of the onshore infrastructure would increase from that shown and assessed in the LVIA, during the period when vegetation is in leaf.
1.10.15	The Applicant	1	2	ES Chapter 29 [APP-077] notes in terms of visual impacts [ref] that the proposed sealing end compounds will be visible, particularly in views from the north. • Confirm that the relevant photomontages provided in the submitted documents include such sealing end compounds. If they are, please provide annotated versions of the relevant photomontages to indicate.	The Applicants can confirm that the photomontages provided in the submitted documents include the proposed sealing end compounds. Annotated versions of several relevant photomontages have been provided in <i>Appendix 9</i> of this document to identify the sealing end compounds in these views. In reviewing the <i>OLMP General Arrangement</i> (APP-401) for submission at Deadline 3, the Applicants will consider the opportunity for additional planting at the cable sealing end compounds.
1.10.16	The Applicant	1	2	The conclusions of the ES Chapter 29 [APP-077 note that it is considered that there is scope for the onshore infrastructure to be accommodated in the landscape, over the long-term, with the delivery of the landscape mitigation plan. a) In this respect define the terms 'accommodated' and 'long term'.	c) Long-term is defined in the <i>Appendix</i> 29.2 (APP-566) as more than 10 years. The term 'accommodated' used in the conclusions of ES <i>Chapter 29</i> (APP-077) refers to the ability of the overall character of the landscape to accommodate the onshore infrastructure without undue consequences, expressed





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		b) Is such accommodation sufficient to adequately mitigate the adverse effects on the quality of landscape and the visual impact of the new infrastructure? How can this mitigation be secured, monitored, and assessed?	as a professional judgement, informed by the likely interactions between the sensitivity of the resource – landscape and visual – and the changes arising from the attributes of the development, including its embedded mitigation.
			d) The Applicants consider that the accommodation of the onshore substations and National Grid Infrastructure with the proposed mitigation is sufficient to mitigate adverse effects on the majority of landscape and visual receptors, including the wider 'overall' character of the 'host' landscape types: the Ancient Estate Claylands and Estate Sandlands LCTs, and the Suffolk Coast and Heaths AONB.
			Despite the proposed mitigation and degree of landscape integration achieved over time, the LVIA does find that the onshore substations and National Grid Infrastructure will have significant, long-term and permanent effects on the landscape character of localised areas to the north of Friston, within approximately 1km around the onshore substations. The Applicants consider that these significant effects on local landscape character are unavoidable due to the fundamental





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			change from an essentially open rural landscape (albeit with overhead lines), to one in which at a local level, the local landscape character will be strongly influenced by the presence of the onshore substations (albeit, within a substantial landscape framework of woodland blocks, tree lines and hedges).
			Visual effects have been possible to mitigate over the long-term through the <i>OLEMS</i> (APP-584) planting proposals addressing specific receptors, with residual significant, long-term and permanent visual effects assessed as occurring only on views experienced by people walking on the PRoW network to the north of Friston and residents of the edges of the village of Friston and its outlying rural dwellings / farmsteads. The potential for further visual impact mitigation addressing these receptors has been described in responses to questions 1.10.2 and 1.10.12.
			Professional judgements made in the conclusions of ES <i>Chapter 29</i> (APP-077) with regards potential to accommodate the substations are made in the context of virtually all Nationally Significant Infrastructure Projects, particularly those







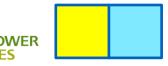
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			of the size proposed for the onshore infrastructure of the project, will have significant effects on their local landscape character and with regard to the minimising of harm to the landscape proposed through appropriate mitigation in the <i>OLEMS</i> (APP-584). Mitigation that improves accommodation described in the conclusions of ES <i>Chapter 29</i> (APP-077) paragraph 268, includes the good / careful design of the project, within a landscape that is partially enclosed by trees and woodlands (which offer more capacity to accommodate development without affecting the wider landscape character), the relatively contained geographic extent of significant landscape and visual effects assessed and the reduction in the magnitude of these effects over time with the delivery of the landscape mitigation plan. There are also existing visual detractors, in the form of the double row of high-voltage overhead transmission, which influence whether development is likely to be accommodated into its surroundings. Mitigation would be secured under the LMP which will be produced and
			implemented in accordance with





