SPR EA1N and EA2 PROJECTS

DEADLINE 2 – COMMENTS ON EXQ1 RESPONSES – 1.4 CONSTRUCTION

Interested Party: SASES **IP Reference Nos.** 20024106 and 20024110 **Issue:** 4

Question	Topic	Question (if any)	Applicant Response or Statement	SASES Comment
1.4.1	Timelines worst case	**Timelines** The ES states that 3 years is assumed for onshore construction, with 2 years for construction and 1 year for commissioning. The assessment for cumulative effects states that onshore construction would occur sequentially, with the duration doubling. a) Does this mean that construction of the two projects could take 6 years sequentially? b) Please confirm (with reference to relevant Application Documents) the worst-case construction assumption. Do the application documents reflect this worst-case assumption?	a) An initial high-level indicative programme was developed for the ES and presented in Section 6.9 of Chapter 6 Project Description (APP-054). This highlight the durations of construction for individual parts of each Project. Activities in different parts of the onshore development area will run in parallel with the longest period required for construction of the substation (30 months). In all, it is expected that the total duration of construction will be three years for one Project. It should be noted that the works for the National Grid substation is expected to be up to 48 months, although this would include works for both Projects. If the Projects were constructed sequentially, back to back, construction would take 6 years. b)	The Applicant's response seems to have considered only two scenarios : concurrent or consecutive implementations). The Applicant has applied in Draft DCO for a 7 years' time limit to commence work. Consequently, in the event of Scenario 2 (sequential project implementation) and given the pessimistic prospects of winning sufficient funding through the Contracts for Difference process as expressed below (Response to 1.4.15) , the worst case scenario could be Project 1 Starts : year 1 Project 2 starts : year 7 Project duration (each project) ; 3

			For the worst case, each onshore assessment chapter (Chapters 18 – 26 (APP-066 – 074, Chapter 27 (APP-075) and Chapters 29 (APP-077) all have a stand-alone appendix (Appendix X.2 in each case – e.g. 18.2, 19.2 etc) which considers the two potential cumulative scenarios for the Projects on an impact by impact basis for construction. This justifies in each case the worst case for each impact which is then carried across to the impact assessment within the relevant chapter. In many cases the worst case is the same for either scenario. However, for some receptors having multiple disturbance events (i.e. sequential construction) represents the worst case (for example see table A22.3 in Appendix 22.2 (APP-502).	years Therefore, Worst case Start-to-Finish duration (both projects) could be 9 years.
			Project Description [APP-054]	
1,4.3	Overlapping projects and the two scenarios	Paragraph 17 refers to two cumulative assessment scenarios which are described briefly in paragraph 18. • How are overlapping programmes covered by these two scenarios?	Paragraph 18 introduces the two scenarios. In terms of how these are reflected in the project description, Appendix 6.4 Cumulative Project Description (APP-453) provides a full comparison of infrastructure footprints etc. The tables from Appendix 6.4 (APP-453) are then used to inform the cumulative worst case for each receptor topic. Each receptor topic	Consent for both projects must take account of onshore environmental and human impact, for which almost certainly the least worst case would be concurrent (Scenario 1). The Applicant should be required to assess impact for Scenario 2 in quantitative terms.

