

The Drax Power (Generating Stations) Order

Land at, and in the vicinity of, Drax Power Station, near Selby, North Yorkshire

Applicant's Responses to the Examining Authority's Second Written Questions

(Submitted for Deadline 6)



The Planning Act 2008

Drax Power Limited

Drax Repower Project

Applicant: DRAX POWER LIMITED

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Contents

1	INT	RODUCTION	1
	1.1	Purpose of this Document	1
2	AL	FERNATIVES, NEED AND CLIMATE EFFECTS	2
3	AIR	QUALITY	22
4	BIC	DIVERSITY & HABITATS REGULATIONS	24
5	CO	MPULSORY ACQUISITION	31
6	DR	AFT DEVELOPMENT CONSENT ORDER (DDCO)	32
7	LAI	NDSCAPE AND VISUAL	38
	7.2	Point 1 – Addressing significant effects through mitigation, compensation and offset 38	ting
	7.3	Point 2 - Timescale for delivery	40
	7.4	Point 3 – Consideration of Green Infrastructure	41
	7.5	Point 4 - Consideration of design principles as guidelines for further detailed work	42
	7.6	Additional Mitigation proposed subsequent to Deadline 5	43
8	NO	SE AND VIBRATION	47
9 APF		AFFIC AND TRANSPORT DICES	48
DCC) - A	PPENDIX A - NYCC CORRESPONDENCE	



1 INTRODUCTION

1.1 Purpose of this Document

- 1.1.1 On 29 May 2018, Drax Power Limited ("Drax" or "the Applicant") made an application ("the Application") for a Development Consent Order to the Secretary of State for Business, Energy and Industrial Strategy ("the SoS"). The Application relates to the Drax Repower Project ("the Proposed Scheme") which is described in detail in chapter 3 of the Environmental Statement (document reference 6.1.3, Rev 002).
- 1.1.2 The Application was accepted for Examination on 26 June 2018.
- 1.1.3 This document, submitted for Deadline 6 of the Examination, contains the Applicant's responses to the Examining Authority's Second Written Questions ("SWQ"), published on 15 January 2019.



2 ALTERNATIVES, NEED AND CLIMATE EFFECTS

Table 2-1 - ExA Written Question - ANC 2.1

ExA Ref	Question to	Question
	Applicant	NPS EN-1 Paragraph 3.2.3
2.1		At the Issue Specific Hearing (ISH) on Environmental Matters held on Wednesday 5 December 2018 [EV-010 – EV-013] and in its response at D4 [REP4-012], the Applicant stated that the starting point for assessing the individual contribution a project makes to meeting need is the overall policy towards need, which should be afforded significant weight. The Applicant then stated that the contribution towards the three pillars then needs to be added to that weight when assessing a scheme's individual contribution to meeting general need, as advocated by Paragraph 3.2.3 of National Policy Statement (NPS) EN-1.
		The ExA suggests that Paragraph 3.1.3 will already have considered the contribution new power projects would have to meeting the three pillars, and to do so again to assess individual contributions as advocated by Paragraph 3.2.3 of NPS EN-1 would in essence amount to double counting. Provide a response.

- 2.1.1 The Applicant's position is not that the contribution of the Proposed Scheme to the three pillars of need is *added to* the substantial weight to be given to need in accordance with paragraphs 3.1.3 and 3.1.4. The combined effect of paragraphs 3.1.3 and 3.1.4 with 3.2.3 is not to double count the contribution of the Proposed Scheme to need. As confirmed by the Applicant at the Issue Specific Hearing (environmental matters), paragraph 3.2.3 should be understood in the context of paragraphs 3.1.3 and 3.1.4. The correct interpretation of these paragraphs is set out at paragraphs 3.4 to 3.6 of the "Written Summary of Applicant's Oral Case at Issue Specific Hearing (Environmental Matters)" (REP4-012) and paragraphs 2.6 to 2.11 of the "Note on Substantial Weight to be Given to Need and Application of Tests Under S104" submitted at Deadline 5 (REP5-021).
- 2.1.2 Paragraph 3.1.3 establishes the overarching decision-making principle that need for the types of infrastructure covered by the Energy NPSs has been established, with paragraph 3.1.4 stating that substantial weight should be given to the contribution that projects would make to satisfying that need. Paragraph 3.2.3 tells the ExA and SoS what degree or category of substantial weight to give to "the anticipated extent of a project's actual contribution to satisfying the need for a particular type of infrastructure".
- 2.1.3 The starting point for assessing the Application is on the basis that NPS EN-1 has set out that need has been established for fossil fuel electricity generation (paragraph 3.1.3). If there is a need for fossil fuel electricity generation then logically there is a need for a scheme comprised in an application for a development consent order for fossil fuel electricity generation. Therefore, the ExA and the SoS are told that need for the Proposed Scheme



has been demonstrated. Paragraph 3.1.4 of NPS EN-1 then tells the ExA and the SoS that the contribution the project in question would make towards satisfying this already demonstrated need must be given substantial weight. The Government, in paragraph 3.1.4, has decided that the contribution made by energy NSIPs covered by NPSs EN-2 to EN-6 should be allocated substantial weight.

- 2.1.4 Paragraph 3.2.3 therefore requires the ExA and the SoS to determine the precise amount or category of weight (within the parameters of "substantial"). Accordingly, the ExA and the SoS are not required to grapple with: (i) whether there is a need for the type of infrastructure in question; and therefore (ii) whether there is a need for the Proposed Scheme. The ExA and the SoS are told to assume there is a need (paragraph 3.1.3) and that substantial weight must be given to that need (paragraph 3.2.3). What remains for the ExA and the SoS to determine, is the precise weight within the defined parameters of "substantial." In order to determine this, the ExA and SoS have to have regard to the "anticipated extent" of the actual contribution that the project before them would deliver in satisfying that already identified need (paragraph 3.2.3).
- 2.1.5 The Applicant has set out (at the request of the ExA) how it considers substantial weight should be given to the contribution that would be made by the Proposed Scheme or, in other words, how paragraph 3.2.3 in the context of paragraphs 3.1.3 and 3.1.4 should be applied. At section 3.0 of the "Note on Substantial Weight to be Given to Need and Application of Tests Under \$104" (REP5-021), the Applicant sets out the factors that will be relevant for the ExA and SoS to take into account when considering the anticipated extent of the Proposed Scheme's actual contribution to satisfying the need for fossil fuel generating stations. At paragraph 6.8 the Applicant concludes that a high degree of substantial weight should be given to the satisfaction of the need identified in NPS EN-1. The section of the note, commencing at paragraph 6.3 under the heading "Application of section 104(7)" explains how the adverse effects of the Proposed Scheme should be balanced against its benefits, which include the high degree of substantial weight given to the Proposed Scheme's contribution to need.
- 2.1.6 That section demonstrates that (in accordance with NPS EN-1) those benefits are only taken into account <u>once</u> in that balancing exercise; there is no double counting in the application of paragraphs 3.1.4 and 3.2.3 for the purposes of the balancing of the Proposed Scheme's benefits pursuant to section 104(7).

Table 2-2 - ExA Written Question - ANC 2.2

ExA Ref	Question to	Question
ANC 2.2	Applicant	Table 15-15 (amongst others) within Chapter 15 of the Environmental Statement (ES) [APP-083] sets out the baseline scenario of the existing coal-fired units operating at current and then reduced emissions intensity. This figure is 188,323,000 tCO2e from 2020 – 2050. Paragraph 15.4.2 of the ES provides for two future scenarios for the existing coal-fired capacity. Either: a) Existing coal-fired units 5 and 6 would be converted/adapted to continue energy production to 2050; or



ExA Ref	Question to	Question
		b) Existing coal-fired units 5 and 6 would close/cease operating, with replacement generation capacity of a similar scale and nature being sourced elsewhere from another thermal power station.
		Paragraph 15.4.2 of the ES is clear that both are only assumptions. In the latter case, the ES acknowledges that it has "not been considered in detail".
		ClientEarth (CE) in its Written Representation (WR) [REP2-002] and its D4 [REP4-017], and Yorkshire Wildlife Trust (YWT) in its WR [REP2-046] and within the draft Statement of Common Ground (SoCG) [REP4-009] challenge if either scenario would occur, owing to the absence of funding for the former and the unproven and un-evidenced nature of the latter. The Applicant's response at D4 [REP4-012] deals principally with the latter point in respect to the National Grid stack arrangement.
		Having regard to the assumptions made in establishing the baseline position, and taking into account points being advanced by both CE and YWT, explain why the future baseline scenarios used to inform the assessment in the ES [APP-083] are appropriate.

- 2.1.7 In its paper submitted at Deadline 5, "Note on Substantial Weight to be Given to Need and Application of Tests Under S104" (Examination Library Reference REP5-021, see in particular at paragraphs 4.8 4.29), the Applicant has provided further detail in relation to the future baseline scenarios and why the assumptions in that respect relied upon in the Environmental Statement are appropriate. That paper also responded to the points raised by ClientEarth in relation to the future baseline scenarios.
- 2.1.8 The scenarios which have been identified as future baseline scenarios for Units 5 and 6 consist of co-firing Units 5 and 6 with coal and biomass in order to meet the 450g CO₂/kWh government threshold; or, if Units 5 and 6 were to cease operating, then the resultant capacity gap would have to be met by other plant, most likely existing gas plant (given the particular role of the plant in the supply mix (e.g, *inter alia* the provisions of flexible generation to support intermittent renewables)) such that the CO₂ emissions would be similar to existing gas plant. The benefits of the Proposed Scheme are therefore obvious: more power at a lower carbon intensity.
- 2.1.9 The scenario that the power requirement would otherwise be met by existing gas plant (i.e. the second future baseline scenario set out in the question) is supported by the Vivid Economics study which ClientEarth referred to in its submission at Deadline 4. This report assumed that <u>all</u> existing gas plant would continue to run at a 40% load factor to provide flexible generation to support intermittent renewables into the future. This being the case, it seems somewhat counter-intuitive that ClientEarth would challenge the future baseline scenario that the existing coal-fired generation would be supplanted by gas-fired generation since this is the exact scenario which the Vivid Economics study proposes in order that future renewable generation capacity is supported. The fundamental difference with the

