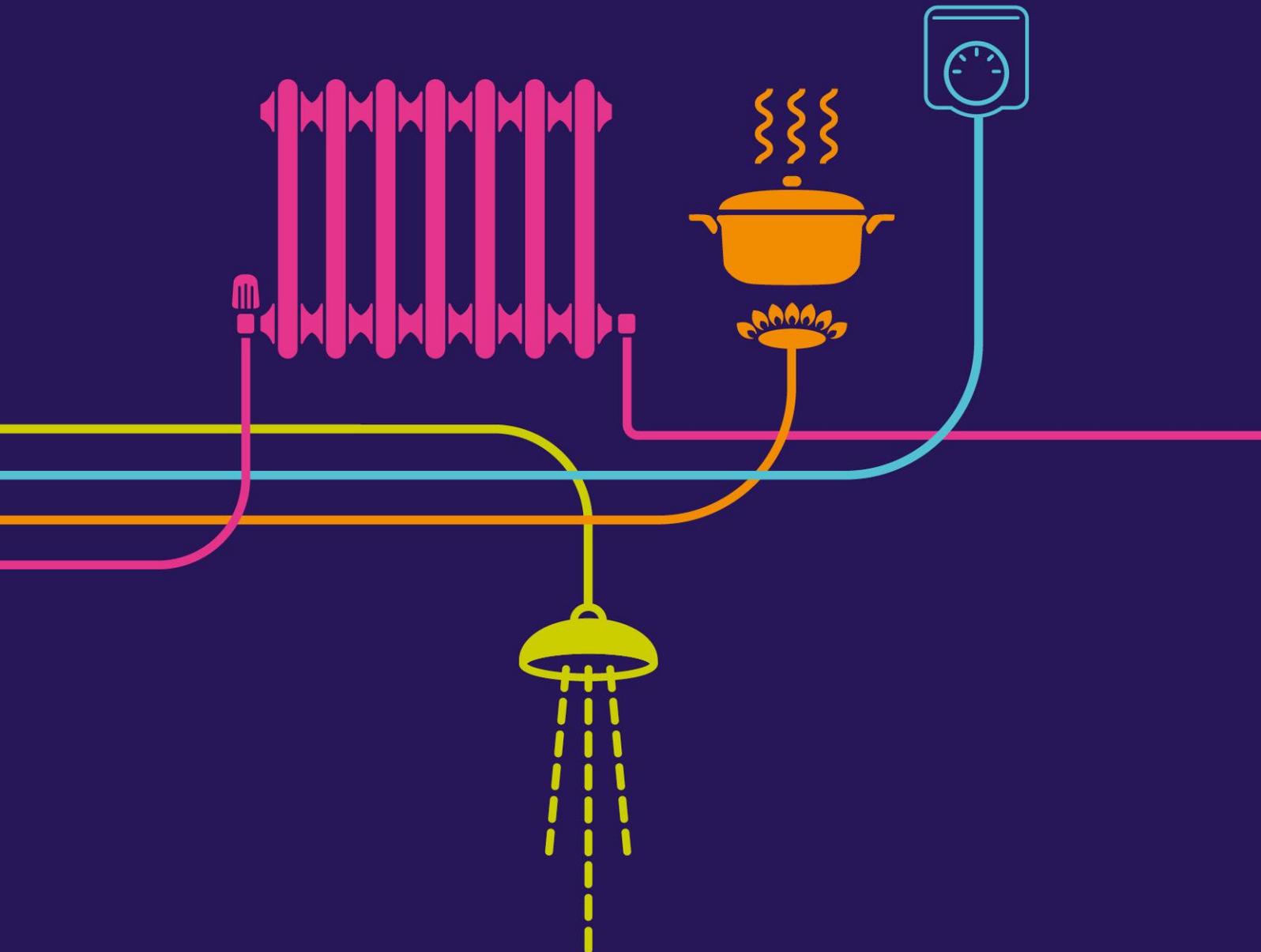


Responses to ExA's First Written Questions

River Humber Gas Pipeline Replacement Project



Question Number	Question to:	Question	Response
1. APPLICATION PLANS AND DOCUMENTS			
1.1	Applicant	Please update the works plan overview [APP-07], W001 to identify the location of the existing gas feeder pipeline that is being replaced.	National Grid had a briefing with MI5 on 23 February 2015 who strongly recommended that the amount of strategically important information placed into public domain material is limited for security reasons. For this reason and taking into account the significance of the pipeline for the continuity of the nation's transmission of gas the existing feeder pipeline is not shown on the works plan overview.
1.2	Applicant	Please update the works drawings to indicate the transition point from tunnel & pipeline construction to open trenched pipeline.	The exact transition points from tunnel to trench will be matters for detailed design by the main works contractor after pre-construction surveys and investigations are carried out. The maximum lengths of trenched and trenchless sections for each part of Work 1 are set out in Schedule 1 of the development consent order. These lengths have been assessed by the Environmental Statement as the 'worst-case scenario'. The detailed design is subject to approval by the local planning authorities under requirement 4. The detailed design must accord with and remain within the parameters of the 'worst-case' Rochdale envelope assessed in the Environmental Statement.
1.3	Applicant	On the Works Plans [APP-07]; 1. the scale bar is illustrated at 1:12,500 but the drawing scale is 1:2,500 – please check and update. 2. the limits of deviation are not parallel with the target route and the target route is not the centre line (for example, at one point (516400 E grid line on W007) 120m (approx.) wide sub-divided 54m/66m). Please check and verify whether this is as intended ? 3. the redline sits approx. 5m outside deviation limit. Please check and verify whether this is as intended and if so is it included within the measurements quoted in the application documents?	1. The overview sheet is at a different scale to the drawings that follow. This is correct. 2. This is intentional. There are certain points along the indicative route where the limit of deviation is limited to less than the prescribed 50m. For example tie-in works at the Above Ground Installations limit the limit of deviation. In addition, the area where the pipeline comes onto land at Paull is limited along with where the reception shaft can receive the replacement pipeline at Paull. 3. The approximate 5m between the red line boundary and the limit of deviation is intentional. This 5m represents the required working width for tunnelling operations. Measurements presented in the Works Plans (Doc 2.2A) represent those quoted throughout the application documents.
1.4	Applicant	Development Consent Order (DCO) Schedule 1 [APP-016] quotes 'approx.' measures for work areas but some vary significantly from the scaled measure taken from the drawings, for example: <ul style="list-style-type: none"> Work 1C, Schedule 1 states approx. 600m but scales closer to 750m. Goxhill – Work 2B states max 6m in Schedule 1 but scales 10m or 12m (it varies) on the works plan. Please audit these measurements and verify the correct position.	The correct position is as follows: Work 1C = Approximately 750m Work 1B = Approximately 10m Schedule 1 of the DCO will be corrected in the next version.
1.5	Applicant	Please illustrate the location of the cathodic protection kiosks, Work No 2C (Goxhill) and Work No 3B (Paull) on the Site Layout Plans [APP-09] and supply updated drawings.	Updated Site Layout Plans showing the limits of deviation for these areas are included with our deadline 2 submissions (Doc 2.4B). The precise locations will be subject to detailed design by the main works contractor.
1.6	Applicant	There are significant areas within the Goxhill and Paull construction sites on works drawings W006 and W008 [APP-07] hatched in green and identified as 'Temporary Work Areas'. Construction detail is then provided on the 'Indicative Site Layout Plans' [APP-09] for Goxhill and Paull. For the green hatched areas, please supply the following; 1. define the transition point from tunnel & pipeline construction to open trenched pipeline; 2. a list of equipment or processes vulnerable to flood and the methods by which they would be protected – for example, raised platform, or bunding for the: portacabins, drive and reception pits, oil & fuel storage, etc.; 3. identify the location of any flood protection measures e.g. bunding and define its height; 4. paragraph 2.4.23 [APP-031] refers to a treatment facility at Goxhill up to	1. Please see response to question 1.2 above. 2. Table 6-1 of the Flood Risk Assessment (Doc 5.2) lists sensitive equipment / processes vulnerable to flooding including the project and welfare offices, generator parks, general storage workshops (and electrical workshops), the drive pit and the reception shaft. In addition, oil and fuel storage is vulnerable to flooding. The project and welfare offices, generator parks, general storage workshops (and electrical workshops) would all be located on platforms raised to a minimum of 3.4m AOD. The drive pit and reception shaft would be protected by bunds at a minimum height of 3.4mAOD. Where larger quantities of fuel are stored the Oil Storage Regulations would apply and in these areas drainage would be contained or oil interceptors installed (paragraph 13.7.8, Chapter 13: Water Resources, Doc 6.13). 3. Indicative locations of flood protection measures are presented in Doc 2.4A. This drawing issued as part of the Deadline 1 documents also shows minimum heights of flood protection measures. 4. The site layout plan at Goxhill (Doc 2.4A) indicates the location of the arisings storage and

		15m in height, typically 20m in width and 30m in length, comprising of drying and settlement facilities. Please clarify where this would be located; 5. define the flood risk design height on the relevant drawings and confirm whether this is now agreed with the Environment Agency (EA); and 6. identify the centre line and limits of deviation for the final open trenched links at either end of the crossing.	loading area and associated infrastructure which is where this facility would be located. 5. Please refer to our response to question 3.1 below. 6. The sections of the pipeline which may be open trenched (Works 1A and 1C) form part of Work No 1, the centre lines of which are indicated by the bold blue lines on the works plans. The limits of deviation for these sections are those indicated by the broken black lines on the works plans.
1.7	Applicant	The term “ <i>significant</i> ” effect is defined in some ES technical chapters but not all. It is found in; 6.3.26 (cultural heritage); 7.3.34 Ecology - paragraph & 10.3.37 Noise and vibration Please clarify how the definition of a “ <i>significant</i> ” effect has been applied to all other technical assessments of the ES?	<u>Air Quality</u> In terms of air quality, there is no specific criteria for significance. Significance is dependent on whether emissions, albeit construction dust or vehicle emissions, are likely to lead to an exceedance of the air quality objective and the change in air quality conditions from the current situation. <u>Geology and Soils</u> There is no specific significance criteria for the assessment of effects on geology and soils therefore, professional judgement is required. Table 8.7 (DCO Document Reference 6.8) defines the significance of the impact. <u>Landscape and Visual</u> Chapter 9: Landscape and Visual Amenity (DCO Document Reference 6.9) is based on the Guidelines for Landscape and Visual Impact Assessment, Edition 3, published by the Landscape Institute / Institute of Environmental Management and Assessment (2013) (GLVIA). With reference to the summary advice on good practice (GLVIA, page 46), under assessing the significance of landscape and visual effects it notes that this is a matter of judgement. On this basis Chapter 9: Landscape and Visual Amenity (DCO Document Reference 6.9) has taken a step by step approach combining judgements about the nature of the receptor and the nature of the effect from which an overall judgement of significance is arrived at using a four point word scale. In addition, it should be noted that, the short term moderate adverse effects reported for the construction phase (in Chapter 9: Landscape and Visual Amenity) would not be considered significant as the effects are reversible over a short time period. <u>Socio-Economics and Land Use</u> There is no specific significance criteria that can be referred to when assessing socio-economic effects. Therefore, the approach relies on previous experience of undertaking socio-economic assessments and professional judgement (Chapter 11: Socio-Economics and Land Use (DCO Document Reference 6.11, paragraph 11.3.13). For land use a significant effect is defined in Table 11-6, Chapter 11: Socio-Economics and Land Use (DCO Document Reference 6.11). <u>Traffic and Transport</u> Effects are considered to be significant or not significant in Environmental Impact Assessment terms according to the significance of effects matrix, this is presented in Question 8.6. <u>Water Resources</u> A significant effect on a water environment receptor is defined as an effect having an overall significance, as a product of receptor value and impact magnitude that is Moderate Adverse or greater. This threshold has been selected based on professional judgement and taking account of the precautionary principle.
2. Construction and Project Delivery			
2.1	Marine Management Organisation (MMO); Crown Estate (CE); Applicant	Under what consents would the existing pipeline remain once capped and no longer used and has the Crown Estate, MMO, or any other relevant party agreed to the retention of the old pipeline? If so please supply evidence of those agreements, or demonstrate that they are not required.	The MMO have indicated that they agree with the following statement from the draft Statement of Common Ground (Doc 8.1.5) in response to this question MMO: <i>‘The MMO has no comments to make on the proposed decommissioning of the Existing No 09 Crossing pipeline as it would not be a licensable activity under Part 4 (66) of the Marine and Coastal Access Act 2009. The proposed decommissioning would be unlikely to have an impact on the marine environment or on users of the sea, and therefore falls outside of the MMO’s jurisdiction.’</i>
2.2	Applicant;	[APP-031] Project Description, Para. 2.11 confirms that the asset life is 40	Minor works are likely to involve isolating the pipeline at points within or immediately adjacent to

	Marine Management Organisation (MMO) & Crown Estate (CE)	<p>years for the pipeline and that the tunnel has a 100 year design life. After 40 years, National Grid may look to re-life the asset. Upon eventual decommissioning, the assets would remain in situ, with very minor works required within and immediately adjacent to the AGIs.</p> <p>Applicant - Please clarify what the likely 'minor works' would comprise?</p> <p>MMO & CE – Do you consider that a draft project of de-commissioning is necessary now and specifically, if an order were to be granted, when the replacement gas pipeline was no longer required, should it be removed?</p>	<p>the existing AGIs before filling with nitrogen and then undertaking ongoing pressure monitoring. Further detail is provided in Chapter 4: The Environmental Impact Assessment Methodology and Construction Environmental Management (Doc 6.4, paragraphs 4.5.21 – 4.5.27).</p>
2.3	Applicant	<p>[APP-019] The application documents suggest an overall construction program of 35 months (paras 4.1/4.2.4) with tunnelling taking 23 months within that overall program (paras 4.1/4.4.1) but the HRA Chapter [APP-027] (paras. 3.5.53-54) suggests tunnelling will take 13 months.</p> <p>1. Please clarify which is correct and supply a single page outline programme to illustrate an indicative sequential programme, with target dates, showing the main survey, acquisition and works events (including stages - Requirement 3, page 36 draft DCO) and milestones (including the programming of any necessary infrastructure accommodation works and the need to obtain any operational and other consents).The purpose being to illustrate and clarify when key works would be undertaken and the likely interaction with the ecological seasons.</p> <p>2. What contingency plans are in place for delay?</p>	<p>1. Chapter 2: Project Description of the Environmental Statement (Doc 6.2) states that construction would be approximately 35 months with physical act of tunnelling taking approximately 13 months (Section 2.6) (as per the Habitats Regulations Assessment (Doc 5.4)).</p> <p>Figure 2.4 (of Chapter 2: Project Description (Doc 6.2) shows Construction Phasing for the Project. This figure indicates that tunnelling would last for approximately 22 months. The 22 months includes all tunnelling activities such as establishing the tunnelling compound, piling the drive pit etc., not just the physical act of tunnelling.</p> <p>The necessary pre-construction ecological surveys (eg water vole, badger, marsh harrier) will be undertaken at the appropriate times of the year prior to determination of the application, by agreement with landowners. All relevant consents (see Doc 5.5) will be obtained by National Grid and the main works contractor prior to relevant work commencing.</p> <p>Regardless of the time it takes to undertake tunnelling activities or delays to the programme (i.e. crossing into different seasons), the project would not have any significant implications on the ecological impact assessment.</p> <p>Detailed programming of works will be determined by the main works contractor having regard to the parameters approved in the DCO. Nevertheless National Grid is in the process of preparing an indicative programme for the purposes of illustration and will submit this document as soon as practicably possible. However it should be noted that the stages to be approved under Requirement 3 are yet to be determined but will be approved by the Local Planning Authority prior to commencement of works – this approach was adopted in the Willington C Gas Pipeline Order 2014 and many other orders. This is to allow flexibility for, amongst other things, the detailed design of the appointed main works contractor and results of detailed pre-construction surveys and investigations. It should also be noted that the DCO establishes the framework within which the detailed development must be carried out and that any variation from the approved details must be in accordance with the principles and assessment in the Environmental Statement.</p> <p>2. Contingency plans comprise submitting a separate local planning application to North Lincolnshire Council for enabling works to ensure the most sensitive site initiation works in terms of soil movement and bird disturbance such as topsoil stripping, bund construction and installation of heras/close board fencing are completed before the winter period.</p>
2.4	Applicant and the Environment Agency	<p>Works Nos 7 & 8 [APP-07] identify the areas defined for the monitoring of settlement over proposed tunnel route. The duration of monitoring is defined in the CEMP at Pre L2 and Post L1 (during construction and 24 months afterwards);</p> <p>1. if settlement adversely affects the existing sea defences, or tunnel what might the consequences be;</p> <p>2. what contingency plans are in place?; and</p> <p>3. Environment Agency – please comment at Deadline 3 on the applicants response.</p>	<p>1. The maximum depth of settlement of existing sea defences due to the construction of the tunnel is limited to 12mm and as detailed in Section 13.7.40 of ES Chapter 13: Water Resources (Doc 6.1.3), settlement of up to a maximum of 12mm as a result of tunnelling beneath the flood defences would not adversely affect the integrity of the flood defences.</p> <p>The Environment Agency's (EA) interim revised 10% Annual Exceedance Probability (AEP) and 1% AEP extreme still water tide levels for the Humber at East Halton are 4.96m Above Ordnance Datum (mAOD) and 5.39mAOD respectively. The existing defences are at an elevation of 5.19mAOD on the Paull side of the Humber Estuary and 5.51mAOD on the Goxhill side of the Humber Estuary. As result the likelihood of the defences being overtopped (even with 12mm of settlement occurring) is very low (likelihood is less than 5%) at Paull during the short period of the tunnelling operation. As the existing defence is 120mm higher than the 1% AEP extreme still water tide level at Goxhill there is no risk of overtopping in this event.</p> <p>Settlement would be localised to a short section of the defence and the amount (up to 12mm) of settlement is very minimal. On the Paull side of the Humber Estuary in a 1% AEP event 200mm of overtopping of the defence is predicted. In the context of this depth of overtopping, the additional floodwater spilling from the Humber Estuary following any settlement of the defences would be very minor. The consequences in terms of additional flooding impacts would therefore be relatively small. On the Goxhill side, even with settlement, no overtopping is predicted in a 1% AEP event.</p>

			<p>In addition the British Tunnelling Society Specification for Tunnelling 3rd Edition (https://www.thomastelford.com/books/SampleChapters/Pages%20from%20Francis_ARpress.pdf) under cl. 314.1(3) requires the Contractor to ensure that the selected TBM includes provisions for adequate settlement control and suitability to meet the settlement limits defined in the works information. In addition, at cl. 315.5(2i) it requires the Contractor to provide instrumentation and a means to control the volume of material excavated per ring of advance. Surface settlement is directly proportional to volumetric ground loss at the tunnel face.</p> <p>The National Grid Tunnel Boring Machine (TBM) Specification, under cl.4.3 to cl.4.5, further requires that the Contractor adopts adequate controls within the TBM to accurately measure the excavated material and reconcile these quantities with the volume of tunnel built, and to ensure that volumetric ground loss at the tunnel face does not exceed 1% for every meter of advance. A volumetric ground loss at the tunnel face limited to less than 1% will result in surface settlement in the order of millimetres (mm), subject to fluctuations relating to depth and type of geology, as per the assessments identified above. This limitation on permissible settlement is necessary for example, to properly protect existing high pressure gas pipelines (and any other infrastructure close by) that the tunnel passes beneath. With regard to the existing sea defences and earth bunds, these levels of surface settlement (in the order of millimetres) will have negligible visual or physical impact.</p> <p>2. The likelihood for significantly greater settlement to occur would be preceded by abnormal readings and measurements within the TBM operational systems. These readings are particularly sensitive, both in respect of excavated volume and in terms of measurement of volumes of grout placed. The measurements are accurate enough to allow sufficient advance warning to cease tunnelling before any excessive (or catastrophic) ground loss occurs. The TBM is a fully sealed, closed-face tunnelling machine that does not allow uncontrolled ground ingress in a dormant state, and only allows controlled volumes of material to enter in the active state. When turned off, the ground in front of the TBM is in equilibrium.</p> <p>Surface settlement monitoring will also take place above the TBM on the landward sections commencing immediately from TBM launch. The data collected by conventional settlement monitoring and precision surveying will be incorporated into the back analysis models of the TBM data relating to excavated volume reconciliation. This will provide a very accurate picture of the volumetric ground loss at the tunnel face, enabling the correct quantities of grout to be measured and placed accordingly. The Contractor is required through the main works contract to collate, present and demonstrate to National Grid this model data in a suitable format within the first 200m of tunnel advanced. Failure to do so with sufficient adequacy or level of accuracy will result in a suspension of tunnelling until such a time that the analysis is presented and the control measures relating to settlement mitigation are fully demonstrated.</p>
2.5	Applicant	<p>[APP-054] Paragraphs 13.7.70 and 13.8.24 explain that settlement monitoring would also be undertaken 'before, during and after any pumping testing undertaken, to provide an indication of the actual response to dewatering effects. This would be needed for two weeks before the test and for the same afterwards. The data will subsequently be reviewed using a finite element model to confirm the assessment of the settlement potential caused by proposed dewatering.' Should the results of the Phase 2 investigation not reduce uncertainty to an acceptable level, the Hydraulic Impact Assessment (Appendix 13.3) and ES explain that there are engineering solutions that could be used to mitigate settlement impacts, namely:</p> <ul style="list-style-type: none"> • recharge wells and/or trenches (paragraphs 13.7.72-74) • ground treatment (grouting and ground freezing) (paragraphs 13.7.75-78) • vertical shaft machine (paragraph 13.7.79) <p>If the outcome of Phase 2 led to the requirement to adopt an alternative engineering solution, has the potential impact of any such works been assessed within the ES? Would such works be possible under the 'authorised development' of the DCO, or would this require a change to the application?</p> <p>Please justify your response(s).</p>	<p>Following ongoing discussions with the EA, the mitigation measures to minimise the hydrogeological impact on the aquifer will comprise a deep impermeable concrete secant pile wall cut-off structure or equivalent combined with the use of external recharge wells located at a distance outside the secant pile wall structure.</p> <p>With a recharge system implemented, drawdown at distance will be negligible and as such settlement as a result of dewatering will be also be negligible. ES Chapter 13: Water Resources (Doc 6.13) includes information on potential groundwater control methods and mitigation options for settlement and paragraphs 13.7.72 and 13.7.73 discuss the option of providing recharge wells to maintain groundwater levels and reduce settlement. Additional explanation of the recharge system along with modelling which demonstrates negligible drawdown at distance (and subsequently negligible settlement from dewatering) is explained within the HIA Addendum (Doc 6.13.3.2).</p> <p>As a result of (i) the available Phase 1 investigation, (ii) the recent analysis of the mini-pumping tests and (iii) the associated modelling works, we consider that any further investigation works, including any further pumping tests by the contractor, would verify the conclusions made to date, and would enable the contractor to specify the details of the engineering approach, i.e. the number, diameter and depth of recharge wells, and the capacity of pumps. In summary, no alternative engineering solution is anticipated beyond the recharge system.</p> <p>Paragraphs 13.8.22 to 13.8.25 (of ES Chapter 13: Water Resources (Doc Ref 6.13)) assess the residual effects of settlement, with a commitment made to mitigate impacts using the most feasible engineering solution. The conclusions of the Environmental Statement are therefore considered not to be affected by the results of more recently available data.</p>

			The engineering solutions referred to do not impact on the tunnelling works directly. This question relates primarily to shaft sinking works, where the findings are likely only to affect the temporary works design of the shafts – primarily such that groundwater flow paths are either slowed down to an acceptable level (i.e. by grouting and/or freezing) or groundwater flow is removed from the equation entirely by using shaft sinking methods that work beneath water table (i.e. vertical shaft sinking machine where groundwater is not disturbed and remains in equilibrium.)
2.6	Applicant and the Environment Agency (EA)	Will the fact that the reception pit lies in 'superficial deposits' make sealing of the shaft difficult to achieve at Paull?	<p>The location of the reception pit in 'superficial deposits' would not make sealing of the shaft difficult to achieve at Paull.</p> <p>The reception pit lies in glacial soils (referred to as "superficial deposits") that consist of variable units of firm to stiff sandy gravelly clay and dense fine to coarse sand and gravel. No specific problems are expected with sealing the reception shaft in this location because it would be expected (in this type of geology) for the Main Works Contractor to sink the shaft using conventional jacked caisson techniques, where full segmental rings are assembled fully watertight above ground before being jacked into the ground with the excavation taking place simultaneously, or by using bored secant piling methods, where alternate interlocking piles are drilled and concreted in situ before the excavation takes place inside the cofferdam. In both methods provision exists for supplementary grouting behind the shafts' structural linings, for leak sealing and water tightness purposes.</p>
2.7	Applicant	<p>'The Humber Estuary Design Standards' ([APP-081] 7.1 Planning Statement, 2.3.3, page 6);</p> <p>Please clarify whose standards are being applied, where are they defined, and how do they apply, or affect the outcome of the Environmental Impact Assessment?</p>	<p>Paragraph 2.3.3 of the Planning Statement (Doc 7.1) states: 'For the offshore pipeline under the Humber Estuary design standards require that the pipeline should be located at such a depth as to give a depth of cover not less than 7m from the true bed of the watercourse, after the removal of any silting, to the top of the tunnel.'</p> <p>These design standards are not Humber Estuary specific rather they are the standards that are outlined in Section 2.2 of Chapter 2: Project Description (Doc 6.2) of the Environmental Statement as having informed the project design. The Environmental Statement has assessed the project described in Doc 6.2 and so there is no effect on the outcome of the Environmental Statement.</p>
2.8	Applicant	<p>Work No 10 [APP-07 and APP-016] defines a temporary spoil storage area at Goxhill.</p> <p>Does this have capacity for the entire spoil generated from the tunnel arisings?</p> <p>Is the spoil storage at Paull purely for topsoil from the site strip to create the works compound and subsoil from the reception shaft?</p> <p>Would there need to be any offsite spoil movements at Paull and is this reflected in the initial Traffic Management Plan?</p>	<p>The temporary storage area is sufficient for the spoil storage requirements of the Project. Paragraph 2.4.29 (of Chapter 2: Project Description) states 'as the spoil is produced it would be removed from site on a daily basis. In the event that spoil has to be stored on site it would be formed into tunnel arisings storage bunds in a dedicated area'. Therefore there would be a continuous movement of material and never a requirement to store everything generated at once.</p> <p>Storage at Paull would purely be for topsoil and subsoil from the reception shaft, arisings would only be stored at Goxhill.</p> <p>There would be no offsite spoil movements at Paull. This is consistent with the initial Traffic Management Plan.</p>
2.9	Applicant	<p>1. Please supply a table to illustrate how the figures for excavated material shown on the Site Layout Plans (Paull and Goxhill) [APP-09] were derived to include details of topsoil from the site strip, subsoil from the drive or reception pit construction and tunnel arisings, the volume calculation (net and then including bulking) and thereby identify the volume of material that would be surplus and identify how many lorry movements this would require to remove?</p> <p>2. Have the necessary vehicle movements for the removal of the surplus material been included in the Initial Traffic Management Plan (TMP) and if so over what period?</p>	<p>1. Principle quantities are detailed in the National Grid Gas Tunnel FEED report. These use a bulking factor of 1.5 and figures would be finalised in line with the final tunnel design. For a 3.65m ID tunnel and the currently assumed geological long section, the principal tunnel quantities are as follows after bulking:</p> <p>Volume of excavated chalk 40,000m³</p> <p>Volume of excavated glacial deposits 28,500m³</p> <p>Volume of excavated material (drive pit) 30,000m³</p> <p>Volume of excavated material (reception pit) 10,000m³</p> <p>Total : 108,500m³ (after bulking)</p> <p>Based on chalk and glacial deposits, on the assumption of 20 tonnes of material being removed in one load over a period of 364 days, with removals running six days a week, it is estimated an average of 21 wagons a day.</p> <p>It is envisaged where possible that drive pit and reception pit material will be used for backfill on site and therefore minimising the requirement for transportation of materials off site.</p> <p>Topsoil volumes have not been included as topsoil will be stored and managed for reinstatement and will not leave site.</p> <p>2. The removal of excavated materials is included within the initial Traffic Management Plan (TMP)</p>

			(Doc 7.2.1). Material would be removed on a rolling basis throughout the construction works.
2.10	Applicant	<p>[APP-054]The Ground Investigation Report, Page 27 states that <i>'During the field works it was agreed to undertake an additional 6 CPTs at Paull (CPTA01 to CPTA06 to provide data associated with an option to relocate the reception pit south of Stoneledge'</i>.</p> <p>Is it necessary to relocate the reception pit? If not what evidence now supports that decision and if it is necessary does the reception pit remain within the application order limits?</p>	<p>It is not considered necessary to relocate the reception shaft and it remains within the order limits provided.</p> <p>Cone Penetration Test (CPT) A01 to CPTA06 (6.8.3 Appendix 8.3 Ground Investigation Report) were carried out as additional CPTs in the Phase I Ground Investigation. The additional CPTs showed granular and organic clay materials, and trial pitting within the proposed reception pit area demonstrated clay materials. Therefore there is no advantage to moving the reception shaft from the original location.</p>
2.11	Applicant	<p>[APP-024] 5.1 Pre app feedback from the Environment Agency at stage 1 states – <i>'contact north yorkshire water for their experience of tunnelling under the river Humber'</i>;</p> <p>Was that done and what was the feedback?</p>	<p>The Environment Agency is referring to the collapse of Yorkshire Water's Humbercare Wastewater Sewer tunnel in Hull in 1999. The section of tunnel that failed was part of a 10.6km wastewater project that involved underground sections constructed using pre-cast concrete linings at 3.66m internal diameter using an EPB (Earth Pressure Balance) Tunnel Boring Machine. On 16th November 1999 at the start of the night shift at around 7.00pm a leak was noticed at a segment joint at the right knee position. Water ingress was recorded at c.2L/min which increased rapidly to c.7L/min within four hours. Segmental rings began buckling in the invert and very fine sand began to fill the tunnel. The tunnel was evacuated and abandoned at 3.30am, and by 7.30am the nearby shaft was surrounded by a 60m wide depression 2.5m deep with an estimated volume loss of around 2600m.</p> <p>Inquiries and feedback indicate that initially no immediate cause could be determined, and subsequent investigations, including laboratory centrifuge tests replicating soil conditions at key positions, provided limited answers. Eventual conclusions were that fine Aeolian sand (wind-blown desert sand deposited over geological time) leaked through a gap in the circumferential joint in the lining under high pressure, allowing some minor movement leading to more sand being washed into the tunnel. The initial leaks were likely due to a combination of forces, including the unusual behaviour of a peat layer above the crown and high water pressure forcing the tunnel upwards. Tidal influences were also reported, and whilst there is still some uncertainty from the investigation, there are reports that the shaft proved impossible to excavate at high tide and was only worked at periods of low tide, and that circumferential segment fastenings in the invert were removed unnecessarily allowing the joints to open very slightly due to weak compressible soils in the crown. There were also unsubstantiated questions relating to the adequacy of grouting, and suggestions of possible over-excavation that was improperly recorded and was not mitigated. Remediation involved freezing the soil around the excavation and using sprayed concrete lining methods.</p> <p>A great deal has changed in the tunnelling industry in the years following the incident. Many of the changes relate to significant improvements in TBM technology, in particular much stricter control systems to accurately measure and reconcile excavated volumes, and systems to accurately measure grout volumes to ensure that no voids are left outside the ring that could lead to minor deformations of the lining. Significant improvements have also been made in relation to the structural integrity of pre-cast concrete linings, and improved manufacturing tolerances for trapezoidal segments (in particular tolerances for horizontal casting of segments) such that the circumferential joint remains fully watertight and doesn't require supplementary "packing", as used to be the case with the older type traditional primary segmental tunnel linings.</p> <p>Of greater significance is the implementation of improved means to understand and manage risk that emerged as result of the introduction of the Joint Code of Practice (JCOP) for Risk Management of Tunnel Work in the UK in 2003. This standard has since been adopted universally on tunnelling projects Worldwide. The code was a joint effort between insurers, the BTS and the tunnelling industry to improve risk management of major tunnel projects, and it has been very successful in putting risk management at the forefront of tunnel design and construction. The JCOP is now applied to all tunnelling projects in the UK, and has become a standard condition for placement of risk on the international reinsurance markets.</p> <p>The tunnel has been designed in accordance with the following principal documents to ensure the works meet the current standards and codes of practice (Section 2.1 (Doc 6.2)):</p> <ul style="list-style-type: none"> • BS 6164:2011 Code of Practice for health and safety in tunnelling in the construction industry. • Specification for tunnelling. Third Edition published by the British Tunnelling Society and The Institute of Civil Engineers 2010.