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					Requirements 14 and 15 of the <i>draft DCO</i> (AAP-023).
1.10.17	The Applicant	1	2	ES Chapter 29 [APP-077] Table 29.1 states that "Lighting effects associated with the construction works and onshore infrastructure have been taken into account within the assessment methodology. More detail is provided in Appendix 29.2 Operational impacts (including lighting) are considered in section 29.6.2" However, it is is not clear to the ExA where more detail is provided in either Appendix 29.2 or section 29.6.2. While noting information provided in the submitted Design and Access Statements [APP-580], clarify the proposed day and night time lighting required of the onshore infrastructure, how this would be controlled both physically and through the DCO, and if any is necessary, the visual effects of such lighting on key receptors.	Regarding construction lighting, the final Code of Construction Practice (CoCP) will include an artificial light emissions plan to be approved by the relevant local authority before commencement. Details of the location, height, design and luminance of all floodlighting to be used during the construction of the Projects, together with measures to limit obtrusive glare to nearby residential properties, will be set out in the final CoCP. Site lighting will be positioned and directed to minimise nuisance to footpath users and residents, to minimise distractions to passing drivers on adjoining public highways and to minimise sky glow, so far as reasonably practicable. Lighting spillage will also avoid or minimise impacts on ecological receptors, including nocturnal species. Construction phase lighting will be limited to permitted working hours in low light conditions, with lower-level security lighting outside of these times. It is proposed that specific operation phase artificial lighting requirements (Works Nos. 30 and 41) be determined post-consent. Full details of artificial light emissions (e.g. hours of lighting and measures to minimise lighting pollution) will be





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					included in an artificial lighting management plan to be submitted to and approved by the relevant local planning authority before operation commences. This is secured in Requirement 25 of the <i>draft DCO</i> (APP-023).
					Section 6.7.8.14 of Chapter 6 Project Description (APP-054) provides information on the operational lighting requirements for the Projects.
					Based on the mitigation described in <i>Table 29.3</i> of <i>Chapter 29</i> of the ES (APP-077), it is considered that any potentially significant visual effects relating to lighting at the onshore substations will have been mitigated through design (i.e. the onshore substations have been designed so that they require no permanent lighting at night-time, with passive lighting (passive infra-red) being used).
1.10.18	The Applicant	1	2	The ExA noted on their unaccompanied site visits [EV-005, EV-006, EV-007] that the eastern side of the property at Moor Farm (NGR TM 41030 61692) has a very open aspect to the south, with open fences and a grassed lawn in front of large windows providing presumably extensive views to the south towards Friston. The applicant is requested to: a) Assess the effect of the proposals in the context of the proposed OLMP from this vista	a) The Applicants note the open aspect to the south from the property at Moor Farm and would highlight the position of the 'covert' woodland block proposed on <i>Figure 5</i> in the <i>OLEMS</i> (APP-584) to the south of Moor Farm, which is placed to provide mitigation of the visual effect of the onshore substations and National Grid Infrastructure in this vista south. This woodland block has been set-back from





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				b) Can the applicant confirm whether or not this property is curtilage listed as part of High House Farm?	the immediate property boundary in order to retain the open farmed landscape in the immediate setting of the dwelling, but the woodland block is proposed on elevated ground upslope from the onshore substations, relatively near to the property, to provide visual screening between the property and the substations. A section of this woodland block is proposed as early stage planting (see <i>Figure 7</i> of the <i>OLEMS</i> (APP-584)) to begin establishment of this woodland screening as early as possible. The Applicants and the Councils are discussing the extent and delivery mechanism for such early planting. b) The Applicants can confirm these are two separate properties. At least two of the
					buildings that make up Fristonmoor Barn are definitely not curtilage listed (swimming pool and adjoining N-S range). The other two buildings may be pre-1948 structures (at least in part) and therefore could merit curtilage listing, but the available information is not detailed enough to be certain of this.
1.10.19	The Applicant	1	2	Submitted plans show proposed sustainable drainage system basins. Assess any effect of the such basins on	Indicative onshore substations and National Grid SuDS detention basin size and location is illustrated in the <i>OLEMS</i> (APP-584) (<i>Figure 3</i>





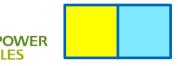
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		the local landscape character in landscape and visual terms, where relevant.	and 5) to the west of the National Grid substation and south-west of the onshore substations and National grid Infrastructure. The SuDS is designed with detention basins and/or retention ponds, which will hold surface water runoff from the onshore substations during rainfall and allow a sufficient attenuation to greenfield runoff rates to the Friston watercourse. The full specification for the SuDS would be addressed as part of the detailed design post-consent, however the intention is for the SuDS basins to be designed in line with best practice (The SuDS Manual, CIRIA, 2015).
			Detention basins would consist of vegetated landscape depressions that may normally be dry except during and immediately after storm events, when the basin fills to provide storage runoff and flow attenuation, or that have a small permanent retention pond and marshy areas at the outlet. The form and aesthetic appearance will be designed in detail, however the intention is that the SuDS basins would have edges with curves and undulations to produce natural-looking features and that the basins would be vegetated with appropriate wetland grasses and wet woodland species, as indicated in the OLMP (<i>Figure 3</i> – G3/W4 areas). In combination with the surrounding species rich-grassland (G2) and woodland areas (W1), the SuDS basins are intended to contribute to a more natural