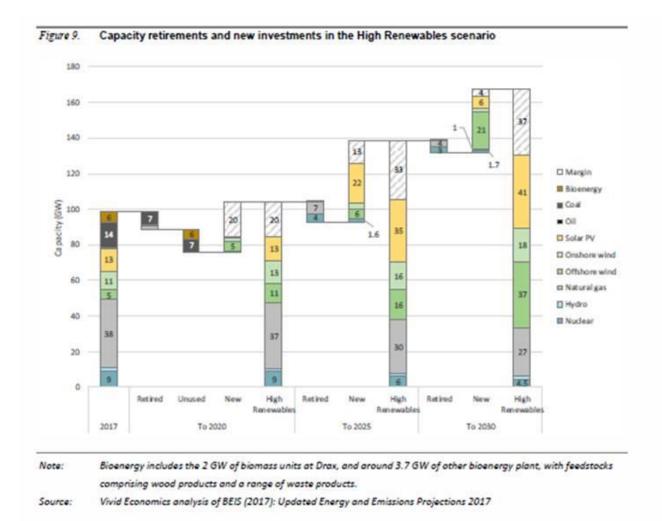


Proposed Scheme is the significant increase in efficiency and the associated decrease in carbon intensity (and therefore overall emissions) compared with existing gas fired generating plant. Another aspect which the Vivid Economics report failed to elucidate on is the 'margin' plant that would operate only during extreme system stress events. Note that the report predicts a sudden increase of some 20GW of 'new' margin plant capacity in 2020 and 33GW by 2025, which is designed to support future intermittent renewables. Some of this margin plant has been identified as gas plant which is likely to be lower efficiency, open cycle gas plant (OCGT), some of it may be diesel reciprocating engines; both technology types have higher carbon intensities than a Combined Cycle (CCGT) gas plant which further supports the use of a baseline of 450g CO₂/kWh when comparing other thermal plant. The current operating fleet of CCGTs has a carbon intensity of 481¹ gCO₂/kWh. Other technology types (such as OCGT or reciprocating engines) are expected to have a carbon intensity greater than 481 gCO₂/kWh). As the requirement for new thermal power generation to meet an emissions standard of 450 gCO₂/kWh is calculated on an annual basis assuming an 85% load factor, the actual emissions from peaking plant could be significantly higher than this. For example, plant operating at a load factor of less than 40% could emit at a rate of nearly 1,000 gCO₂/kWh while operational. The 450g CO₂/kWh future baseline in the absence of the Proposed Scheme is therefore justified.

2.1.10 Figure 9 from Vivid Economics report, below, shows the growth in margin plant required to offset the expected closure of unabated coal power generation.

¹ The 481 gCO₂/kWh figure, has been calculated using the same method as presented in the ES – and as such includes Well to tank emissions, and is therefore comparable to the 450 gCO₂/kWh figure and 380 gCO₂/kWh figure as presented in the ES.





- 2.1.11 The first future baseline scenario referred to in the question refers to a scenario in which the existing coal Units 5 and 6 continue in operation and Drax co-fires biomass to at least achieve a carbon intensity of 450gCO2/kWh in line with government plans to end unabated coal combustion (the plans do not apply to existing gas with a carbon intensity of above 450gCO2/kWh). In addition, Drax is piloting a Carbon Capture Storage ("CCS") plant at one of its current units, and a carbon intensity of 450gCO2/kWh could in the future be achieved through CCS in line with government plans to end unabated coal combustion, meaning that a carbon intensity of 450gCO2/kWh could be achieved either by co-firing or through CCS. With or without CCS though, a carbon intensity of 450gCO2/kWh is the likely evolution of the future baseline without the Proposed Scheme, and therefore the realistic worst case.
- 2.1.12 In terms of co-firing, Drax can clearly demonstrate that technically it is feasible to co-fire coal and biomass and that much of the infrastructure required to undertake these modifications is in place (see minor modifications below that would be required) and sized to a capacity which would support co-firing in Units 5 and 6. Indeed Drax successfully carried out a co-firing operation from 2003 to 2013 prior to unit's 1,2 and 3's conversion to full biomass. Drax has developed control over its supply chain of biomass to the Existing Drax Power Station Complex and has invested heavily in the supply chain including having designed and procured specific rail rolling stock to ensure that the transport and discharge of fuel is as efficient as possible. Infrastructure onsite including storage facilities and conveyors already



exist to transport fuel around the site and to enter various silos located around the station. Infrastructure which likely would be required would include additional day silo(s), and conveying systems connecting into existing systems to move biomass from the current storage and transport systems to the northern end of the station. Modification may be required to some of the rail infrastructure onsite including double tracking trains to speed up unloading of the biomass. In addition, modification to the burner systems would be required to allow direct injection into the boilers and to control the combustion conditions within the boiler. Other, relatively minor modifications would be required although none of these would be beyond what has been undertaken on other units. All units at Drax are permitted to fire biomass up to 100% so co-firing would not require any modification of the Environmental Permit.

2.1.13 Reference is made to the absence of funding for the further combustion of biomass; however, this statement does not account for the likely increases in peak electricity prices during periods of high demand, limited generating capacity and the increasing value of ancillary services, which will only become more critical as increased renewable generation capacity comes online and existing large thermal plant closes. This will make large, flexible thermal generating plant (including the biomass fired units) of significant value in the future. Furthermore, it is reasonable to assume that there will be cost reductions in the future; indeed Drax has already commenced looking at reducing the costs of biomass procurement, transport and processing associated with Units 1-4 in order to ensure continued operation of converted units post 2027. These cost reductions in fuel would also be replicated for a co-firing unit particularly where the costs for coal would be significantly less than that for biomass (especially given the use of shared infrastructure). In addition, the Applicant is currently piloting a pilot project that will see Carbon Capture and Storage technology applied to one of its four existing biomass generating units. If the pilot proves successful, it will move the Applicant one step closer to successfully deploying CCS technology at Drax Power Station. Accordingly, it is reasonable for the Applicant to assume two baseline scenarios one where Units 5 and 6 cease to operate and another where it is viable to co-fire Units 5 and 6. In either scenario, a carbon intensity of 450gCO₂/kWh is an appropriate baseline.

Table 2-3 - ExA Written Question - ANC 2.3

ExA Ref	Question to	Question
ANC	National Grid	Baseline Scenario
2.3		Paragraph 15.4.2 of the ES [APP-083] states that if the existing coal-fired units 5 and 6 were to close, the lost energy would be replaced elsewhere on the National Grid, and that this would be sourced from thermal power sources with similar scale and nature, and similar emission intensity as the existing coal-fired units 5 and 6. The ES acknowledges that this is an assumption and has not been considered in detail.
		The Applicant provided some further explanation of this at the ISH on Environmental Matters held on Wednesday 5 December 2018 [EV-010 – EV-013], and confirmed in writing in Paragraph 3.63 of its D4 response [REP4-012]. This states that National Grid would replace lost capacity by dispatching power plant capacity based on a stack list, with the more



ExA Ref	Question to	Question
		efficient and thus cheaper energy producers being dispatched first. While this might refer to renewable plants if there was an abundance of wind or sun, it is likely to result in thermal plants being called on as they offer grid stability and transfer requirements.
		 i. Comment on the Applicant's assumptions. ii. Explain why renewable resources would not more frequently fill the gap given the quantum of renewable energy source generating stations within the vicinity of Drax Power Station.

2.1.14 The Applicant has based its assumptions regarding the future operational regimes of the Proposed Scheme and how the Proposed Scheme would interact with other generating technologies on the System Operator's (i.e. National Grid) Ten Year Statement and the future Energy Scenarios. These assumptions and the analysis of them can be found in the Applicant's "Note on the Substantial Weight to be Given to Need and Application of the Tests Under Section 104 of the Planning Act 2008", submitted at Deadline 5 (REP5-021). Section 3 of the Deadline 5 note provides more in-depth analysis of how the Proposed Scheme would meet the requirements as specified by National Grid.

Table 2-4 - ExA Written Question - ANC 2.4

ExA Ref	Question to	Question		
	Applicant	Baseline Scenario		
2.4		CE has submitted at D5 [REP5-022] an alternative baseline scenario and quantitative climate impact assessment in respect of Drax Re-power in response to a request made by the ExA at the ISH on Environmental Matters held on Wednesday 5 December 2018 [EV-010 – EV-013].		
		 i. Comment on CE's summary of requirements relating to baseline scenarios in Environmental Impact Assessments (EIA), and set out how the baseline scenario in the ES meets the relevant requirements of the EIA Regulations. ii. Comment on the net greenhouse gas emissions in its version of Table 15-13 [REP5-023]. iii. Consider CE's alternative methodology used to provide a revised baseline scenario, and explain if there is merit in considering a range (best case scenario to worst case scenario) when setting out the impact of the development in terms of net increase in greenhouse gas emissions. 		



Response to part (i)

The Applicant has the following comments on CE's summary of requirements relating to baseline scenarios in Environmental Impact Assessments.