			chapter has a stand-alone appendix (Appendix X.2 in each case – e.g. 18.2, 19.2 etc) which considers the two potential cumulative scenarios for the Projects on an impact by impact basis for construction. The two scenarios presented cover the two extremes of construction scenarios possible. Temporally – Parallel construction results in the shortest possible duration. This can either result in a best case (e.g. in relation to the shortest overall duration of an effect) or a worst case (e.g. in relation to traffic the worst case is a result of having the most vehicles in the shortest time). Sequential construction results in the longest possible duration (whether construction is back to back or there is a gap). This can either result in a worst case (e.g. overall duration of disturbance to residents) or a best case (e.g. in relation to traffic the vehicle numbers are spread over a greater time, reducing daily peaks). For the two examples given above, any scenario in between parallel of sequential construction (i.e. partial overlap) remains with the assessment envelop (i.e. partial parallel and partial sequential construction). In some cases the assumptions used in the project alone assessment are so precautionary that cumulative impacts can be no worse than project alone	It is not practicable for the Applicant to model every possible overlapping projects scenario. However, it should be possible to exercise the Applicant's computer based **quantitative** models for a scenario 3: That is for work on Project 2 to commence midway through Project 1 development timescale and to predict forecast data for: • Peak resource requirements by type • construction and transport traffic peak volumes, • HGV junction waiting times • predicted noise at sensitive receptors • etc Consent for Project 2 should be dependent on scenario(s) leading to least worst impact.

			under either scenario. For example (Appendix 22.2 Onshore Ecology CIA (APP-502) section 22.3.3, para 20 "The assessment for proposed East Anglia TWO project alone assumes that all the improved grassland (6.4ha) and all the semi-improved grassland habitat (9.4ha) within the onshore development area could be temporarily impacted by the construction of a single project (with a footprint of 77ha) as the worst case scenario. The addition of the proposed East Anglia ONE North project cannot increase the total area of grassland within the onshore development area therefore the project alone worst case cannot be exceeded." The Applicants are confident that, given that there are no blanket assumptions over the worst case and each impact in each receptor topic has been considered individually, that the worst case has been assessed in every case. The Applicants recognise that some clarification may be useful regarding Appendix 6.4 and a revised version will be submitted at Deadline 3.	
1.4.15		Paragraph 310 says that "Cables will be placed directly underground without ducting, although ducting may be used in	a) The scenario described would reduce impacts, as per the rationale applied to East Anglia ONE and East Anglia THREE. The determining factor	**General** The Applicant has announced on 26/11/2019 that it intended to combine three projects (East

		some or all of the route.". a) Bearing in mind that there are two projects proceeding side by side onshore, should the onshore cables be laid in ducts throughout, with a view to reducing the construction impacts in the event that the projects are constructed consecutively rather than concurrently? . b) What would be the advantages and disadvantages of installing ducts for the second project at the same time as installing the ducts and cables for the first project? And c) if the onshore works were carried out separately for each project, is it intended that the haul road would remain in place between the construction of the first and second projects?	in terms of which construction scenario is adopted will be the outcome of the Contract for Difference (CfD) auction, scheduled to be held by the UK Government in 2021 and every two years thereafter. Depending on the auction prices achieved, the auctions could see 1 to 2 gigawatts of new offshore wind being deployed every year in the 2020s. Whilst the precise level of Government funding for each round of future CfD auctions is yet to be announced, it is clear that the Government is continuing to drive the offshore wind sector to reduce costs. Recent CfD auctions have seen significant reductions in the cost of offshore wind projects. In 2015, CfD Round 1 (in which East Anglia ONE successfully secured its CfD), achieved an average clearing price of approximately £117/MWh. In 2017, CfD Round 2 achieved prices as low as £58/MWh. The offshore wind CfD prices for CfD Round 3 in 2019 were lower still at around £40/MWh. All indications are that this downward pressure will continue into the 2021 CfD auction, when the Projects are expected to enter the Round 4 CfD auction. This reduction in CfD strike price represents a significant challenge for the offshore wind sector to reduce construction costs, and is likely to result in only the most	Anglia One North, Two and Three) into one single delivery programme with a capacity of 3,100 megawatts (MW), to be known as The East Anglia Hub. The three projects would be procured together to leverage their scale with a continuous installation programme. Ref. https://www.scottishpowerrenewables.com/news/pages/iberdrolas_scottishpower_renewables_to_create_the_3100_mw_east_anglia_hub_offshore_wind_development.aspx In other words, the Applicant intends to deliver a Programme of Work comprising three projects EA3, EA1N and EA2. The Applicant should have submitted with each project DCO submission its Programme Plan indicating as a minimum and inter alia the planned sequencing of and interdependencies between the component projects. ExA cannot be expected to assess overall benefit versus cost to the environment and human impact if only individual independent project proposals are put forward for approval without the context of a formal Programme Plan indicating key project dependencies and