			<p>In addition the tunnel would be designed in accordance with the following:</p> <ul style="list-style-type: none"> • Closed-face tunnelling machines and ground stability – a guideline for best practice. Published by the British Tunnelling Society and The Institute of Civil Engineers 2005. • Tunnel lining design guide. Published by the British Tunnelling Society and The Institute of Civil Engineers 2004. • The joint code of practice for risk management of tunnelling works in the UK, 2003 published by the British Tunnelling Society and the Association of British Insurers. <p>Whilst unforeseen conditions can never be entirely eliminated, the above standards endeavour to minimize project risk, and all came into force after the 1999 failure of the waste water tunnel in Hull. Yorkshire Water were unfortunate in that there was no immediately obvious cause of the collapse, which is an unusual feature in itself, but important lessons were nonetheless learned and have since been passed to the wider industry. These relate to the importance of carrying out geo-hazard risk assessments early; the importance and significance of data collection; a zero tolerance approach to leaks and annular grouting; monitoring ground movement and tunnel deformation; adequate segment design and quality control during casting, and independent validation of lining design (including segment fastenings) for sufficient robustness to take into account, as in this case, the potential for tidal variations and possible minor cyclic movement, even with a fully grouted annulus.</p>
2.12	Applicant	<p>[APP-054] 6.8.3 4.7 pages 26-27 Scope Changes – ‘due to limitations on access, risks and limited time the intertidal investigations were de-scoped from Phase 1 ground investigations’:</p> <ol style="list-style-type: none"> 1. Have these works now been completed; 2. if not when will they be undertaken; 3. what risks does that otherwise leave for project execution; and 4. which intertidal areas would be affected? 	<p>1 & 2. Phase 1 ground investigation (GI) works were carried out in Q2 2014, comprising 16 offshore boreholes (BH) and 11 onshore boreholes (7 at Goxhill and 4 at Paull. The result of the Phase 1 works confirmed the tunnel alignment, relocated the drive shaft closer to East Marsh Road and supported the development of the Geotechnical Baseline Report for inclusion in the Main Works Tender.</p> <p>Phase II GI works were carried out in Q2 2015 comprising of 4 onshore BHs (one at Goxhill and three at Paull). The results of the phase II works have been received and both onsite observations and draft reports support the proposed alignment of the works. The Factual Report has been reviewed and is currently being finalised (it will be submitted at deadline 3) and will support the refinement of the Geotechnical Baseline Report for inclusion in the main works contract.</p> <p>Phase III of the GI works will be two onshore BHs, due to be completed in October 2015, to confirm the ground condition at the reception pit location.</p> <p>3. The intertidal BHs at Paull Holme Strays (BH19 & 20) were descope due to limitation on access and limited time during tidal influx. Currently this leaves an area of circa 800m where National Grid has no Ground Investigation data. However the Geotechnical Baseline Report has been risked appropriately for encompassing this area of unconfirmed conditions based on the information from Phase 1 and will be reviewed based on the information from Phase II. We do not consider that this poses any risk to delivery of the project as there is sufficient data from the Phase I and II tests to support the proposed alignment.</p> <p>4. The intertidal area affected is that at Paull Holme Strays.</p>
3. Flood Risk			
3.1	Applicant and the Environment Agency (EA)	<p>[APP-054] 6.8.3 The Ground Investigation Report, page 2 records the groundwater level range at:</p> <ul style="list-style-type: none"> • Paull -0.45 to 1.83 AOD • Goxhill -1.47 to 2.07 AOD <p>Is 1.4m flood design for protecting the drive and reception pits adequate and if so is that now agreed with the EA in a SOCG?</p>	<p>The Flood Risk Assessment (FRA) Addendum (Doc 5.3.1, Section 3.2), that has been submitted as part of Deadline 1, confirms that the Environment Agency (EA) is concerned about flooding of the wider floodplain surrounding the drive and reception pits as a result of a tunnel collapse (rather than flooding of the development site itself).</p> <p>A minimum of 1.4m flood bunds (to a height of a minimum of 3.4mAOD) would be provided around the drive and reception pits. During the tunnel drive phase the bunds around the drive pit and reception shaft would be continuous. However, once the tunnel drive phase had been completed the defence line would have to be broken to enable the pipes to be pulled through the tunnel.</p> <p>In the event that a tunnel collapse coincided with a Mean High Water Spring (MHWS) tide, the flood bunds would prevent any flooding of the surrounding land. For tides greater than MHWS flooding could occur, but the risk of a tunnel collapse is extremely low.</p> <p>An FRA Addendum (Doc 5.3.1, Section 3.2), has been produced which provides the additional information the EA has requested (e.g. flood maps showing the extent of flooding as a result of a tunnel collapse) and outlines why the flood bunds cannot be raised further and why other</p>

			<p>mitigation cannot be incorporated into the project. This was submitted for Deadline 1.</p> <p>The FRA Addendum (Doc 5.3.1) has been issued to the EA and we are currently seeking the EA's agreement to a minimum of 3.4m AOD bunds through the Statement of Common Ground.</p>
3.2	Applicant	<p>Was your modelling and risk assessment based upon the EA's latest flood risk data (interim tidal levels for the Humber) and therefore can you confirm that it represents a worst case scenario and has agreement been reached on the relevant allowance (if any) for climate change?</p>	<p>The Flood Risk Assessment (FRA) (Doc 5.2) was informed by existing published data sets available from the Environment Agency (EA) at the time of writing.</p> <p>On the 11 March 2015 the EA provided their interim revised extreme still water tide levels for the Humber at East Halton. These levels are higher (and therefore represent a worst case scenario) than the levels used to inform the FRA.</p> <p>An FRA Addendum (Doc 5.3.1, Section 3.1), that was submitted at Deadline 1, has been produced to take into account the EA's interim levels and the EA's guidance on the climate change allowances (this was informed by a phone conference with the EA on the 29th July 2015).</p> <p>The FRA Addendum (Doc 5.3.1) has been issued to the EA and we are currently seeking the EA's agreement to the revised assessment of flood risk informed by the interim levels and the climate change allowances used, through the Statement of Common Ground.</p>
3.3	Applicant	<p>Please verify whether on site sleeping accommodation is currently proposed during the project, or in the light of pre-application consultation with the EA (22.12.14 – page 87 FRA [APP-025]) has this now been removed from the project plan? If it remains a proposal please supply details and evidence to support its safe use.</p>	<p>Sleeping accommodation has been removed from the proposals. Welfare facilities for staff consist only of showers, canteen and amenities.</p>
3.4	East Riding of Yorkshire Council (ERYC)	<p>The applicant provided a draft Flood Incident Report Plan (FIRP) at Appendix C (page 89) of the Flood Risk Assessment for the project [APP-025]. The EAs RR [RR-010] provides their current feedback on the project and recommended the opinion of the Humber emergency planners at East Riding of Yorkshire Council be sought on the draft FIRP.</p> <p>Does ERYC have any comments upon this plan and are there any specific matters regarding flood management, or emergency planning that the ExA should be made aware of and explore during the examination?</p>	<p>No comment.</p>
3.5	Applicant	<p>In section 5.6.3 of 5.2 Flood Risk Assessment [APP-025] the statement is made that '<i>a key element of tunnel design is the appropriate independent validation of design.</i>' That work is not planned until a stage after which a DCO would need to have been granted and as submitted there remain caveats within the engineering reports supporting the tunnels viability.</p> <p>Can the applicant demonstrate the application project can be delivered safely with the necessary certainty within the order limits?</p>	<p>National Grid are committed to ensuring that the pipeline is designed and built strictly in accordance with current and recently improved standards and codes of practice, some of which have been reproduced in answer to Question 2.11. With respect to the tunnel element, central to those codes is the Joint Code of Practice (JCOP) for Risk Management of Tunnel Work in the UK that was introduced in 2003 to mitigate safety risk on major tunnel projects, and to put risk management unequivocally at the forefront of tunnel design and construction.</p> <p>The design of a tunnel (as with any underground excavation) is, to a large extent, the design of a support system and an excavation method. National Grid have ensured that the excavation method will be by closed-face, state-of-the-art tunnel boring machine (TBM) designed and manufactured at an internal diameter of not less than 3.65m in strict accordance with the requirements of BS EN 16191:2013 Tunnelling machinery – Safety Regulations, the most recent revision of which came into force in the UK in July 2014, and the requirements of the Closed-face Tunnelling Machines and Ground Stability Guideline for Best Practice published by the British Tunnelling Society and The Institute of Civil Engineers in 2005. The TBM must also meet the requirements of the National Grid Recommended TBM Specification that requires the Contractor to meet further extensive high-level standards with respect to machine safety, operational control and capability, as well as including adequate provisions to manage groundwater pressure and mitigate environmental risk.</p> <p>Equally, the tunnel support system as proposed accords with industry best practice for TBM driven tunnels, and the lining will be suitable pre-cast, reinforced structural concrete constructed using trapezoidal segments that will be designed to withstand ground (and other) loadings and will be compatible with the Contractor's selected TBM. By way of the FEED and the Works Information, National Grid have ensured that the support system (the lining) will be designed in accordance with the requirements of the Tunnel Lining Design Guide published by the British Tunnelling Society and The Institute of Civil Engineers in 2004 and also requires that the Contractor provides a comprehensive validation of design by way of a CAT III independent design checking procedure identifying all the design elements which are to be checked, including the category of check and</p>

			<p>confirming which entity, established engineering practice or individual engineer will perform the check. The procedure further requires the Contractor to provide CV's and an organogram of their proposed tunnel design checking and approval team, naming the registered Chartered Engineers of either the Institute of Civil Engineers or the Institution of Structural Engineers who will supervise the checking with demonstrable independence from the design. The tunnel support system design must also meet the requirements of National Grid's Recommended Tunnel Lining Specification, which requires the Contractor to meet further extensive high-level standards with respect to structural integrity, concrete quality, materials control and laboratory testing, and crucially strict requirements relating to dimensional tolerance and precision engineering for both the segments, joints and fastenings, and the moulds to be used in segment manufacture.</p> <p>These provisions and requirements are all commensurate with the existing scope of the tunnel proposals as detailed in the FEED and the Works Information, and along with further industry codes and standards, such as BS 6164:2011 Code of Practice for health and safety in tunnelling in the construction industry and similar electrical and hydraulic standards, this will ensure with a high degree of certainty that the project is delivered safely within the order limits.</p>
3.6	Applicant	<p>What would the 7 No 750m3 pillow tanks shown on the Indicative Goxhill Site Layout Plan [APP-09] be constructed of, could they impact on flood risk during the project and if used what would happen to the potable water on completion?</p>	<p>The pillow tanks would be manufactured from impermeable fabric (e.g. urethane, rubber or vinyl fabrics etc.). As outlined in ES Chapter 13: Water Resources (Doc 6.13 Section 13.7.32) a single continuous bund around the perimeter of the pillow tanks would be designed to contain all of the water released should a pillow tank fail, removing the risk of flooding on the site.</p> <p>Following construction, water would be discharged to the outfall at Skitter (as per Doc 2.2A).</p>
3.7	Applicant	<p>[APP-073] Initial Site Water Management Plan, para 4.1.2 states '<i>The dewatering process has the potential to produce relatively large volumes of groundwater over time that will be stored in on-site lagoons</i>'.</p> <p>What size (approx.) would the lagoons need to be, how would they be created and where would they be located? Please illustrate on the Site Layout Plans [APP-09].</p>	<p>Water would be stored in the surface and de-watering management areas as per the indicative Site Layout Plans (Doc 2.4B). Detailed design would be undertaken by the Main Works Contractor. Typically construction would comprise creating temporary earth bunds to create the shallow lagoons combined with a degree of excavation (c50m x 25m x 2m). They may be lined with recovered clays from excavations (if available) or using imported bentonite matting or geotextile or similar suitable impermeable membranes.</p> <p>Implementation of a recharge system will reduce the quantity of groundwater that needs to be stored on site.</p>
3.8	Applicant	<p>Section 5.6 of the Flood Risk Assessment [APP-025] addresses the concern expressed by the EA [RR-010] regarding tunnel collapse and the risk of a breach of the flood defences. The application documents (Ground Investigation Report [APP-049] item 1.14) contained caveats because the Phase 1 ground investigations/lab tests were incomplete;</p> <p>1. without further investigation what level of confidence can you have on the conclusions presented for the impacts of the project on flooding and what level of risk remains;</p> <p>2. if the additional GI and pump testing has now been completed what evidence has this provided and has this altered the conclusions within the ES;</p> <p>3. is a position on flood risk and flood design height now agreed with the EA?</p>	<p>1. Some conclusions of the Flood Risk Assessment (FRA) (Doc 5.3) have been strengthened or superseded by further investigations into flooding conditions in the extremely unlikely scenario of a tunnel collapse. More detailed information regarding the risk of a breach of the flood defences has also been reported in the FRA Addendum (Doc 5.3.1) that has been submitted as part of Deadline 1.</p> <p>Indicative flood maps have been produced to show the potential extent of flooding should a collapse of the tunnel occur during the construction phase coinciding with extreme 100%, 20% and 10% Annual Exceedance Probably (AEP) tide events. Spill volumes from the drive pit, derived from a simple hydraulic model of the tunnel/bunds, have been calculated and the maps produced identify receptors within the flood extents that would be vulnerable to flooding in this extremely unlikely scenario.</p> <p>Information on floodwater flow velocities and flood hazard under breach conditions is also presented in Section 3.6 of the FRA Addendum (Doc 5.3.1).</p> <p>2. The GI showed no effect. The mini-pumping tests were completed on site in early September 2015. Analysis of these results are in progress and early findings have indicated that the original parameters used in previous analysis have proved to be suitable. In summary, these findings have not changed the conclusions within the ES on the basis that recharge wells are used to recirculate the groundwater so mitigating any net loss of groundwater from the aquifer.</p> <p>3. The FRA Addendum (Doc 5.3.1) has been issued to the EA and National Grid are currently seeking the EA's agreement to conclusions reached regarding the impacts of the Project on flooding in tunnel collapse and defence breach scenarios, as well as the height of the flood bunds, through a Statement of Common Ground.</p>
4. Water Resources			
4.1	Applicant	<p>Please identify clearly on the '<i>Indicative Site Layout Plans</i>' [APP-09] the location (and grid reference) of the water discharge and abstraction points, for</p>	<p>Grid reference points for the abstraction and discharge point at the Humber at Goxhill have been added to the works plans (Doc 2.2A – see points A and B. Abstraction will not and cannot occur</p>

		example the proposed abstraction point within the intertidal area.	within the intertidal area given the variable water level – the caged pumps for abstraction will only, by necessity, be placed below the mean low water mark. A commitment will be added to the Initial CEMP to confirm this.
4.2	Applicant	Have water discharge points at Goxhill and Paull been agreed with the EA, the North East Lindsay Drainage Board (NELDB) and the South Holderness Internal Drainage Board (SHIDB)? Note [RR-010] from the EA which at 2.1(8) states ' <i>The 'Indicative Paull Site Layout' shows an area denoted as the 'water discharge work area' which appears to coincide with the existing flood defence and Thorngumbald Pumping Station outfall. More detail is requested to assess any potential impacts'</i>	Both drainage boards i.e. North East Lindsey and South Holderness have been consulted regarding the project and had no comments to make. This is documented in Statements of Common Ground (Docs 8.1.11 and 8.1.12). The EA query regarding the 'water discharge work area' has been answered in a Statement of Common Ground, which clarifies that this area, as illustrated in Doc 2.4A 'Indicative Paull Site Layout' comprises hoses over the flood defence to facilitate the discharge of brackish and fresh water. Unhindered access to the defences would be maintained and no intrusive interference with the defences in this area is required. Hoses would not hinder the ability of essential vehicles to move along the defences. National Grid is currently seeking agreement that the additional information provided satisfies the EA, through the Statement of Common Ground.
4.3	Applicant	[APP-054] 6.8.3 The Ground Investigation Report, 5.4 page 40, end of para 3, states – ' <i>the geology of both land sites along the tunnel route is laterally and vertically changeable making it difficult to model the waterflow and recharge status for the chalk'</i> ; 1. what level of risk does this introduce to the project delivery and ES conclusions; 2. how might that risk be reduced; and 3. how confident can your modelling in the application ES be?	1. With the secant pile wall constructed, there is no significant risk to prevent the safe dewatering of the excavation for construction purposes. With sufficient recharge wells installed – pumped groundwater can be recharged to ground so the Main Works Contractor (MWC) can be in control of net groundwater abstracted so can work within any groundwater abstraction licence provided by Environment Agency. 2. Rigorous groundwater management by the MWC following specifications by National Grid. Groundwater needs to be abstracted by suitably constructed wells with appropriate filters so that recharge wells do not become clogged. No clogging of the wells is expected over the relatively short pumping period, but if they do, a standard programme of well cleaning with compressed air and water is required. 3. Modelling documented in the Environmental Statement has been updated as new information arises as a consequence of the new mini-pumping tests and other modelling scenarios. On the basis that recharge wells are installed, the most recent modelling which determines that the net groundwater abstraction is in line with the initial Environmental Statement modelling. In summary, National Grid is confident that modelling is sufficiently accurate to the extent that it can be used to develop a dewater/recharge design that mitigates against significant impact on the surrounding aquifer.
4.4	Applicant	[APP-054] 6.8.3 The Ground Investigation (GI) Report, Section 8.0, page 100 Geotechnical Risk Register - The table summarises the design processes, hazard level (based on ground work investigation/modelling completed at the time of the report [25.11.14]) and quantifies risk. Of particular note; • row 1, ' <i>Around one km of tunnel below mudflats has no GI at present'</i> – and recommends that Phase 2 should include boreholes; • row 3 - Loss of tunnel face leading to settlement – most critical Goxhill side; • row 5 - Blow out of tunnel – inability of ground to withstand face pressures of Tunnel Boring Machine (TBM) – ' <i>High to medium (risk) pending 2nd Phase GI'</i> ; • row 9 & 13 - Excessive water entering launch (low-med) or reception pit (med). ' <i>2nd Phase GI required to determine ground conditions noting inability to undertake GI in land during 1st Phase GI.'</i> • row 17 - AGI Connections - ' <i>Excessive water ingress – high</i> These are examples of risks associated with the project. Out of 31 entries 2 risks are rated ' <i>high</i> ' and 21 ' <i>medium</i> '. Completion of GI works at Paull, additional GI and pump testing, etc. are recommended. In the absence of the completion of Phase 1 and Phase 2 GI at application stage, based on what evidence can you be confident that the project can be delivered with drive and reception pits in the positions identified, within the order limits and without causing impacts that have not been evaluated in the ES?	Phase I and Phase II ground investigations are now complete and no obstacles have been evidenced that would promote alignment change. The mini-pumping tests have demonstrated in practice that pumping from suitably designed dewatering wells can adequately lower the water table to below the excavation formation as required for both pits. Secant pile walls and recharge wells are required to mitigate the risks of over abstraction of groundwater. The section of tunnel below the mudflats where extensive Ground Investigation has been problematic is known to comprise predominantly glacial soils that consist of variable units of firm to stiff sandy gravelly clay and dense fine to coarse sand and gravel, overlying the Flamborough Chalk. This is confirmed in the Desk Study (Doc 6.8.2) and from the available boreholes (that were possible to complete), and generally accords with a good understanding of the glacial deposition of the region. Under normal circumstances, a more detailed investigation of the tunnel geological horizon between Ch4200m and Ch5040m would be required, particularly in order to verify the known geology and to investigate the secondary constituents of the glacial soils, such as the presence and frequency of cobbles and boulders etc., that might impact upon different forms of tunnelling. (NB: Ch refers to 'chainage', the unit of measurement for points along the longitudinal profile of the tunnel). National Grid have concluded that as well as important data from sampling and laboratory testing, significant information will also be gained by observation during the physical drilling work on site. Consequently it has been decided that this work would be best carried out and observed by the successful tunnel Contractor, rather than by National Grid in isolation using external sub-contractors / consultants on the basis that valuable practical "hands-on" information may be lost, to a degree, in translation of the lab results (only).

			<p>Notwithstanding this, there is nothing to suggest that the geology over this section of tunnel is likely to affect the deliverability of the project in any way, or necessarily influence the position of the reception shaft, the TBM type or any other aspect of the tunnel as designed. Provision has already been made with respect to ensuring the TBM's capability in dealing with high water pressures and secondary soil constituents such as cobbles and boulders etc., particularly as these are likely to manifest in the form of flint within the chalk horizons in any event.</p> <p>In a worst case scenario, if ground conditions are more challenging than as indicated by the Phase I and II boreholes this would result in an impairment (ie slowing down) of tunnel progress only over this section, or possibly changing the cutting tool on the TBM, rather than manifesting in major excavation problems such that the delivery of the project is in any way placed at risk.</p>
4.5	Applicant and the Environment Agency (EA)	<p>[APP-054] 6.8.3 The Ground Investigation Report, page 67, para 1 'Permeability Summary'– describes how the lab test results varied significantly and contradict the results achieved in the field. It is therefore suggested the lab data 'are to be treated with extreme caution' and that 'a greater understanding of permeability will only be possible when full scale pumping tests have been completed as part of the Phase 2 ground investigation';</p> <p>1. has this work now been completed;</p> <p>2. what do the results demonstrate;</p> <p>3. has this been captured in an up to date Statement of Common Ground (SOCG); and</p> <p>4. due to the difference in ground conditions either side of the river and the need to undertake de-watering within both compounds, is it necessary to undertake pump tests at each location and if not please explain why?</p> <p>Environment Agency – please comment on the applicant's response at Deadline 3.</p>	<p>1. Mini Pumping Tests were undertaken in August/September 2015 to determine the permeability of the fractured Chalk at varying depths. The analysis of these tests has been incorporated into a Factual and Interpretive Report (Doc 6.13.3.1) which has been issued to the Environment Agency for review. Further pump testing will be undertaken by the Main Works Contractor, once their final structural design has been finalised to verify the data obtained.</p> <p>2. The results of the mini pumping tests indicate that the permeability of the Chalk is in line with the parameters assumed in the original modelling undertaken by Hyder and OGI and the ground conditions are suitable for the proposed groundwater control system and associated mitigation measures.</p> <p>3. A draft Statement of Common Ground has been issued to the Environment Agency and Docs 6.13.3.1 Mini-Pumping Test Results and Factual Report and 6.13.3.2 Addendum to Hydrogeological Impact Assessment have been issued to the EA for review and responses are awaited at this time.</p> <p>4. Additional ground investigation is proposed at both the Drive and Reception Pit locations to further understand or verify the ground conditions that are likely to be encountered. Once the Main Works Contractor has finalised their design, additional pumping tests will be conducted at the Drive Pit to verify the vertical permeability of the Chalk. At Paull, additional GI (Phase III – BHs 11 and 12) will be carried out in Q3 2015, with permeability tests carried out by the Main Works Contractor, as required.</p> <p>Significant variation exists relating to ground permeability, and some contradictions were observed between the laboratory and field tests. Variability, is of course, a "finding" in itself, and heterogeneous complex soil groups cannot always be separated or categorised into homogeneous units.</p> <p>In such circumstances it is prudent to exercise caution - particularly in relation to reliance upon certain Tunnel Boring Machine (TBM) systems, for example, to balance lateral earth pressure and water pressure, based on a particular set of results and findings. Consequently, worst case scenarios have been allowed for with respect to the intrinsic TBM systems to balance lateral earth pressure and water pressure, as well as the inclusion of provisions for further incremental stages in the geotechnical investigation work. These stages include further pumping tests at Goxhill (such as the mini pumping tests which are now complete) in order that a better understanding of groundwater behaviour is achieved, as well as including a further opportunity to carry out pumping tests on the Paull side, if required.</p> <p>However, based on the information currently available, extensive pumping tests on the Paull side are unlikely to yield particularly relevant information to better inform the tunnelling process, as the geology is known to consist of predominantly low permeability glacial deposits (clays) with the Reception Pit not penetrating the Chalk (a Principal aquifer), unlike the Drive pit. At a later stage there may be some merit in carrying out pumping tests on the Paull side if required. In any event, it is envisaged that no additional findings relating to permeability, adverse or otherwise, are likely to affect the delivery of the project or the position of the shafts.</p> <p>Equally, the shaft sinking methodology on the Paull side is significantly different to that on the Goxhill side, the latter being primarily in order to facilitate TBM launch and pipeline insertion in a single continuous pipe-string, and the former being only to recover the TBM and receive the pipe-string inserted from the Goxhill side.</p> <p>Dewatering and potentially recharge will be required at the Paull side, and this may require subsequent tests by the MWC to establish the size/number of wells. This is seen as a less sensitive and problematic operation which will not affect the design of the Pit.</p> <p>The Goxhill site is hydrogeologically complex, with the groundwater coming from a Principal groundwater aquifer unlike the Reception Pit on the Paull side. As such this site has needed careful</p>