CE makes the following assertions regarding the baseline assessment:

- 1) [The applicant] "has selected the highest possible emissions intensity on the grid for non-peaking capacity as of 2025 as the baseline against which to assess the Proposed Development's climate impact".
- 2.1.15 The baseline for the Proposed Scheme does not select the highest possible emissions intensity on the grid for non-peaking plant. After 2025, coal plants will be limited to 450 gCO2/kWh. However, there are no plans for existing plants (consented before 18 February 20142), using fuels other than coal to have any emissions limits applied, and as such these plants are expected to have a higher carbon intensity than 450 gCO2/kWh (peaking or otherwise).
- 2.1.16 In addition, there will be peaking plant on the grid, and it is entirely appropriate for the baseline to take this plant into account. This is the case because the Proposed Scheme is most likely to run when there is high demand for electricity and low supply from renewables. These are the same conditions under which peaking plant will run. Therefore, in a baseline scenario, where the Proposed Scheme did not exist, more peaking plant would need to run to supply the electricity that would otherwise be provided by the Proposed Scheme. As such the carbon intensity of the electricity supplied by this peaking plant, needs to be accounted for within the baseline.
- 2.1.17 The Emissions Performance Standard Regulations 2015 require plant consented after 18 February 2014 to meet an emissions limit of 450 gCO2/kWh with a load factor of 85%. If any plant runs at a load factor of less than 85% (which peaking plant will), it can exceed the 450 gCO2/kWh threshold. For example, a new 1 GW plant running at 450 gCO2/kWh with a load factor of 85%, would result in emissions of 3,350,700 tCO23. If this same plant was run at a load factor of 10% it can still emit 3,350,700 tCO2. However, if it only ran at a 10% load factor, this would mean its allowed emissions intensity threshold would be 3,825 gCO₂/kwh4. Therefore, even new plant (other than coal plant) may have an emissions intensity higher than 450 gCO2/kWh. There are likely technologies that this would apply to, including Open Cycle Gas Turbines and reciprocating engines.
 - 2) The baseline selected is not an appropriate benchmark and does not account for developments "expected to supply the grid over the life of the Proposed Development"
 - CE argues that the baseline does not meet the "European Commission guidance referred to above". Presumably this is the requirement for the baseline to be

⁴ 3,350,700 (total allowable emissions divided by 876 (10% of the hrs in a year multiplied by 1 (the capacity of the plant)) equals 3,825 gCO2/kwh



http://www.legislation.gov.uk/ukpga/2013/32/pdfs/ukpga_20130032_en.pdf https://www.legislation.gov.uk/uksi/2015/933/pdfs/uksi_20150933_en.pdf http://www.legislation.gov.uk/uksi/2015/933/pdfs/uksiem_20150933_en.pdf

³ 7,446 (85% of the hrs in a year) multiplied by 1 (plant capacity) multiplied by 450 (the emissions intensity) equals 3,350,700 tCO₂

dynamic. The baseline is dynamic as it does take into account the UK Government plans for a 450 gCO2/kWh threshold for existing coal plants and new thermal plants using other fuels. The lowest carbon intensity plant type that the project will displace (CCGT), currently has a carbon intensity of about 481 gCO2/kWh⁵. The average carbon intensity of the plant that the Proposed Scheme will displace is likely to be significantly higher than this as other less efficient technology types will also be displaced. As old plant is retired, and replaced with new more efficient plant (like the Proposed Scheme), the average carbon intensity of electricity that the Proposed Scheme would displace will fall. The selection of 450 gCO2/kWh takes this into account, as it provides space for carbon intensity of the electricity that the plant will displace (plant more polluting than the Proposed Scheme) to fall over the life of the Proposed Scheme. However, as noted above, other more polluting plant is still expected to be operating as peaking plant.

CE also Quote some IEMA guidance6, "Future baseline should capture both operational and use GHG emissions irrespective of their source (i.e. direct and indirect emissions). ... With regards to energy supply ... future baseline should report on operational GHG emissions and how these may change over time (based on ... UK grid decarbonisation projection scenarios or the adoption of renewables for example)" The full quote is "Future baseline should capture both operational and use GHG emissions irrespective of their source (i.e. direct and indirect emissions). The distinction between operation and use GHG emissions is important. For example, an existing motorway will have operational emissions (i.e. lighting, maintenance, upgrades) as well as in-use emissions associated with vehicles travelling along the route. Current baseline travel patterns would have to be assessed as well as how these might change in the near future (changes in mode share, increased efficiency in vehicles and trip numbers for example). With regards to energy supply and demand (e.g. electricity use in a commercial building), future baseline should report on operational GHG emissions and how these may change over time (based on occupancy changes, UK grid decarbonisation projection scenarios or the adoption of renewables for example)".

What the full quote shows is that any future baseline should be project specific. Therefore, a road scheme should take into account the future changes on the existing road network, or for a project such as a commercial building that **consumes** electricity, the decarbonisation of the UK electricity grid should be taken into account (the intensity of the electricity consumed in the future will change). Therefore, for a power project (such as the Proposed Scheme), the baseline should take account of the changing intensity of the electricity that would be produced if the Proposed Scheme did not exist. The baseline presented in the ES does this. It does not quantitatively take account of the changing intensity of the whole electricity grid (UK grid decarbonisation projection scenarios), as this is not relevant to a generator rather than consumer.

⁶https://www.iaia.org/pdf/wab/EIA%20Guide_GHG%20Assessment%20and%20Significance_IEMA_16May17.pdf



⁵ This carbon intensity has been calculated using Government data on the average efficiency of CCGT plant in the UK during 2017 (https://www.gov.uk/government/statistics/electricity-chapter-5-digest-of-united-kingdom-energy-statistics-dukes) and the same method as presented in the Environmental Statement (and is therefore comparable).

In summary, the Applicant has acknowledged in the ES that the average carbon intensity of grid electricity is expected to fall over the lifetime of the Proposed Scheme. However, the Applicant has also demonstrated that the Proposed Scheme will not affect the viability or operation of renewable energy generation. Only generation technologies that fall below the Proposed Scheme in the stack would be displaced. Therefore, likely low carbon developments are irrelevant to the baseline assessment in that they will not change with the development of the Proposed Scheme.

 The baseline is frozen in 2025 on the commencement of the coal-phase out emissions limit

The baseline presented in the ES does not change beyond 2025. However, it does take into consideration, the likely evolution of the current state of the environment; for example, it includes the UK Government plan for a 450 gCO2/kWh threshold for existing coal plants. It also considers the potential for decarbonisation of the plant that the Proposed Scheme will displace. It does this by providing space for carbon intensity of the electricity that the plant will displace (plant less efficient than the Proposed Scheme) to fall over the life of the Proposed Scheme.

The ES could have presented a baseline that did change beyond 2025. This baseline would fall from a rate somewhere above 481 gCO2/kWh towards 450. This is based on the current carbon intensity of UK CCGT technology, the fact that the plant will only displace other fossil fuel plants (due to its position in the stack, and its provision of system services), the operational life of fossil fuel plant, and the build out rate of fossil fuel plant with a carbon intensity below 450 gCO2/kWh that will be displaced.

However, there are no available projections of how the carbon intensity of the electricity that the plant will displace will change over time. As such there is significant inherent uncertainty regarding the above. As such a precautionary approach of using a carbon intensity below the carbon intensity of the plant that would produce electricity if the plant was not constructed, has been used. This is inline with EIA Regulations requirement that the "baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge".

4) There is insufficient detail to justify the climate baseline for 2026-2050 Given the uncertainty inherent in future predictions over such a long period, a detailed examination of other possible but unlikely future scenarios or speculation over theoretical changes to Government policy was not considered proportionate or reasonable.

The implicit uncertainty in trying to predict what a future baseline scenario will look like is highlighted by the challenge in identifying "likely" scenarios, demonstrated by looking at the Government's own Long-term Nuclear Energy Strategy⁷, published in 2013. This stated that a "key priority in ensuring the future of nuclear power will be the success of developers' current plans to deploy up to 16GW of nuclear

 $https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/168047/bis-13-630-long-term-nuclear-energy-strategy.pdf$



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capacity... with deployment running through the 2020s". What appeared reasonably likely in 2013 is now a highly unlikely scenario, with proposed nuclear projects at Moorside, Wylfa and Oldbury all on hold and only Hinkley C receiving consent and any prospect of being operational before 2030, leaving a shortfall in reliable, low carbon generation of almost 9 GW. This demonstrates that even detailed future predictions have a high degree of uncertainty attached to them.

Despite this uncertainty, the ES baseline is robust and based on available published information, including the likely evolution of UK electricity generation over the lifetime of the Proposed Scheme. Under all reasonable scenarios, UK energy generation will comprise a mix of renewable and thermal plant, as assessed in the ES baseline.

As per the EIA Regulations the ES must include "A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge". The ES baseline meets this requirement. As explained above, the addition of further scenarios would not be appropriate given the potential uncertainty associated with future energy scenarios, and would exceed 'reasonable effort' based on available information and knowledge. As such The ES has followed the principles of 'proportionate EIA'8.

5) The Applicant has failed to show the partial CCS and co-firing scenarios are reasonably likely

The Applicant has responded to this point in the response to ANC 2.2.

6) The Applicant has set the quantity of generation in the baseline scenario by reference only to the current on-site generating capacity of Units 5 and 6, which is significantly lower than that of the Proposed Development. However, it is a core principle of EIA that assessments should be based on system boundaries appropriate to the project in question, including in respect of the baseline scenario. In the context of capacity connected to the electricity grid, this means setting the baseline scenario on a grid-wide basis and by reference to the quantity of generation produced by the Proposed Development. It is correct to say the baseline scenario is based on a 2x660MW of capacity, and the Proposed Scheme is 2X1,800MW. However, applying 2X1,800MW to the baseline scenario would increase emissions in the baseline scenario, and would therefore present a more positive picture for the Proposed Scheme; as such adopting 2x660MW is considered conservative.

Conversely it is not correct to say that the ES is not based on system boundaries appropriate to the project in question. This is because the ES also presents the carbon intensity of the project, with reference to the baseline scenario, based on the carbon intensity of the electricity that would be produced if the Proposed Scheme



⁸ https://www.iema.net/policy/ia/proportionate-eia-guidance-2017.pdf

did not go ahead. This carbon intensity is based on the plant that the project would displace on the electricity grid, and as such the ES uses a grid-wide boundary, which is appropriate for the Project.

7) The baseline scenario does not take account of relevant greenhouse gas reduction targets.

The ES has discussed relevant national targets in the form of Carbon Budgets. CE mentions the Committee on Climate Change (CCC) power sector scenarios⁹, these are scenarios rather than statutory carbon targets (e.g. the carbon budgets). There is no requirement to discuss these scenarios, and the project, is not inconsistent with these scenarios, or the carbon budgets.

In addition, NPS EN-1 is clear that "Government has determined that CO₂ emissions are not reasons to prohibit the consenting of projects which use these technologies or to impose more restrictions on them in the planning policy framework than are set out in the energy NPSs (e.g. the CCR and, for coal, CCS requirements). The IPC does not, therefore need to assess individual applications in terms of carbon emissions against carbon budgets."

The Applicant has the following comments on how the baseline scenario in the ES meets the relevant requirements of the EIA Regulations.

2.1.18 Rather than quote selectively from the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, it is important to set out the full paragraph 3 of Schedule 4. This states:

"A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge".