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					landscape character in the local area to the west of the substations, as a contrast to the more complex form of the substations. The visual impact of the SuDS basins is relatively localised, since they are only likely to be viewed in close proximity, most likely from the PRoW passing to the west and slightly more elevated areas of this PRoW to the north towards Fristonmoor.
1.10.20	The Applicant	1	2	Can the Applicant confirm whether any noise impacts of the operational sub-stations has been considered in the assessment of landscape effects?	The Applicants can confirm that noise impacts of the operational substations have not been considered in the assessment of landscape effects, for example in respect of effects on perceived tranquillity of the landscape. Effects on tranquillity as an aspect of the special qualities of the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) have been considered as part of the assessment of the project on the AONB special qualities and the Applicants note that the onshore substation locations are 1.6km from the AONB at its closest point (and 3.7km from the main coastal area of the AONB) and that it is inappropriate to assess the onshore substations on this same basis. Noise impacts of the onshore infrastructure are assessed in <i>Chapter 25 Noise and Vibration</i> (APP-073).
1.10.21	The Applicant	1	2	Friston Parish Council raise concerns over the extent of the proposed access road. The ExA note the responses of the applicants to this point of view in their responses	The substation operational access road must be sufficiently wide to accommodate Abnormal Indivisible Load (AIL) deliveries to the onshore





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				to the RRs [AS-036] and the technical details provided. Provide justification for the proposed length and width of the road.	substations (such AIL deliveries comprising two transformers required for each onshore substation) during construction, and potentially during operation in the case unlikely event of a replacement transformer being required.
					The maximum weight of each transformer is assumed (based on similar projects) to be 282 tonnes and delivered on a minimum 20 axle trailer, supported by 2 ballast tractors. Maintenance of the onshore substations and National Grid infrastructure will also require period two-way vehicle movement along the substation operational access road and may also require pedestrian access.
					The Applicants have reviewed the concept design of the substation operational access road and confirm that it can be reduced from up to 8m in width to up to 7m in width. Detail design of the onshore substations and the finalisation of the AIL delivery configuration will allow the final design of the substation operational access road to be completed. Potential remains during the detail design stage to further reduce the width of the substation operational access road.
1.10.22	The Applicant, Natural England	1	2	Natural England [RR-059, Appendix D] raise issues in respect of highlighting the need for considering and potentially committing to simultaneous construction of the onshore cabling for both projects should they both	a) The Applicants are currently investigating the possibility of installing ducts for both projects in parallel should the Projects be





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				be approved, as a form of mitigation to limit construction phase landscape and visual impacts to the short term.	built sequentially. An update will be provided at Deadline 2.
				They note that in their view the importance of the AONB (a nationally designated landscape with the highest level of planning policy protection) justifies the most effective mitigation being applied i.e. both onshore cabling stages to be completed together and the landscape fully restored as soon as possible.	
				The ExA note the responses of the Applicant to this point of view in their response to the RR [AS-036] that the projects are being developed by two separate companies, are two separate projects and will have two separate Development Consent Order consents.	
				a) Can any assurances be provided of the likelihood (or not) of financing being secured for both projects in parallel and works being carried out concurrently?	
				To Natural England:	
				If the projects are not able to be carried out together, provide further views and comments on the effects of the proposals on the AoNB	
1.10.23	The Applicant, Natural England	1	2	Natural England [RR-059, Appendix D] note that there is a limited amount of detail as to how construction activities would proceed along the cable route in and close to the Suffolk Coast and Heaths AONB and how	a) Flexibility to accommodate open trench laying or ducting of the onshore cables is required. The proposed methodology will be determined following detailed design and a construction programme will be established at that time. Supply chain