			<p>advanced site investigation (such as the pump testing etc) compared to the Paull site.</p> <p>Mini Pumping Tests have been undertaken with five individual sets of analysis having been conducted (2 No. Pumping, 3 No. Recovery) from which critical aquifer parameters have been calculated. These tests have been documented within the Mini Pumping Tests Factual and Interpretive Report (Doc 6.13.3.1) which demonstrates that the calculated parameters are sufficiently close to those estimated in previous modelling.</p> <p>The results demonstrate that the aquifer can be pumped to lower the water table, and that the net abstraction rates are not excessive to accomplish this. Despite the tests only being conducted over a short time to satisfy the EA WR32 Licence, due to the high level accuracy of the monitoring of groundwater levels and pumping rates, we are confident of the accuracy of the resulting aquifer parameters.</p>
4.6	Applicant	<p>1. In their letter to the Planning Inspectorate, dated 30 July [AS-005] the EA expressed concern at the adequacy of the proposed 'mini pump test' and suggested that a full pump test would be required. Has the position regarding the necessary pump tests to provide evidence for an updated Hydrological Impact Assessment early within the examination been agreed?</p> <p>2. In the [APP-054], Ground Investigation Report, page 67, para 1 'Permeability Summary' your expert states the need for 'full' pump tests. Please explain why the position has changed?</p> <p>3. What is the difference in the two types of pumping tests proposed and how might that affect the quality of the data produced?</p>	<p>1. There has been substantial communication and dialogue between National Grid and the EA over the past several months. Richard Morgan (EA) made a visit to the Goxhill site during the mini pumping test operation during which the groundwater management strategy was clarified and where the EA concerns could be addressed. There has been further correspondence between all parties with further emphasis on communicating the role of the recharge wells placed on the requirement of recharge wells to mitigate the overall abstraction of groundwater from the aquifer. National Grid Gas has explained that beyond the mini-pumping testing and analysis, it is more appropriate for the Main Works Contractor to undertake any future pumping testing as (i) it will be for the purpose of establishing and testing their particular temporary pumping and recharge design, and (ii) the tests need to be appropriate to their secant wall design. It is not appropriate for National Grid to undertake these tests at the current time as they may not be relevant to the contractor's design. Most significantly, the results of the mini-pumping tests, combined with the current groundwater pressure logger monitoring have proved sufficient to confirm that a groundwater management system comprising a cut-off wall, pumping and recharge, can be designed to lower the water table to provide a safe excavation and, at the same time, to mitigate any risks to the aquifer.</p> <p>2. The tests have been termed "Mini" because the tests are conducted from smaller wells, and due to the EA limitations, licenced for only 4 hours of pumping. However, we consider that these tests have been more fruitful in that they have provided aquifer properties at a number of depths below ground surface. This is more appropriate than having one single test that provides an average permeability over the full depth. As a consequence of the construction technique, it is necessary to establish the permeability at a deeper level as groundwater is forced under the impermeable wall before rising into the individual pumping wells. In summary, the mini-pumping tests are more suitable for the particular construction process.</p> <p>3. The tests are the same in principle, i.e. pumping from a well and monitoring water drawdown and recovery. Full pumping test = bigger wells pumping for longer period, but pumping over full depth of well. Mini-pumping tests = smaller wells pumping for shorter period, pumping from short section of well at a specific depth. Results were analysed for three out of four wells. One well, L01, was considered to be blocked.</p>
4.7	Applicant	<p>If in relation to [4.4 & 4.5] additional modelling, ground investigations and pump testing have now been completed;</p> <p>1. how does this affect the project risk register on pages 100-107 [APP-054]? ; and</p> <p>2. please supply relevant updated documents.</p>	<p>Work to update the risk register is ongoing due to the further groundwater investigation work being undertaken and it is anticipated that an updated document will be provided at deadline 3.</p>
4.8	Environment Agency; North East Lindsay Drainage Board & South Holderness Internal Drainage Board	<p>Schedule 3 – Requirement 9, Agricultural Land Drainage – is sufficient information known about the project from the application documentation to secure and maintain adequate drainage provision throughout?</p> <p>Are the Environment Agency able to verify that that there is no major concern (related to agricultural land drainage) to the possible grant of an order? If there are outstanding concerns please identify them and what you would require to reduce or remove them?</p>	<p>No comment.</p>

4.9	Applicant	<p>[APP-071] Water Resources - There are some mitigations measures contained within the ES that do not appear to be controlled through the initial CEMP, draft Site Water Management Plan, or the draft DCO, as detailed below;</p> <ul style="list-style-type: none"> • para. 13.7.4 - states that topsoil stripped from the banks of surface water receptors would be stored separately • para. 13.7.39 – appropriate tunnel design is stated to minimise the risk of tunnel collapse. • para. 13.7.65 – states that ‘a requirement to confirm the construction details of the slurry pits including material, thickness and age of any lining would be included as part of the PEMP’ – this is not included in the initial CEMP and it is unclear what construction would take place at the slurry pits, given that they are located 360m northwest of the drive pit • para. 13.7.84 – the materials used for grouting would be submitted to the Environment Agency for review and approval. <p>How would these measures be controlled?</p>	<p>An amended initial Construction Environmental Management Plan (CEMP) (Doc 7.3) will be submitted to the Examining Authority at Deadline 3 to capture measures not currently controlled (and also additional measures that have been requested by stakeholders through Statements of Common Ground during the Examination). This will include relevant clauses although appropriate tunnel design will not be referenced. Such measures are included in the Environmental Statement for completeness but are not appropriate to secure through the Initial CEMP.</p> <p>There is not anticipated to be any construction works at the slurry pits. They are referenced in the Environmental Statement on a precautionary basis only i.e. should they be needed.</p>
4.10	Applicant	<p>[APP-071] Water Resources, para. 13.4.4 identifies a small pond located within the red line boundary immediately to the south of the existing Paull AGI and 13.4.14 states that one surface water abstraction has been identified by the Envirocheck Report, which is located approximately 500m from the Goxhill site.</p> <p>Please identify the location of each on a plan and advise how they were taken into account in the assessment and clarify if the pond requires specific measures to protect it?</p>	<p>The small pond is located at NGR 518024, 425115. Given that the sources of inflow to the pond (namely groundwater, direct rainfall and some overland flow (rainfall runoff) are similar and surrounding land uses are the same, the pond and the adjacent Pasture Drain are considered to share similar water quality and water resource attributes. Therefore, it is considered that the effects on the pond will be comparable to the residual effects on the adjacent watercourse and therefore of neutral significance. It is considered that there would be no specific measures required to protect the pond.</p> <p>The surface water abstraction is located at NGR 512710, 421980. The abstraction is sourced from a tributary of the Carr Gutter which is a tributary of the East Halton Beck. In Table 13-14 of Chapter 13: Water Resources (DCO Document Reference 6.1.3) it was confirmed that the Project would have a negligible impact on the East Halton Beck and the associated drainage ditch network. Therefore, as the tributary of the Carr Gutter forms part of the East Halton Beck drainage network, the impact of the project on this watercourse is also considered to be negligible.</p> <p>The ponds are presented in Doc 8.9.1 Annexure 1 to these responses.</p>
4.11	Applicant	<p>[APP-071] Water Resources, para. 13.8 - It is unclear how the conclusions in Table 13-14 (page 60) have been reached for potential impacts on water quality at Humber Estuary and Thorngumbald Drain South Pasture Drain, Pasture Drain and the associated drainage ditch network because no supporting text has been provided in the preceding section.</p> <p>Please clarify how this conclusion was reached?</p>	<p>Text supporting the conclusions in Table 13-14 is provided in Section 13.8.2 of Chapter 13: Water Resources (Doc 6.1.3). This section states ‘<i>once appropriate environmental design measures are in place, the potential for residual water quality effects on surface water receptors [i.e. East Halton Beck, the Humber Estuary, South Pasture Drain, Pasture Drain and associated drainage ditch network] within the defined study areas, is restricted to the potential for localised contained spills and or silt releases, or mobilisation of ground contamination during the construction phase. The working practices that would be adhered to would limit these to minor incidents and allow rapid containment and clean up.</i></p> <p><i>Therefore, the magnitude of the residual effect on the water quality attributes of the surface water receptors (of Low to Medium sensitivity) [as illustrated in Table 13-14], is classified as Negligible, with an overall residual significance that is Neutral.</i>’</p>
4.12	Applicant	<p>[APP-071] Water Resources, para. 13.7.61 states that additional mitigation measures for groundwater control, such as providing alternative water supplies and re-charging surface water features affected by draw down, would be explored with the Environment Agency.</p> <p>What is the latest position on this matter and how would any measures agreed be controlled?</p>	<p>No impact on surface water features is expected. As such recharging of surface water features is not required.</p>
4.13	Applicant	<p>[APP-071] Water Resources, paras. 13.7.66 and 13.8.17 confirm that intrusive geo-environmental investigations should be undertaken at the World War II bomb decoy site to further investigate a potential source of contamination.</p> <p>What would the extent of this work be and should the wording under DCO Requirement 14(2) be amended to capture and control the remediation of</p>	<p>The intrusive work proposed in this area is related to the dewatering of the drive pit. If contamination is present in the saturated zone at the World War (WW) II bomb site this may be mobilised during dewatering and the contaminated water would migrate towards the pit.</p> <p>The investigation sampling should include soil and groundwater and associated testing (especially hydrocarbons as this is what was burnt at the WWII site). Groundwater monitoring installations</p>

		identified sources of potential contamination?	<p>should be installed to monitor the groundwater regime at this site. By utilising recharge wells, the extent of dewatering is limited to an area of around 200m from the Drive and Reception chambers. There is negligible regional flow towards the Pits beyond this area.</p> <p>Requirement 14(3) already provides for the preparation of a detailed remediation project where contamination is identified.</p>
4.14	Applicant	<p>[APP-071] Water Resources para. 13.7.3 states that 'The outfall for discharge would be closely monitored by the Main Works Contractor's (MWC's) Environmental Manager in order to prevent adverse effects on water quality as a result of sediment contamination'. This is included in the initial CEMP at Con A3.</p> <p>What would the MWC be looking for at the outfall and what actions would be implemented should adverse effects be identified?</p>	<p>The Main Works Contractor would monitor the receiving waterbody for visual signs of contamination, such as changes in colour or clarity/turbidity with regard to sedimentation, and for other visual indicators of contamination, such as surface scums/ foams/or sheen.</p> <p>If visual signs of contamination are identified good practice measures would be deployed, for example, spill kits or hay bales, in order to contain and clean up the contaminant as set out in the Initial Construction Environmental Management Plan (CEMP) (DCO Document Reference 7.3). The land drainage system discharging to the outfall would then be checked to identify the source of contamination and rectify any deficiencies in the system.</p> <p>A commitment to update the Initial CEMP (DCO Document Reference 7.3) with regard to pollution control and management measures is stated in the Environment Agency (EA) Statement of Common Ground, specifically to build in two additional requirements requested by the EA, namely addition of the EA 24-hour Incident Hotline Number 0800 807060 and a restriction on the use of dispersant chemicals, which must not be used unless all materials are contained in readiness for correct offsite disposal.</p>
4.15	Applicant	<p>What level of confidence is there that in implementing the project there would be no adverse impacts from;</p> <ul style="list-style-type: none"> • saline intrusion - the movement of estuary water into the freshwater chalk aquifer from works at the drive pit; • reductions in groundwater level or quality and a resultant impact on existing licensed and unlicensed groundwater users; and • reduced flows in surface watercourses (including drainage ditches) and thereby effects on ecology. <p>What evidence is your response based upon and is that position agreed with the Environment Agency and (for item 3) Natural England (NE), Lincolnshire Wildlife Trust (LWT) and Yorkshire Wildlife Trust (YWT) and documented in a SOCG?</p>	<p>Saline water</p> <p>Using recharge wells will provide a hydraulic barrier that prevents the gradient reversing towards the excavation so preventing further additional induced saline water intrusion.</p> <p>Groundwater level</p> <p>The groundwater level will be reduced beneath the footprint of the excavation and immediately outside the secant pile wall. However, at the location of the recharge wells the water level is maintained at a higher level, close to ground level. This means that the water level beyond the row of recharge wells can be held effectively at pre-pumping levels.</p> <p>Potential reduced flows in surface water courses</p> <p>No impact on surface water courses is expected as a result of groundwater abstraction from within the Pits. This is partly because of the recharge wells, but mainly because there is a thick clay layer above the chalk bearings that effectively separates the surface water features from the underlying chalk.</p> <p>For this reason, National Grid does not anticipate effects of reduced flows on ecology within the watercourses (in particular, water voles), and this is reflected in the assessment in the Environmental Statement (ES).</p> <p>With regard to reaching agreement with consultees, National Grid is currently awaiting agreement with the Environment Agency on the points listed above in a Statement of Common Ground.</p> <p>Whilst the specific issues listed above have not been discussed with Natural England, Lincolnshire Wildlife Trust and Yorkshire Wildlife Trust National Grid has agreed with all three organisations that any potential implications for water voles can be addressed through the development of a draft water vole mitigation strategy, to be secured as part of the Initial CEMP. This is likely to involve not only pre-construction surveys, but also monitoring of the situation throughout the construction period, and the submission of a licence if required (refer to draft Statement of Common Ground (Docs 8.1.4, 8.1.7 and 8.1.8). This will set out suitable mitigation measures to be put in place, including measures to address de-watering, should monitoring indicate that this is leading to adverse impacts on water voles.</p>
4.16	Environment Agency (EA)	<p>[RR-010] para 1.5 - It is understood that DEFRA have been seeking to make water abstraction 'de-watering' during excavations a licensable activity for 'sometime' and the current target for introduction of such a licence is October 2015. Does that timetable remain current? The Environment Agency also state in their relevant representation that</p> <p><i>'Even if the proposed activities would not fall under the abstraction licensing regime, we will still seek to apply the spirit of the licensing regime through the</i></p>	No comment.

		<p><i>DCO process.</i></p> <p>1. would the absence of the availability of any catchment capacity inevitably prevent issue of an abstraction licence if this becomes licensable as DEFRA intend (Oct 15) before construction commences (or, by the application by Environment Agency of the <i>'sprit'</i> of this licencing proposal) and could that prevent lawful project implementation; and</p> <p>2. if the answer is 'yes' what alternative solutions are there?</p>	
4.17	Applicant	<p>[APP-073] Table 3-1 on page 5 of the 6.13.2 Initial Site Water Management Plan states under 'Hydrostatic Testing' that 'Water tankered in to verify pipeline integrity. There is a possibility that water may be sourced from dewatering (groundwater control) and/or from an abstraction from the Thorngumbald Drain". Given the matters raised by the Environment Agency in their relevant representation [RR-010] please clarify;</p> <p>1. would potable water be tankered into site, if so from where would it be sourced, how many lorry movements would be required and are these included in the Initial Traffic Management Plan? If not, where would the potable water be sourced from;</p> <p>2. has the water resource position been agreed with the Environment Agency and is that documented within a SOCG; and</p> <p>3. if the Thorngumbald Drain were to be used would that require Environment Agency and Land Drainage Board consents? If so please supply evidence that this has been agreed.</p>	<p>1. Traffic predictions for the project allow for the worst case and the import of water to the site and this is reflected in relevant ES chapters e.g. Chapter 5: Air Quality (Doc 6.5), Noise and Vibration (Doc 6.10) and Traffic and Transport (Doc 6.12). At this stage it is not known where the water would be sourced from, however, vehicles would use the construction route to the site.</p> <p>2. National Grid is currently seeking to agree the water resource position with the Environment Agency via the Statement of Common Ground (Doc 8.1.1).</p> <p>3. If abstraction is required from Thorngumbald Drain this would be undertaken in accordance with an abstraction licence which would be applied for by the Main Works Contractor (as set out in Section 6 of the Initial Site Water Management Plan (Doc 6.13.2). This is also agreed with South Holderness Internal Drainage Board (Doc (8.1.12).</p>
4.18	Applicant	<p>[APP-073] para 5.3.5 & 5.3.6, 6.13.2 Initial Site Water Management Plan predicts the following abstraction rates:</p> <ul style="list-style-type: none"> • Goxhill (South of the Humber) 70m3/day for 'approximately six weeks'; and • Paul (North of the Humber) 150m3/day for 35 days (from 29/05/2018 – 02/07/2018) <p>In each case these extraction rates are stated as being 'negligible' due to their limited volume and duration as compared with overall extraction and water resource.</p> <p>1. When much of the detailed design is stated to be the responsibility of the Major Works Contractor (MWC) how confident are you from the work completed to date regarding your predicted extraction parameters?</p> <p>2. What contingency is built into the figures quoted? For example, if ground conditions, or inclement weather delay the completion of the drive and reception pits requiring longer operation of the de-watering pumps?</p>	<p>1. Utilising recharge wells to mitigate drawdown, the Main Works Contractor (MWC) can be in control of the overall net abstraction rate. The MWC can decide on the number, location, diameter and depth of recharge wells, to ensure that the overall net groundwater abstraction rate is within the agreed Environment Agency licenced abstraction rate. Therefore, the rates quoted are reliable.</p> <p>2. The recharge wells give control to the MWC to inject more or less flow to the wells as required for the construction operation. If the excavation and base slab construction period is delayed, the abstraction rate would still remain within the EA licenced rates. Therefore, the assumptions in the assessment are reliable.</p>
4.19	Environment Agency (EA); North East Lindsay Drainage Board South Holderness Internal Drainage Board & Marine Management Organisation (MMO)	<p>[APP-073] Table 6-1, pages 13-14, 6.13.2 Initial Site Water Management Plan identifies a series of water related consents and licences required for the implementation of the project;</p> <p>1. Does the list cover all relevant permits? If not what other licences or matters should the ExA be aware of?</p> <p>2. Given the timing of licencing is largely suggested as <i>'prior to construction'</i>, if that is agreed, from the content of the application is there sufficient information to be able to confirm that you have no major concerns to the granting of such permits?</p>	No comment.

4.20	Applicant and Environment Agency	<p>[APP-072] 13.1 Water Framework Directive (WFD), 1.15 states that 'on currently available information the effects associated with the control of the groundwater on groundwater bodies, are considered to be moderate and would be temporary'.</p> <p>Given the Environment Agency's relevant representation [RR-010] and in the light of caveats within the Ground Investigation Report [APP-054] 6.8.1 what additional evidence can you supply to support this statement and has a common position been agreed with the Environment Agency and recorded in a SOCG? If not please provide an update on this matter.</p> <p>Environment Agency - from the content of the application is there sufficient information to be able to confirm that you have no major concerns, or are there any matters related to compliance with the WFD that you wish to draw to the ExAs attention?</p>	<p>The recent mini-pumping testing has verified the aquifer conditions used in the groundwater modelling. Using this model, on the basis that recharge wells are constructed and utilised, the impacts on the aquifer will be low.</p> <p>This information is contained in Docs 6.13.3.1 Mini-Pumping Test Results and Factual Report and 6.13.3.2 Addendum to Hydrogeological Impact Assessment.</p> <p>These findings will also be referred to within the ongoing Statement of Common Ground.</p>
5. Biodiversity, Biological Environment and Ecology			
5.1	Natural England (NE)	<p>[APP-047] Ecology and Nature Conservation, para. 7.9.2 identifies three limitations for the bird surveys however it states that it is not envisaged these would have a significant influence on the outcome of the survey results. We note that consultation has been ongoing with the applicant.</p> <p>Please clarify whether you agree that these limitations do not affect the outcome of the surveys or the overall assessment?</p>	No comment.
5.2	Applicant	<p>[APP-047] Ecology and Nature Conservation, para. 7.8.28 states that effects on birds using the estuarine habitat from vehicle movements during the construction phase would not be significant in the long-term, however does not mention short-term impacts.</p> <p>Please clarify whether there would be any significant impacts in the short term?</p>	<p>There would be no significant short-term impacts from construction traffic on birds using the estuarine habitat.</p> <p>The main access route at Goxhill is at least 450m from the Estuary at its closest point. The majority of the route at Goxhill runs southwest away from the edge of the Estuary. The main access route into the Paull construction area is adjacent to Paull Holme Strays for a very short period (but over 500m from the Estuary itself and behind the sea wall). The route then runs north, again away from the edge of the Estuary (refer to Works Plans (DCO Document Reference 2.2A)).</p> <p>Given the fact that the main routes in and out of the construction sites at both Goxhill and Paull would not pass in close proximity to the estuarine habitat, and birds are already habituated to traffic using these roads, no significant effects upon birds using the estuarine habitat are considered likely as a result of vehicle movements during the construction phase of the Project in the short or long-term.</p>
5.3	Natural England (NE)	<p>[APP-075] Cumulative Effects Tables 14-8 and 14-9. The cumulative assessment concludes that whilst there is potential for construction to overlap with the Able UK Logistics Park and Able Marine Energy Park projects those projects have their own mitigation areas to offset impacts and as a consequence there would be no significant cumulative impacts.</p> <p>Do you agree with this conclusion?</p>	No comment.
5.4	Natural England (NE) and the Royal Society for the Protection of Birds	<p>[RR-029] In point 4 of their relevant representation the Royal Society for the Protection of Birds have raised the need to assess impacts on SPA assemblage species against the populations of the assemblage's constituent rather than the assemblage as a whole. [APP-027] 5.4 HRA, para. 5.4.40 onwards provides assemblage information.</p> <p>Do you consider the existing information adequate and if not why not?</p>	No comment.
5.5	Applicant	<p>1. By means of a simple table and numbered illustration (plan) please confirm the land areas (Ha) green hatched and grey dotted (temporary spoil) identified on [APP-07] 2.2 Sheet 5 of 8 Works Plans. Include both the areas (ha) within</p>	<p>1. The areas are indicated on Doc 8.9.2 – Annexure 2 to these responses.</p> <p>2. The use of 40ha (rather than 51.3ha) is the area of fields to be temporarily used as a result of</p>

		<p>the main construction site and that necessary for pipes and pumps for de-watering and flooding of the tunnel by pumps placed in the intertidal area and temporary spoil storage.</p> <p>2. [APP-027] Para 2.2.5 of the HRA report indicates that approximately 40 ha of arable land in total will be required (Goxhill & Paul). Is the total area required actually 51.3 ha? ([APP-019] Statement of Reasons 20.5 ha [4.2.1] + 12.3 ha [4.2.3] + 12.9 ha [4.3.2] + 1.6 ha [4.5.1] + 2.7 ha [4.6.1] m+ 1.3 ha [4.6.2]= 51.3 ha? Please clarify.</p>	<p>the construction phase of the project (i.e. the amount of foraging/ roosting habitat directly under the footprint of the Project which would not be available for Special Protection Area bird species for the duration of the works). This figure does not include existing infrastructure such as the Above Ground Installations, and the area of set aside at Goxhill (Works No. 11).</p>
5.6	<p>Natural England (NE);Yorkshire Wildlife Trust (YWT); Lincolnshire Wildlife Trust (LWT); Royal Society for the Protection of Birds (RSPB)</p>	<p>[APP—019] Statement of Reasons 4.3.5 - 7.6 ha of set aside land for roosting has been identified. Is this of adequate size, in the best location, how should it be prepared and should consideration be given to its (or an alternative piece of land) long term retention as a positive environmental benefit from the project?</p>	<p>No comment.</p>
5.7	<p>Applicant</p>	<p>[APP—019] Statement of Reasons para 4.3.5 identifies 7.6 ha of set aside land for roosting birds. Please clarify;</p> <ol style="list-style-type: none"> 1. how this area was derived; 2. how the location was selected; and 3. is it intended for this land to be made available solely during the projects implementation, or permanently as described in DCO Requirement 18, page 14 (includes operation)? 	<ol style="list-style-type: none"> 1.This area of land (the eastern part of Field 5 - Works No. 11, refer to Works Plans Doc 2.2A) lies within the boundary of National Grid possession for the duration of the construction works, but is not within the construction area itself. It was therefore considered that this area would be suitable to mitigate for the loss of some of the habitat under the footprint of the construction works. However, as outlined in paragraph 8.3.47 of the Habitats Regulation Assessment (Doc 5.4), it is not anticipated that there would be any significant effects from temporary loss of foraging habitat during the construction phase of the project. Therefore, this area would be classified as mitigation for a non-significant effect, and its inclusion within the project as a potential foraging/roosting resource for the birds has therefore been taken as an 'opportunity' of the project, in accordance with Overarching National Policy Statement for Energy (EN-1). The area involved (7.6Ha) is thus simply the area available (as the farmer would not be able to effectively farm it during the construction phase) and not a figure calculated to fulfil a particular mitigation necessity. 2. This site was selected as it forms a relatively large area of farmland directly adjacent to the Estuary. Birds which choose to use this field during the construction period would not need to pass the construction works in order to reach the set-aside area. And as discussed above, its selection was largely based upon opportunity and availability. 3. The land will be used as set aside for the duration of the construction works only. The land will be re-instated for future use by the farmer following completion of the construction phase (this requirement is secured as part of the DCO), as it is not classified as essential mitigation and thus there is no means of compulsorily purchasing the land for the operational phase of the development.
5.8	<p>Applicant</p>	<p>The relevant representations from the Yorkshire Wildlife Trust (YWT) [RR-030]; Lincolnshire Wildlife Trust (LWT) [RR-019]; RSPB [RR-029] and the EA [RR-010] raised the question of enhancement under NPS EN-1, 5.3.4.</p> <p>Has further discussion taken place on this and has agreement been reached? If so is that recorded in a SOCG? If not what is the current position?</p>	<p>Lincolnshire and Yorkshire Wildlife Trust have provided details on the enhancement measures which they would like National Grid to consider. Details of these are provided in the Statements of Common Ground for the Wildlife Trusts (Refer to DCO Document References 8.1.7 and 8.1.8 respectively).</p> <p>A Statement of Common Ground has been produced for the Environment Agency (Doc 8.1.1) and this is currently with the Environment Agency for comment. This is also true for the Royal Society for the Protection of Birds (Doc 8.1.6).</p>
5.9	<p>Applicant</p>	<p>Please update the footnotes (including relevant ES references) to the screening and integrity matrices in Appendices 3 and 4 of [APP-027] HRA Chapter as identified in section 1.36 of our Pre Application Advice. The footnotes should include the document references from the examination library and specific paragraph numbers which contain the supporting evidence for each statement.</p>	<p>This has been completed and was included as part of the Rule 6 letter Deadline 1 submission (23rd September 2015).</p>

5.10	Applicant	<p>Natural England's relevant representation [RR-023] requested further detail in order to review whether the tunnel flooding operation is likely to have a significant effect on the interest features of the Humber Estuary SAC.</p> <p>The RSPBs relevant representation [RR-029] raised a similar question regarding the potential for visual disturbance to SPA birds using the intertidal areas during the tunnel flooding works.</p> <p>The MMOs relevant representation [RR-020] requested further technical details on the type of abstraction pumps, cage, method of installation (whether attached to sea bed or not) and duration of the tunnel flooding.</p> <p>Can the applicant therefore;</p> <ol style="list-style-type: none"> 1. provide further details of the methodology to be used for the seawater extraction referred to in paragraph [APP-031] 2.4.56 of the ES; 2. identify on the works plans the intertidal area required (including the grid reference for the pumps); 3. secure the methodologies to be used within an updated CEMP; and 4. address the queries raised in the relevant representations from NE; the RSPB and the MMO. 	<ol style="list-style-type: none"> 1. Further details relating to the methodology to be used for the sea water extraction are set out in the Statement of Common Ground for the Marine Management Organisation (MMO)(refer to Table 3-1 (Doc 8.1.5). The flooding would involve pumping seawater directly from the Humber Estuary into the tunnel at the drive pit by two suitable hi-head pumps. The pumps would be placed inside a cage in order to prevent debris / fish or benthic species from being drawn into the mechanism. There may be some very localised disruption to the intertidal habitat for the duration of the pipeline flooding; however, this would take less than two weeks to complete, and therefore no significant impacts on the intertidal habitat are considered likely. 2. These areas are identified on the revised Work Plans (Doc 2.2A). The grid references for the pumps are identified on the revised Works Plans and are set out in the Deemed Marine Licence. 3. The methodologies to be used for the sea water extraction will not be detailed in the revised Construction Environmental Management Plan (CEMP). However, a single entry will be included relating to the deployment of the hoses for the abstraction of water from the Humber Estuary. 4. Natural England – This issue has been resolved within the Statement of Common Ground with Natural England (Doc 8.1.4). It has now been agreed that there would be no significant effect upon the interest features of the Humber Estuary Special Area of Conservation as a result of the Project. <p>RSPB – This issue has been resolved with the RSPB through the Statement of Common Ground (DCO Document Reference 8.1.6)</p> <p>MMO - This issue has been resolved within the Statement of Common Ground with the MMO (DCO Document Reference 8.1.5).</p>
5.11	Applicant	<p>An assessment of in-combination impacts on the Humber Estuary SAC has not been undertaken. Section 51 advice was issued to the applicant post-acceptance (12 May 2015) querying this omission. No reply has been received.</p> <p>Please respond on this matter.</p>	<p>This has been completed and was included as part of the deadline 1 submissions (23rd September 2015) as requested in the Rule 6 letter. (Doc 5.4.1 and 5.4.2)</p>
5.12	Applicant	<p>[RR-029] RSPB's relevant representation notes that '<i>Paull Holme Strays must be treated as part of the Humber Estuary SAC/SPA/Ramsar due to the protection afforded it as a compensation site under paragraph 118 of the National Planning Policy Framework (NPPF)</i>'. This is not currently clear in the Environmental Statement (ES), or Habitats Regulations Assessment (HRA).</p> <p>Please respond to RSPBs comment and explain how the Paull Holme Strays has been taken into account in the assessment in both the Environmental Impact Assessment and Habitats Regulation Assessment?</p>	<p>Paragraph 8.3.13 of the Habitats Regulations Assessment (Doc 5.4) notes that Paull Holme Strays is likely to be included in the Special Protection Area designation in the future. Whilst it is not specifically stated each time, Paull Holme Strays is discussed in the context of the Special Protection Area throughout the Habitats Regulations Assessment and Environmental Statement. For example, when assessing potential displacement and disturbance to SPA/Ramsar bird species using the estuarine habitat within the Humber Estuary Special Protection Area (refer to paragraphs 8.3.9 to 8.3.25 of the Habitats Regulations Assessment (Doc 5.4)), this includes discussion of the species recorded within Paull Holme Strays, and is based upon the extent to which the noise contours from the modelling would impinge upon this area. The species accounts in Section 5.4 of the Habitats Regulations Assessment (Doc 5.4) also discuss each species referring to Paull Holme Strays as forming part of the Special Protection Area.</p>
5.13	Royal Society for the Protection of Birds, Applicant	<p>[RR-029] Can the RSPB share the information on nesting marsh harrier at Goxhill (which they refer to in their relevant representation) with the applicant as quickly as possible to enable the applicant to update the assessment?</p> <p>Can the applicant comment upon on how this information affects their assessment of impacts on marsh harrier at Goxhill?</p>	<p>Hyder Consulting on behalf of National Grid carried out the surveys referred to by the Royal Society for the Protection of Birds and therefore have all of the relevant information in relation to the marsh harrier observations.</p> <p>Breeding bird surveys were undertaken in May and June 2015 (three visits in total (13th May, 10th June, 17th June)) prior to the start of Ground Investigation works at Goxhill. During these surveys, marsh harrier were observed attempting to breed within an area of reedbed approximately 500m from where the Ground Investigation works were taking place.</p> <p>The basis for the current assessment presented in the Environmental Statement was the previous breeding season surveys (2014). Although marsh harrier were recorded during the 2014 surveys (refer to Table 3 of the Ecology Technical Appendix of the Environmental Statement (Doc 6.7.1), no breeding behaviour was observed.</p> <p>Whilst the observation from the Ground Investigation work is an important record, it is not considered that this would materially affect the assessment. The nesting area is over 500m from the works and behind the sea wall; therefore, should marsh harriers attempt to nest again in this location, they would not be affected by the works.</p> <p>Pre-construction surveys for breeding marsh harrier would, nevertheless, be carried out to determine if marsh harriers are attempting to breed within the reedbed prior to the construction phase (or indeed anywhere else within the vicinity of the proposed works). This commitment will be added to the updated initial CEMP (Doc 7.3) being prepared for submission at Deadline 3. In</p>