Importantly, Regulation 14(3) of the EIA Regulations requires that an ES must:

"(b) include the information reasonably required for reaching a reasoned conclusion on the significant effects of the development on the environment, taking into account current knowledge and methods of assessment;"

The baseline presented in the ES meets the requirements of the EIA Regulations, as follows:

(a) It **does** take account of the relevant aspects of the current state of the environment. The baseline considers the carbon intensity of the electricity that would be produced if the Proposed Scheme did not go ahead. It considers that this electricity would be produced at a carbon intensity of 450 gCO₂/kWh. This is based on the fact that with or without the Proposed Scheme, renewables will operate. However, without the Proposed Scheme other fossil fuel plant will operate (as explained fully in paragraphs 4.8 to 4.29 of the

⁹ https://www.theccc.org.uk/wp-content/uploads/2015/10/Power-sector-scenarios-for-the-fifth-carbon-budget.pdf



Applicant's Note on Substantial Weight to be Given to Need and Application of Tests Under S104, REP5-021), and given that the current fleet of CCGTs (the most efficient fossil fuel plant), operate above 450 gCO₂/kWh, it can be stated that the baseline takes the current state of the environment into account (this is also explained earlier in response to this question).

(b) As set out earlier in response to this question, the baseline **does** take into consideration the likely evolution of the current state of the environment; for example, it includes the UK Government plan for a 450 gCO₂/kWh threshold for existing coal plants. It also considers the potential for decarbonisation of the plant currently on the grid. The lowest carbon plant that the project will displace (CCGT), currently has a carbon intensity of 481 gCO₂/kWh. The average carbon intensity of the plant that the Proposed Scheme will displace is likely to be significantly higher than 481 gCO₂/kWh of just the CCGT. As old plant is retired, and replaced with new more efficient plant (like the Proposed Scheme), the average carbon intensity of electricity that the Proposed Scheme would displace will fall. The selection of 450 gCO₂/kWh takes this into account, as it provides space for the carbon intensity of the electricity that the plant will displace (plant above the Proposed Scheme in the stack) to fall over the life of the Proposed Scheme.

The baseline also takes the expansion of renewables / the decarbonisation of the grid into consideration. However, because renewables will all sit below the Project in the stack, and because the Proposed Scheme will provide system services, the electricity that would be produced if the project did not exist, would not be produced from these sources. As such, although they are taken into consideration, they are not included within the 450 gCO₂/kWh baseline figure.

- (c) Finally, the EIA Regulations require that the likely evolution from the baseline scenario is to be described as far as "natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge". The description of the future baseline is required to be based on a set of assumptions and predictions, because clearly no one is able to know with certainty how the current baseline will evolve. The approach taken to quantifying the baseline carbon intensity is considered to have been undertaken using reasonable effort, based on the environmental information (in this case, the current carbon intensity of UK CCGT technology, the fact that the plant will only displace other fossil fuel plants (due to its position in the stack, and its provision of system services), the operational life of fossil fuel plant, and the build out rate of fossil fuel plant with a carbon intensity below 450 qCO2/kWh that will be displaced).
- 2.1.19 In addition to the requirements of the EIA regulations, CE also presents some extracts and interpretations from the European Commission¹⁰ guidance, stating that the baseline:
 - 1. "must "form the foundation" against which both the project and alternatives to the project are assessed at the outset, and therefore allow for consideration of the maximum extent to which a significant environmental impact can be either avoided or reduced, including by developing less, differently or not at all".
 - 2. "must be "dynamic", "moving baselines", taking into account future "trends and

¹⁰ European Commission, Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment, 2013



- scenarios" over the life of the project and avoiding "snapshot analysis (i.e. at a single point in time)", particularly in the context of long-term infrastructure projects and in respect of greenhouse gas emissions".
- 3. "must be based on rigorous and thorough analysis, proportionate to the scale of the project, with the development of the baseline often comprising "the bulk of the EIA process" and "a significant proportion of the final EIA Report".
- 2.1.20 In terms of point 1, the European Commission guidance does state that the baseline forms the foundation of the assessment, and the baseline presented in the ES does provide this.
- 2.1.21 In terms of Point 2, the European Commission guidance actually states that "the Baseline should, therefore, be dynamic, going beyond a static assessment of the current situation". And in fact, goes on to say "This is especially important for issues where there is considerable uncertainty, such as climate change, or for longer-term developments, such as large infrastructure Projects. Predicting uncertain elements can be challenging, particularly concerning the availability of information, as well as ensuring that the assessment is carried out with reasonable effort". We have in any event demonstrated earlier in the response to this question how the baseline used is dynamic, in line with the guidance.
- 2.1.22 In terms of point 3, the selective quotation is misleading. The full quotation is that "the development of the Baseline can often comprise the bulk of the EIA process, and can occupy a significant proportion of the final EIA Report". It does not specify that this must be the case and this should be read in the context of the ensuring the assessment is carried out with "reasonable effort".
- 2.1.23 Overall the guidance presented is precisely that guidance. It states what should and can be done, not what must be done. In any event, the baseline for the ES of the Proposed Scheme was presented in line with this guidance, as demonstrated below:
 - (a) The baseline **is** the foundation of the assessment.
 - (b) The baseline **is** dynamic, it **does** consider potential changes to future emissions rates, including the UK Government plan for a 450 gCO₂/kWh threshold for coal plants. The description of the future baseline is appropriate as it assesses the changes "with reasonable effort on the basis of the availability of environmental information and scientific knowledge", particularly in light of the uncertainty regarding the carbon intensity of plant that would produce the electricity over the 25 year lifetime of the Proposed Scheme if it did not exist. As outlined previously (and as explained in detail at paragraphs 4.8 to 4.11 of the Applicant's Note on Substantial Weight to be Given to Need and Application of Tests Under S104, REP5-021) the average of all electricity generation technologies including renewables would not be an appropriate baseline as the plant will not displace renewables, and although there are forecasts available for the carbon intensity of the whole grid, there are not forecasts available for the carbon intensity of only the plant that would produce the electricity if the Proposed Scheme did not exist.
- 2.1.24 The bulk of the ES chapter is not taken up with the baseline. However, it does not have to be, and the baseline is based on rigorous and thorough analysis, as has been presented. As required by Regulation 14(3) of the EIA Regulations, it includes the information



reasonably required in order to reach a reasoned conclusion as to the significant effects of the Proposed Scheme, having regards to current knowledge and methods of assessment.

Response to part (ii)

- 2.1.25 The figures presented by CE in Table 15-13 of its Revised baseline scenario and quantitative climate impact assessment in respect of Drax Re-power (REP5-022), underestimate the carbon intensity of the electricity that would be produced if the Proposed Scheme did not exist. This is because the data used predicted average carbon intensity of the UK electricity grid to 2050 is an average that includes renewables. However, the carbon intensity of the electricity that would be produced if the Proposed Scheme did not exist would not include renewables (with their very low to zero carbon intensity and low operating costs). The reasons for this have been set out fully at paragraphs 4.8 to 4.11 of the Applicant's Note on Substantial Weight to be Given to Need and Application of Tests Under S104.
- 2.1.26 This is because National Grid operates an auction system call the 'stack'. This system is designed to deliver the cheapest electricity to the consumer through competition between different electricity generation operators leading to the most efficient operators (i.e. those with the lowest operating costs), bidding lowest and therefore being dispatched first by National Grid. Renewable sources of electricity (including battery storage of renewable electricity) do not have fuel costs, and as such have the lowest operating costs. However, the Proposed Scheme does have fuel cost, and as such has higher operating costs than renewables. The plant is none-the-less very efficient and as such will outperform other existing and consented fossil fuel generators (who have higher fuel costs per unit of electricity). As such the electricity that would be produced if the Proposed Scheme did not exist, would be produced at the carbon intensity of this fossil fuel plant. This would be in excess of 450 gCO₂/kWh, rather than the 70 gCO₂/kWh as presented by CE. In essence, ClientEarth's proposed revised baselined scenario does not accept that thermal plants will be required, despite all projections stating otherwise.
- 2.1.27 The only relevance of the average grid carbon intensity is in considering the effect the Proposed Scheme would have on that average. By displacing more polluting generating stations on the grid, the Proposed Scheme will reduce (improve) that grid average intensity and reduce overall carbon emissions from the electricity sector.
- 2.1.28 In addition, the Proposed Scheme provides system services such as frequency response (that can only be reliably provided by fossil fuel plant) (explained in detail at paragraphs 3.16 to 3.44 of the Applicant's Note on Substantial Weight to be Given to Need and Application of Tests Under S104, REP5-021). As such the Proposed Scheme provides essential services that renewables cannot provide (for the reasons explained at paragraphs 3.32 to 3.44 of the Applicant's Note on Substantial Weight to be Given to Need and Application of Tests Under S104), which means a comparison with a baseline that includes renewables, is inappropriate for these reasons as well as those outlined above.
- 2.1.29 Furthermore, the plant also provides capacity when renewables are unavailable (for example due to weather conditions). As such the plant is most likely to run when renewables are not operating. During times when renewables are not operating, the UK grid average increases. As such, even if it was appropriate to use a baseline based on the grid average (which it is not as outlined above), the average presented would still be an underestimate, as the Proposed Scheme is most likely to run when renewables are not operating, and as



- such, would run at a times when the short-term grid average is above the grid average to 2050.
- 2.1.30 Finally, CE does not include the Well to Tank (WTT) emissions within their methodology to produce a 'revised baseline'. The BEIS modelling the CE methodology is based on includes 'transmission and distribution losses', however, does not include WTT emissions (emissions from the extraction, processing and transportation of fuel). However, CE compare this to the Proposed Scheme running at a carbon intensity of 380 gCO₂/kWh. The 380 gCO₂/kWh figure includes WTT emissions. This is therefore not a like for like comparison, and as such the CE methodology does not produce a baseline that can be compared to the performance of the Proposed Scheme.
- 2.1.31 As such the figures presented by CE in Table 15-13 overestimate the impact of the Proposed Scheme, through the selection of an irrelevant and inappropriate baseline.