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		soon after commencement all signs of construction activity would be removed from the AONB. The ExA note the responses of the applicants to the point of view in their responses to the RRs [AS-03] and notes that there is no commitment to an anticontimetable and / or schedule for how construction activities would progress along the cable route with the immediate setting of the AONB and specific durations of Construction Consolidation Sites (CC) and construction activity and that this will be consumed as part of detailed design once a contractor is appointed. Provide further information on the above, including a) Further justification as to why an anticipated timetable / schedule for how construction activities would progress along the cable route within and in immediate setting of the AONB, including details undergrounding works within and in the immediate setting of the AONB, covering both the topsoil stripping/trenching (and HDD if relevant) and back reinstatement of the cable route cannot be provided the case) b) An assessment of how such construction activities, would impact on the character and setting of the cable route cannot setting of the removal, including construction consolidations and their removal, including construction consolidations is the case.	availability will also influence the final construction sequence and programme. b) An assessment of how such onshore cable route construction activities (including Construction Consolidation Sites), would impact on the character and special qualities of the AONB (Area A between Thorpeness, Sizewell and Leiston) is provided in <i>Appendix 29.3</i> (APP-567) page 40-44. c) It is anticipated that reinstatement works will take place within 12 months of completion of the relevant stage of the onshore works (see section 6.9.7 (APP-054) of the ES). Details of proposed reinstatement of trees, hedgerows and other landscape features are provided within the <i>OLEMS</i> (APP-584) and will be secured through the approval and implementation of the LMP in accordance with Requirements 14 and 15 of the <i>draft DCO</i> (APP-023). d) See c).





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				AONB, particularly given the unknowns at the present time. c) The timetable for and details of the reinstatement of trees, hedgerows and other landscape features lost during the construction phase and confirmation whether such information could be secured as part of the DCO. d) Any suggested proposals to mitigate the effects of the inability to provide an anticipated timetable/schedule and how they might be secured For Natural England e) Provide your comments on the responses of the applicant	
1.10.24	Natural England	1	2	With respect to the assessment of cumulative impacts of the EA1N and EA2 OWFs with the construction and operational phases of the Sizewell C project, the ExA note that you advise that all parties consider landscape enhancement/net gain opportunities within the AONB, and consider that an agreement should be put in place on how this could be achieved with the AONB partnership in consultation with yourselves and others. The ExA note the responses of the applicants to this point of view in their responses to the RRs [AS-036] that there is no policy requirement to deliver net gain for NSIP projects. Respond to this if necessary	No response



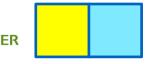


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1.10.25	The Applicant	1	2	Photomontages The ExA noted on their unaccompanied site visits [EV-005, EV-006, EV-007] that further additional visualisations/photomontages of the proposals for the following locations would be very useful. Please produce these: a) Footpath to south of Little Moor Farm NGR TM 41293 61495 b) Bench to north of Friston at intersection of footpaths NGR TM 41394 60679 c) Footpath across field to south west of High House Farm/Moor Farm NGR 40860 61501	The Applicants would note the following with regards additional photomontages: a) The Applicants would highlight the position of cultural heritage VP4 (<i>Figure 9a-g in Appendix 24.7</i> (APP-520)) included in the cultural heritage assessment, on the footpath near Little Moor Farm, approximately 200m north of the suggested location, which would afford a similar view and propose that this viewpoint should be used with reference to the footpath south of Little Moor Farm. Alternatively, if the Examining Authority wish, additional viewpoint photography could be obtained, but this would be travel and weather dependant. b) The Applicants hold baseline view photographs near this suggested location near bench to north of Friston TM 41293 61495, which appear to be suitable, and an additional photomontage can be provided at Deadline 3. c) The Applicants would highlight the position of VP5 (<i>Figure 29.17a-e</i> (APP-408)) included in the LVIA, on the same footpath near High House Farm / Moor Farm, approximately 150m north of the suggested location, which would afford a

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					similar view and propose that this viewpoint should be used with reference to footpath across field to south west of High House Farm / Moor Farm. Alternatively, the Applicants hold other baseline view photographs near this suggested location and can produce an additional photomontage, if required, for Deadline 3.
1.10.26	The Applicants	1	2	Pilgrims Paths Various IPs [including but not limited to RR-445, RR-356, RR-068]] to the effect of the proposal on "pilgrims paths". The existing footpath running north from Friston towards Little Moor Farm which will be removed as part of the proposals is stated to be one such path. Respond to this view. Has any assessment been taken of any additional value which a footpath may accrue by virtue of historical associations?	The Applicants have given further consideration to the value of this path. An <i>Onshore Archaeology and Cultural Heritage Clarification Note</i> (ExA.AS-10.D1.V1) that includes additional baseline information and further assessment has been submitted to the Examination at Deadline 1.