			<p>addition, an outline mitigation strategy for marsh harriers will be drafted (in consultation with Natural England and RSPB).</p> <p>Should breeding marsh harrier be found to be present during the pre-construction surveys, the outline mitigation strategy would be finalised in consultation with Natural England and the RSPB.</p>
5.14	Natural England	<p>[APP-027] 5.4 HRA, Part 1, Table 1, page 12 indicates that revised conservation objectives for the Humber Estuary SPA would be available in early 2015.</p> <p>Have these been published since the application was submitted, and if so, is the assessment presented sufficient to take into account the new conservation objectives?</p>	No comment.
5.15	Applicant	<p>In PINS pre-application advice dated 9.02.15 at 1.17 we asked;</p> <p><i>'Paragraph 5.7.1 states that the land will be re-instated to its existing condition following completion of the construction works. There does not seem to be any estimate of the likely length of time that reinstatement will take. Without this it is difficult to establish how long some of the effects of construction will last. Indicative timescales for restoration and re-establishment of different features should be provided'.</i></p> <p>Please provide a response.</p>	<p>Following completion of the construction phase, agricultural land would be returned to its existing use with all hedgerows and vegetation loss reinstated at the earliest opportunity. Chapter 2: Project Description (Doc 2.6) states 'reinstatement would be agreed' at pre-entry meetings with landowners/farmers.</p> <p>Reinstatement will be undertaken during April – Sept window following mechanical completion, it is anticipated to take 2 - 3 months to reinstate and return the land to agricultural use.</p>
5.16	Applicant	<p>[APP-027] HRA, para. 8.3.15 of the HRA Report states that light modelling at Goxhill was undertaken as part of the landscape and visual effects assessment (Doc 6.9). The results of the light modelling are shown diagrammatically in Figure 14 of the HRA Report but there is no explanation of the methodology used or of how the levels of modelled illuminance translate into significance.</p> <p>Please provide more details of the methodology used to support the conclusion of no Likely Significant Effects.</p>	<p>The lighting assessment was undertaken utilising a 3D model of the proposed construction site at Goxhill, including models of the proposed earth bund, surrounding infrastructure and housing based on topographical information and construction details.</p> <p>The construction plant and proposed lighting assemblies were detailed using Autodesk Revit, including the type of luminaires, physical configuration and the height from ground level, providing a realistic representation of the site during the construction phase of the project. Vendor data was obtained to apply the corresponding luminaire information including lux levels for the specific lighting assemblies.</p> <p>The lighting assessment was undertaken using an approved lighting tool (Elumtools) based on the AGI32 engine to establish the effects on the surrounding environment and neighbouring properties.</p> <p>The modelling demonstrated that lux levels at neighbouring properties and adjacent land would be minimised, whilst ensuring acceptable operational light levels during the works. Upward light pollution would be limited by specifying shielded luminaires which have a zero upward light component.</p> <p>External lighting illumination levels would be based on CIBSE guidance and the proposed lighting project would comply with all relevant British Standards, in particular the Institute of Lighting Professionals Guidance Document GN01:2011 and BS EN 12464-2:2014.</p> <p>Therefore, the light modelling has shown that there would be no significant illumination outside of the construction area itself (light pollution at ground level beyond the construction site boundary would be negligible at both Paull and Goxhill). As it is assumed that birds would not be using the construction area for the duration of the works, it can be concluded that the low levels of light which would reach the adjacent fields and would not have a significant effect.</p>
5.17	Applicant	<p>[APP-047] Paragraphs 7.4.22-7.4.24 explain that part of the Humber Estuary is designated as an Important Bird Area (IBA) for supporting internationally important numbers of a bird species. The tunnel appears to travel under the IBA areas.</p> <p>Please clarify whether there are any potential impacts of bird species within the IBA?</p>	<p>The Humber Estuary Important Bird Area is designated on the basis that it supports internationally important numbers of: short-eared owl, sanderling, dunlin, knot, ringed plover, marsh harrier, bar-tailed godwit, curlew, ruff, golden plover, grey plover, avocet, little tern, shelduck and redshank.</p> <p>The potential impacts on all of these species, with the exception of short-eared owl, are considered in Section 7.8 of the Environmental Statement (Doc 6.7) and Section 8.3 of the Habitats Regulations Assessment (Doc 5.4). One short-eared owl was recorded during the baseline surveys (refer to Table A9.11 of the Ecology Technical Appendix of the Environmental Statement (Doc 6.7.1)); given the single sighting during the surveys, and the small number of desk study records, it is considered that this species is largely absent from the study area.</p> <p>Based on the assessments presented in the Habitats Regulations Assessment (Doc 5.4) and</p>

			Environmental Statement (Doc 6.7), it is considered that there would be no significant effects upon birds associated with the Important Bird Area during the construction phase of the Project.
5.18	Applicant; Natural England; Yorkshire Wildlife Trust; Lincolnshire Wildlife Trust & Royal Society for the Protection of Birds	[APP-047] 6.7 Ecology and Nature Conservation (paras. 7.3.8-7.3.9 and Table 7-3). Please clarify (applicant) whether the desk study covered the access improvement areas and are any interested parties aware of any information available for these areas which could affect the assessment undertaken?	For those access improvement areas which fell within the 2km search area, desk study data was available; however, additional information was not purchased specifically to cover those outside of the 2km search area. It was considered that a site visit to each of the areas, coupled with local knowledge, information available from public sources (such as the National Biodiversity Network Website and MAGIC website), and the general context provided by the main desk study, provided sufficient information to inform the ecological assessment of these sites.
5.19	Natural England	[APP-047] 6.7 Ecology and Nature Conservation 7.4.74 suggests that bats (roosting) could be affected by the road widening works but that impacts could be minimised by careful design and minimising light spillage. Do you agree with the applicant's conclusion? Is there a need for a pre-construction bat survey to confirm no bats are present in the area and does A7 of the CEMP adequately mitigate against the effects of night lighting?	No comment.
5.20	Applicant	Given that Deepdale Quarry Road Verges Local Wildlife Site on the B1206 is located along the proposed construction traffic route why have the potential impacts not been assessed?	It was not considered necessary to undertake an assessment of potential impacts on Deepdale Quarry Local Wildlife Site. The Initial Traffic Management Plan (Doc 2.1) and Transport Assessment (Doc 7.2) have clearly confirmed that no construction traffic would need to cross onto the grassed verges at Deepdale Quarry Local Wildlife Site. Where pinch-points have been identified along the construction traffic route, designated passing places will be widened / extended to accommodate Heavy Goods Vehicles, and to allow opposing vehicles. The locations of all passing places are shown on the Works Plans (Doc 2.2A). Consultation with Lincolnshire Wildlife Trust as part of the Statement of Common Ground (DCO Doc 8.1.7) has confirmed that they are in agreement that no further assessment of Deepdale Quarry Local Wildlife Site is required.
5.21	Applicant	YWT [RR-030]; LWT [RR-019]; RSPB [RR-029] all raise concern at the impacts of the project on water voles. In particular concern was raised at the extent of the survey work undertaken due to H&S and either dry or overgrown ditches. In their relevant representation, Yorkshire Wildlife Trust has also offered assistance in the design of ditch crossing points to avoid fragmented habitat. Can the applicant please; 1. supply a plan identifying the areas where surveys were completed and those where it was not possible. What % of relevant ditches were inspected; 2. provide a more comprehensive water vole mitigation plan which incorporates actions to mitigate for habitat loss; and 3. have further discussions now taken place with Yorkshire Wildlife Trust on design? If so please provide an update.	1. A plan showing the ditches that were surveyed, and those which could not be accessed (or were dry at the time of the survey) within the study area, is provided on Figure 7.5 (sheet 1 of 2) of the Technical Appendix of the Environmental Statement (Doc 6.7.1). Within the study area, ditches A, B, C, E and F fell within, or on the boundary of, the construction area. The only ditches which could not be surveyed for H&S reasons were Ditch E and a short section of Ditch F. Therefore, approximately 70% of the wet ditch network within or on the boundary of the construction area was surveyed (Ditches D and G were within the study area, but are not within or on the boundary of the construction area and have therefore not been included in the percentage calculation). 2. (Answer to both questions 2 and 3). This issue has now been resolved with the consultees (refer to Statements of Common Ground for Lincolnshire Wildlife Trust, Yorkshire Wildlife Trust and the Royal Society for the Protection of Birds (Docs 8.1.6, 8.1.7, and 8.1.8)). Pre-construction surveys for water voles within ditches that may be affected by the works would be undertaken prior to the start of the construction phase and this will be secured via the Initial CEMP. Depending on the results of these surveys, a water vole mitigation plan would be developed in consultation with the Wildlife Trusts. This would include measures such as micro-siting of the culverts, design of culverts to ensure water vole passage, and habitat enhancement directly adjacent to the crossing locations, if necessary.
6. Construction and Environmental Management Plan (CEMP)			

6.1	Natural England	There are no specific requirements for measures to mitigate for impacts on the SPA and SAC interest features within the draft DCO, however an initial CEMP has been provided which is to be controlled by Requirement 12. Can you please comment on the sufficiency of the initial CEMP, specifically for mitigating impacts on European sites? If you consider separate requirements should be incorporated into the DCO, can you work with the applicant to propose appropriate wording?	No comment.
6.2	Natural England, East Riding of Yorkshire Council; North Lincolnshire Council; Environment Agency and all interested parties	Schedule 3 – Requirements 12 - CEMP – Is sufficient information known about the project from the application documentation including the [APP-084] Initial CEMP and [APP-088] Environmental Mitigation Commitments Document to control the necessary environmental mitigation identified in the ES? If there are outstanding concerns please identify them and what you would require to reduce or remove your concern(s)? The ExA would be interested in particular for comments from Natural England, the Environment Agency and the local planning authorities who would be responsible for approving the CEMP under requirement 12 of the DCO.	No comment.
6.3	Applicant	[APP-074] Hydraulic Impact Assessment (HIA), Section 16 'Develop a monitoring strategy' contains further details of the monitoring strategy, from baseline through construction and post-construction. These have not currently been incorporated into the CEMP. Please update and re-issue.	An amended Initial CEMP (Doc 7.3) will be submitted to the Examining Authority at Deadline 3 to capture measures not currently controlled (and also additional measures that have been requested by stakeholders through Statements of Common Ground during the Examination). This will include the monitoring strategy within the HIA (Doc 6.13.1), along with a requirement for the Main Works Contractor to undertake a pumping test, based on their final structural design, similar in scope to the specimen pumping test included within the HIA Addendum (Doc 6.13.3.2).
6.4	Applicant	[APP-084] Initial Construction and Environmental Management Plan (CEMP), para. 7.3 identifies the need to communicate with parties affected by the project for example, in section 3.4, table 3.1 a 'Community Relations Representative' is identified as a person who would keep Parish Councils briefed. Should there be direct communication with those most affected e.g. adjacent landowners and businesses? If so, where is this commitment currently identified?	As part of National Grid's ongoing local liaison and community relations programme throughout the construction period, National Grid will have in place a dedicated community relations support. This will combine reactive and proactive contact with local stakeholders and people with an interest in the project. The system includes a telephone information line, e-mail and postal address that anyone wanting information can use. This is staffed by wider members of the National Grid team who will work in conjunction with the main contractor to answer any questions and provide any information or responses as needed. In terms of proactive engagement, National Grid will build on the links and relationships already established with Parish Councils through earlier consultation and engagement. National Grid intends to offer regular updates to the Parish Councils advising on the construction programme and will discuss with them how frequently they would like to be contacted. This information will also be posted to the National Grid project website so that any local landowner or interested member of the community can follow what's happening by visiting the website on a regular basis. Those directly impacted such as landowners and tenants will have direct and regular contact with our dedicated project Lands Team. Where specific construction activities would benefit from more detailed or closer communication (i.e. in the event of exceptional loads on the construction traffic route), National Grid intends to carry out leaflet drops to those properties most directly affected. The identified Community Relations Representative would be responsible for briefing Parish Councils, adjacent landowners, schools and businesses. Paragraph 3.4.4 of the Initial Construction Environmental Management Plan (CEMP) (DCO Document 7.3) states that the parish councils would be provided with the contact details of the Community Relations Representative. It is considered that no further update is required to the Initial CEMP.
6.5	Applicant	There is no mention of water vole monitoring within the initial CEMP. Given water voles have been identified as a key ecological receptor (KER) can the applicant please comment on the necessity for this to be included and include?	The Initial Construction Environmental Management Plan (Doc 7.3) specifies that, based upon the findings of the pre-construction water vole surveys (Pre F3), a water vole mitigation strategy and a licence may be required. The need for monitoring would be outlined in the mitigation strategy/licence method statement (if required), which is already a commitment under Pre 4 . Therefore, there is no need to include an additional commitment for monitoring within the Initial Construction Environmental Management Plan.

6.6	Applicant	<p>[APP-084] The following measures have been referred to within the ES but have not been included in the initial CEMP:</p> <p>1. para. 7.4.37 states that <i>'all mature trees would be retained as part of the Project design'</i>. Should this be included and would further restrictions be required to avoid disturbing the area around the trees?</p> <p>2. para. 7.4.39 confirms that small-scale coppicing of trees along the Soff Lane Diversion may need to be undertaken, but <i>'where possible'</i> would be undertaken outside of the bird breeding season. Please include this within the CEMP.</p> <p>Should the timing of the work not be a firm requirement and could this also affect bats?</p>	<p>Points 1 and 2 will be added as commitments to the revised Construction Environmental Management Plan (to be submitted for Deadline 3), as follows:</p> <p>1. All mature trees would be retained as part of the Project Design with root protection zones clearly demarcated and protected.</p> <p>2. Any small-scale coppicing of trees at Soff Lane would be undertaken outside of the breeding bird season (where possible). The use of the term <i>'where possible'</i> allows a degree of flexibility in the timings of works, so that the programme is not compromised by delays affecting programme-critical activities. These have only been applied in situations where undertaking the works outside of the recommended season, differently to the methodology suggested, etc. would not have a significant effect. For example, vegetation clearance would be undertaken outside of the nesting period (where possible). However, if this is not possible, appropriate measures would be taken, such as nesting bird checks, to comply with the relevant legislation. This term therefore means that the commitments made are robust but also flexible.</p> <p>In relation to bats, timing would only be an issue if any trees with the potential to support roosting/hibernating bats that would need to be removed. However, as stated above, all such trees will be retained, so this is not an issue.</p>
6.7	Applicant	<p>The Initial CEMP [APP-084] 7.2 uses the term <i>'where possible'</i> for example Pre F2 – topsoil strip outside of winter season and 30m buffer to badger setts.</p> <p>Can the qualification be removed throughout to provide a robust commitment and what would be done if any of the measures were not deliverable?</p>	<p>The use of the term <i>'where possible'</i> allows a degree of flexibility in the timings of works, so that the programme is not compromised by delays affecting programme-critical activities.</p> <p>These have only been applied in those situations where undertaking the works differently to the methodology suggested (e.g. outside of the recommended season) would not have a significant effect and/or where the situation has changed.</p> <p>For example, Pre F2 states that <i>'where possible topsoil stripping would be undertaken outside of the winter period'</i> - however, even if this is not possible, it is not considered that there would be a significant effect on birds.</p> <p>Similarly, Pre F6 says that <i>'where possible, a 30m buffer zone should be maintained around any badger setts where heavy machinery is likely to be used'</i> – in this case, such a stipulation would have to be fulfilled if the sett was found to be occupied during the pre-construction surveys (and would indeed be a requirement of the licence to disturb for which we would need to apply), but would not need to be fulfilled if the sett was found to be disused. This term therefore means that the commitments made are robust but also flexible.</p>
6.8	Applicant and Natural England	<p>[APP-084] paras. 7.7.7-9 identify enhancement measures (Field 26 at Paull) which would be provided in addition to mitigation;</p> <ul style="list-style-type: none"> • use of low nutrient soil to ensure species-rich grassland can develop • suitable habitat for basking, foraging and hibernating reptiles • construction of artificial reptile hibernacula • installation of a barn owl box <p>The latter two of these (see Post F1 and Con F16) are included in the CEMP.</p> <p>Should all 4 be included and would planting works be completed the first season after completion?</p> <p>Natural England – please comment on the number of barn owl boxes proposed.</p>	<p>The first bullet is dealt with through Post F3 in the Initial CEMP (Doc 7.3) The second point will be clarified in the Initial CEMP being prepared for submission at Deadline 3. All planting works would be completed in the first planting season after construction is complete.</p>
6.9	Applicant	<p>[APP-084] At section 5, the CEMP provides a Register of Site Specific Environmental Commitments which identifies <i>'all environmental commitments, mitigation measures, and measures to ensure compliance with legislation and requirements of statutory bodies and monitoring programmes.'</i></p> <p>How does this link with the Schedule of Mitigation Commitments document and why is the latter not referred to in the CEMP, or draft DCO?</p>	<p>As stated in paragraphs 5.1.1 and 5.1.2 of the Initial CEMP:</p> <p><i>"The Commitments Register (hereinafter referred to as the Register) provides a means by which all environmental commitments, mitigation measures, and measures to ensure compliance with legislation and requirements of statutory bodies and monitoring programmes are identified.</i></p> <p><i>The Register identifies the Scheme-specific commitments with reference to any relevant documentation and provides a framework within which all parties are aware of their responsibilities. It also provides a means of establishing a checklist of measures and the requirement for Method Statements and environmental risk assessments to be produced. The Register would detail the</i></p>

			<p><i>responsible party for each commitment and mitigation measure to be undertaken. As the Scheme develops, the Register would be continually reviewed. The achievement criteria would also be developed by the MWC and agreed with National Grid Gas prior to construction commencing.</i></p> <p>The "Register" is the consolidation of mitigation actions and issues for the contractor when working onsite and will also contain site-specific detail and measures for day-to-day operations onsite.</p> <p>The Environmental Mitigation Commitments Document (Doc 7.7) is not referred to in the CEMP or DCO because it was prepared post-submission at the request of the Examining Authority to summarise how the mitigation in the Environmental Statement is secured. It does not impose new or separate commitments or requirements – it simply collates and cross-references to them to assist with the Examining Authority's understanding of how mitigation is secured.</p> <p>There is some overlap between the Register and the Environmental Mitigation Commitments Document as the former is also a summary of mitigation (amongst other regulatory requirements) for use by the contractor, and the latter is a bespoke summary document for the Examining Authority to illustrate where mitigation is secured. All of the information in the Environmental Mitigation Commitments Document already appears elsewhere in the application material (eg DCO, CEMP, TMP) - it is simply drawn together in this document to assist the examination.</p>
6.10	Applicant	<p>[APP-084] At section 10 of the CEMP, 'Design Changes' a procedure is identified for the Main Works Contractor (MWC) to review whether any changes to the temporary works shown on the 'Indicative Site Layout Plans' would cause a change to the likely significant effects reported in the ES. A register is to be maintained and any significant changes reported to NGG.</p> <p>Should all such changes be notified to the Local Authority? If not please explain how there remains control over material changes?</p>	<p>The purpose of the register is to enable the Main Works Contractor to document key changes and to confirm that they have been assessed and would not change the significance of effects reported, as per a number of the requirements of the Initial CEMP (Doc 7.3). This is to ensure no worsening of effects. Therefore, this table could be submitted to the Local Authorities for their information such that they are kept informed should they require it.</p>
6.11	Applicant	<p>[APP-088] The Schedule of Mitigation Commitments follows the drafting of the Register of Site Specific Environmental Commitments within the CEMP but some items e.g. D21 and E3 are missing and the order is not in full alphabetical or numerical order.</p> <p>Please audit the two documents and update.</p>	<p>An updated Schedule of Mitigation Commitments (Doc 7.7A) was been submitted for Deadline 1. A further update will be provided with an updated Initial Construction Environmental Management Plan (Doc 7.3) for Deadline 3.</p>
6.12	Applicant	<p>The control of lighting is mentioned in the [APP-084] Initial Construction and Environmental Management Plan (CEMP) under entries CON A7 and CON H12 which references lighting during the works. Only Paull is mentioned but works would be undertaken at Goxhill and Paull and within the intertidal area during tunnel flooding.</p> <p>Can the CEMP be updated to provide for lighting control across the whole works, or please explain why that is considered unnecessary?</p>	<p>Con A7 is not specific to either side and applies to both Goxhill and Paull. There is also Con H11 included in the Initial Construction Environmental Management Plan (DCO Document Reference 7.3): "At Goxhill there would be static lighting points fixed to temporary structures such as the masts, cabins, workshops, gantry cranes and silos with the lamps up to 10m in height. These would be used to illuminate regularly used work areas, the car park and access areas. Baffles would be installed on all lighting columns and light is to be angled to face works"</p>
6.13	Environment Agency; North East Lindsay Drainage Board; South Holderness Internal Drainage Board	<p>[APP-025] At para. 7.3.1 the applicant states a 10m buffer that exceeds drainage board byelaws will be maintained between stockpiled spoil and water courses. Is this position agreed and incorporated into a SOCG and should this be identified in the Initial CEMP?</p>	<p>No comment.</p>
7. Noise, Disturbance and Vibration			
7.1	Applicant	<p>Draft Requirement 13 prevents the development from commencing until a written project for noise management is submitted and approved by the local planning authority. However, the definition of 'commence' under Article 2, <i>Interpretation</i> allows a number of exclusions for example, erection of the contractor's work compound and noise limits are suggested in the ES to minimise adverse impacts. Therefore is it appropriate that an initial plan for</p>	<p>The definition of 'commence' is being carefully reviewed by National Grid and an amended version will be submitted in the next version at deadline 3 which will address this question.</p>

		noise management is produced now and controlled within the DCO	
7.2	East Riding of Yorkshire Council (ERYC) & North Lincolnshire Council	Are you satisfied with the data supplied for baseline noise levels, the methodology for a noise impact review ahead of implementation (if necessary), the predicted impacts, the mitigation strategies proposed and the security under Schedule 2 , Requirement 13, page 39 of the draft DCO? Has a SOCG been agreed and do any outstanding matters of concern remain? Do you consider it appropriate that an Initial Noise Management Plan is produced (see Question 7.1)	No comment.
7.3	Applicant	[APP-064] Noise and Vibration – states at 10.10.5, ' <i>Noise levels would be mitigated to a minimum level and would be considered to be moderate adverse</i> '. 1. Are there any mitigation measures other than those listed in 10.7.2 required to achieve the noise levels predicted in the report? 2. Are there any additional methods that could be employed to improve the situation further and if so what are they?	1.No, the mitigation measures suggested in paragraph 10.10.5 of Chapter 10: Noise and Vibration (Doc 6.10) would be sufficient to mitigate construction noise levels to those predicted in the report 2. Portable noise barriers could be implemented around areas of concentrated works and all reasonable endeavours would be used to enforce low noise emission plant.
7.4	Natural England; Yorkshire Wildlife Trust; Lincolnshire Wildlife Trust & Royal Society for the Protection of Birds	[APP-027] Habitats Regulation Assessment, para. 8.3.19, Page 80 ' <i>Noise Disturbance</i> ' references documented reports in evidence to support that 70dB is the relevant limit for construction noise levels and that ' <i>where possible, sudden, irregular noise above 50dB should also be avoided</i> '. Are these noise levels agreed? If not what alternative levels are suggested and on what basis?	No comment.
7.5	Applicant; Natural England; Yorkshire Wildlife Trust; Lincolnshire Wildlife Trust & Royal Society for the Protection of Birds	Baseline sound levels were taken at each site at the SPA boundary and are stated to be in excess of noise levels predicted during construction of the project. Applicant - Please provide the source of L _{max} at the boundary of the SPA on both sides of the river that was recorded during the baseline monitoring. Can the applicant share this information with Natural England the Wildlife Trusts and RSPB and can these organisations subsequently confirm whether they agree an adverse effect on the integrity of the Humber Estuary SPA and Ramsar site can be ruled out?	Although the noise monitoring was undertaken at the same time as the bird surveys, the noise monitors themselves were not manned. Therefore, it is not possible to identify the exact source of noise for each of the L _{max} figures recorded. The noise monitoring method was agreed with Natural England in advance of the survey commencing. However, based on current knowledge of the recording locations and their surroundings, it is considered likely that they originate from such sources of noise as large vehicles moving along the East Marsh Road, farm activities (associated with the adjacent farmsteads), and residents using the adjacent footpaths (predominantly local dog- walkers). All relevant information collected as part of the noise monitoring has been shared with Natural England, the Wildlife Trusts and the Royal Society for the Protection of Birds through the Habitats Regulations Assessment (Doc 5.4) and relevant Statements of Common Ground (DCO Documents 8.1.4, 8.1.6, 8.1.7 and 8.1.8).
7.6	Applicant	[APP-027] Habitats Regulation Assessment, para. 8.3.21 identifies background noise levels (baseline) recorded at Paull and Goxhill on the edge of the SPA and states that these levels would only be exceeded slightly on two occasions and at Paull Holme Strays on nine occasions (two in winter). In these instances what would be the cause (noise input from construction) for the limit being exceeded? If the programme, or plant utilised changes during further detailed design works, how likely is this statement to change? Please provide a list of the noisiest construction activities that are likely to occur, those that may occur infrequently but their nature is such that they nevertheless may cause disturbance to overwintering birds and explain: 1. which of those activities would in mitigation be programmed outside of the	The causes of elevated levels are due to the amount of plant on site and the position of the plant in relation to the boundary of the site. The amount of plant on site relates specifically to the construction programme. Programme is unlikely to change (refer to point 2 below), and the initial Construction Environmental Management Plan (CEMP)) (Doc 7.3) requires that the Main Works Contractor completes a reassessment in the event of changes to layout and plant (Section 10 of the Initial CEMP). It is not possible to provide a list of the noisiest construction activities that are likely to occur as this would depend upon the number of plant on site, the final TBM, and the location of where the noisiest activities would be perceived, which cannot be predicted at this stage. With regards to impacts upon the SPA, the noisiest activities would be when works are taking place close to the boundary and when the Above Ground Installation (AGI) works are taking place. With regard to the three specific questions:

		<p>period (October-April?);</p> <p>2. what contingency is in place if the programme slips and how is this mitigation currently controlled; and</p> <p>3. how would the conclusion of the HRA differ if the program slipped and this form of mitigation was lost?</p>	<p>1. No activities have been specifically programmed to take place outside of the over-wintering period (as part of mitigation for the project), given that significant effects are not predicted, even in the worst-case scenario. However, where possible, activities such as vegetation clearance/ installation of the bunds and site mobilisation would be undertaken prior to birds associated with the Humber Estuary Special Protection Area arriving for the winter (refer to Section 3.4 of the Habitats Regulations Assessment (Doc 5.4)).</p> <p>2. Once the embedded mitigation measures have been put in place, specifically the bunds and fencing around the construction area, the potential impacts of the project are not considered to be significant. The only time programme slippage may be of concern is if site mobilisation/ installation of the bunds moves into the winter period. However, contingency plans comprise submitting a separate local planning application to North Lincolnshire Council for enabling works to ensure the most sensitive site initiation works in terms of soil movement and bird disturbance such as topsoil stripping, bund construction and installation of heras/close board fencing are completed before the winter period.</p> <p>3. Based on the answer to question 2, the conclusion of the Habitats Regulations Assessment would not change.</p> <p>Given the nature of the project, although it is possible to predict that loud noises would occur, as stated in Section 8.3.22 of the HRA (Doc 5.4), it is not possible to accurately predict the frequency of these events on a daily basis. LAmax is a measure of single loud noises; however, there is currently no methodology contained within any available British Standards for the prediction of LAmax (and therefore the frequency of LAmax) from general construction activities. Generally, high LAmax levels are associated with percussive piling methods; however, these methods would not be employed during the construction phase of this project. The majority of the work for the project would be undertaken with continuous flight auger piling (with a small amount of sheet vibro-piling around the reception/drive pits) which would not generate high LAmax levels compared to percussive piling. It should also be noted that the figures presented in the HRA (Doc 5.4) are a worst case scenario. Therefore, the actual noise levels experienced during the construction phase are likely to be lower than those presented in the current noise modelling. In addition, National Grid would manage the site in a way that reduces those unexpected incidents which result in loud noises for example when slurry presses are cleaned there may be a need to dislodge material which could create ad-hoc noise as it drops.</p>
7.7	Applicant	<p>[RR-023] Natural England’s relevant representation at 5.1 & 5.2 raises questions on noise impacts.</p> <p>Please supply the additional information requested and confirm whether the effect of the storage/flood bunds and sound and herras fencing shown on [APP-09]</p> <p>Site Layout Plans for Goxhill and Paul have been taken into account in Figure 12 (Noise monitoring results (LAmax) (2014), predicted noise contours (LAmax) (September 2016) and peak bird counts (where assemblage species are above 1% of SPA population)?</p> <p>If this is included and therefore relevant to achieving mitigation how are the timings of the installation of these noise barriers controlled in the DCO?</p>	<p>The noise modelling has been carried out taking into consideration the bunding and fencing around the construction area (refer to Table 1 of the Habitats Regulations Assessment, Doc 5.4).</p> <p>Where possible, activities such as vegetation clearance/ installation of the bunds and site mobilisation would be undertaken prior to the winter period (refer to Embedded Mitigation in Section 3.4 of the Habitats Regulations Assessment (Doc 5.4)). Once the embedded mitigation measures have been put in place, the potential impacts of the project are not considered to be significant.</p> <p>Timing and installation of the noise barriers are controlled via the approval of detailed design under requirement 4 and noise requirements 13.</p>
7.8	Applicant	<p>Please provide an informed indication of the likely frequency of LAmax from construction activities throughout the 35 month program of works.</p>	<p>There are no planned construction activities which would give rise to significant amounts of LA max levels. The frequency of LA max activities is based upon our own historical data from general construction activities.</p> <p>Given the nature of the project, although it is possible to predict that loud noises would occur, as stated in Section 8.3.22 of the HRA (Doc 5.4), it is not possible to accurately predict the frequency of these events. LAmax is a measure of single loud noises; however, there is currently no methodology contained within any available British Standards for the prediction of LAmax (and therefore the frequency of LAmax) from general construction activities.</p> <p>Generally, high LAmax levels are associated with percussive piling methods; however, these methods would not be employed. The majority of the work for the project would be undertaken with continuous flight auger piling (with a small amount of sheet vibro-piling around the reception/drive pits) which would not generate high LAmax levels compared to percussive piling.</p> <p>It should also be noted that the figures presented in the HRA are a worst case scenario. Therefore, the actual noise levels experienced during the construction phase are likely to be lower than those</p>

			presented in the noise modelling.
7.9	Yorkshire Wildlife Trust	In your relevant representation you state ' <i>Research on bird disturbance on SPA bird populations has shown that loud, infrequent noises can be more damaging to birds than constant, low level noises which they may habituate to over time</i> '. Can you please identify and reference the relevant report from which this statement is made?	No comment.
7.10	Applicant	The Wildlife Trusts and Royal Society for the Protection of Birds highlight a remaining concern as the potential disturbance to birds due to remaining noise impacts on golden plover, black tailed godwit and stone curlew in fields 4, 5 and 6. Has agreement been reached on a solution or do there remain matters that are not agreed? Please summarise the position in a SOCG.	Statements of Common Ground for Lincolnshire Wildlife Trust, Yorkshire Wildlife Trust and the Royal Society for the Protection of Birds have been produced (Doc 8.1.6, 8.1.7, and 8.1.8). The Wildlife Trusts have confirmed that they will defer to Natural England/Royal Society for the Protection of Birds on matters concerning potential disturbance to birds as a result of the Project. A meeting took place on 22 nd September 2015 to address this issue. A resolution is currently under discussion (Doc 8.1.6).
7.11	Applicant	[APP-027] Habitats Regulation Assessment, para. 8.3.20 states that noise modelling suggests average noise levels of 50dB LAeq and LA max of 70dB would reach adjacent saltmarsh fields and that this is below levels that would affect SPA species using adjacent fields; 1. are these figures inclusive or exclusive of the mitigation by means of bunds and close boarded fences; 2. how confident can you be in the modelling given that the final design, tunnel boring machine and other points of detail that may affect plant requirements are not yet finalised; 3. Fig 12 sheet 18 of 22 suggests that nearby fields could reach levels of 75dB is that correct? In the light of para 8.3.20, please explain?	1. These figures include all mitigation measures recommended in Paragraph 10.7.2 of including the bunds and the close board fences. 2. The confidence level in the modelled levels is high, as every opportunity to present a worst case scenario has been undertaken throughout the assessment. 3. Figure 12 (sheet 8 of 22) does show that adjacent fields could experience LAmax of 75dB. However, paragraph 8.3.20 is discussing the potential noise impacts on birds using the estuarine habitat associated with the Humber Estuary, rather than the fields adjacent to the construction works. Levels of 75dB would not reach the edge of the 'saltmarsh fields' of the estuarine habitat (which is over 400m away at Goxhill and over 500m away at Paull). Levels of more than 75dB could reach adjacent fields, and the implications of this are discussed in paragraphs 8.3.18 to 8.3.25 of the HRA (DCO Document Reference 5.4).
7.12	Applicant	[APP-027] HRA, para. 8.3.23 identifies that there are predicted to be some noises up to 73dB at Paull in month 35 and states that ' <i>In addition, extra fencing would be placed around activities which are likely to cause the highest levels of noise. This would further reduce the noise levels reaching the saltmarsh and intertidal habitats</i> '. Where is this identified in the CEMP and thereby controlled?	Commitment Con 13 of the Initial CEMP (Doc 7.3) addresses this.
7.13	Applicant	2. how often would the helicopter pad shown in [APP-09] Indicative Site Layout Plans for Goxhill be used and has this been accounted for in modelling and noise control? 3. why is a helicopter pad necessary for the project and why is it not mentioned within the draft DCO, please explain? 4. what would the flight path direction (in and out) be? 5. what would be the peak noise level emitted and what effect would this intermittent noise and flight activity have on the birds and wildlife within the SPA/Ramsar site? 6. would it be appropriate to include a restriction on the noisiest activities for example, helicopter flights and the ' <i>temporary gas evacuations</i> ' event (venting) at Paull AGI (paragraph 7.8.23)?	The helicopter pad as shown on the Indicative Site Layout Plans has been included to allow for any emergency health and safety situation that may arise on site requiring the urgent movement of a member of staff to hospital or other serious accidents. The helicopter pad would otherwise not be used. It is therefore unlikely that the helicopter pad would be used at all during the 35 month construction phase. In the event of this needing to be used the flight path would be from the closest available hospital with an emergency air ambulance service to the closest hospital which could cope with the emergency. Therefore, the use of the helicopter pad would already be restricted and no further control is required. Whilst there is the potential for the use of a helicopter to cause some localised noise and visual disturbance to birds, given that this is likely to be a one-off event (should it happen at all), it is considered to be <i>extremely unlikely</i> that there would be any significant effects on the integrity of the Humber Estuary Special Protection Area. It should also be noted that the Humber Estuary and its environs is already overflown by a number of commercial and military aircraft on a regular basis. Furthermore, in the very unlikely event that there were to be a significant effect, this would be considered to be due to 'imperative reasons of over-riding public importance' (as defined in the Habitats Directive); that is, this would represent a scenario under which significant effects upon a European Site would be deemed acceptable.
7.14	Applicant	[APP-031] Para. 2.5.21 of the ES refers to a potential District Network Operator (DNO) connection from an existing pole mounted substation on	The assessment presented a worst case scenario (the use of generators). The use of Distribution Network Operator (DNO) connection would reduce noise levels although the mitigation in Paragraph

		<p>Thorngumbald Road by a trenched cable along the verge; or a new pole mounted substation would be installed on an existing pole. The Unaccompanied Site Visit identified District Network Operator equipment (pole transformers) in each site location.</p> <p>Can the applicant clarify whether a DNO connection at Goxhill and Paull remains viable and would this have any tangible and beneficial effect on site compound noise by eliminating the need for temporary generators?</p>	<p>10.7.6, of Chapter 10: Noise and Vibration (Doc 6.10) recommends the use of low noise generators so the use of a DNO connection would not reduce noise levels significantly to alter the conclusion of the assessment.</p> <p>A DNO connection would only be viable at Paull as outlined in paragraph 2.5.21 of the Project Description (Doc 6.2).</p>
7.15	Applicant	<p>[APP-082] Transport Assessment identifies the scope of the Transport Assessment in Fig 4.1 (Goxhill) and Fig 4.6 (Paull). This study area is much wider than that covered by the Noise Assessment at both sites ([APP-064] Noise Figures 10.1 sheets 1 & 2 which focuses on the area around each site and does not cover the wider transport highway corridor.</p> <p>Can the applicant;</p> <ol style="list-style-type: none"> 1. explain why the study area for construction traffic noise is smaller than the study area for the traffic and transport assessment? 2. clarify if there any potential noise impacts on any highway links outside of the construction traffic noise study area and if so; 3. provide a noise and vibration assessment for all the links assessed in ES Chapter 12. 	<ol style="list-style-type: none"> 1. The noise assessment has considered the wider road network in Table 10.4, Chapter 10: Noise and Vibration (Doc 6.10) in accordance with The Calculation of Road Traffic Noise (CRTN). 2. The links that were considered were predicted to experience a negligible change in noise level as reported in paragraph 10.3.24. No further assessment is required. 3. This is provided in Table 10.4 of Chapter 10: Noise and Vibration (Doc 6.10)
7.16	Applicant	<p>[APP-064] Noise and Vibration Paragraph 10.3.6 describes that the baseline readings taken were '<i>filtered</i>' for unrepresentative noises.</p> <p>On what basis were the filtering decisions taken and what was excluded?</p>	<p>The background noise data was filtered by taking out any obvious high noise levels and the dawn chorus from birds which can elevate the ambient noise environment. The dawn chorus has the potential to affect measured levels as this can vary from the night time period to the day time period throughout the year.</p>
7.17	Applicant	<p>[APP-064] Noise and Vibration, Table 10-4 illustrates the traffic data and basic noise level with and without the project and is based on an 18 hour period. The construction hours are limited to 12 hours (DCO Requirement 11 (1) (a)).</p> <p>If the noise modelling had been based on 12 hour construction period what would the figures in Table 10-4 be and would that change the analysis and conclusions presented within the ES?</p>	<p>The noise levels in Table 10-4 have been calculated in accordance with the calculation of road traffic noise (CRTN) which is based upon an 18 hour period (0600-0000) and is the method used for assessing noise from roads in the UK. There are no recognised methodologies for calculating a 12 hour flow. The 18 hour period contains the peak periods of traffic flow as would the 12 hour. The difference would be negligible and the conclusions in the Environmental Statement would remain valid.</p>
7.18	Applicant	<ol style="list-style-type: none"> 1. [APP-066] - There is a significant amount of heavy plant machinery listed in Table 0-2, para 10.1.3 which would require delivery to site by low loader. Table 0-4, para 10.1.5 suggests 1x two way HGV movement per hour over the first 2 months during site preparation and set up. Is that realistic give the scale of the operation? 2. [APP-066] - The peak hourly 2 way HGV vehicle movement over the project is shown in Table 0-4 as 8 No movements between months 12 and 24 when the tunnel is proposed to be driven. Does this include the removal of tunnel arising's[sic] as work proceeds? If not what is planned and how was the noise of those vehicle movements reflected in the model? 3. [APP-064] - The illustrations for predicted monthly traffic movement at Goxhill (Plate 2-3) and Paull (Plate 2-4) demonstrate that if non HGV predicted traffic were added to predicted HGV movements the total volume (both average and peak) more than doubles. Why is predicted non HGV construction traffic not included in the noise model? Would inclusion of this generate higher total noise levels that would have a significant effect on the reported figures? 	<ol style="list-style-type: none"> 1. All the plant would not be delivered to site at once. The indicative construction schedule indicates ROW fencing, pre-construction drainage and topsoil strip as the main activities in months 1 and 2 with a total number of 22 items of plant to be delivered over the course of 2 months. It is considered that the HGV movements during the first 2 months would be realistic. 2. Yes, this would amount to 96 movements a day. The noise model has considered all HGV movements throughout the construction period. 3. In terms of noise the existing traffic flows would be low and the contribution to the overall noise level would not have an effect. Noise from the HGV movements would be the dominant noise source.
7.19	Applicant	<p>[APP-064] Can the applicant confirm the units of assessment in Tables 10.52-10.54, Noise and Vibration?</p>	<p>The HGV calculations are dB LAeq 12 Hour.</p>
7.20	Applicant	<p>Further to the request made in the Secretary of State's scoping opinion at para. 3.5.3, can the applicant confirm what the impact of offsite construction traffic vibration is on human and ecological receptors?</p>	<p>Significant levels of vibration are generally dependent upon any imperfections on the road surface and do not occur normally.</p> <p>Paragraph 10.7.6 of Chapter 10: Noise and Vibration (Doc 6.10) recommends speed limits and road surface condition surveys on the road to be used by the Project to mitigate any possibility of</p>

			vibration from road traffic.
7.21	Applicant	[APP-064] Noise and Vibration, para 10.7.7 recommends that if an order were granted night time works should be re-assessed in accordance with BS5228 based on specific manufacturer's data and specific locations of equipment and that if the project layout or design differs 'significantly' an updated assessment should be undertaken. Where is this controlled in the DCO?	This will be included in the Initial CEMP as a commitment and will be updated and submitted at Deadline 3.
7.22	Applicant	[APP-064] 6.10 Noise and Vibration, para. 10.7.6 identifies the concept of using best practice to minimise noise effects, gives examples and labels these 'Best Practicable Means (BPM)'. Not all of these appear to be listed within the Schedule of Mitigation Commitments. Please check and update.	The Schedule of Mitigation Commitments (Doc 7.7) and the initial Construction Environmental Management Plan (Doc 7.2.1) have been reviewed. All Best Practical Means are provided in the documents through Clause Con I3 aside from: 'Static noisy plant, including generators, would be located as far away from noise sensitive receptors as is feasible for the particular activity'. This will be included in the updated documents to be submitted at Deadline 3.
7.23	Applicant	Commitments are made regarding noise monitoring in [APP-064] at paras.10.7.8 (Min 1 day per month at Fir Tree Farm, Goxhill and Lakes Farm, Paull) and 10.7.9 (continuous night-time monitoring at Fir Tree Farm and Marshlands).The night-time monitoring is stated to be 'initially for 21 days.....and then reported on a monthly basis'. 1. Paull 'Lodge' is located south of the reception shaft at similar distance as Marshlands. Why is monitoring not relevant here; 2. is the level of monitoring proposed adequate given the different levels of intensity of work throughout the projects duration; 3. what action would be taken if predicted noise levels and the noise management project described in [APP-016] Draft DCO, Req 13, schedule 3 of the DCO (page 39) failed; and 4. should these noise management commitments also appear in the Schedule of Mitigation?	1. Monitoring was based upon proximity to the redline boundary. The Noise monitoring strategy has been reviewed and during construction noise monitoring will be included at Paull 'Lodge'. 2. Noise monitoring is considered to be adequate and North Lincolnshire Council has not indicated that any further noise monitoring is required (See Statement of Common Ground Doc 8.1.2). 3. A review of the current working practices would need to take place to mitigate noise levels although as the assessment has been based on a worst case scenario and so this scenario is considered unlikely. 4. The initial Construction Environmental Management Plan (CEMP) and Register of commitments will be reviewed and updated and issued for Deadline 3 if necessary.
7.24	East Riding of Yorkshire Council (ERYC) & North Lincolnshire Council	Are you satisfied with the noise and vibration monitoring proposed and the means by which it is controlled in Requirements 12 and 13 of the draft DCO [APP-016]?	No comment.
7.25	Applicant	[APP-064] Noise and Vibration, paras. 10.7.6 /10.7.2 describes the 2.4m close boarded fencing to be installed around the outside of the Paull and Goxhill construction sites as indicated on the [APP-09] Indicative Site Layout Plans. Has spillage of sound at the site access points been included in the modelling? If this fencing is required to achieve satisfactory noise control should these drawings not be certified documents controlled within the DCO?	The noise model has accounted for any openings in the fence line and bunds around the main construction site. The fence line is indicative and would form part of the site layout which needs to remain flexible and subject to detailed design. The exact layouts will be approved by the Local Planning Authorities prior to commencement as part of the CEMP.
7.26	Applicant	[APP-064] Noise and Vibration, para 10.10 summary describes the impact of the project during daytime as compliant with BS5228 Annex E but due to the quiet location (daytime baseline) concludes 'moderate adverse' after mitigation – what does this mean? Please explain what would be experienced by local people? Is any further noise mitigation possible?	The results from the baseline noise survey indicate that existing noise levels in the area are low. Although the mitigated noise levels would not be considered a significant adverse effect level they would still be out of character within the local area. Noise may be heard and cause small changes in behaviour e.g. turning up volume of television, having to close windows for short periods of time. The use of portable noise barriers could be used around areas of concentrated works should noise levels exceed those predicted however this is not considered likely as a worst case scenario has been assessed.
7.27	Applicant	[APP-064] Noise and Vibration, para 10.10.6. For the 12 months of the tunnel drive when work would continue at night the noise and vibration levels are described as being below World Health organisation (WHO) guidelines and are	The assessment has taken every opportunity to present a worst case scenario resulting in a high confidence in the impact being slight adverse.

		concluded on a cautious approach to be <i>'slight adverse'</i> but would not disturb sleep – what level of confidence is there in this statement and how would problems be dealt with if they arose during construction?	Paragraph 10.7.3 of Chapter 10: Noise and Vibration (Doc 6.10) outlines the requirement for effective communication with the local community so that should any noise issues arise they can be mitigated swiftly.																									
8. Transportation and Traffic																												
8.1	Applicant	How would changes to the programme and initial Traffic Management Plan be communicated to local people, particularly those closest to each site and most directly affected and where is this stated in the initial Traffic Management Plan?	Using the communication channels described above (Question 6.4), National Grid will update Parish Councils and other interested parties through a combination of website updates, regular updates to Parish Councils, letter drops to affected residences and by maintaining an information line, e-mail and postal address for responding to any specific questions or requests for additional information. Any change to the programme and initial TMP would be assessed individually and then an appropriate plan for supporting communication put in place and enacted. National Grid expects to confer and work closely with the appropriate individuals within the local highways authorities during the implementation of this process.																									
8.2	Applicant	18 hour annual average weekday traffic (AAWT) flows for Thornton Road reported in [APP-064] Noise, Table 10.4 are different from the 18 hour without project, AAWT flows reported in [APP-082] Transport Assessment, Table 4.6 for Thornton Road. Can the applicant confirm which flows are correct and verify that there are no other consistency errors between tables?	Baseline 18 hour annual average weekday traffic (AAWT) flows for Thornton Road (1403) are as reported in the Transport Assessment, Table 4.6 and Chapter 12 Table 12-10. There are no other consistency errors between tables. Please note, the noise assessment presented in Chapter 10: Noise and Vibration is not affected by this Thornton Road error.																									
8.3	Applicant	[APP-070] Traffic and Transport - There are a number of discrepancies between the conclusions drawn within the transport impact assessment summary tables and the assessment text. For example between the impact tables for Goxhill (ES Tables 12.21-12.23) and the summary of pre-mitigation effects (ES Table 12.24) and between the impact tables for Paull (ES Tables 12.29-12.31) and the summary of pre-mitigation effects (ES Table 12.32), as well as between the text and tables. ES para 12.6.29 describes a <i>major adverse</i> effect on Thorngumbald Road on Driver Delay but Table 12.32 reports a <i>negligible effect</i> . Can the applicant provide revised tables to complement the text? Should any errors be noted in the original text, can the applicant provide an explanation of these?	Revised tables of Chapter 12: Traffic and Transport (Doc 6.12) have been prepared 12-24 and 12-32. These will be submitted as part of the 'Environmental Statement Errata and Amendments Document' (Doc 8.6A) at Deadline 2.																									
8.4	Applicant	[APP-031] Project Description, 2.8.14 confirms that the ES assumed a worst case that <i>'all waste materials would be disposed of offsite and would be removed by road transport'</i> . Please; 1. clarify if this statement includes all surplus and waste material i.e. tunnel arisings, surplus subsoil, or topsoil from site preparation etc.; 2. confirm how many vehicle movements of what type, frequency and duration were built into the Initial Traffic Management Plan; 3. verify whether these same figures were used in the predictive noise modelling; 4. provide an update on the off-site disposal options identified in [APP-084] CEMP, para. 2.5.13; and 5. which option would create the worst location and worst route?	1.National Grid confirms that this statement does include all surplus and waste material such as tunnel arisings, surplus subsoil from site preparation etc. No top soil will be surplus and it will be protected throughout the construction phase. 2. The vehicle movements, type, frequency and duration have been derived from Appendices 1 and 6 in the Initial Traffic Management Plan (DO Doc 7.2.1). Table 3.1 of the initial TMP <table border="1"> <thead> <tr> <th></th> <th></th> <th>Max</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Monthly</td> <td>All</td> <td>4401.0</td> <td>2772.7</td> </tr> <tr> <td>HGV</td> <td>2047.0</td> <td>1148.5</td> </tr> <tr> <td rowspan="2">Daily</td> <td>All</td> <td>220.1</td> <td>138.6</td> </tr> <tr> <td>HGV</td> <td>102.4</td> <td>57.4</td> </tr> <tr> <td rowspan="2">Hourly</td> <td>All</td> <td>18.3</td> <td>11.6</td> </tr> <tr> <td>HGV</td> <td>8.5</td> <td>4.8</td> </tr> </tbody> </table>			Max	Average	Monthly	All	4401.0	2772.7	HGV	2047.0	1148.5	Daily	All	220.1	138.6	HGV	102.4	57.4	Hourly	All	18.3	11.6	HGV	8.5	4.8
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			<p>3. National Grid confirms that these same construction traffic forecasts were used in the predictive noise modelling.</p> <p>4. All disposal options are still considered viable, as standalone options and as hybrids. The Main Works Contractor may bring further solutions. A final solution cannot be confirmed at this time but National Grid will consider all opportunities for disposal of tunnel arisings on an ongoing basis as they arise.</p> <p>5. It depends where the ultimate destination of the spoil is for each option but likely to be Option 4 with off-site disposal at a licensed waste management facility.</p>																													
8.5	Applicant	<p>[APP-070] Traffic and Transport, para. 12.6.8 states that '<i>Using the worst case scenario (peak traffic flow for construction), all roads would be subject to further detailed assessment identifying the impacts on....</i>' Why is this statement made?</p> <p>Given the peak figures are significantly higher than the daily averages (Tables 12-19 and 12-20 pages 33 and 35) should this assessment not be undertaken now to establish the worst case impacts for the Environmental Statement?</p>	<p>This is an error – this statement should have read 'Using the worst case scenario (peak traffic flow for construction), all roads have been subject to further detailed assessment identifying the impacts on....'</p> <p>There is no requirement for any further assessment.</p>																													
8.6	Applicant	<p>[APP-070] Traffic and Transport, para. 12.3.3 summarises the guidance notes, design documents etc. that informed the baseline information gathering. Terms to help quantify the level of impact are used in latter tables such as '<i>negligible</i>', '<i>minor adverse</i>', '<i>moderate adverse</i>' and '<i>major adverse</i>'.</p> <p>Please supply a table of these definitions identifying whether the source is from guidance (and if so which guidance and where), or professional judgement to give a better understanding of the thresholds between each and the basis of their derivation.</p> <p>Has professional judgement influenced the assessment of receptor sensitivity including for example Public Transport and if so how might that have affected the conclusions?</p>	<p>Effects are considered to be significant or not significant in Environmental Impact Assessment terms according to the significance of effects matrix. This is judged on the relationship of the magnitude of effect of each assessment criteria to the assessed sensitivity of each receptor. A Major and Moderate effect is seen as significant. A Minor or Negligible effect is seen as not significant.</p> <p>Significance of effects</p> <table border="1"> <thead> <tr> <th rowspan="2">Sensitivity of receptor</th> <th colspan="4">Magnitude of effect</th> </tr> <tr> <th>Major</th> <th>Moderate</th> <th>Minor</th> <th>Negligible</th> </tr> </thead> <tbody> <tr> <td>Major</td> <td>Major Adverse - Significant</td> <td>Major Adverse - Significant</td> <td>Moderate Adverse - Significant</td> <td>Minor Adverse - Not Significant</td> </tr> <tr> <td>Moderate</td> <td>Major Adverse - Significant</td> <td>Moderate Adverse - Significant</td> <td>Minor Adverse - Not Significant</td> <td>Negligible - Not Significant</td> </tr> <tr> <td>Minor</td> <td>Moderate Adverse - Significant</td> <td>Minor Adverse - Not Significant</td> <td>Negligible - Not Significant</td> <td>Negligible - Not Significant</td> </tr> <tr> <td>Negligible</td> <td>Minor Adverse - Not Significant</td> <td>Negligible - Not Significant</td> <td>Negligible - Not Significant</td> <td>Negligible - Not Significant</td> </tr> </tbody> </table> <p>Criteria for defining the sensitivity of key receptors have been developed based on the criteria in the IEMA Guidelines and are shown in Table 12-5, Chapter 12: Traffic and Transport (Doc 6.12).</p>	Sensitivity of receptor	Magnitude of effect				Major	Moderate	Minor	Negligible	Major	Major Adverse - Significant	Major Adverse - Significant	Moderate Adverse - Significant	Minor Adverse - Not Significant	Moderate	Major Adverse - Significant	Moderate Adverse - Significant	Minor Adverse - Not Significant	Negligible - Not Significant	Minor	Moderate Adverse - Significant	Minor Adverse - Not Significant	Negligible - Not Significant	Negligible - Not Significant	Negligible	Minor Adverse - Not Significant	Negligible - Not Significant	Negligible - Not Significant	Negligible - Not Significant
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			<p>Criteria from IEMA Guidelines and professional judgement are used to assess the effect on receptors and these are summarised in the table below and also sections 12.3.23 to 12.3.27 of Chapter 12: Traffic and Transport (Doc 6.12).</p> <table border="1"> <thead> <tr> <th></th> <th>Major</th> <th>Moderate</th> <th>Minor</th> <th>Negligible</th> </tr> </thead> <tbody> <tr> <td>Pedestrian Severance</td> <td>Increase of over 90% traffic</td> <td>Increase of over 60% traffic</td> <td>Increase of over 30% traffic</td> <td>Increase of less than 30% traffic</td> </tr> <tr> <td>Pedestrian Amenity</td> <td>Increase of over 90% HGV</td> <td>Increase of over 60% HGV</td> <td>Increase of over 30% HGV</td> <td>Increase of less than 30% HGV</td> </tr> <tr> <td>PRoWs and Bridleways</td> <td>Increase of over 90% HGV</td> <td>Increase of over 60% HGV</td> <td>Increase of over 30% HGV</td> <td>Increase of less than 30% HGV</td> </tr> <tr> <td>Accidents and road safety</td> <td>Junctions or links with 10 or more accidents in 3 years</td> <td>Junctions or links with 6 to 9 accidents in 3 years</td> <td>Junctions or links with 3 to 5 accidents in 3 years</td> <td>Junctions or links with less than 3 accidents in 3 years</td> </tr> <tr> <td>Parking & Loading</td> <td>Loss of loading or parking bays for over 12 weeks</td> <td>Loss of loading or parking bays for 5 to 12 weeks</td> <td>Loss of loading or parking bays for up to 4 weeks</td> <td>No loss of loading or parking bays</td> </tr> <tr> <td>Increase in traffic levels and driver delay</td> <td>Increase of over 90% traffic</td> <td>Increase of over 60% traffic</td> <td>Increase of over 30% traffic</td> <td>Increase of less than 30% traffic</td> </tr> <tr> <td>Public Transport</td> <td>Bus stops closed or bus services diverted for over 8 weeks</td> <td>Bus stops closed or bus services diverted for 3 to 8 weeks</td> <td>Bus stops closed or bus services diverted for 1 to 2 weeks</td> <td>Bus stops closed or bus services diverted for up to 1 week</td> </tr> </tbody> </table>		Major	Moderate	Minor	Negligible	Pedestrian Severance	Increase of over 90% traffic	Increase of over 60% traffic	Increase of over 30% traffic	Increase of less than 30% traffic	Pedestrian Amenity	Increase of over 90% HGV	Increase of over 60% HGV	Increase of over 30% HGV	Increase of less than 30% HGV	PRoWs and Bridleways	Increase of over 90% HGV	Increase of over 60% HGV	Increase of over 30% HGV	Increase of less than 30% HGV	Accidents and road safety	Junctions or links with 10 or more accidents in 3 years	Junctions or links with 6 to 9 accidents in 3 years	Junctions or links with 3 to 5 accidents in 3 years	Junctions or links with less than 3 accidents in 3 years	Parking & Loading	Loss of loading or parking bays for over 12 weeks	Loss of loading or parking bays for 5 to 12 weeks	Loss of loading or parking bays for up to 4 weeks	No loss of loading or parking bays	Increase in traffic levels and driver delay	Increase of over 90% traffic	Increase of over 60% traffic	Increase of over 30% traffic	Increase of less than 30% traffic	Public Transport	Bus stops closed or bus services diverted for over 8 weeks	Bus stops closed or bus services diverted for 3 to 8 weeks	Bus stops closed or bus services diverted for 1 to 2 weeks	Bus stops closed or bus services diverted for up to 1 week
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8.7	Applicant	<p>It is unclear why the notable increase in HGV traffic flows for many links around Goxhill is considered to be '<i>negligible</i>', whereas for Thorngumbald Road the one month peak flow increase in traffic identified in ES para 12.6.29 is considered to be a '<i>major adverse</i>' effect.</p> <p>Can the applicant clarify the apparent difference in application of significance criteria for increase in traffic levels and driver delay between Goxhill and Paull?</p>	<p>Tables 12-24 and 12-32 of Chapter 12: Traffic and Transport (Doc 6.12) have been updated, they now have consistent application of significance criteria in traffic levels and driver delay at Goxhill and Paull. These tables will be submitted as part of the 'Environmental Statement Errata and Amendments Document' (Doc 8.6A) at Deadline 2.</p>																																								
8.8	Applicant	<p>[APP-070] Traffic and Transport, para. 12.3.25 Where the '<i>30% increase in lorries for more than 4 weeks in any 12 month period on routes intersecting PRoW, bridleways or near an equestrian centre</i>' threshold is exceeded, please confirm how effects are categorised as being of <i>minor, moderate or major</i> significance?</p>	<p>The significance effects are categorised as follows:</p> <p>Increase of over 30% Heavy Goods Vehicles (HGV) =minor</p> <p>Increase of over 60% HGV = moderate</p> <p>Increase of over 90% HGV = major</p>																																								
8.9	Applicant	<p>[APP-070] Traffic and Transport, Table 12.21 and Table 12.29 focus on the percentage change in total traffic flow. There are very large increases in HGV traffic (albeit from very low baseline).</p>	<p>Assessment of pedestrian severance is based on when there would be an increase in net traffic flows of 30%, 60% and 90% (considered minor, moderate and major effects respectively). The increase in Heavy Goods Vehicles flows has been used to determine the effects on pedestrian</p>																																								