Response to part (iii)

- 2.1.32 As per the EIA Regulations the ES must include "A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge".
- 2.1.33 When applying this definition to the Proposed Scheme, the carbon intensity of the baseline must be the carbon intensity of the electricity what would be produced without the Proposed Scheme. In addition, this baseline also needs to be 'likely' and be assessed with 'reasonable effort on the basis of the availability of environmental information and scientific knowledge'.
- 2.1.34 As has been set out previously, the electricity that would be produced without the Proposed Scheme, does not include renewable electricity. With or without the Proposed Scheme, the same quantity of renewables will run all renewables available. However, some thermal plant (Gas, oil and coal) will not be dispatched if the Proposed Scheme goes ahead, and will need to run if the Proposed Scheme does not go ahead. As such, the carbon intensity of the electricity that would be produced without the Proposed Scheme is electricity that will be projected by thermal plant, not by renewables.
- 2.1.35 CE's alternative methodology proposes using the average carbon intensity of the whole UK electricity to 2050 as the baseline. This baseline includes renewables, and does not consider that the project is most likely to run when the short-term grid average is above the long-term grid average. As such this methodology does not produce the carbon intensity of the electricity that would be produced without the Proposed Scheme (the reasons for this are set out above, and have been detailed elsewhere). Therefore, CE's methodology does not produce a baseline that could be used to assess the Proposed Scheme.
- 2.1.36 In terms of providing a 'worst case' scenario, the grid average to 2050 data provided by CE also is not appropriate. This is because, as previously outlined, the Proposed Scheme will not displace renewables. The carbon intensity of the electricity that would be produced without the Proposed Scheme will not include renewables, and will certainly not be the average of the whole electricity grid to 2050. This means a baseline based on grid average is not a worst case, it is implausible and does not comply with the EIA Regulations.



- 2.1.37 As per the EIA Regulations the baseline must be a 'likely evolution'. As demonstrated previously the CE methodology does not produce a 'likely evolution'. However, the baseline of 450 gCO₂/kWh used in the ES does produce a 'likely evolution' for the baseline carbon intensity.
- 2.1.38 As previous analysis has shown, the 450 gCO₂/kWh baseline is the worst case (the lowest carbon plant that the Proposed Scheme will displace (CCGT) on the grid currently, has a carbon intensity of 481 gCO₂/kWh). As such the baseline already represents a likely worst case. Given the parameters within which the UK electricity system operates, it is not likely that the Proposed Scheme will displace electricity at an average rate significantly less than 450 gCO₂/kWh, and therefore a range of scenarios do not need to be presented to meet the requirements of the EIA Regulations.

Table 2-5 - ExA Written Question - ANC 2.6

ExA Ref	Question to	Question	
	Applicant	Carbon Capture Storage Readiness -	
2.6		At the ISH on Environmental Matters held on Wednesday 5 December 2018 [EV-010 – EV-013], and confirmed in its written submissions for D4 [REP4-012], the Applicant stated that it is not economically feasible to install carbon capture storage.	
		i. Justify this response.	
		ii. Given the increase in greenhouse gas emissions from the Proposed Development as set out in Chapter 15 of the ES [APP-083], and the concerns raised above in respect to baseline scenarios, explain whether a commitment to carbon capture storage should be made to the relevant planning authority at a later stage.	
		iii. If so, amend the dDCO [REP5-011] accordingly.	

2.1.39 Regarding part (i), the Applicant firstly re-iterates that it will be technically feasible to retrofit Units X and Y and it is likely that in the lifetime of the Units it will be economically feasible to link the plant to the full CCS Chain (in line with the CCR conditions contained in the Carbon Capture Readiness (Electricity Generating Stations) Regulations 2013 and Government's CCR Guidance - Carbon Capture Readiness (CCR): A Guidance Note for Section 36 Electricity Act 1989 Consent Applications (November 2009)). The reference to "not economically feasible" was in relation to current costs of CCS which the Government itself acknowledges is "currently expensive and cost reductions are necessary to be able to deploy CCUS cost effectively in the UK, providing value for money for both the taxpayer and consumers."¹¹

¹¹ https://www.gov.uk/guidance/uk-carbon-capture-and-storage-government-funding-and-support



- 2.1.40 With respect to Carbon capture and storage not currently being economically feasible, CCS has not currently been demonstrated on a plant of the size of the Proposed Scheme anywhere in the world. This means that it would be unique in its scale, which would have a significant impact on the capital cost of the Proposed Scheme.
- 2.1.41 Drax have previously been involved in a carbon capture and storage project (the White Rose Project) and the feasibility assessments identified that the most technically robust solution was to pipe the CO₂ out to the southern North Sea and to inject it into geological features under the sea bed. The White Rose project would only have been economically feasible with government funding; the reason that the project did not go ahead was because the government funding was withdrawn. The extensive pipeline and storage facilities for the White Rose project were designed and sized to be shared with other carbon emitters, termed the Yorkshire and Humber Cluster, in order to reduce the costs of storage. Without government funding and a commitment to cost sharing from other users, the transport and storage facilities would currently be prohibitively expensive.

The storage of CO₂ in underground geological features would also represent major long-term liabilities that would add significant additional cost.

- 2.1.42 The CCS plant would represent a large parasitic electrical load to the plant, which would be evident as a major reduction in overall plant efficiency, calculated from fuel use to electrical output to the grid, and therefore a large operational expense to the plant. Due to these disproportionate costs, a requirement to commit to CCS would fail the test of 'reasonableness' (see the Planning Practice Guidance, which provides that 'Conditions which place unjustifiable and disproportionate financial burdens on an applicant will fail the test of reasonableness').
- 2.1.43 Since no other large generator operates CCS, installation of CCS on the Proposed Scheme alone would put the development at an economic disadvantage compared to competitors. Additional costs of this scale would mean that Drax Repower would be the most expensive large thermal generator in the UK portfolio and therefore all other available thermal plant would be called on to generate before Repower, meaning that proposed development would only rarely or never operate commercially in the short to medium term stages of its operational life, until the requirement to install CCS became government policy through a legislative requirement. This would have the perverse effect of ensuring that less efficient, higher CO₂ intensity plant would always be called on to run ahead of an efficient plant with CCS, meaning that there would be an overall relative increase in the UK electricity system CO₂ intensity than if the Proposed Scheme were to proceed without CCS.
- 2.1.44 It is because the capital and operational costs of CCS are prohibitively expensive, that the current CCR Guidance¹² requires:
 - "...if granted consent, operators of the power station will be required to:
 - retain control over sufficient additional space on or near the site on which to install the for the carbon capture equipment, and the ability to do use it for that purpose;

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/43609/Car bon capture readiness - guidance.pdf



¹²

- submit reports to the Secretary of State for DECC as to whether it remains technically feasible to retrofit CCS to the power station. These reports will be required within 3 months of the commercial operation date of the power station (so avoiding any burden on the operator with an unimplemented consent) and every two years thereafter until the plant moves to retrofit CCS.
- 2.1.45 This is similarly reflected by the current requirements of the CCR Regulations (which as explained in relation to part (ii) of the question below, have been reviewed by the Government in November 2018 and found to be fit for purpose as currently drafted).
- 2.1.46 Therefore, there is an existing requirement to regularly review the technical feasibility to install CCS and there is no requirement for further commitments through the Development Consent Order process. The CCR Guidance includes model requirements which have been relied upon by the Application in the CCR requirements contained in its draft DCO.
- 2.1.47 Recently, the UK Government has strengthened its position on future installation of CCS, through the Clean Growth Strategy¹³; however, it acknowledges that the costs for CCS are currently too high and it sets out mechanisms for reducing the costs over time, although there is no certainty that this goal will be met in the short to medium term:

"CCUS has the potential to decarbonise the economy and maximise economic opportunities for the UK. However, it is currently expensive and cost reductions are necessary to be able to deploy CCUS cost effectively in the UK, providing value for money for both the taxpayer and consumers.

Through the Clean Growth Strategy, the government has set out a programme of work that will be undertaken to establish the additional steps that are required to meet the ambition of having the option to deploy CCUS at scale during the 2030s, subject to cost reduction. In delivering this work, government will work collaboratively with the CCUS industry, including existing projects."

- 2.1.48 In conclusion, the high capital and operational costs of CCS and the acknowledgement by Government that it is not yet economically feasible, allied with the fact that there is a large amount of uncertainty about the future economic feasibility of CCS means that it would currently be inappropriate to include a requirement to commit to CCS through the DCO process. Such a requirement would be unreasonable for the reasons set out above. Drax is already closely involved with the Government in the area of CCS on its existing assets and is committed to working to develop relevant technologies and reduce costs¹⁴.
- 2.1.49 Regarding part (ii), the Applicant does not consider that it is appropriate for a requirement to be imposed committing to CCS at a later stage. This is for the reasons set out at paragraphs 4.35 to 4.42 of the Applicant's Note on Substantial Weight to be Given to Need and Application of Tests Under S104, REP5-021. As stated in that note, at paragraph 4.34, whilst there will be an increase in GHG as a result of the Proposed Scheme, that is not an

¹⁴ <u>https://www.drax.com/press_release/energy-clean-growth-minister-visits-innovative-carbon-capture-pilot-drax/</u>



https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/700496/clean-growth-strategy-correction-april-2018.pdf

entirely accurately representation of the findings of the climate assessment, as outlined in the Environmental Statement Chapter 15 (APP-083) given the indirect benefits the Proposed Scheme would have on GHG emissions and its increased capacity (as explained in the note in the sections starting at paragraph 4.5, and at paragraph 6.11). It is simplistic to simply state that the Proposed Scheme will increase green house gas emissions, when there are wider indirect benefits of the Proposed Scheme, e.g. displacement of older thermal plants and security of supply enabling other sectors to decarbonise, such as industry and transport. As the Environmental Statement makes clear, "In terms of the GHG emissions intensity per unit of electricity output, the Proposed Scheme is judged to provide a significant positive effect on climate compared with the baseline/do nothing scenario."