			competitive projects receiving CfD support and therefore proceeding to construction. Acknowledging the extremely competitive market, in order to ensure the capital cost of both Projects are as competitive as possible, each project must bear its own construction cost. Should only East Anglia TWO be successful in the 2021 CfD auction for example, that project may not be able to carry the significant cost of the duct installation for the East Anglia ONE North project as it would increase the East Anglia TWO construction costs, making the East Anglia TWO project less competitive and potentially jeopardising its ability to secure a CfD in its own right (and vice versa if only East Anglia ONE North was successful in the 2021 auction). In that case, both Projects would progress sequentially (construction scenario 2), with the project that was not successful in the 2021 auction proceeding to construction at a later date once it secures a CfD. The Applicants are currently investigating the possibility of installing ducts for both projects in parallel should the Projects be built sequentially. An update will be provided at Deadline 2. b) If ducts were used for the second project: • Cables would be installed in sections between jointing bays, the	project sequencing The Applicant's response to ExAQ 1.4.15 clearly demonstrates that its sole concern with regard to the Cable Corridor construction continues to be cost and its desire to maintain financial flexibility and multiple options for financing each project. It takes no account of environmental damage or disruption to residents. It is disappointing that the Applicant's response shows no recognition of NPS EN-1 4.2 (Environmental Statement), specifically 4.2.1 – 4.2.6, 4.2.8. We would respectfully refer also to ExA's obligation under 4.2.9. SASES view is that project on its own would have broadly the same negative impacts on the onshore environment during construction as if both projects were being built concurrently. Therefore, in considering overall national benefit versus dis-benefit, the generating capacity of each project must be weighed against estimated negative impact from each project. One cannot look at the generating capacity of both projects in order to justify the impacts of one project. If the Applicant's benefits case

			worst case assumes 19 jointing bays along the onshore cable route. The jointing bays would need to be accessed via a haul road. Cables would be pulled through the ducts across the full-length of the onshore cable route. • The advantage would be to reduce the intrusiveness of the cable pulling when compared to open trenching for the second project. The footprint for impacts would be the same as per parallel construction, however some repeated impacts would be avoided or reduced in magnitude for the second project. • There are no disadvantages from this approach in terms of environmental impact. c) Requirement 29 of the draft DCO (APP-023) requires that any land which is used temporarily for construction of the onshore works and not ultimately incorporated into permanent works or approved landscaping must be reinstated within twelve months of completion of the relevant stage of the works or such other period as the relevant planning authority may approve. The assumption would therefore be that the haul road will be removed and the land reinstated where there is a gap between the construction of the first project and the second project. However, there is scope for agreeing with the relevant planning authority	relies upon total generating power from both projects and if that is accepted, then it seems clear that the only acceptable option that could be consented is that both projects are built concurrently. We do not understand the Applicant's reluctance to commit to the installation of ducting as it has on other projects, unless that is another focus on cost alone. Given the flexibility the Applicant has expressed with regard to sequencing, it seems only reasonable that a condition on consent to help mitigate impact on the communities should pre-installation of ducts for both projects.