		Does the increase in the proportion of HGV within total traffic flows influence the assessment of severance and if not how this effect has been assessed?	amenity.
8.10	Applicant	<p>[APP-070] Traffic and Transport, Tables 12-19 and 12-20 pages 34 and 35 illustrate the percentage increase in 12 hour daytime traffic at Goxhill and Paull based on average and peak flows for total traffic and HGV's.</p> <p>Given the predicted percentage increase in traffic identified please explain how the judgements in 12.6.20 on the 'significance of effects' the results of which appear in Table 12-24, page 42 (Summary of Effects on Receptors at Goxhill before mitigation) end up defined for Driver delay as 'negligible' at Chapel Field Road, East Marsh Road and Ferry Road.</p> <p>Would there not be more significant impacts on local residents and farming businesses?</p>	Tables 12-24 and 12-32 of Chapter 12: Traffic and Transport (Doc 6.12) have been updated. The significance effects for Driver delay is considered Major Adverse at Chapel Field Road, East Marsh Road and Ferry Road so there would be more significant impacts on local residents and farming businesses on these roads. These tables will be submitted as part of the 'Environmental Statement Errata and Amendments Document' (Doc 8.6A) at Deadline 2.
8.11	Applicant	<p>[APP-031] Project Description at Plate 2-3, page 28, (Goxhill) and Plate 2-4, page 29 (Paull) illustrate the predicted traffic volumes at each site during the construction period. Please clarify;</p> <p>1. does 'Total' include all site traffic e.g. labour traveling in private vehicles but exclude baseline i.e. local non construction traffic;</p> <p>2. please add to the illustrations the existing baseline counts.</p>	<p>1. The total number of traffic movements includes all site traffic such as labour/site personnel travelling in private vehicles to site. It does exclude the existing baseline traffic i.e. local non construction traffic.</p> <p>2. Baseline traffic data varies on the different roads on the construction traffic routes. Baseline traffic flows are provided for each road in the Transport Assessment (Doc 7.2) in Section 4 and also Figures 6.3 and 6.4. Baseline traffic flows are also provided for each road in Chapter 12: Traffic & Transport (Doc 6.12) in Section 12.4. The graphics included in the Project Description are purely intended to show construction traffic requirements.</p>
8.12	Goxhill Parish Council & Applicant	<p>[RR-013] In their relevant representation Goxhill Parish Council identified that they had suggested an alternative access option to route vehicles away from the main populated area of Goxhill and avoid Thornton and Ferry Roads 'which is to have two-way traffic using Chapelfield Road and the new bypass road'.</p> <p>Goxhill Parish Council:</p> <ul style="list-style-type: none"> • is this the route now shown on the application Works Plan 1 (W002) but utilised for all traffic on a two way basis; <p>Applicant:</p> <ul style="list-style-type: none"> • is this a viable and practicable solution and if not please identify why with evidence to support? 	<p>National Grid has considered the above and has concluded that the significant highway works and impacts of a 2-way bypass cannot be justified for the following reasons:</p> <ul style="list-style-type: none"> • The traffic impacts from construction works of the project are temporary in nature. • For the majority of the works the average two-way construction traffic flows are low and would be controlled through measures proposed in the Initial Traffic Management Plan (DCO Document Reference 7.2.1). • Following completion of the construction works, the maintenance vehicles accessing the existing Above Ground Installation (AGI) to undertake maintenance works would be no greater than the existing and so there would be no change to existing conditions along the local roads as a result of the Project. • As part of mitigation proposed along the route, HGV construction vehicle movements at Goxhill would be between 09:00-15:15 term time Monday to Friday, outside peak hour traffic conditions, therefore delay to other motorists, school traffic or bus services is unlikely (Initial TMP, paragraph 3.1.4 (DCO Document Reference 7.2.1)). • There are existing utilities in the verge along Chapelfield Road which would need diverting such as Anglian Water pipes and gas pipelines. The latter would take between 35 and 50 weeks to divert and there would be additional associated nuisance and disruption caused by these works. • A large number of mitigation measures have been incorporated into the Project design including passing places and other measures outlined in the Initial TMP (Doc 7.2.1) that have been discussed and agreed with North Lincolnshire Council and are subject of a near complete Statement of Common Ground with the Council. <p>Further to the above, any highway works on the proposed temporary two-way construction route would need to be built prior to the start of the works at the Goxhill site which is programmed for autumn 2016. The extent of the additional works and the necessary consultation with residents, the highway authority and landowners would significantly delay the programmed start date of construction. It would also be necessary to seek additional powers in the DCO for temporary possession of these areas should affected landowners not consent to grant private rights and this does not form part of the current application. It should also be noted that abnormal loads would still need to use Ferry Road as they cannot use the rail crossing on Chapelfield Road. Residents and businesses would be given advance notice of these traffic movements. National Grid Gas considers for the above reasons that the construction and operation of a new temporary two-way route road is not justified for a temporary project and is not viable based on the critical project programme. National Grid is currently seeking agreement regarding the above through a joint Statement of</p>

			Common Ground (Doc 8.1.10) with Goxhill Parish Council and North Lincolnshire Council.
8.13	Applicant	<p>How would traffic be controlled to ensure that the impact on local residents and businesses is minimised, for example those in the industrial units at Soff Lane, private residences along the route, farm businesses, Goxhill airfield and would such parties be able to use the highway network against the proposed one way construction flow sections, or what is proposed?</p> <p>How does the Initial Traffic Management Plan mitigate the impacts on local people who use the network most affected by traffic increases and how would the impact be reduced during am/pm peak hours e.g. school run?</p>	<p>All local residents and businesses would be able to use the highway network against the proposed one way construction flow sections so their access routes would not be affected.</p> <p>Environmental Design Measures are identified in Section 12.7 of Chapter 12 (Doc 6.12). At Goxhill the transportation of segments and waste/arising is planned to be carried out during working hours Monday to Friday i.e. weekdays only and during school term this will also be restricted between the hours of 09:00-15:15hrs as stated in 3.1.4 of the Initial Traffic Management Plan (Doc 7.2.1). This will avoid these movements during the AM/PM peak hours during term time and also during the school run. There will also be a traffic monitoring system in place for HGVs to ensure they follow the Traffic Management Plan (refer to the Initial Traffic Management Plan (Doc 7.2.1)).</p> <p>In addition, Rosehill Track will be used for two way construction traffic movements to avoid traffic through Paull village. Initial Traffic Management Plan (Doc 7.2.1)</p>
8.14	Applicant	Has the weight limit of the Ferry Road railway bridge been confirmed by Network Rail to be sufficient? If so please provide written evidence.	Network Rail has been contacted with the traffic routing and the initial Traffic Management Plan (TMP) (Doc 7.2.1). A draft Statement of Common Ground has been issued to them and they have alerted National Grid to the fact that an abnormal loads process will be required. A meeting has been organised to discuss project and requirements from Network Rail.
8.15	Applicant	Are there any potential conflicts between the proposed route and traffic volumes and the railway crossing at Soff Lane, or are you satisfied that the proposals in the application documents are practicable?	<p>The Main Works Contractor would review the need for traffic marshals at all key locations along the construction traffic routes, which could include the railway crossing at Soff Lane.</p> <p>Network Rail have been contacted with the traffic routing and initial Traffic Management Plan (TMP) (Doc 7.2.1). A draft Statement of Common Ground has been issued to them and they have alerted us to the fact that a notification process for Soff Lane will be required with potential upgrade.</p>
8.16	Lincolnshire Councillors & Applicant	<p>[RR03-05] relevant representations were received from three Lincolnshire Council Councillors acting (acting for their constituents);</p> <p>Councillors:</p> <ul style="list-style-type: none"> • Please clarify whether these representations refer directly to the by-pass as shown on [APP-07] Works Plan 1, W002. <p>Applicant:</p> <ul style="list-style-type: none"> • A suggestion was made that this road is made permanent and adopted on completion of the project. What would be the additional impacts (including cost) of this to the project and what are your views on this suggestion? 	<p>The response provided to question 8.12 also applies to this question. In addition, regarding the permanent installation of the temporary Soff Lane Diversion (of which two options have been suggested by North Lincolnshire Council; retaining the temporary diversion and constructing a longer route to the south), there are two main obstacles to the proposals:</p> <p>1. Technical feasibility</p> <p>If retained as a permanent road, the temporary diversion would need to be designed and constructed to current Design Manual for Roads and Bridges (DMRB) highway standards. New junctions would need to be provided with appropriate road traffic and pedestrian signs for public rights of way that cross the site. If such works would be undertaken they would also require a separate Environmental Impact Assessment and would be considered to be a project in its own right. These works could not be undertaken as part of the River Humber DCO project. In addition, as per above statutory undertaker apparatus would also need to be diverted. All of the above would cause a disproportionate and prohibitive cost and delay to the critical construction timetable in light of the temporary nature of the construction traffic.</p> <p>2. Land rights</p> <p>New permanent acquisition of land would be required. Provision for this has not been made in the DCO and compulsory powers are unlikely to be justifiable. In order to acquire this land compulsorily, National Grid Gas would need to demonstrate:</p> <ul style="list-style-type: none"> - That it is necessary for the Project; and - That it is in the public interest. <p>It is unlikely that these tests can be satisfied as only temporary works are needed to alleviate the impacts of the Project and permanent acquisition of land for a new bypass would be disproportionate to the impact of the works. Under its funding arrangements with OFGEM National Grid is also unlikely to be able to justify the disproportionate costs of constructing a permanent access to alleviate temporary impacts.</p>
8.17	North Lincolnshire Council (NLC)	<p>What are your views on the suggestion (8.16) regarding upgrading of the temporary bypass as shown on [APP-07] Works Plan 1, W002:</p> <ol style="list-style-type: none"> 1. is this necessary; 2. could such a proposal comply with relevant highway plans, standards etc.; 	No comment.

		<p>3. would it provide significant local benefit; and</p> <p>4. would NLC be willing and able to adopt the new road if this was a matter agreed between the applicant and the relevant parties?</p>	
8.18	Applicant	<p>The condition of the final sections of single track lane to the Goxhill site in each direction is poor with the road surface having sunk.</p> <p>Is it proposed to upgrade these surfaces ahead of any site construction works commencing?</p>	<p>The site would be accessed at the northern most point of East Marsh Lane (an unadopted highway) off East Marsh Road as shown on the Site Layout Drawings (Doc 2.4B). The site exit would be on Chapel Field Road to the northeast of Marshlands Cottage (Doc 2.4). A temporary haulage road would be provided within the construction compound along the pipe stringing site to connect the western and eastern parts of the site over East Marsh Lane. As such the exiting single track road to the existing AGI at Goxhill will not be used for construction traffic (Doc 2.4B). However a short section of East Marsh Lane between the tunnel and the tunnel arisings storage area would be used for construction traffic and the short stretch of carriageway here would be repaired and maintained where required.</p> <p>North Lincolnshire Council has stated that pre/post commencement structural condition surveys need to be completed on the highway network. The scope and extent of these surveys will be agreed with North Lincolnshire Council and secured under requirement 15. These may identify the need for maintenance works in identified routes prior to works starting, to ensure that the routes are capable of carrying construction traffic. North Lincolnshire Council is particularly concerned about the northern sections of Ferry Road, Chapelfield Road and East Marsh Road. Section 2.2 of the Intial TMP (Doc 7.2.1) gives some detail of the pre/post condition surveys.</p>
8.19	Applicant	<p>Given the proposed volume and weight of vehicles necessary to implement the project, the nature of the local highway network and potential impacts over the construction period are you fully confident that the best solutions have already been identified within the application and that these are viable and capable of implementation? For example, has the swept path analysis in the TA appendices included abnormal loads such as the Tunnel Boring Machine to ensure the ability to navigate the final sections of highway?</p>	<p>Swept path analysis has been carried out for the Tunnel Boring Machine abnormal load as shown in Appendix A of the Transport Assessment (Doc 7.2). Mitigation measures in the form of localised widening are included in the access works sought as part of the DCO to ensure abnormal loads can navigate the route safely.</p>
8.20	Applicant; North Lincolnshire Council; East Riding of Yorkshire Council	<p>[APP-070] Traffic and Transport, Table 12-4, page 8 identifies that meetings were undertaken in the development of the DCO application with the relevant local highway authorities.</p> <p>What is the current status of discussions with the relevant highway authorities? Do they have any outstanding concerns and if so what are they and how could they be removed or minimised?</p>	<p>National Grid is currently agreeing a highways-specific joint Statement of Comment Ground with North Lincolnshire Council and Goxhill Parish Council. To date National Grid has had no comments from East Riding of Yorkshire Council and a signed SOCG is submitted with this material (doc 8.1.3A).</p>
8.21	Applicant	<p>Please confirm how the residual significance of effect of the project on footpath 70 has been derived in the absence of an impact assessment description and describe what the impact of the project would be on footpath 50 which lies within the construction site?</p>	<p>Footpath 50 would remain open at all times during the construction works.</p> <p>Footpath 70 would remain open at all times during the construction works but would be fenced and gated at the point where it crosses the Soff Lane Diversion (refer to Chapter 11: Socio-Economics and Land Use, Doc 6.11).</p>
8.22	Applicant	<p>[APP-070] Traffic and Transport para 12.6.35 identifies that a potential temporary closure of PRoW 6 and 1 may be required for three days in the Paull area.</p> <p>Please confirm whether there is any more clarity regarding the likelihood and duration of any PRoW closures in the Paull area, or more broadly at Goxhill?</p>	<p>National Grid confirms that there will be a need to close Footpath 6 and Footpath 1 at Paull for a maximum of three days to allow for venting works. There are no footpath closures at Goxhill (refer to Chapter 11: Socio-Economics and Land Use, Doc 6.11).</p>
8.23		<p>[APP-070] Traffic and Transport para 12.6.34 and table 12-30 (page 52) identifies that as a consequence of increases in predicted HGV flows, given the low baseline flows the impacts on pedestrian amenity and users of bridleways and PROW's [sic] at Paull would be '<i>major adverse</i>'. The summary of effects table 12-32 (page 54) then describes the worst affects at Paull as '<i>moderate adverse</i>'.</p> <p>Please explain this apparent anomaly and also provide details of specific mitigation measures that are proposed to minimise these potential effects?</p>	<p>Table 12-32 of ESChapter 12: Traffic and Transport (Doc 6.12) has been updated. This table will be submitted as part of the 'Environmental Statement Errata and Amendments Document' (Doc 8.6A) at Deadline 2.</p> <p>Mitigation measures to minimise these potential effects are summarised in paragraph 12.7.1 of Chapter 12: Traffic and Transport (Doc 6.12) and include</p> <ul style="list-style-type: none"> • Temporary signage for construction traffic and public to notify all road users of the presence of HGVs. Signs to be erected where Public Rights of Ways (PRoWs) and Bridleways intersect the highway;

			<ul style="list-style-type: none"> The Driver Pack (outlined in the initial Traffic Management Plan (Doc 7.2.1)) would advise drivers to be observant of walkers, cyclists and equestrians (the latter particularly on East Marsh Road near Uplands Lodge); and <p>HGV movements would be restricted to 07:00 to 19:00 on weekdays (excluding bank holidays) only. Pedestrian, equestrian and cycle demand on PRoW tends to be higher at the weekend.</p>
8.24	Applicant	<p>[APP-070] Traffic and Transport, section 12.4 summarises 18 hour traffic flows collected through automatic traffic counts, or factored from 12 hour manual count flow data. The following errors have been identified in the 18 hour factored flows at Paull:</p> <ul style="list-style-type: none"> link A1033 main road north of Hook's Lane Junction 474 HGV 12 hour flows are factored to 0 HGV 18 hour flows; and link Rose Hill Farm Private Road 2 HGV 12 hour flows are factored to 112 HGV 18 hour flows. <p>The 18 hour flows have no bearing on the assessment of transport effects but could impact on the noise and vibration assessment.</p> <p>Please review Transport Table 12.15 and provide confirmation of the correct 18 hour factored flow data.</p> <p>Does this change any of the conclusions in the noise and vibration assessment?</p>	<ul style="list-style-type: none"> Link A1033 main road north of Hook's Lane Junction 474 HGV 12 hour flows should be factored to 531 HGV 18 hour flows; and Link Rose Hill Farm Private Road 2 HGV 12 hour flows should be factored to 2 HGV 18 hour flows. <p>Revised tables will be submitted as part of the 'Environmental Statement Errata and Amendments Document' (Doc 8.6A) at Deadline 2.</p> <p>Chapter 10: Noise and Vibration (Doc 6.10) has used the correct data and so there are no changes to the assessment.</p>
8.25	Applicant	<p>[APP-031] Project Description para 2.4.67 suggests that areas of the Goxhill site would be '<i>regularly trafficked at night</i>'.</p> <p>Since draft DCO Requirement 11 allows for '<i>associated spoil movement</i>' from tunnel boring to occur outside the standard working hours, can the applicant please confirm whether offsite spoil movement is intended to occur outside of the core working hours, as well as the likely volume and destination of any traffic?</p>	<p>National Grid confirms that no offsite spoil movement is intended to occur outside of the core working hours. The only construction movements would be within the site itself between the tunnelling site and the spoil storage area.</p>
8.26	Applicant	<p>[APP-070] The scope and method of the Transport Assessment is described in para 12.3.1&2.</p> <p>Why has the assessment relied on PPG13?</p> <p>Does the withdrawal of the 2007 transport assessment guidelines in favour of '<i>Transport evidence bases in plan making and decision taking</i>' (available on .gov.uk) have any implications for the outcomes of the assessment?</p>	<p>Reference to PPG13 is an error in the Transport Assessment (Doc 7.2). The withdrawal of the 2007 transport assessment guidelines in favour of '<i>Transport evidence bases in plan making and decision taking</i>' does not have any implications for the outcomes of the assessment.</p>
8.27	Applicant	<p>[APP-083] Paragraph 3.3.2 states that '<i>some of the routes (meaning non designated routes) may be used by local construction traffic...</i>'</p> <p>How could this be controlled to avoid the potential for creating local adverse impacts?</p>	<p>Local site workers who live in surrounding villages would have to use other routes to get to/from their homes. However, the following measures are identified in Section 13 of the Initial Traffic Management Plan (TMP) (Doc 7.2.1) which relate to all site staff and suppliers:</p> <ul style="list-style-type: none"> Ensure all personnel (workers) receive site inductions covering the use of vehicles, traffic rules on site traffic routes and speed <p>Copies of the Drivers Pack will be given to all suppliers who are likely to make deliveries to site.</p>
8.28	Applicant	<p>During an Unaccompanied Site Visit on 29th July 2015 the proposed haul routes were driven and it was noted that passing places already exist on Ferry Road and East Marsh Lane.</p> <p>Please identify which of the Works are improvements to existing passing places and (if any) which are new?</p> <p>What works will they involve (in particular will they affect drainage ditches, hedges, or trees?) and would these passing places (new and upgraded) remain on completion of the project?</p>	<p>Works 6D, 6H, 6I, 6J and 6K are works improvements to existing passing places and works 6A, 6E, 6F, 6G, 6L, 6N, 6O, 6P, 6Q, 6R are works to provide new passing places.</p> <p>The temporary access works could affect drainage ditches, hedges and trees. The temporary access works have been assessed from an ecology perspective, the results of these are presented in Annex 2 (Tables A2.1 and A2.2) of the Technical Appendix (Doc 6.7.1), and is also discussed in the Ecology chapter in paragraphs 7.4.39 (Doc 6.7). All temporary passing places (new and upgraded) will be removed on completion of the Project subject to agreement otherwise with the Local Highway Authority.</p>
8.29	Applicant	<p>Whilst the location of work areas for the proposed road improvements for access during the project are identified on the Works Plans and in Works 6 (Goxhill) and 9 (Paull) within the draft DCO there is limited detail on their</p>	<p>The temporary access works could potentially affect existing drainage ditches, boundaries, access points to properties or land and trees or hedges. However, the temporary access works have been assessed from an ecology perspective, the results of these are presented in Annex 2 (Tables A2.1</p>

		<p>scope.</p> <p>Will any of the temporary access works identified affect existing drainage ditches, boundaries, access points to properties or land, trees or hedges?</p> <p>If so by means of a table please identify where that is the case and in each location which of the listed items would be affected and how any impacts for example, on boundary security (if fence or hedges need removal), drainage (if passing places interfere with drainage ditches) etc. will be minimised?</p>	<p>and A2.2) of the Technical Appendix (Doc 6.7.1), and is also discussed in the Ecology chapter in paragraphs 7.4.39 (Doc 6.7).</p>
8.30	Applicant	<p>[APP-083] The Initial Traffic Management Plan (TMP) route to Goxhill is inconsistent in its illustration of traffic routes, since the Soff Lane diversion that is assessed as part of the ES is omitted from Plates 3.3, 6.1 but is included in Figures 1 and 2. The assessment includes the diversionary route.</p> <p>Please review and update.</p>	<p>National Grid can confirm that the Soff Lane Diversion has been assessed as part of the Environmental Statement. Plates 3.3 and 6.1 of the Initial Traffic Management Plan (Doc 7.2.1) will be updated and submitted as part of the revised Initial Traffic Management Plan at Deadline 3.</p>
8.31	Applicant	<p>[APP-083] TMP section 8 suggests that pipes may be delivered to a local port (e.g. Hull).</p> <p>What reliance does the applicant place on the selected construction route? For example, is there potential for alternative port locations to be used to import pipes and other materials, such as the nearby New Holland dock?</p> <p>If so, what transport impacts could arise from this arrangement?</p>	<p>The selected construction routes from Hull and Immingham Ports in the Initial Traffic Management Plan (Doc 7.2.1) utilise the Project construction traffic routes.</p> <p>New Holland jetty is approximately 10 miles from the Project and is privately owned. Communication with the Ports Authority confirmed that the use of the jetty would not be a viable option. The option was therefore discounted as the jetty is currently at capacity, therefore a further jetty would be required to be built. Transport by boat would also require double handling of spoil/materials (i.e. handled by transport to load and unload spoil/materials) therefore the option (although not viable) would still require highway movements. Road infrastructure to the jetty would also need to be assessed as no direct route from the Project is available and suitable roads would mean additional haulage distances to and from the jetty (paragraph 2.8.16, Chapter 2: Project Description (Doc 6.2)).</p>
8.32	Applicant	<p>[APP-083] Additional measures to reduce transport movements to site, such as minibuses are not included within the mitigation proposals.</p> <p>Should further options for reducing vehicle movements to site such as car shares and use of staff minibuses be incorporated in a revised Initial Traffic Management Plan (TMP)?</p>	<p>Section 12.1.3 of the Initial Traffic Management Plan (TMP) (Doc 7.2.1) does state that car sharing is practical and should be encouraged. However, minibuses are difficult to schedule with varying working hours of staff. In addition, route and journey times can be unacceptably long for some.</p>
8.33	Applicant; North Lincolnshire Council; East Riding of Yorkshire Council	<p>[APP-083] Paragraph 3.2.4 of the Initial Traffic Management Plan suggests that marshalling would be required for vehicles entering the Soff Lane diversion.</p> <p>Would additional locations such as the railway crossing and railway bridge require similar traffic control (lights or marshalling)?</p> <p>No specific reference is made to provision of marshals in DCO Requirement 15.</p> <p>Should this mitigation measure be controlled through the provision of more detail within section 11the initial Traffic Management Plan [APP-083]?</p> <p>North Lincolnshire Council; East Riding of Yorkshire Council – at Deadline 3 please comment on the Applicants response.</p>	<p>No, abnormal loads will be controlled with escort vehicles.</p> <p>The (MWC) would review the need for traffic marshals at all key locations along the construction traffic routes, which could include the railway crossing at Soff Lane and the railway bridge at Ferry Lane. The MWC would also review the need for traffic marshals at all key locations along the construction traffic routes as stated in Section 13 of the initial Traffic Management Plan (Doc 7.2.1).</p>
8.34	Applicant	<p>[APP-070] ES Chapter 12 makes reference to the Initial Traffic Management Plan in paras 12.7.1 and 12.8.2. The topic chapter does not clearly explain how mitigation relied upon for the assessment of impact significance has been controlled and which mitigation relates to which effects.</p> <p>Please update the Initial CEMP and Schedule of Mitigation Commitments with cross referencing to clearly identify and control the proposed mitigation.</p>	<p>The measures will not be included in the updated initial Construction Environmental Management Plan to be submitted at Deadline 3 as the traffic and transport mitigation measures are all documented in the Initial Traffic Management Plan (Doc 7.2.1) to prevent the risk of duplication and errors. However, an updated Initial TMP will be provided at Deadline 3 to take account of the review requested. The table in Doc 8.9.4 (Annexure 4 – Summary of Traffic Mitigation Assessments) provides details of how the mitigation and each measure specifically deals with impacts.</p> <p>The Initial Traffic Management Plan (Doc 7.2.1) is secured through requirement 15 of the DCO.</p>
8.35	North Lincolnshire Council; East	<p>[APP-070] Table 12-4 Traffic and Transport Assessment - Post-Scoping Consultation page 8, at page 9 under a meeting dated 26.11.14 with NLC Highways states that '<i>Mitigation measures from the Initial TMP were discussed</i></p>	<p>No comment.</p>

	Riding of Yorkshire Council	<p><i>and were deemed appropriate</i> but feedback from NLC on proposed passing places was yet to be received.</p> <ol style="list-style-type: none"> 1. are you satisfied with the level of detail and periods used for baseline traffic flow and that the figures transferred into the noise modelling [APP-064] reflect worst case for the ES assessment; 2. has sufficient evidence been provided to support conclusions drawn in relation to impacts on non-motorised users; 3. what is your current position regarding the proposed access route and mitigation measures; 4. are you satisfied with the level of detail provided within the [APP-083] Initial Traffic Management Plan and has adequate survey and early design work been completed for you to confirm that the project is capable of implementation within the order limits defined and on the basis of the DCO application; and 5. ERYC's position following these meetings is not clearly stated. Please also respond and confirm your current position on the application DCO and points 1-4 (above). 	
9. Debris, Waste and Contamination			
9.1	Applicant	<p>[APP-038] Appendix 4.2 Consultation Comments – page 10 <i>'a draft site waste management plan has not been prepared to accompany the ES due to the level of uncertainty regarding what will happen to waste at the site'</i>.</p> <p>Given the volume of spoil and arisings and its consequential impacts on highway if removed from site, or flood plain if retained long term, is this not essential to understanding the project, ensuring the worst impacts are covered within the ES....etc?</p>	Requirement 6 of the DCO requires a site waste management plan to be approved by the Local Planning Authority in consultation with the Environment Agency prior to commencement of works.
9.2	Applicant	<p>If materials are to be stored on site what would that consist of; is the time limit set by draft DCO Article 25, 3(a) i.e. 2 years; would topsoil be usable after such a time; how is it intended to be stored; and has it been agreed with the Environment Agency?</p> <p>Please clarify whether licensing under the Environmental Permitting Regulations is required.</p>	<p>Topsoil would be stored in bunds of up to 3m in height (Paragraph 2.4.8, Chapter 2: Project Description (Doc 6.2) which from National Grid's experience allows soil to breath and therefore maintains fertility. National Grid has experience of storing materials in this manner with no detriment to fertility.</p> <p>Storing to heights above this increases compression which allows conditions to develop that would affect the fertility of the soil.</p> <p>During the pre-application phase the following advice was received from the Environment Agency in relation to management of waste materials (letter dated 26 January 2015). Therefore, ongoing discussions will be held with the Environment Agency as potential options for the management of the waste arisings are defined.</p> <p>"Waste - In relation to the waste arisings, the need for a permit or relevant exemption depends on the material's final use. Temporary storage at a specific location may require an exemption. Storage for any length of time may require a permit. This may also be affected by the type of material extracted".</p>
9.3	Environment Agency	Are there local flood defence opportunities within the project timeline for local re-use e.g. as part of your planned flood defence re-alignment project and if so what volume of material could be used?	No comments.
9.4	Applicant	<p>[APP-060] Information Relating to Stoneledge Field Investigation describes <i>'remediation'</i> having taken place at Stoneledge field near the reception pit prior to handover to National Grid Gas.</p> <p>Please clarify the scope of those works and what evidence is there that the Asbestos Containing Material (ACM) risk is now removed, what further works (if any) might be required and how could this affect program, or the final location of the receive pit?</p>	<p>Investigations showed that Asbestos Containing Material (ACM) material was at surface level only, through the examination of small elements of ACM examined on site. It should be noted that the Owner has remediated the majority of materials, however residual levels ACM remain on site.</p> <p>The Main Works Contractor will be alerted to all the ACM Reports, in addition a membrane layer would be proposed prior to working in that area along with minimising access, undertaking air monitoring and preparing a ACM risk assessment. This will not affect the program or the location of the reception pit as the land is now owned by National Grid.</p>
9.5	Applicant	During the design process to date, have construction areas been confined to	Chapter 3: Design Iterations and Alternatives Considered (Doc 6.3) states that <i>'Throughout the</i>

		the minimum, or are there any other measures (such as reduced stockpiling of materials during construction) that would enable the construction areas to be reduced further?	<i>design process it has been possible to minimise the working area required for the Project which offers a number of potential environmental benefits including reduced footprint reducing the ecological, hydrological, land use and landscape effects of the Project.</i> Further reductions would be unworkably restrictive having regard to health and safety and construction requirements. It should also be noted that reducing stockpiling on site would directly lead to increased traffic movements to site to deliver materials.
10. Historic Environment			
10.1	Applicant	[APP-041] Cultural Heritage, section 6.9. Can the applicant provide an update on the archaeological trial trench evaluation work which was programmed to be undertaken in early 2015? Work appears to have commenced at the Soff Lane diversion site. If so from the evidence to date will this (or any other planned works) have any impact on the ES presented, or the execution of the project and if so what would that be?	Work began on the trial trenching on the 7 September 2015 following a delay due to crops and landowner permission. All trenches on the Soff Lane diversion have now been completed. The most notable finds in the Soff Lane site were some features of probable Roman date in trench 45. Doc 8.9.3 contains Annexure 3 to these responses – Written Scheme of Archaeological Investigation. It is currently anticipated that the fieldwork programme will be 4-6 weeks. Alison Williams, Historic Environment Officer from North Lincolnshire Council carried out a site visit on 22 September 2015. At this stage it is not anticipated that the archaeology recorded so far will have any impact on the ES presented or the execution of the project.
10.2	Applicant	The relevant representation [RR-012] from Mr Carr expresses concern over the proximity of the temporary haul road at South End, Goxhill to a scheduled monument being the site of a medieval manor complex (moats and fishponds). Would a survey be carried out ahead of construction in this location as suggested and if not why is that considered unnecessary?	The route of the south end bypass (Soff Lane) was subject to a geophysical survey (Doc 6.6.5) as part of the assessment to inform the Environmental Impact Assessment. No evidence of any remains associated with the Scheduled Monument were recorded during the survey. In addition no evidence for remains associated with the Scheduled Monument, including moats and fishponds were recorded in the evaluation trenches at Soff Lane. We are confident that there is no potential for impact to any remains associated with the Scheduled Monument from the temporary haul road. Any archaeological remains that are present within the route of the haul road (for example the Roman features recorded in trench 45) will be subject to archaeological mitigation and will be recorded appropriately.
10.3	Historic England North Lincolnshire Council; East Riding of Yorkshire Council	Are you satisfied with the information presented in [APP-041] ES Chapter on Cultural Heritage and are there any matters that you wish to draw to the attention of the ExA?	No comment.
11. Navigation			
11.1	Trinity House	Flooding the tunnel on its completion will require the placement of pumps and pipes within the intertidal area at Goxhill for a period of approximately 2-weeks. Would there be a requirement for night-time warning lights and are there any other matters that you would draw to the attention of the ExA to consider during the examination?	No comment.
12. Design, Landscape and Visual Impact			
12.1	North Lincolnshire Council; East Riding of Yorkshire Council	The detailed design of above ground works within the AGIs at Goxhill and Paull are subject to final approval by the Local Authority under [APP-016] draft DCO, Schedule 3, requirement 4; 1. Are you satisfied that adequate design information has been provided at application stage for an order to be granted that ensures the mitigation set out in the ES is delivered?	No comment.