- 2.1.50 As was explained in the Applicant's note submitted at D5, there is currently no policy or legislative basis for requiring the installation of carbon capture and storage on any existing or new large combustion plant. The legal requirement (in accordance with the Carbon Capture Readiness (Electricity Generating Stations) Regulations 2013 ("CCR Regulations") and Government's CCR Guidance Carbon Capture Readiness (CCR): A Guidance Note for Section 36 Electricity Act 1989 Consent Applications (November 2009) ("CCR Guidance")) is for the project to demonstrate carbon capture readiness by demonstrating that there is sufficient land secured and under the applicant's control and there is an assessment of technical and economic feasibility to install carbon capture plant.
- It would have been quite easy for the Government to say either it will not permit new fossil 2.1.51 fuel generation plants or that any such plants would have to have CCS or to limit the amount to be consented to a specific level of capacity. It did none of these things. As required by Regulation 7 of the CCR Regulations, the Environment Minister undertook her statutory review of the CCR Regulations 2013 in November 2018. In that review the Minister confirmed that the CCR Guidance and CCR Regulations will be kept under review to ensure CCR requirements continue to be fit for purpose as technologies advance, but that there is no requirement currently to amend the Regulations. This is further evidence of the Government's existing policy with respect to CCR and CCS, as set out in the Applicant's Note on Substantial Weight to be Given to Need and Application of Tests Under S104, 4.36 and 4.36; it follows that there is a very clear regulatory position set out in the CCR Regulations, only recently endorsed by Government review. Whilst the Government's policy (and the emphasis in EN-1) is to bring forward low carbon technology, the Government recognises the need for fossil fuel generation and supports it in the national policy statement (subject to it being CCR). It would be at odds with the urgent need for fossil fuel generation, as identified in the NPS EN-1, to impose a requirement which has the effect that fossil fuel generation was not delivered to meet that identified need.
- 2.1.52 The same concerns as set out in paragraph 4.40 of the Applicant's D5 note apply in relation to the type of requirement suggested by the ExA in this question. To require CCS would be tantamount to rewriting recently endorsed Government policy which is based on detailed research into feasibility and practicality. Such a requirement would not meet standard tests for requirements / conditions, as it would be unreasonable because it would be at odds with planning policy, and the relevant legislation and guidance for CCR, as set out above. The requirement could not be said to make the development acceptable in planning terms, having regard to planning policy.
- 2.1.53 With respect to part (iii), the Applicant does not propose amending the draft DCO.



3 AIR QUALITY

Table 3-1 - ExA Written Question - AQ 2.1

ExA Ref	Question to	Question
AQ	Applicant	Selective Catalytic Reduction (SCR) and Ammonia Cap
2.1		In the draft SoCG with Environment Agency (EA) [REP4-007] in paragraph 3.2.1e, it is stated that the use of secondary abatement technology, selective catalytic reduction (SCR) may be required to achieve the reduction of oxides of nitrogen emissions by injecting ammonia from the emissions stack, called the "ammonia slip".
		i. Set out what, if any, further information does the Applicant need to determine whether or not use of secondary abatement technology, SCR, will be required.
		ii. Explain whether it is likely to be determined before the close of the Examination.

- 3.1.1 The decision as to whether further reduction of NOx would be required for the Proposed Scheme was dependent on a decision by DEFRA regarding the relevant NOx Associated Emission Levels (AELs) that would be applied to high efficiency CCGT plant. As reported by the Environment Agency at the Issue Specific Hearing (environmental matters) (see paragraphs 3.153 & 3.154 of the summary of the Applicant's oral case at the hearing, REP4-012), the Environment Agency notified the industry trade body (Energy UK) in December 2018 that DEFRA had made the decision that the Best Available Techniques Reference (BREF) document AEL for new large combustion plant would apply to high efficiency CCGT plant (such as the Proposed Scheme). The Applicant anticipated this potential outcome by including secondary abatement in the form of Selective Catalytic Reduction (SCR) as a means of reducing NOx in its DCO Application and in its environmental assessment and habitats regulations assessment. An artefact of the operation of SCR is that any unreacted ammonia is emitted from the stack and is called 'ammonia slip'.
- 3.1.2 Secondary abatement (such as SCR) is not the only option for reducing emissions of NOx from high efficiency plant. The plant could be operated at slightly lower outputs in order to meet the NOx emission limits, which is in effect primary abatement. The engineering teams from Drax's Original Equipment Manufacturer (OEM) and from Drax are currently assessing the costs and benefits associated with primary and secondary abatement. Drax intends to vary the submitted Environmental Permit variation application to accommodate both options following the DEFRA December 2018 announcement. Once issued, emissions from either compliance route would be regulated by the Environment Agency through the Environmental Permit.



3.1.3 In any event, and as noted above, the Application allows for the Proposed Scheme to operate either with or without SCR. Accordingly, which ever form of abatement is decided upon, in conjunction with the Environment Agency, the DCO Application has assessed that abatement – with SCR and ammonia slip already covered in the assessment conclusions in the Environmental Statement and the Habitat Regulations Assessment.



4 BIODIVERSITY & HABITATS REGULATIONS

Table 4-1 - ExA Written Question - BHR 2.1

ExA Ref	Question to	Question	Question		
BHR 2.1	Applicant	[EV-010 - (NYCC) a secured of DEFRA of one of the	H on Environmental Matters on Wednesday 5 December 2018 – EV-013] it was stated by North Yorkshire County Council and Selby District Council (SDC) that the biodiversity net gain of 5% and 6% was the minimum expected and that a recent consultation recommended 10%. This has also been set out as e matters to resolve in Paragraphs 3.2.4-3.2.7 within the SoCG [[REP4-009].		
		i.	Provide a further response or update to Paragraph 3.146 of the Applicant's written response to D4 [REP4-012] and whether opportunities exist to use existing owned land to improve and enhance ecology.		
		ii.	If so, provide an updated Outline Landscape and Biodiversity Strategy (LBS) and Biodiversity Net Gain Report.		
		iii.	Provide an update on outstanding matters in the SoCG with YWT [REP4-009].		

- 4.1.1 With respect to part (i) the Applicant would like to highlight that the DEFRA consultation states that nationally significant infrastructure is not in the scope of the consultation (footnote 3, page 5) (Ref 1).
- 4.1.2 The Applicant has continued to explore opportunities to deliver additional Biodiversity Net Gain ("BNG") since Deadline 4. This has included considering the use of existing owned land (i.e. land within the control of the Applicant) to improve and enhance ecology.
- 4.1.3 The Applicant had previously conducted an optioneering exercise to identify land that could be made available for ecological mitigation and enhancement. This exercise is described in the Outline Landscape and Biodiversity Strategy ("OLBS"). The latest version of this document was submitted into the Examination at Deadline 2 (Examination Library Ref: REP2-026). Section 2.2 and Figure 6.7.2 of the OLBS sets out the process taken to determine mitigation areas, which assessed factors including existing land-use, potential contribution to mitigating impacts, and connectivity with other habitats and landscape features.



- 4.1.4 The Applicant has revisited this exercise, and has not identified any additional opportunities to provide substantive ecological and / or landscape mitigation within its landholdings. The reasons previously identified, for example removal of Best and Most Versatile agricultural land, continue to apply. The Applicant has, however, identified land to the west of Wren Hall Lane in the ownership of a third party, where additional ecological enhancements can be delivered (the "Bingley Land"). Mitigation measures relating to the Bingley Land would be agreed with the landowner through a land agreement outside the DCO (and confirmation of agreement between the Applicant and the landowner in this respect will be provided to the ExA prior to the end of the Examination). The proposed ecological enhancements are shown on Figure 6.7.9 of an updated OLBS, which is submitted at this Deadline 6 (Applicant's document reference 6.7 Revision 003).
- 4.1.5 The BNG report has been updated to reflect the additional ecology enhancements that would be delivered; a revised version is provided as part of the Applicant's Deadline 6 submission (Applicant's document reference Appendix 9.10 Biodiversity Net Gain Assessment Revision 003). The updated BNG calculations show an increased BNG of +7% for area-based habitats and +8% for linear habitats. This compares to the previous round of calculations which predicted a BNG of +5% for area-based habitats and +6% for linear habitats.
- 4.1.6 The Applicant would like to highlight again that the predicted impacts of the Proposed Scheme on biodiversity on which the BNG is based are a worse-case scenario in terms of habitat loss. It is unlikely that construction will require the entire footprint of the Proposed Scheme to be cleared and built out; as such it is unlikely that the worse-case scenario for habitat loss will occur. Delivery of the landscaping and ecological enhancements specified in the OLBS would therefore be likely to deliver a greater level of BNG than the 7% (area-based habitats) and 10% (linear habitats) currently predicted. The Applicant has previously made this point at the Issue Specific Hearing (Environmental Matters) (see paragraph 3.141 of the Applicant's Written Summary of Applicant's Oral Case at Issue Specific Hearing; Examination Library Ref: REP4-012). The Applicant continues to consider that the level of BNG that would be delivered by the Proposed Scheme is proportionate to the nature of the impacts.
- 4.1.7 With respect to part (ii) an updated OLBS and updated BNG report are submitted by the Applicant at this Deadline 6, as described above.
- 4.1.8 With respect to part (iii), the Applicant remains in discussions with YWT and has been updating them over the potential increase in BNG, subject to reaching signed agreements with the landowner. YWT agree that both Parties are unlikely to reach agreement on a number of outstanding specific issues, this position will be reflected in an updated SoCG.

Table 4-2 - ExA Written Question - BHR 2.2

ExA Ref	Question to	Question
2.2	Applicant North Yorkshire	At the ISH on Environmental Matters on Wednesday 5 December 2018 [EV-010 – EV- 013] the Applicant offered to strengthen the wording in the Outline Construction and Environmental Management Plan (CEMP) [REP2-025] in respect of the watercourse crossings and



ExA Ref	Question to	Question
	County Council Selby District Council	the selected construction technique. An updated Outline CEMP submitted for D4 [REP4-005] amends Paragraph 1.3.11 to include the following statement: "The confirmed construction technique at each crossing location and reasons for any deviation from the approach shown in Table 1-2 will be shared with North Yorkshire County Council and Selby District Council prior to the commencement of those works." Confirm the adequacy of the Outline CEMP.

4.1.9 This question appears to be addressed to SDC and NYCC only. The Applicant considers the text included in the Outline CEMP submitted for Deadline 4 is sufficient.