			that works are not to be reinstated within the twelve month period. This flexibility is intended to cover the situation where it would make sense (for example, from an environmental perspective) for temporary works to remain in place between the construction of one project and the construction of the second (i.e. where removal and reconstruction of the temporary works may give rise to more impacts than leaving them in place between the construction of the first and second projects might).	
1.4.17	Permanent Cable Corridor Easement 20m	Paragraph 329 states that "Post construction, a permanent cable corridor easement of approximately 20m in width is anticipated …" except for where a wider corridor is needed, for example where HDD is used, and Plate 6.20 shows an	a) Within the permanent cable corridor easement there is space for spoil storage where any digging is required to access the cable for maintenance. b) The same permanent easement width is required if the cables are laid directly or in ducts and what is being sought is comparable with similar schemes.	Re: a) There no mention in 7.1 Cable Statement of any specific areas along the cable route designated for Spoil Storage. In view of their potential environmental / community impact, these areas must be specified before consent.
1.4.18	Highways special crossing techniques	Table 6.25 lists all the locations where the onshore cable route crosses the public highway and paragraph 366 says that "some crossing locations will require … special crossing techniques …". Paragraph 368 says that "the use of an onshore HDD … is only for consideration … where	a) The Onshore Crossing Schedule can be found in Appendix 7 of this document. b) It is intended that open trenching be used in all cases where the cable route crosses the public highway. The process for open trenching for road crossings, which will maintain traffic use at all times, is described in Chapter 6 Project	

		the onshore cable route crosses the Leiston- Aldeburgh SSSI/Sandlings SPA. However, an open-cut crossing technique is … preferred" a) Please provide an onshore crossing schedule and plan giving, for each obstacle to be crossed by the cables, an ID, sheet number, type and description of obstacle (eg woodland, hedgerow, highway, public right of way, footpath, river, utility) and your proposed crossing method. b) Is it intended that trenchless techniques be used where the onshore cable route crosses the public highway to minimise impacts on traffic and access to property? c) Is it intended that trenchless techniques be used where the onshore cable route crosses the Leiston Aldeburgh SSSI/Sandlings SPA? d) If not, please explain what technique you intend to use and why	Description (APP-054) sections 6.7.3.10.4 & 6.7.3.10.5. The Applicants therefore do not consider that trenchless techniques are necessary to cross these roads in this instance. c) The EIA and draft DCO provide for either a trenchless and open-trench solution at the SPA crossing. The Outline SPA Crossing Method Statement (ExA.AS-3.D1.V1) which has been submitted at Deadline 1, provides more information. This crossing is the subject of ongoing discussion with the LPAs, Natural England and the RSPB. d) The Outline SPA Crossing Method Statement presents and justifies the Applicants' preferred solution for crossing the SPA, which is the open trench technique.	
			Outline Code of Construction Practice [APP-578]	
1.4.24	B1122 and B1143 crossings open	With reference to oral submissions at OFHs 1 – 3 (7 – 9 October) raising concerns	Within Table 26.4, Chapter 26 Traffic and Transport of the ES (APP-074), the Applicant has committed to no	SASES welcomes the Applicant's confirmation and commitments here (and reiterated in its Deadline

	at all times	about the extent of road closures and diversions likely to be caused by cable trenching, the Applicant is requested to respond to these points, and comment on the possible use of HDD to mitigate this particular construction effect. Can HDD be used to further limit the extent of diversions due to road crossings?	roads being fully closed to install the Projects' cables under the public highway. The Applicant will therefore ensure that the B1122 Aldeburgh Road will remain open at all times and minimise disruption by implementing the following measures (if required): • The road crossings will be completed in two stages maintaining one traffic lane in each direction; • Traffic will be controlled through temporary traffic signals; • A safe route will be maintained for pedestrians through the works area along the B1122l. • The Applicant will consult with the relevant highway authority and local stakeholders to develop a final Travel Plan as part of the discharge of requirements process. This will accord with the Outline Travel Plan (APP-588) in line with Requirement 28 of the draft DCO. • Advanced signing will be implemented to assist drivers in finding alternative routes; and • The works will be staggered (i.e. not closing a lane on the B1122 at the same time as the B1069). The Applicants note that the onshore cable route does not cross Sizewell Gap and therefore this road will not be affected as a result of trenching works. As per their response to question 1.2.66, the Applicants consider that there is insufficient lateral space to accommodate a	1 submission : 'Applicants' Responses to Examining Authority's Written Questions Appendix 7 Onshore Crossing)' with regard to ensuring that the B1122 Aldeburgh Road would remain open at all times and that a safe route would be maintained for pedestrians through the works area along the B1122.