		2. Do you consider that Work No 6, Work No 9 (temporary road access improvements), Work No 10 (temporary spoil), Work No 11 (temp environmental mitigation) and Work No 12 (temporary abstraction hoses and pumps) should be included within requirement 4?	
13. Socio Economic Effects			
13.1	Applicant	[RR-021 & RR-017] How would the impact of the project on local residents and businesses most directly affected by the project be managed, what mitigation measures are planned and where these are identified and controlled within the application Environmental Statement?	<p>The relationship with the local community would be maintained pre, post and during the construction phase with all landowners/occupiers and other stakeholders kept fully informed (refer to the Initial Construction Environmental Management Plan Document (CEMP) Doc 7.3).</p> <p>Complaints would be investigated and logged in line with National Grid's internal procedure: - NGUK/PM/SHE/217 Management of Environmental Noise, Nuisance and Complaints.</p> <p>In addition, National Grid Gas would appoint an Agricultural Liaison Officer to liaise with landowners / occupiers affected by the Project. Pre-entry agreements would be set up taking into account landowner's access requirements, land drainage, reinstatement etc.</p> <p>A record of condition survey would be undertaken prior to construction to assess crops, condition of field boundaries etc and agreed with the occupier to facilitate reinstatement to original conditions (paragraph 11.7.15, Doc 6.11).</p>
13.2	Applicant	How will the impact of the project on local farm businesses be mitigated, in particular during peak periods of activity e.g. harvest, hay making etc. when time is particularly precious and to avoid severance?	<p>The following would mitigate the impact of the Project on the local farming business:</p> <ul style="list-style-type: none"> - An Agricultural Liaison Officer would be in place to ensure local farmers are informed and up to date with the Project. - The proposed Soff lane diversion will further mitigate the impact on farm traffic through known bottle neck locations along Church Side and South End. - HGV movements during school term time will be restricted to 9am-3.15pm (Initial Traffic Management Plan (Doc 7.2.1)). - Abnormal loads will be re-utilising Ferry Road as an exit route due to weight restricted access on preferred one way traffic route, which will also mitigate the impact on farm traffic visiting Chapelfield Road grain store.
13.3	Applicant	What is the current status of compaction removal, land drainage reinstatement and after care plan agreements with each affected landowner or occupier?	<p>Individual voluntary agreements with affected landowners contain specific provisions to remediate and reinstate land drainage where required, in line with the findings of an Independent Drainage Report. Whereby prior to termination National Grid will be responsible for all reinstatement works meaning that National Grid will undertake full remedial drainage to the extent of the land take on completion of the works and where required install interceptor drainage to ensure drains outside the working area continue to function during construction. The land take shall be reinstated to a condition as near as reasonably practicable to that subsisting before the commencement of the works using good practice and sound farming techniques. The statuses of the agreements are as per the updated schedule of voluntary negotiations, land compensation legal provisions apply.</p>
13.4	Yorkshire Wildlife Trust (YWT)	In your relevant representation [RR-030] you raise the question of impacts on access to the reserve parking at Paull Holme Strays and the visitor experience and suggest a solution could be an alternative access to the reserve. Please supply a plan and do you consider this the only reason for Paull Holme Strays to not currently be scoped out?	No comment.
14. Draft DCO			
14.1	Applicant	<p>Please supply a hierarchy of plans to illustrate and explain the relationship between the supporting documents included within the application and how they are tied back to the draft DCO. An example can be found here.</p> <p>Include identification of whether each document is in final, or initial (draft) status and the document reference/version number.</p>	Please see doc 8.9.5 – Annexure 5 to these responses.

14.2	Applicant and all interested parties	<p>There are supporting documents/plans referred to in the application ES, some of which are then directly referred to within the DCO and others which are not and some of which have been drafted and submitted for examination and others not, including;</p> <p>A. <i>Initial Construction and Environmental Management Plan (CEMP) [APP-084]</i> B. <i>Schedule of Mitigation Commitments [APP-088]</i> C. <i>Initial Site Water Management Plan [APP-073]</i> D. <i>Flood Incident Response Plan (FIRP) (at Annex C to the Flood Risk Assessment) [APP-025]</i> E. <i>Site Waste Management Plan (SWMP) (not currently provided but referred to in section 2.5 of the CEMP)</i> F. <i>Materials Management Plan (MMP) (not currently provided but referred to in para. 2.5.16 of the CEMP)</i> G. <i>Initial Traffic Management Plan (TMP) [APP-083]</i> H. <i>Initial Project of Noise Management (not currently provided but referred to in Schedule 3, requirement 13 of the draft DCO)</i> I. <i>Stages of Authorised Development – (not currently provided see also EXQ1_2.3)</i> J. <i>Independent Validation of Design (not currently provided but referred to in para. 5.6.3 of the FRA [APP-025]</i> K. <i>Decommissioning Project (not currently provided)</i></p> <p>1. Whilst these documents (A-K) are contained (or mentioned) within the ES documentation due to their importance in securing mitigation, or ensuring viable delivery of the project within the order limits and scope of the ES should they all be available and listed for 'certification' in Article 42 of the draft DCO as Article 49 of the final draft order for the Yorkshire and Humber (CCS Cross Country Pipeline) DCO and Article 45 of the Hinckley Connector final draft DCO.</p> <p>2. Given the potential impacts of the removal of surplus material from site should an Initial MMP (F) be produced and submitted during the examination and should it be referred to in Schedule 3, Requirement 6 – Site Waste Management Plan?</p> <p>3. Given the current definition of 'commence' (within Article 2 Interpretation of the draft DCO) which excludes certain pre-commencement works including for example site clearance and erection of a contractors' works compound and the wording of Requirement 13 'Noise' should an Initial Project of Noise Management (H) be produced and submitted during the examination to secure adequate mitigation? Should 'pre-commencement' works also be defined and is the scope of the existing list of exclusions necessary?</p> <p>4. The programming of the individual operations within the defined project and date of commencement has potential to alter the effects on the SPA/RAMSAR, water voles etc. In order to minimise these effects could an outline programme (I) be produced and submitted during the examination to secure mitigation created by appropriate timing of key activities? If not how can the ExA be assured that programming would consider and minimise potential adverse impacts remaining within the parameters of the application ES assessment?</p> <p>5. (J) Given the uncertainties remaining in the application regarding ground conditions and hydraulic modelling should the 'independent validation of design' in para.5.6.3 of the FRA [APP-025] be controlled within Schedule 3, Requirement 4 of the draft DCO?</p> <p>6. Should there be a decommissioning project (K)? What control is there</p>	<p>1. In accordance with other made orders, include the Willington C Gas Pipeline Order 2014 it is proposed to amend article 42 by adding the words "any other plans or document referred to in this order".</p> <p>2. Preparation of the detailed site waste management plans are the responsibility of the Main Works Contractor as details are dependent on detailed design of the scheme and choice of TBM, amongst other things.</p> <p>3. The definition of 'commence' is being carefully reviewed by National Grid and an amended version will be submitted in the next version at deadline 3 which will address this question.</p> <p>4. The Initial CEMP requires that the necessary surveys be carried out at the appropriate times and a new requirement is under negotiation with Natural England to secure pre-construction badger and water vole surveys which will be included in the next version of the draft order. See otherwise our response to Q2.3.</p> <p>5. Negotiations are ongoing with the Environment Agency to agree appropriate controls and further requirements in the order and amendments will be included in the next version of the draft order.</p> <p>6. Given the value of this asset and its lifespan it has not yet been determined whether the pipeline will be removed or re-used at the end of its operation life. It is therefore not possible to plan for its decommissioning now. The regulation of any future use of the pipeline is that works to it will be outside the scope of this DCO, and constitute "development" - and will therefore require separate consent via a full planning application. Such application will assess the environmental impacts of any re-use or removal of the pipeline.</p>
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		within the draft DCO for decommissioning, or how would that be regulated at end of life to conclude the project for which DCO is applied?	
14.3	Applicant	The Site Layout Plans [APP-09] and Elevations (Tunnel Long Section) [APP-010] are fundamental to understanding the project. Whilst these form part of the Environmental Statement (ES) should these documents be listed in Requirement 42 (1), Certified Documents and Schedule 2, Plans? If not please explain why?	The Site Layout Plans (doc 2.2B) and Elevations (Tunnel Long Section) (doc 2.5A) are indicative plans. The plans support the Environment Statement which has assessed the project in accordance with the Rochdale Envelope approach. This approach allows for a necessary and proportionate degree of flexibility, taking account of the need for evolution in the design of the project within the assessed parameters. The site layout and other design details will be subject to change and refinement during the detailed design of the project. A requirement for strict and literal adherence to these indicative plans would be unnecessarily restrictive and would fetter National Grid's ability to deliver the Project. The certification of these plans is not necessary as the Environmental Statement is a certified document under article 42(1) of the draft DCO. The authorised development must be carried out within the parameters assessed by the Environmental Statement in any event. Furthermore, the detailed design of the Project is the subject of approval by the local planning authority under Requirement 4 in Schedule 3 to the draft DCO. Therefore, National Grid do not agree that these plans should be included in Article 42(1) (<i>certified documents</i>) and Schedule 2 (<i>Plans</i>).
14.4	Applicant	It is currently unclear within the application documents where the open trenching for the final connections to the existing Above Ground Infrastructure is made at Paull and Goxhill. Could this be better defined in Schedule 1 (Work No definitions) of the draft DCO and the application plans (see questions 1.2 and 1.6 above) by separately defining the location of the final pipeline connection between the reception, or drive pit and the existing Above Ground Installations (AGIs)?	The exact lengths of tunnelled and trenched sections will be matters for detailed design by the main works contractor after pre-construction surveys and investigations are carried out. The maximum lengths of trenched and trenchless sections for each part of Work 1 are clearly set out in Schedule 1 of the development consent order and are indicated on the works plans by blue sections for Works 1A and 1C and a pink section for Work 1B. These lengths have been assessed by the Environmental Statement as the 'worst-case scenario'. The detailed design is subject to approval by the local planning authorities under requirement 4. The detailed design must accord with and remain within the parameters of the 'worst-case' Rochdale envelope assessed in the Environmental Statement. This approach allows for a necessary and proportionate degree of flexibility, taking account of the need for evolution in the design of the project within the assessed parameters.
14.5	Applicant	Although likely to be of short duration the location and operation of abstraction pumps in the intertidal area is within a sensitive area. Where is the drafting that exercises control over this element of the project?	A commitment will be included in the next version of the CEMP to ensure that the abstraction takes place below mean low water mark. The impacts of the abstraction have not otherwise been assessed as likely to be of significance and the deemed marine licence otherwise regulates that activity.
14.6	Environment Agency	Are there items within the DCO which duplicate control over matters within the DCO, or are there any gaps between the necessary environmental permits and the DCO?	No comment.
14.7	Applicant	Article 2, Interpretation – the definition of ' <i>commencement</i> ' includes a wide ranging list of works that are ' <i>excluded</i> ' and are not therefore subject to Local Authority control. Please explain; 1. why each of these exclusions is necessary; 2. why the list is so wide compared with that under the made order for the replacement pipeline at Willington; and 3. whether ' <i>site clearance</i> ' should be defined to avoid the possibility of this inadvertently removing protection to trees and hedges pre-commencement (a stage that requires prior approval by the Local Authority)?	The definition of ' <i>commence</i> ' is being carefully reviewed by National Grid and an amended version will be submitted in the next version at deadline 3 which will address this question.
14.8	Applicant	Article 2, Interpretation – there are currently no definitions for the following list of items; 1. Completion	'Completion': This word is used in a number of different contexts throughout the draft DCO and therefore the addition of a definition would not be appropriate. This definition is not generally used in Development Consent Orders. National Grid consider that the meaning of the term throughout the draft DCO is sufficiently clear and, therefore, does not believe that it is necessary to add this

		<p>2. Decommissioning</p> <p>3. Initial Site Water Management Plan</p> <p>4. Requirement (see Willington made order)</p> <p>5. Intertidal</p> <p>Please explain and if necessary update the draft DCO</p>	<p>definition into the draft DCO.</p> <p>'Decommissioning': 'Decommission' appears once in the draft DCO, in the definition of 'maintain' in article. This will be deleted and an updated version of the DCO will be submitted at the next deadline.</p> <p>'Initial Site Water Management Plan': This term is not used in the draft DCO. Furthermore, there is no need for a definition relating to the Site Water Management Plan as the required information to be included in this plan are specified in Requirement 5(2)(a)-(g).</p> <p>'Requirement': A definition of 'Requirement' is included in the draft DCO at paragraph 1 of Schedule 3. National Grid considers this definition and its inclusion in Schedule 3 rather than article 2 to be satisfactory.</p> <p>'Intertidal': The term 'intertidal' is not used within the draft DCO. No works will take place in the intertidal region as the abstraction pipe works will be below the water mark and the deemed marine licence otherwise regulates that activity.</p>
14.9	Applicant	<p>Article 2, Interpretation – Is the definition of 'maintain' too wide? Decommission and demolish are not maintenance. The Secretary of State has, in two recent decisions (Hirwaun and Progress Power), removed improve from the definition of maintain in Article 2.</p>	<p>The definition of 'maintain' in article 2 of the draft DCO will be amended to exclude 'decommission', and 'demolish' from its scope. An updated version of the draft DCO will be submitted at the next deadline.</p> <p>'Improve' has been included in the definition of 'maintain' as improvements to the authorised development may be required as a result of changes to operating regulations or other legislation or for the addition of risk reduction measures necessary for the safe operation of the pipeline in the future. The scope of maintenance works within the draft DCO is limited by the definition in article 2 and by article 5. The definition states that maintenance activities must not vary the description of authorised development and article 5 stipulates that maintenance must not include works whose likely significant effects have not been assessed in the Environmental Statement. National Grid, therefore, considers that appropriate limitations are contained within the draft DCO and the inclusion of 'improve' is necessary for the future safe and lawful operation of the pipeline. 'Improve' was included within the definition of maintenance in the Willington C Gas Pipeline Order 2014.</p>
14.10	Applicant	<p>Article 2, Interpretation - Willington Replacement Gas Pipeline had a correction order issued by the Secretary of State. Should the following Article 2(1) definitions be updated to reflect these changes;</p> <p><i>"National Grid Gas"</i> had the following text inserted at the end of the definition <i>"or any successor company performing the same functions"</i> - the statutory function could be removed from National Grid Gas?; and</p> <p><i>"local highway authority"</i> had the following text inserted at the end of the definition <i>"or any successors to their statutory function as highways authorities"</i></p>	<p>Article 2 of the draft DCO will be amended to include "or any successor company performing the same functions" at the end of the definition of 'National Grid Gas' in order to avoid ambiguity in relation to successor companies. The updated draft DCO will be submitted at the next deadline.</p> <p>The definition of "highway authority" in article 2 of the draft DCO already includes successors of North Lincolnshire Council and/or East Riding of Yorkshire Council. Therefore, National Grid does not believe that it is necessary to amend this definition.</p>
14.11	Applicant	<p>Article 3 (1)(a) [RR-010] from the Environment Agency records no objection in principle provided:</p> <ol style="list-style-type: none"> 1. protective provisions are agreed; and 2. question why the equivalent byelaws for Goxhill (the Anglian Region Land Drainage and Sea Defence Byelaws. Sections schedule 96C and 6H) are not stated? <p>Please explain and if necessary update the draft DCO</p>	<p>The next version of the draft order will contain the EA's protective provisions and amendments to the bye-laws and disapplication provisions as agreed with the EA.</p>
14.12	Applicant	<p>Article 6 (2), Limits of Deviation – We note that there are currently no lateral limits of deviation but in the Statement of Reasons [APP-016] at paras 2.7-2.10 some are defined.</p> <p>Should these be incorporated into an updated draft DCO?</p>	<p>Article 6(1)(a) of the draft DCO provides lateral limits of deviation and states that the undertaker may "in respect of the location of any work comprised in the authorised development deviate laterally from the lines or situations shown on the works plans to the extent of the limits of deviation for that work shown on those plans".</p> <p>It is standard practice in DCOs for lateral limits of deviation to be expressed by reference to the works plans and similar wording was included in the Willington C Gas Pipeline Order 2014.</p> <p>The Statement of Reasons (doc 4.1) is a supporting document and explains the purpose of the limits of deviation, explains how they have been set and provides justification for acquiring rights</p>

			for them. It would be inappropriate and unnecessary to include the detail in the Statement of Reasons within the draft DCO. Paragraph 2.12 of the Statement of reasons refers back to the draft DCO stating that “the vertical LoD are defined in article 6 of the DCO”.
14.13	Applicant; Environment Agency; North East Lindsay Drainage Board; South Holderness Internal Drainage Board	Article 6 (2), Limits of Deviation currently states that ‘ <i>the undertaker may construct the drainage works anywhere within the order limits</i> ’. Has the scope of this been agreed with the Environment Agency and relevant drainage boards and why is it considered necessary?	Drainage works are necessary anywhere in the order limits to allow a necessary and proportionate degree of flexibility taking account detailed design, survey results and construction detail, and to ensure that the other mitigation measures such as those relating to flood risk, reinstatement, and site water management are effective. All works will be carried out within the assessed parameters in the ES.
14.14	Applicant	Article 8 (2) Benefit of Order – this is drafted solely to benefit NGG. Should flexibility be built into the drafting for assignment to another (future) licenced transporter of gas?	National Grid agrees that flexibility should be built into the drafting to allow for assignment to another future licenced transport of gas. An article allowing the benefit of the Order to be transferred will be added to the draft DCO to provide flexibility for the future. An updated version of the draft DCO will be submitted at the next deadline.
14.15	East Riding of Yorkshire Council; North Lincolnshire Council and Highways England	Article 9 – Street Works. Is the drafting agreed, in particular the expanded definition of apparatus at (4)?	No comment.
14.16	Applicant	Article 9 – Street Works. Comparing the draft DCO against the made order for Willington; 1. are Articles (1) (a) – (c) necessary, or should the agreements be limited to Street Works authorised in Article 9 (the Street Works Article) as in Willington; 2. In the Willington DCO Street Works Article (Article 10), the savings in relation to provisions of the 1991 Act are not applied (see para 3 of Article 9 of the draft DCO). Please explain why?	1. We have assumed that the reference in this question to (1)(a)-(c) is to article 15 of the draft DCO (agreements with street authorities). Article 15(1) is generally based on the DCO Model Provisions and allows National Grid to enter into agreements with street authorities relating to the construction of new streets, works in or affecting streets and the stopping up, alteration and diversion of streets. Unlike the Willington C Gas Pipeline Order 2014, the draft DCO includes the power to alter the layout of streets (article 10) and for the construction and maintenance of new, altered or diverted streets (article 11) as well as the power to undertake streets works in article 9. These powers are necessary to deliver the traffic mitigation measures for the project. It is, therefore, appropriate that the ability to enter into agreements with street authorities should extend to works undertaken under articles 10 and 11 as well as 9. Such drafting is common in Development Consent Order and similar wording has been included in orders such as the Progress Power (Gas Fired Power Station) Order 2015, the Able Marine Energy Park Development Consent Order 2014 and the National Grid (North London Reinforcement Project) Order 2014. As part of the street works proposed under the Order, resurfacing and road strengthening works will be required in some locations and passing places will be installed. Following discussions with North Lincolnshire Council and subject to the agreement of landowners, National Grid is investigating the possibility of these temporary passing places being retained and adopted by the Council. It will, therefore, be necessary for the draft DCO to contain the power to enter into agreements with street authorities in this regard. National Grid does not believe that this article should be limited to those works set out in article 9(1) (street works). 2. An undertaker does not ordinarily need the consent of the street authority for placing apparatus in a protected street if it has a street works licence (see section 61(2) of the 1991 Act). The equivalent of that licence is comprised in paragraph (1). Accordingly sub-paragraph (3)(a) confirms that this means that the undertaker does not need further consent from the highways authority for the placing of the apparatus in the course of the authorised development. Section 62(2) and 62(4) of the 1991 Act allow the Secretary of State following the designation of a

			<p>protected street to require the removal or repositioning of apparatus already placed in the street, or if works are still in progress, to give directions in respect of those. It is therefore sensible for sub-paragraphs (3)(b) and (c) to disapply these in relation to apparatus placed in the course of the authorised development, in case streets in which apparatus is placed are in future designated as protected streets, as the pipeline is a nationally significant infrastructure project requiring certainty that it will not have moved.</p> <p>Specifying the provisions of the 1991 Act which apply to street works under a Development Consent Order is common in Transport and Work Acts Orders and was included in the Network Rail (Ipswich Chord) Order 2012.</p> <p>National Grid are unable to comment on why this wording was not included in the Willington C Gas Pipeline Order 2014 but can only assume it was not necessary on the facts of that particular project.</p>
14.17	Applicant; East Riding of Yorkshire Council; North Lincolnshire Council and Highways England	Articles 10(4) creates a power to remove bus shelters without Highways approval is this actually necessary and has this been agreed with the relevant highway authorities?	National Grid confirm that the power to remove bus shelters without highway authority approval under article 10(4) will not be necessary for the carrying out of the project and therefore, this wording will be deleted. An updated version of the draft DCO will be submitted at the next deadline.
14.18	Applicant	Article 15 has an insertion 1(b) which is not in the model provisions or Willington made DCO. The explanatory memorandum says there is precedent in other DCOs but doesn't explain why it is necessary to have these provisions. Please clarify?	<p>The addition to the DCO Model Provision wording at article 15(1)(b) allows National Grid to enter into agreements with respect to the strengthening, improvement, repair or reconstruction of any street under the powers conferred by this Order.</p> <p>As explained in the response to question 14.16 above, the Willington C Gas Pipeline Order 2014 did not include the power to alter the layout of streets or for the construction and maintenance of new, altered or diverted streets.</p> <p>Certain sections of the road network within the Order limits will need to be resurfaced and strengthened and passing places will be installed for the construction of the Project. Following discussions with North Lincolnshire Council, they are in favour of such works and, subject to landowner approval, may enter into agreements with National Grid in relation to such street works to enable permanent public benefit from the Project to be secured. This power will therefore be required for effective carrying out of the Project.</p> <p>Similar wording is common in Development Consent Order and has been included in the Able Marine Energy Park Development Consent Order 2014, the Network Rail (Norton Bridge Area Improvements) Order 2014 and the National Grid (King's Lynn B Power Station Connection) Order 2013.</p>
14.19	Environment Agency; Marine Management Organisation; North East Lindsay Drainage Board; South Holderness Internal Drainage Board.	Article 16 – Discharge of Water – Are the scope of these provisions the subject of agreement?	No comment.
14.20	Applicant	Article 17 – Authority to survey and investigate the land: 1. exercise of these powers should be a 'last resort'. Are private agreements to	1. National Grid can confirm that the use of the powers under article 17 of the draft DCO will be used only as a last resort. Private voluntary agreement are currently being negotiated with

		<p>be sought first;</p> <p>2. should the powers granted here be limited in the same way as Article 5(2) in that only works <i>'whose likely significant effects on the environment are not described in the ES may take place'</i>?</p>	<p>landowners and National Grid will always seek agreements prior to the exercise of any such powers. The progress of negotiations in relation to land rights can be found in document 7.8 (Schedule of Progress on Voluntary Negotiations).</p> <p>2. The carrying out of the authorised development under the draft DCO (including the exercise of powers under article 17) must be carried out within the parameters of the assessment contained in the Environmental Statement.</p> <p>The wording of this article is based on the DCO Model Provisions and is commonly included in Development Consent Orders including the Willington C Gas Pipeline Order 2014. National Grid does not believe that any additional wording is required in the article.</p>
14.21	Applicant	<p>Articles 19 and 20 – could a right potentially be subject to the power in both Article 19 and Article 21?</p> <p>If that occurred the time from which the right applies is different in each.</p> <p>In Article 19 the right applies from the date of the notice. In Article 21 the extinguishment on the earliest of either the date of acquisition or the date of entry.</p> <p>How would this operate effectively?</p>	<p>The difference in the trigger events under articles 19 and 21 stems from the Model Provisions, in model articles 18 (Compulsory Acquisition of Land) and 22 (Private rights of way) respectively. It is unclear why compulsory acquisition is duplicated in these articles, however article 21 is required to give effect to extinguishment or suspension where land is acquired by agreement and there is no requirement to serve a compulsory acquisition notice. We have therefore not sought to deviate from the Model Provisions but would anticipate relying on article 19 in the case of compulsory acquisition and 21 in instances of private agreement with landowners.</p>
14.22	Applicant	<p>Article 25 – Temporary use of land – The drafting here is not included in the model provisions. In the Explanatory Memorandum it states that this allows for flexibility to switch to temporary occupation rather than CA if required. Please explain why this flexibility may be required and why in para. 4 there is a limit on the restoration of land?</p> <p>What is envisaged?</p>	<p>The flexibility is provided to ensure the minimum interference necessary with the private rights and interests of land owners for the carrying out of the Project. It means that where during detailed design of the Project land which was subject to compulsory acquisition is only needed temporarily, this lesser power can be exercised.</p> <p>National Grid will seek to use powers of temporary use in preference to acquiring rights, and acquiring rights in preference to acquiring land as it considers this to be the most proportionate approach to securing the land it needs to construct, operate and maintain the authorised development. The drafting contained in this article allows this more proportionate and flexible approach to be taken to land acquisition.</p> <p>The article provides that National Grid will not have to reinstate the land where permanent mitigation works under the Order remain or where ground strengthening works have been put it to facilitate construction. As these works will have been authorised under this article and will be necessary to mitigate the impacts of the project, it is appropriate that they should not be required to be removed unless requested by the landowner. Such wording has been included in a number of Development Consent Orders including the Central Bedfordshire Council (Woodside Link Houghton Regis) Development Consent Order 2014 and the Thames Water Utilities (Thames Tideway Tunnel) Order 2014.</p> <p>The DCO Model Provision provides that the duty to reinstate land after temporary possession does not extend to reinstating any building removed under the power of the article. It would be impractical and onerous for an undertaker to have to reconstruct such buildings as it would not be development authorised by the order and it may be physically impossible. This wording is commonly included in Development Consent Orders and was contained in the Willington C Gas Pipeline Order 2014 and the Able Marine Energy Park Development Consent Order 2014.</p>
14.23	Applicant	<p>Article 26 - Temp use for maintenance. In the Explanatory Memorandum (EM) it is acknowledged that this is an extension of the model provisions and an explanation of the safeguards provided.</p> <p>Why are these additional rights necessary?</p>	<p>As stated in the Explanatory Memorandum, the DCO Model Provision is extended to include a right to enter on to the land for the purpose of gaining access to maintain the authorised development. The model provision contains a power to enter onto and take temporary possession of the land for maintenance. The extension of the provision simply clarifies that the land can be used for gaining appropriate access to the authorised development where necessary and gives full effect to the maintenance powers which are set out in clause 6 and clarifies that.</p> <p>This drafting is used in the Preesall Underground Gas Storage Facility Order 2015.</p>
14.24	Applicant	<p>Articles 27 & 28 The Explanatory Memorandum says that these Articles were contained in Transport and Works Act (TWA) Model Provisions but they weren't in the Willington made order.</p> <p>Why are they necessary here?</p>	<p>The wording of the article 27 (disregard of certain interests and improvements) mirrors section 4 (assessment of compensation) of the Acquisition of Land Act 1981 (the "1981 Act"). It is necessary to specifically apply the effect of section 4 to the draft Order. This is because the 1981 Act only applies to a compulsory purchase to which any other statutory instrument has applied its provisions (Section 1 (Application of Act) and neither the 2008 Act nor the DCO Model Provisions apply section 1 of the 1981 Act to the draft Order. It provides for the disregarding of certain interests in and</p>