Table 4-3 - ExA Written Question - BHR 2.3

ExA Ref	Question to	Question	
BHR 2.3	Applicant	the descrit. 1.2.16 that 122.5m a modelling for the pudata prest the Applicamendments.	cant's updated HRA Report [REP3-017] includes in respect to iption of the Proposed Development, confirming at paragraph at "Each HRSG will have a main stack, with a minimum height of nd a maximum height of 123m". However, the air quality data presented in Section 6 of the HRA Report, as relied upon rposes of the assessment, continues to refer to the modelling ented in ES Chapter 6 Air Quality [APP-074] as submitted with cation. The Applicant's 'Assessment of non-material ents to the proposed scheme' [RE3-022] does not discuss how sed amendments to the scheme parameters has affected the ort.
		i. ii.	Provide a revised HRA Report or provide an addendum to the HRA Report [REP3-017] based on the Proposed Development as proposed by the non-material change request submitted at D3, to include the re-run air quality data and modelling. Provide Word versions of any updated HRA screening and integrity matrices.



- 4.1.10 With respect to part (i) a revised copy of the HRA report is provided as part of the Applicant's Deadline 6 submission (Applicant's document reference: 6.6 Revision 003).
- 4.1.11 With respect to part (ii) revised integrity matrices are provided as part of the Applicant's Deadline 6 submission (in Word format). No revisions to the screening matrices have been required as the Applicant was already carrying out an Appropriate Assessment, and hence the integrity matrices only have been amended.

Table 4-4 - ExA Written Question - BHR 2.4

ExA Ref	Question to	Question	1	
BHR 2.4	Applicant Natural England	026] in requestioni updated appear to included For exam defers to incorporatinclude pout, the aminimisir	The ExA acknowledges the additions made to the Outline LBS [REP2-026] in respect of otter and fish mitigation following the ExA's questioning (BHR 1.19 [PD-006]). However, additions made to the updated Outline CEMP [REP4-005] in respect of otters and fish species appear to be minimal and do not contain the same certainty as those included in the HRA Report [REP3-017] and Outline LBS [REP2-026]. For example, paragraph 3.4.6 defers to the HRA Report and states that the measures "should be incorporated in the final CEMP for submission" and that "Such measure include pre-construction surveys ideally before site clearance is carried out, the avoidance of any obstructions to established otter paths, minimising light spill and the use of exclusion zones if necessary." [emphasis added].	
		i.	Check and correct differences between the Outline CEMP, the Outline LBS and the HRA in this matter.	
		ii.	Comment on the revisions to the Outline CEMP and whether the revision will support the statements made in the Applicant's HRA Report and Outline LBS.	

- 4.1.12 In response to part (i) having checked the differences with the OLBS and HRA, an updated version of the outline CEMP is provided as part of the Applicant's Deadline 6 submission (Applicant's document reference 6.5 Revision 003).
- 4.1.13 In response to part (ii) the revisions to the outline CEMP strengthen the wording to match that used in the OLBS and HRA Report, making it clear that the necessary mitigation measures would be carried out under the CEMP and are not optional activities.



Table 4-5 - ExA Written Question - BHR 2.5

	Question to	Question	
BHR 2.5	Applicant	Paragraphs 5.3.21 and 5.3.22 of the HRA Report [REP3-017] states that there may be some insignificant residual effects on the otter feature of the European sites.	
		i.	Confirm how the Secretary of State could be confident that these effects would not interact with the effects of other plans or projects to lead to significant in-combination effects.
		ii.	Comment on whether any insignificant residual effects on the fish features are anticipated and if so, confirm as per otters above how the Secretary of State could be confident that any such effects would not interact with the effects of other plans or projects to lead to significant in-combination effects.

- 4.1.14 In response to part (i) the HRA Report states at Paragraph 5.3.21 that there may be some minor residual effects on otters' use of habitats within and adjacent to the Proposed Scheme, within the Pipeline Area (i.e. where the gas pipeline will be constructed). The paragraph goes on to conclude that 'no perceptible effects on otters are expected to arise'.
- 4.1.15 There is abundant suitable habitat for otters within the River Derwent SAC and Lower Derwent Valley SAC and surrounding habitats (see paragraph 5.3.1 of the HRA report, an updated version of which is submitted at Deadline 6 (Applicant's document reference 6.6)Revision 003). There is also abundant suitable habitat along the River Ouse, as demonstrated by surveys completed by the Applicant (Environmental Statement Appendix 9.9 Otter and Water Vole survey; Examination Library Ref APP-115).
- 4.1.16 Otters occupy large home ranges, with research having shown that the territory of an individual otter may frequently cover in excess of 20 km of watercourse, over an area which some studies indicate can vary between approximately 17 and 36 km². Otters are also able to habituate relatively well to disturbance, as evidenced by the large number of otter populations which include town and city centres as part of individual otters' territories (Ref 2).
- 4.1.17 As highlighted in the Applicant's response to the ExA's First Written Question FW 1.2 (Examination Library Ref: REP2-035), see paragraph 8.1.22), construction of the Gas Pipeline will be relatively short in duration, with construction expected to last approximately four months. There is therefore a limited period of time during which construction of the Gas Pipeline could lead to disturbance of the local otter population.
- 4.1.18 In light of the above, the Applicant does not consider any minor disturbance effects on the local otter population could combine appreciably with those of other plans or projects. As such, there is no prospect of significant in-combination effects.



4.1.19 In response to part (ii) any residual effects on fish qualifying interests would be so minimal as to be imperceptible, as set out in the ES Biodiversity Chapter (Examination Library Ref APP-077). The Applicant therefore considers that the impacts of the Proposed Scheme on fish populations could not combine appreciably with those of other plans or projects. As such, there is no prospect of significant in-combination effects.



References

Ref 1: Department for Environment Farming and Rural Affairs (Dec 2018). Net Gain Consultation Proposals.

Ref 2: Chanin P (2003). Ecology of the European Otter. Conserving Natura 2000 Rivers Ecology Series No. 10. English Nature, Peterborough.



5 COMPULSORY ACQUISITION

Table 5-1 - ExA Written Question - CA 2.1

ExA Ref	Question to	Question
CA 2.1	Applicant National Grid	At the Compulsory Acquisitions Hearing held on Thursday 6 December 2018 [EV-015], the ExA raised the issue of concern expressed by National Grid in its WR [REP2-044] in respect to the Plot 5 'limbs' in connections with Works Nos 8A and 8B, on which compulsory acquisition of new rights are sought as shown on the Land Plan [REP2-006]. The Applicant responded, also confirmed in writing in its submissions at D4 [REP4-010] that this point is wrapped up in discussions with National Grid on the protective provisions, and that the issue was expected to be resolved by the end of the Examination. The 'limbs' remain on the Land Plans submitted at D5 [REP5-004]. Update this position and whether the objection is to be removed.

5.1.1 The Applicant and National Grid are in the process of agreeing the protective provisions and a confidential side agreement and are in discussions regarding the required variations to existing property and commercial documents that relate to the substation and other apparatus located within the Power Station Site. The Applicant hopes to reach agreement prior to the end of the Examination. Whilst the protective provisions included in the draft DCO submitted by the Applicant at Deadline 5 (REP5-011) are not agreed with National Grid, the Applicant considers they appropriately protect National Grid's interests and ensure that no serious detriment is caused to the carrying on of National Grid's undertaking. The Applicant therefore considers that the tests set out in s127 of the PA 2008 are satisfied.



6 DRAFT DEVELOPMENT CONSENT ORDER (DDCO)

Table 6-1 - ExA Written Question - DCO 2.1

ExA Ref	Question to	Question
	North	Definition of Commence Part 1 Article 2
	Yorkshire County Council Selby District Council	In Written Question DCO 1.1 [PD-006], the ExA explained that it was concerned the commencement of proposed Unit Y was not controlled by the dDCO [AS-012]. Notwithstanding its written response at D2 [REP2-035], the Applicant stated at the Issue Specific Hearing on the dDCO held on Thursday 6 December 2018 [EV-014], confirmed in its written response at D4 [REP4-011] that it would look to insert a new Requirement into the dDCO which would require the development to accord with a phasing plan.
		The dDCO submitted at D5 [REP5-011] inserted new Requirement 3 in which this commitment is made.
		Provide a response as to its adequacy

6.1.1 The Applicant can confirm that it provided a draft of the new Requirement 3 to NYCC's lawyer (who represents both NYCC and SDC) ahead of Deadline 5, and it received confirmation that the requirement was agreed by email of 9 January 2019 (see email provided at Appendix DCO-A).

Table 6-2 - ExA Written Question - DCO 2.2

ExA Ref	Question to	Question
	Applicant	Definition of Maintain Part 1 Article 2:
2.2		In Written Questions DCO 1.3 and DCO 1.4 [PD-006], the ExA expressed concerns with the wording of the definition of "maintain" in the dDCO [AS-012]. Specifically, the ExA considers the terms "materially new or materially different" to be undefined and ambiguous; that there is no arbiter of what constitutes a maintenance work to be "unlikely to give rise to materially new or different environmental effects" as opposed to "new or different". Moreover, the ExA considered the definition as worded could potentially allow maintenance works to individually or cumulatively exceed the scope of the ES. The ExA considered the Applicant's response for D2 [REP2-035] focused on the need for the maintenance works rather than its precise wording. In its response at D4 [REP4-011], and at the Issue Specific Hearing on the dDCO held on Thursday 6 December 2018 [EV-014], the Applicant stated that it considered the definition to be acceptable.



ExA Ref	Question to	Question
		The ExA remains concerned for the reasons given above. It also considers the Applicant has failed to explain why the Secretary of State should accept the drafted wording [REP3-007] when they have accepted much tighter and precise wording for the Eggborough Gas Fired Generating Station Order 2018. NYCC/SDC in its response to D4 [REP4-019] have proposed changes to this wording.
		The ExA requests the definition of "maintain" is changed to:
		"includes inspect, repair, adjust, alter, remove, refurbish, reconstruct, replace and improve any part, but not the whole of the authorised development, to the extent that such activities have been assessed in the environmental statement and "maintenance" and "maintaining" are to be construed accordingly"
		Provide a response.