			trenchless crossing methodology at the B1122 crossing	
1.4.34	Noise and vibration monitoring	Paragraph 79 says in respect of noise and vibration management that “a programme of monitoring may be required.” and paragraph 85 says that “If it is deemed by the Local Planning Authority that during construction monitoring of construction noise is necessary, then the locations of such monitoring will be agreed in advance with the Local Planning Authority.”. a) Surely a programme will be required on a project of this scale in order to optimise mitigation? And b) should the programme start with baseline measurements taken before site clearance starts?	It is the Applicants’ understanding that the monitoring methodology set out within the Outline CoCP (APP-578) will only be implemented where issues arise (i.e. in the event of the Project receiving a noise complaint) or where noisy construction activities are anticipated to be undertaken in close proximity to noise sensitive receptors. The measures in relation to noise set out within the final approved CoCP prepared post-consent and in accordance with the Outline CoCP (APP-578) will be based upon the detailed design of the Project and the construction methods to be employed by the appointed contractor. The Applicants do not consider it appropriate to commit to monitoring at this time, when the worst case construction noise assessed and presented within Chapter 25 Noise and Vibration of the ES (APP-073) may not materialise during construction. The Applicants will consult with the relevant planning authority through the post-consent stage when discharging requirements and throughout construction to establish the requirement for site-specific monitoring. Requirement 22	The Outline CoCP should include a specification for regular unsolicited noise monitoring of and reporting on specific sensitive locations to be determined by the Local Planning Authority (LA) . Where a given threshold has been exceeded, it should trigger an automatic notification to the LA. Regular reporting summaries should be posted and available to all stakeholders on a publicly accessible internet location.

			of the draft DCO (APP-023) includes the preparation of a construction phase noise and vibration management plan as part of the CoCP, which must be approved before works commence.	
1.4.36	River Hundred Crossing	2 Paragraph 104 says that the crossing of the Hundred River will be a trenched crossing, requiring a temporary bridge or culvert for the haul road, and temporary dams, flumes and pumps to minimise upstream impoundment and maintain flows downstream, all with the attendant risk of flooding and surface water pollution. • Please explain why trenchless methods such as HDD are not proposed for this crossing	Please refer to the answers provided for question 1.2.66.	In view of the high level of fluvial flood risk in this area, we ask that the Applicant shall be required to provide measures within a R. Hundred Crossing Plan that avoid any risk of flooding at homes in Gipsy Lane, immediately downstream of the proposed crossing and that pumps be selected and sited such that noise disturbance at homes in the vicinity is minimal.
1.4.37	Onshore cable corridor widths	Cable corridor widths onshore ES Appendix 6.4 'Cumulative Project Description' [APP-453] states that the onshore cable route width would generally be no wider than 64m if the two projects were constructed concurrently i.e. 32m for each project. However, R12(14) refers to the following working widths: a) where the cables cross the Sandlings SPA the	All working widths listed in Requirement 12(14) are correct for a single project in either construction scenario. Further explanations for these working widths is set out in sections 6.7.3.1.1 and 6.7.3.1.2 of ES Chapter 6 Project Description (APP-054). How reduced working widths are applied in either construction scenario is set out in Table A6.1 in ES Appendix 6.4 (APP-453). The Applicants recognise that some	SASES supports the need for the Applicant to provide considerably more clarification on the working widths for each scenario and each method of construction still under consideration within a revised ES Appendix 6.4 'Cumulative Project Description'. This might be more appropriately titled 'EA1N/ EA2 In Combination Project Description'.

		working width of the onshore cable route must not exceed— (i) 16.1 metres, in the event that open cut trenching is used; (ii) 90 metres, in the	clarification may be useful regarding Appendix 6.4 and a revised version will be submitted at Deadline 3.	