			<p>enhancements to the value of land for the purpose of assessing compensation with respect to its compulsory acquisition, where the creation of the interest or the making of the enhancement was designed with a view to obtaining compensation or increased compensation.</p> <p>The principle in article 28 (set –off for enhancement in value of retained land) is established in section 7 of the Land Compensation Act 1961 (effect of certain actual or prospective development of adjacent land in same ownership), which needs to be applied. Sections 120(3) and 5(a) and item 36 of Part 1 of Schedule 5 allow the application in an Order of statutory provisions which relate to the payment of compensation. This article provides that in assessing compensation payable in respect of the acquisition of land, the Lands Chamber of the Upper Tribunal shall set off against the value of the land any increase in value of any contiguous or adjacent land belonging to that person arising out of construction of the authorised development.</p> <p>These articles simply apply established legislation relating to the assessment of compensation for the acquisition of land to the draft DCO. These provisions have been included in the Thames Water Utilities Limited (Thames Tideway Tunnel) Order 2014 and the Preesall Underground Gas Storage Facility Order 2015.</p> <p>National Grid are unable to comment on why this wording was not included in the Willington C Gas Pipeline Order 2014 but can only assume it was not necessary on the facts of that particular project.</p>
14.25	Applicant	Article 31 –Statutory undertakers – please review drafting in particular 31(3) for clarity and update the draft DCO.	This article will be amended in the next version of the draft order.
14.26	Applicant	Article 38 – Operational land – Please review against the made order for Willington Article 31 and update or provide an explanation of the current drafting.	<p>The wording included in article 31 (Operational land for purposes of 1990 Act) is taken from the DCO Model Provisions and also reflects the wording in the Willington C Gas Pipeline Order 2014.</p> <p>The only difference is the update to the name of the clause of the 1990 Act which appears to have been written mistakenly as “cases in which land is to be treated as operational land for the purposes of that Act” rather than “cases in which land is to be treated as not being operation land for the purposes of that Act”.</p>
14.27	Crown Estate	Article 41 – Crown Rights – are your rights sufficiently protected and is the drafting agreed?	No comment.
14.28	Applicant	<p>Article 43 – Service of Notice - Article 33 in the made order for Willington appears more concise. Please review and if applicable update the drafting of Article 43.</p> <p>Please also review and update Article 2 to include a definition of ‘address’ (to include e-mail address).</p>	<p>Article 2 of the draft DCO will be updated to include a definition of ‘address’. This change will be reflected in the updated draft order which will be submitted at the next deadline.</p> <p>The service of notices article (article 36) in the Willington C Gas Pipeline Order 2014 is longer and less concise than article 43 of the draft DCO. National Grid does not believe that any amendments to the drafting of this article are required.</p>
14.29	Applicant	Article 46 – incorrectly refers to Schedule 13 please update to ‘12’	The incorrect schedule reference will be amended in the next version of the draft order.
14.30	Applicant	Schedule 1 – Authorised Development – The lists of ‘Works’, particularly those under ‘Associated Development’, temporary Work Nos 4-12 on pages 30-31 of the draft DCO. Could these works be better defined by reference to the ‘ <i>Indicative Site Layout Plans</i> ’ [APP-09]?	The Indicative Site Layout Plans are illustrative only and are subject to change by the Main Works Contractor – they are not intended to be definitive lists of works comprising the development. They may well include fewer works than are listed in Schedule 1. The DCO is the appropriate document to define works as it comprises the consent and sets the maximum scope of works approved, and regulates approval of further details and assessments, not the Indicative Site Layout Plans.
14.31	Applicant	Schedule 1, Work No 5 – should the list a)-n) be extended to also include reference to spoil treatment and storage?	Spoil treatment and storage will be added to work no 5A in the next version of the draft order.
14.32	Applicant	<p>Schedule 1, Work No 11 – this describes a ‘<i>Temporary environmental management and mitigation area...</i>’ However, Schedule 3, Requirement 18, Environmental Mitigation Land is drafted as relevant during construction and operation.</p> <p>Is this mitigation area temporary or permanent?</p>	The Environmental Mitigation Land is temporary only. “Operation” was included out of an abundance of caution to make it clear that National Grid would not carry out works or store plant on that land during maintenance of the development. However it has now been confirmed that the land is not required for maintenance and the word “operation” will be deleted in the next version of the order.
14.33	Applicant	Could water vole monitoring be controlled as a requirement within the DCO	The Initial Construction Environmental Management Plan (Doc 7.3) secured by requirement 12

		under a new requirement covering surveys and monitoring? (see also 6.5)	specifies that, based upon the findings of the pre-construction water vole surveys (Pre F3), a water vole mitigation strategy and a licence may be required. The need for monitoring would be outlined in the mitigation strategy/ licence method statement (if required), which is already a commitment under Pre 4 . Therefore, there is no need to include an additional requirement.
14.34	Applicant	Schedule 3 – Requirements - Is it necessary to define the intertidal area and add drafting for abstraction work within this area due to potential impacts on the SAC/Ramsar?	It is not necessary to define intertidal and add drafting for abstraction works – a commitment will be added to the Initial CEMP to reflect the agreement MMO and RSPB that the abstraction pumps will be placed below mean low water. No works are required for the pumping.
14.35	Applicant	Schedule 3, Requirement 1 - Is the flood defence area identified on a map within the application? If not should it be?	In National Grid's view it should not. The requirement for the Local Planning Authority to consult the EA on works within the flood defence area was included at the request of the EA to enable them to comment on detailed design for works within these areas and this has been agreed with the EA. National Grid assumes that the EA is aware of the extent of flood defence areas within its jurisdiction.
14.36	Applicant	Schedule 3, Requirement 2 – The Willington DCO had provision for authorised development to be begun within 5 years <i>or such longer period as Secretary of State may hereafter direct in writing</i> . Would that flexibility be appropriate here?	As demonstrated in the Need Case (Doc 7.4) the deterioration of the existing pipeline requires that project is implemented as soon as possible. Therefore National Grid do not envisage a need for this flexibility.
14.37	Applicant	Schedule 3, Requirement 3, Stages of the authorised development – should an outline programme be defined now to illustrate the impact of the project on ecological seasons (see also 2.3 above)?	See response to Q2.3 above.
14.38	Applicant; East Riding of Yorkshire Council; North Lincolnshire Council	Schedule 3 Requirement 4(1), Detailed Design Approval lists at (a) to (e) various defined 'Works' that are subject to detailed design approval by the relevant local planning authority before commencement. However, Works 6 & 9 - Temporary Road Works (involving works to hedgerows and trees), Work 10 - Temporary Spoil, Work 11 - Temporary Environmental Mitigation and Work 12 – Temporary Abstraction Hoses and Pumps are excluded from the drafting? Should these works also be subject to detailed design approval?	Works 6 & 9 - Temporary Road Works (involving works to hedgerows and trees) – these details are to be approved under requirements 15 and 7; Work 10 - Temporary Spoil – these details will be approved under the Initial CEMP in requirement 12; Work 11 - Temporary Environmental Mitigation – no physical works are taking place on this land. It is included as a 'work' area so that a restriction on its use for the development can imposed to protect it for ecological mitigation. Work 12 – Temporary Abstraction Hoses and Pumps - these details will be approved under the Initial CEMP in requirement 12 and under the deemed marine licence.
14.39	Applicant	Schedule 3, Requirement 9 – Agricultural land drainage – should drafting also provide for monitoring to ensure continued effectiveness of any drainage reinstatement works?	This is not necessary as private agreements will be in place with landowners to cover the defects liability period for reinstatement.
14.40	Applicant	Schedule 3, Requirement 11, 3(a) – this drafting has potential to extend the working hours each day by 2 hours. Do 'start up' and 'shut down' activities require definition and would activities within these periods still be controlled by all relevant parts of the DCO e.g. noise?	It is not practical to define 'start up' and 'shut down' as these activities vary depending upon the stage of the construction process. The written noise scheme will apply at all times.
14.41	Applicant	Schedule 3, Requirement 12 – CEMP – should the specific commitments to minimise impacts from construction be extended to include: 1. pre-construction surveys of water voles, badgers and bats; 2. a specific requirement(s) for measures to mitigate for impacts on SPA and SAC interest features; 3. is this an appropriate location for reference to the Schedule of Mitigation Commitments [APP-088]; 4. [APP-074] HIA Paragraph 17.1.44 states that piling to a depth of approx. 36m could be used to significantly reduce impacts. Should that be included	1. A requirement for pre-construction surveys of water voles, badgers is to be included in the next draft order at the request of Natural England. There was no need to survey for bats surveys as they were scoped out of further assessment on the basis of initial surveys and desk study (See s7.4 of ES Chapter 7). 2. There are no impacts on the SAC as agreed in the SOCG with Natural England. Any mitigation in respect of the SPA is detailed in the Initial CEMP and this is already secured by requirement 12. 3. The Schedule of Mitigation Commitments was prepared at the request of the Examining Authority to summarise the mitigation and indicate where and how it is to be secured. It does not of itself enforce or secure anything. It is not part of the order and does not impose separate commitments or requirements – it simply summarises and cross-references to them to assist with the Examining Authority's understanding of how the order and documents arising from it fit

		here? 5. The ES states that the groundwater abstraction (dewatering) would take place in March and April when water resources are less stressed after winter recharge. Should that be included here?	together. It is not necessary or appropriate to include it in the order. 4. Negotiations with the EA on mitigation are ongoing and appropriate requirements, if required, will be included in the order in due course. 5. Negotiations with the EA on mitigation are ongoing and appropriate requirements, if required, will be included in the order in due course.
14.42	Applicant	Schedule 3, Requirement 13 – Should this be extended here to include that the 'project' should also set out particulars of: 1. 2© – <i>night time works to be re-assessed in accordance with BS5228</i> . See [APP-064] Noise and Vibration, para 10.7.7 recommends this. 2. 2(d) <i>best practicable means</i> – see [APP-064] 6.10 Noise and Vibration, para. 10.7.6	1. It is not necessary to include this in the requirement as it is contained in the Initial CEMP. 2. 'Best practicable means' are determined by the contractor at the time of construction having regard to all relevant factors and circumstances of the particular situation.
14.43	Applicant	Schedule 3, Requirement 15, Construction traffic and access – should this include; 1. (c) the addition of 'timing of movements'? 2. (h) condition surveys (including verges) and defect repairs; 3. (i) marshalling at SOFF lane diversion 4. (j) protection of existing access by 3rd parties (see Environment Agency [RR-010]) 5. (k) repairs to the existing carriageway e.g. on the final approaches to Goxhill site compound	Requirement 15 is to be amended in the next version of the order having regard to the comments from the Local Impact Report of East Riding of Yorkshire Council.
14.44	East Riding of Yorkshire Council; North Lincolnshire Council	Schedule 3, Requirement 15 (2), Draft DCO, - Should the list of requirements include a 'Communications Plan' – a method of notifying Parish Council's and affected parties of changes to the plan during the project (e.g. bad weather results in need to delay abnormal load delivery) and a mechanism for the feedback of complaints and concerns should they arise?	No comment.
14.45	Applicant	Schedule 3, Requirement 18 is for 'Environmental Mitigation Land' and describes temporary mitigation land (Work 11) as being set aside 'to be set aside during the construction of the authorised development' whereas Requirement 18 states 'During the construction and operation....'. The latter therefore suggests permanent mitigation. Which is intended?	The Environmental Mitigation Land is temporary only. "Operation" was included out of an abundance of caution to make it clear that National Grid would not carry out works or store plant on that land during maintenance of the development. However it has now been confirmed that the land is not required for maintenance and the word "operation" will be deleted in the next version of the order. It is included as a 'work' area so that a restriction on its use for the development can imposed to protect it for ecological mitigation.
14.46	Applicant	Schedule3, Requirement 20, Amendments to approved details – is 'general' necessary in this drafting? Could it be deleted? Should this drafting also refer to any amendments being within the scope of the impacts assessed under the ES?	The wording "or in general accordance" will be deleted from Requirement 20 of Schedule 3 to the draft DCO. The following will also be added in as a new sub-paragraph: "Any amendment or variation from the approved details must be in accordance with the principles and assessment set out in the environmental statement" to provide clarity that nothing under the Order can go beyond the assessment carried out in the Environmental Statement. These changes will be reflected in the updated draft DCO which will be submitted at the next deadline.
14.47	Applicant	How is the Flood Incident Response Plan (FIRP) in Appendix C of the FRA controlled within the DCO?	Pre-L7 of the Initial CEMP requires the Main Works Contractor to develop the FIRP into flood risk management plan.

15. Compulsory Acquisition

15.1	Applicant	S51 advice issued on 12.05.15 requested clarification on the following matter	All persons with relevant interests in land or potential Category 3 claims identified to date have
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		<p>affecting the Book of Reference and in my Rule 6 letter dated 22.07.15 a response was requested by Deadline 1 to confirm the following;</p> <ul style="list-style-type: none"> • S42(1)(a) and (d) Consultees – whether all relevant persons with an interest had been consulted. <p>Can the applicant verify that this work is complete and that all affected persons with interests in land, or Category 3 persons (who have no legal interest but may be affected by the construction or use of the works) have now been identified, consulted and recorded in the Book of Reference?</p>	<p>been consulted and included in the Book of Reference.</p> <p>National Grid are continuing the due diligence process to identify all persons with an interest in the land as is established good practice. A number of steps have been taken to identify unknown land owners such as the placing of newspapers advertisements and site notices.</p>
15.2	Affected persons	<p>Does any affected person (person whose land or rights in land would be affected if an order were granted) have any outstanding concerns regarding the extent and nature of compulsory acquisition of rights identified in the application, or the case made (need) for the acquisition of those rights?</p>	<p>No comment.</p>
15.3	Applicant	<p>[APP-089] Schedule of Progress on Voluntary Negotiations. Please update this schedule by Deadline 3 to include:</p> <ol style="list-style-type: none"> 1. cross reference to Plot Nos (as R6-Annex G request); 2. the nature of the rights required (Permanent or Temporary) and identification of the Type of that right as defined on the Land Plans and in the Book of Reference (Tables 1 and 2, paras. 6.1.8 and 6.2.14); 3. whether objection has been raised; and 4. the status of negotiations - please identify the steps that have been taken since Feb 2015 (initial offers for easement options – [APP-019] para. 7.4.3). 	<p>The Schedule of Progress on Voluntary Negotiations (document number 7.8A) submitted at deadline one includes the plot numbers of the relevant land, identification of the type of interest to be acquired and the status of the negotiations. A further updated Schedule will be submitted at deadline 3 which will include all information requested.</p>
15.4	Applicant	<p>[APP-019] Statement of Reasons, para. 7.4.2 states that there has been ongoing dialogue direct with Persons with Interest in Land (PILS) to obtain the necessary rights by private treaty. Please provide evidence in support of this.</p>	<p>National Grid have been in ongoing dialogue with Persons with Interest in Land (PILs) to obtain all necessary rights by private treaty. The Schedule of Progress on Voluntary Negotiations (document 7.8A) records the progress of all such negotiations to date including the dates on which heads of terms have been issued and signed and the date of exchange of agreements. Details of negotiations are commercially confidential.</p>
15.5	Applicant	<p>[APP-019] Statement of Reasons, para. 10 states that negotiations to conclude satisfactory protective provisions with Statutory undertakes is 'ongoing';</p> <ol style="list-style-type: none"> 1. please provide a list of the parties involved and an update on the position of those agreements; and 2. given the importance that Protective Provisions are inserted into the draft DCO at the earliest possible stage of the examination please provide draft Protective Provisions where possible. 	<p>Full details of the parties requiring protective provisions and an update on the status of the negotiation of the provisions is contained in the Statement of Common Ground Schedule (document 7.9A) which was submitted for deadline 1. An updated version of the document will be submitted for future deadlines.</p> <p>The inclusion of protective provisions in the DCO has been agreed with the Environment Agency, Anglian Water, Centrica and Network Rail and these provisions are currently being negotiated. These protective provisions will be inserted into the draft order as soon as they are agreed between the parties.</p>
15.6	Applicant	<p>Please provide an update on the status of the negotiations with ABP for a lease and how and when this will be evidenced?</p>	<p>National Grid is negotiating specific terms of an underlease with ABP's agent and lawyer for the replacement pipeline. This is reflected within the updated schedule of voluntary negotiations. Details of the negotiations are commercially sensitive however they are well-advanced, and National Grid and ABP will notify the Examining Authority when agreement has been finalised.</p>
15.7	Applicant	<p>Please provide an update on the position in achieving Crown Estate consent [s 135(1) & 135 (2)]. How and when this will this be evidenced?</p>	<p>The consent from the Crown is to be provided once the heads of terms are agreed with ABP for the sub-lease.</p> <p>It is envisaged that agreed heads of terms will be approved by ABP main Board before being presented to The Crown Estate for supplementary consent prior to Deadline 3.</p>
15.8	Applicant	<p>[APP-019] Statement of Reasons, para. 11.1. Please confirm the missing Plot No(s) affecting Crown Estate Rights that is missing from the application Statement of Reasons and re-issue.</p>	<p>Paragraph 11.1 of the Statement of Reasons (document 4.1) should include plot numbers 56, 57, 58, 59, 62 and 63. These plots are also shown on the Crown Land Plans and recorded in Part Four of the Book of Reference. Consequently, National Grid does not believe that it is necessary to reissue the Statement of Reasons.</p>

15.9	Applicant	<p>In reviewing the Book of Reference [APP-021] against the Land Plans [APP-06] and Works Plans [APP-07] it was noted that the descriptive titles from the Book of Reference (Table 1, para. 6.1.8 and Table 2, para. 6.2.14) and those within the tables on the Land Plans are different. Please update.</p>	<p>In answering this question we have assumed that the reference to Table 1, paragraph 6.1.8 and Table 2, paragraph 6.2.14 of the Book of Reference in this question should be a reference to the Statement of Reasons (document reference 4.1).</p> <p>The descriptions of the classes of permanent and temporary rights have been worded slightly differently in the Book of Reference (document reference 4.3A) and the Statement of Reasons. However, this is simply a difference in the expressions used; the nature of the rights sought are consistent between the two documents.</p> <p>The Statement of Reasons is a supporting document to the application which provides justification for the rights sought. The descriptions in this document reflect this and tie the rights back to the way in which it will be exercised. For example, the description for permanent type 2 in the Statement of Reasons is 'Pipeline easement over land' whilst in the Book of Reference it is 'compulsory acquisition of rights for the pipeline onshore'.</p> <p>The descriptions contained in the tables in the Land Plans (document 2.1A) match those contained in the Book of Reference but are summarised so as to fit on the plans. The Book of Reference and the Land Plans are the key documents relating to the compulsory acquisition of land and National Grid are satisfied that the descriptions of the classes of rights between these two documents are consistent. National Grid does not believe that any updates to the Statement of Reasons are necessary in this regard.</p>
15.10	Applicant	<p>[APP-06] Land Plans - Please clarify the following;</p> <ol style="list-style-type: none"> 1. L003 - defines Plot 18 as Permanent Type 4 (Cable Easements Over Land) and Temporary Type 1 (Construction) but it is not shaded blue on W008. Why is that and to which Work No does it relate? 2. L003 – plots 23, 25 & 26 define both Temporary Type 1 (Construction) and Permanent Type 6 (Access Rights Over Land). Which plot number defines Work 3D the capping of the existing pipeline as identified in blue on W008? 3. Plot 30 – which Work No applies to these temporary access works, 5A? 4. Plots 39 & 42 – why are the permanent pipeline rights in this location 50% wider than in plots 52 and 54? 5. Plot 46 - temporary construction access does not appear to be hatched on W008? Should this be part of Work 5A? 6. Is the difference between Plots 82 and 86 the fact that 82 provides permanent easement access rights to the cable laid at 86? 7. Plot 100 – why does this link to the highway when it is not shown as an access point? Please explain its purpose? 	<ol style="list-style-type: none"> 1. This will be reviewed and corrected in the next revision of the Works Plans. 2. Work 3D is contained in plot number 26 which is subject to Permanent Type 1 (Freehold acquisition) and Permanent Type 6 (Compulsory acquisition of rights of access for use and maintenance) as shown on sheet number L003 of the Land Plans (document reference 2.1A). 3. There is an existing crossing at this location and no works will be required. Plot 30 has been included in the Book of Reference to secure the right to pass over this land. 4. Plots 52 and 54 are required only for the laying of the pipeline whereas plots 39 and 42 also include work compounds and work areas (Work No. 5A) as shown on sheet L004 of the Works Plans. Rights over a wider area of land are therefore required for plots 39 and 42. 5. Plot 46 contains Work No. 5A as shown on Works Plan W008. The plot is shown hatched on sheet L003 of the Land Plans to illustrate that the plot is subject to the acquisition of temporary rights for construction access. 6. Plot 86 comprises Work No. 2B which is the laying of underground cathodic protection cable. Plot 82 provides for the limits of deviation for Work No. 2B. 7. Plot 100 forms part of Work No. 4B and its purpose is to provide an access point to this work.
15.11	Applicant	<p>Article 18 of the Willington made order provides authority for acquisition of existing rights in land whereas Article 19 of this draft DCO provides powers for compulsory acquisition of land. Given the works are for a replacement gas pipeline why are freehold rights of small areas of land required for kiosks and monitoring equipment?</p> <p>Can existing infrastructure not be used. Please explain?</p>	<p>These are essential pieces of infrastructure for monitoring and maintaining the pipeline and tunnel and form part of the authorised development. Freehold acquisition of these small areas of land is required to fence off and protect these facilities and ensure that National Grid maintains control over them at all times. They will also sterilise the subject land from all further use. The cathodic protection kiosks and monitoring equipment are bespoke to this project and to the tunnel, because the tunnel will be flooded and sealed once complete and all monitoring will take place from ground level. The current pipeline is an entirely different piece of infrastructure, laid on the river bed, and therefore does not require cathodic protection or the other facilities required by this project.</p>
15.12	Applicant	<p>[APP-019] Statement of Reasons sets out at para 5.7 the need for acquiring permanent rights with para. 5.7.2 stating that a 24.4m width is required along the pipeline.</p> <p>Please demonstrate (illustrate) why such a width is necessary?</p>	<p>An easement width of 24.4 metres is industry standard for a gas pipeline. This width allows sufficient space for safe working access and maintenance activities during the operation of the authorised development.</p>
15.13	Applicant	<p>[APP-019] Statement of Reasons sets out at para 5.7 the need for acquiring permanent rights with para. 5.7.4 stating that a 6m width is required along the cathodic protection cable routes and 5.7.6 requiring 6m wide access rights for easement strips not directly abutting the public highway.</p>	<p>Such widths are necessary for the future maintenance of the equipment and replacement provisions if required in the future. This would include for the splitting of sub and top soils on either side of the excavation to allow for proper reinstatement after works have taken place, and to allow for equipment and vehicles of the necessary size to access the works.</p>

		Please demonstrate (illustrate) why such widths are necessary?	
15.14	Applicant	Are the acquisition and rights requested the minimum necessary given the anticipated 40 year operational life-span [APP-019, para 2.5]? Is there going to be an end date on the project after which the pipeline would be dismantled and removed and the land restored?	[APP-031] Project Description, Para. 2.11 confirm that the asset life is 40 years for the pipeline and that the tunnel has a 100 year design life. After 40 years, National Grid may look to re-life the asset for an additional 60 years. Upon eventual decommissioning, the assets would remain in situ, with very minor works required within and immediately adjacent to the AGIs to cap off the asset. Given the value of this asset and its lifespan it has not yet been determined whether the pipeline will be removed or re-used at the end of its operation life. It is therefore not possible to plan for its decommissioning now. The regulation of any future use of the pipeline is that works to it will be outside the scope of this order, and constitute "development" - and will therefore require separate consent via a full planning application. Such application will assess the environmental impacts of any re-use or removal of the pipeline.
15.15	Applicant	[APP-020] para. 2.2 of the Funding Statement describes the OFGEM RIIO price control arrangements that enable NGG to discharge its duties as Transmission Operator and Owner. Does this mean that NGG has agreed with OFGEM a customer price increase reflecting the capital cost required for this (and no doubt other) projects? Please explain further.	In our RIIO contract we agreed with Ofgem to deliver a series of outputs for our customers and stakeholders across the 8 year RIIO period. Our regulatory framework defines our allowances and our performance against this determines the revenues we can recover from our customers. This has been set by Ofgem through to 2021 for more certain expenditure; however in some areas the costs that we will incur over the RIIO period were uncertain at the start. To address this, the RIIO framework provides two opportunities to for further funding in specific areas, the first in May 2015 and the second in May 2018. The additional revenue provided through this mechanism is recovered from our customers in the same way as the more certain expenditure set by Ofgem at the start of the RIIO contract.
15.16	Applicant and all interested parties (IP's)	Who estimated the funding level required, what is their background and has the funding assessment been independently verified? IP's - Does anyone consider that the funding level required is insufficient to meet all the CA liabilities?	The level of funding required for the compulsory acquisition has been calculated by RICS qualified members of National Grids Lands Team internally, with input from the project team and through ongoing negotiations with opposition instructed land agents. To demonstrate that the funding level is appropriate and deliverable the project team has had monthly reviews of the funding statement.
15.17	Applicant	How will you ensure that the CA monies are readily available when compensation becomes payable?	As part of our current regulatory deal (RIIO-T1 which covers the period 2013-2021) National Grid Gas Transmission, as the gas transmission licence holder, has funding mechanisms to deliver 'One off asset Health Costs'. The project is classified as such a project. Under these arrangements there is an opportunity in 2015 and 2018 for NGGT to request additional funds for any works (including lands costs) associated with delivery of the project. National Grid has immediate funding in place for our consenting activities associated with the project and as such, compulsory acquisition payments can be made as and when required. Therefore the ability to fund compulsory acquisition and all incidental costs is not considered an issue for the project.
15.18	Applicant	With regard to the 'unknown' interests in the Book of Reference, can you please confirm whether these interests remain unknown and whether diligent enquiry is ongoing?	Diligent enquiry into unknown ownerships continues to progress well and it is anticipated that in the next draft Book of Reference to be submitted on 27 November all such interests will have been resolved and updated.
15.19	Applicant	Part 3 of the Book of Reference highlights the interest of Centrica who own a gas condensate pipe that appears to be crossed by the proposed new gas feeder. Why does this not appear in the schedule of voluntary negotiations [APP-089] and have protective provisions been agreed?	Although the proposed pipeline will cross the Centrica condensate pipeline, the limits of deviation for the proposed pipeline mean that no land or rights need to be acquired from Centrica in respect of this crossing. Centrica's rights will be protected by the inclusion of protective provisions within the DCO (these are currently being negotiated between the parties).
15.20	Applicant	Plot 128 adjacent 129 is identified as 'unknown'. Is this land necessary to provide the turning radii etc. required at this point and has any progress been made in tracing its legal owner. What steps are being taken to secure its use for the project?	Diligent enquiry is ongoing and National Grid are also reviewing the necessity for this plot in traffic engineering terms. Any amendments will be made in the next revision of the book of reference and land plans.
15.21	Applicant	Land Sheet Plan 2 of 16. Please mark the transition point between Works 1B and 1C. This is to the west of the 'sloping masonry' separating land from the mud flats. Is the edge of this hard boundary not the limit of Plot 54. If so please update the drawing to reflect.	The exact transition points from tunnel to trench will be matters for detailed design by the main works contractor after pre-construction surveys and investigations are carried out. The maximum lengths of trenched and trenchless sections for each part of Work 1 are set out in Schedule 1 of the development consent order and are indicated on the works plans by blue sections for Works 1A and

			<p>1C and a pink section for Work 1B.</p> <p>The boundaries between plots on the Land Plans is shown by a think black line. The boundary edge of plot 54 is the start of plot 53 (which is shown by a thick black line). The sloping masonry does not mark the edge of plot 54.</p> <p>The transition between Work Nos. 1B and 1C is clearly shown on the Works Plans by different colouring (Work No. 1C is shown blue and Work No. 1B is shown pink).</p> <p>National Grid does not believe any amendments to the plans are necessary in this regard.</p>
16. Health			
16.1		[RR-028] received from PHE – no questions	No comment.