- 6.1.2 The Applicant's position on this point remains as previously set out in the response to First Written Questions (REP2-035, responses to questions DCO1.3 and DCO1.4) and at the Issue Specific Hearing (DCO) (see Written Summary of Applicant's Oral Case at Issue Specific Hearing (DCO) REP4-011, paragraphs 3.8 3.17).
- 6.1.3 The Proposed Scheme clearly needs to be maintained and it cannot be right for the DCO to restrict the maintenance activities in such a way that hinders that maintenance or prevents improvements in technology being taken advantage of. Equally there is a need to ensure that the environmental adverse effects identified in the submitted Environmental Statement are not exceeded. This is the tension that needs to be overcome.
- 6.1.4 The definition of "maintenance" is important to an NSIP promoter because section 31 of the Planning Act 2008 requires a DCO for any NSIP and any development that forms part of an NSIP. Where such maintenance work is considered "development that is part or forms part of a nationally significant infrastructure project", then there is a real concern that work would need its own DCO, which is clearly not what the regime intended. Therefore, these are important submissions to the Applicant.
- 6.1.5 Noting this, and to prevent a situation in which maintenance would be prohibited because it had the effect of *improving* the effects of the Proposed Scheme (through technological improvements or improvements to efficiency), it is proposed to amend the definition with the addition of the words in bold: "...insofar as such activities are unlikely to give rise to any materially new or materially different environmental effects which are worse than those assessed in the environmental statement..."
- 6.1.6 With respect to the terms "materially new or materially different" being undefined and ambiguous, the Applicant has explained at paragraphs 7.1.16 to 7.1.22 of its response to the Examining Authority's First Written Questions what this term means and how it operates in practice to limit the scope of maintenance works that would be undertaken. At paragraph 7.1.22 the Applicant explained why it is not necessary to define this term, explaining that:



- "It is a term that is widely used in DCOs (see for example the Eggborough Gas Fired Generating Station Order 2018 where the term is used in the definition of "permitted preliminary works", Requirement 39 and Schedule 11 without being defined), and can be understood on its face (normal meaning) and, to date, it has not been considered necessary to provide a definition. There is nothing new or different in this proposed DCO that would suggest or merit any change from this established approach."
- 6.1.7 Further, the reference to "unlikely" (underlined in the ExA's question) has a commonly understood meaning in the context of EIA, given the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 refer to "likely significant effects", and all environmental impact assessments are undertaken on the basis of needing to identify likely significant effects.
- 6.1.8 With respect to the reference to there being no arbiter of what constitutes maintenance work, this would be the relevant planning authority, as set out at paragraph 7.1.25 of the response to the First Written Questions. The relevant planning authority is the enforcing authority, and has the ability to take appropriate action if it considered that the maintenance of the Proposed Scheme was not in accordance with the DCO. Ultimately in the event of any potential breach or action, the burden of proof would fall to the Applicant who would need to stay within the terms of section 160 and section 161 of the Planning Act 2008 (as amended).
- 6.1.9 The ExA's question refers to the wording of the Eggborough DCO definition as having "much tighter and precise wording". However, the suggested wording for the definition does not provide any more clarity than the wording provided by the Applicant; it simply shifts the focus to limiting maintenance to works based on what works have been assessed in the ES, from limiting maintenance based on the impacts assessed in the ES. There is no greater clarity or certainty provided for the relevant planning authority in monitoring or enforcing the maintenance works for Eggborough.
- 6.1.10 In addition, there is a distinction in the case of the Proposed Scheme Units 5 and 6 already exist (powered by coal) and form part of the ongoing operation of the existing Power Station, which is already maintained and in respect of which maintenance there is an existing communicative and close working relationship with the local authorities.
- 6.1.11 The Applicant also notes that the ExA's question has rejected its proposed drafting (in underline), that the definition of maintain "includes inspect, repair, adjust, alter, remove, refurbish, reconstruct, replace and improve any part of, but not replace the whole of, the authorised development". This is a separate point to the ones discussed above. The reason for this proposed amendment is that the wording proposed by the ExA could be taken as meaning maintenance activities do not allow the whole development to be inspected, which is surely not the intention. The intention of the definition is presumably to prevent the whole development being rebuilt under the guise of "maintenance", hence the proposed wording. However, we would propose the additional amendments in bold to the definition: "includes inspect, repair, adjust, alter, remove, refurbish, reconstruct, replace and improve any part of, but not remove, reconstruct or replace the whole of, the authorised development".



6.1.12 Accordingly, the definition in the next iteration of the draft DCO will read: "includes inspect, repair, adjust, alter, remove, refurbish, reconstruct, replace and improve any part of, but not remove, reconstruct or replace the whole of, the authorised development to the extent that such activities are unlikely to give rise to any materially new or materially different environmental effects which are worse than those assessed in the environmental statement..."

Table 6-3 - ExA Written Question - DCO 2.3

ExA Ref	Question to	Question
DCO 2.3	Applicant	Application and modification of legislative provisions Article 8 Part 2 In Written Question DCO 1.6 [PD-006] and at the Issue Specific Hearing on the dDCO held on Thursday 6 December 2018 [EV-014], the ExA sought clarification from the Applicant as to whether consents have been obtained in order to dis-apply a number of consents sought by the Article. The Applicant stated [REP4-011] that while the Internal Drainage Board had given its consent in respect to Articles 8(3)(a) and 8(3)(b), the Environment Agency had not done so in respect to Articles 8(3)(c) and 8(3)(d). Provide an update.

6.1.13 The Applicant provided the draft protective provisions (as included in the draft DCO submitted by the Applicant at Deadline 5 (REP5-011)) to the Environment Agency on 21 December 2018. No response has been received at this stage.

Table 6-4 - ExA Written Question - DCO 2.7

ExA Ref	Question to	Question
DCO 2.7	The Applicant The Environment Agency	At the Issue Specific Hearing on the dDCO held on Thursday 6 December 2018 [EV014], the ExA requested details as to why Requirement 21 had been deleted in the updated version of the dDCO [REP2-014]. The Applicant responded, confirmed in its written response to D4 [REP4-011] that it had been removed as it was deemed unnecessary because the matter is controlled by the Environmental Permit Regime (EPR). The ExA has considered the response. However, it considers a separate Requirement in the dDCO is necessary. The ExA considers that even though the Secretary of State, should they decide to make the Order, could rely on the Environment Agency to police the CHP readiness of the scheme, the ExA is concerned that it has other



ExA Ref	Question to	Question
		implications, such as an effect on layout, which would fall outside of the EPR.
		Provide a response, and re-insert Requirement 21 as worded in the dDCO submitted with the Application [AS-012] or suitable appropriate wording.

- 6.1.14 The Applicant's position remains that no CHP requirement is necessary in the DCO as this would duplicate the condition on the environmental permit issued by the Environment Agency. The Environment Agency is very clear that if it grants a permit, it will include a condition to undertake a CHP review (see the Environment Agency's Relevant Representation and Written Representation submitted at Deadline 2, REP2-041). Having a CHP review requirement on both the DCO and the environmental permit could lead to confusion as they could include different specifications.
- 6.1.15 However, the Applicant confirmed at the Issue Specific Hearing (DCO) on 6 December 2018, in response to questions from the ExA, that it would:
 - "... go away and discuss this with the Environment Agency and consider what [CHP] condition the Environment Agency would request. The Applicant will then issue a revised, without prejudice draft Requirement they would be happy to accept should the Secretary of State impose the Requirement." (paragraph 4.42, Written Summary of Drax Power Limited's Oral Case put at the Draft Development Consent Order Issue Specific Hearing 6 December 2018, REP4-011)
- 6.1.16 The Applicant therefore contacted the Environment Agency and was provided with the standard CHP condition the EA would impose on the environmental permit. Having regard to the need to be consistent with the environmental permit, the Applicant proposes that, if the SoS decides to impose a CHP requirement, the following requirement would be appropriate:

Combined heat and power

- 21.—(1) On the date that is 12 months after the date of Work No. 1A full commissioning (or such other date that is agreed with the environment agency having regard to any condition relating to combined heat and power imposed on any environmental permit issued by the environment agency in relation to the operation of the authorised development), the undertaker must submit to the environment agency for its approval a report ("the CHP review") updating the CHP statement.
- (2) The CHP review submitted and approved must—
- (a) consider the opportunities that reasonably exist within 15 kilometres of the authorised development for the export of heat from numbered work 1A and, following the date of Work No. 2A full commissioning, numbered work 2A at the time of submission of the CHP review; and



- (b) include a list of actions (if any) that the undertaker is reasonably required to take (without material additional cost to the undertaker) to increase the potential for the export of heat from numbered work 1A and, following the date of Work No. 2A full commissioning, numbered work 2A.
- (3) The undertaker must take such actions as are included, within the timescales specified, in the approved CHP review.
- (4) On each date during the operation of numbered work 1A and, following the date of Work No. 2A full commissioning, numbered work 2A, that is four years after the date on which it last submitted the CHP review or a revised CHP review to the relevant planning authority (or such shorter timeframe that is agreed with the environment agency having regard to any condition relating to combined heat and power imposed on any environmental permit issued by the environment agency in relation to the operation of the authorised development), the undertaker must submit to the environment agency for its approval a revised CHP review.
- (5) Sub-paragraphs (2) and (3) apply in relation to a revised CHP review submitted under subparagraph (4) in the same way as they apply in relation to the CHP review submitted under subparagraph (1).

Table 6-5 - ExA Written Question - DCO 2.8

ExA Ref	Question to	Question
DCO 2.8	The Applicant	Amendments to the dDCO Provide a response to NYCC/SDC's suggested amendments tabled at D4 [REP4-019] to the dDCO [REP2-014].

6.1.17 The Applicant has provided a response to the amendments to the draft DCO suggested by NYCC/SDC at Deadline 4. That response is set out at paragraph 5.2.5 of the Applicant's Response to Other Parties' Submissions at Deadline 4, submitted at Deadline 5 (REP5-020).



7 LANDSCAPE AND VISUAL

Table 7-1 - ExA Written Question – LV 2.1

ExA Ref	Question to	Question
LV 2.1	Applicant	In its WR, Local Impact Report and responses to WQs [REP2-047], as well as submissions at D4 [REP4-021] [REP4-020] NYCC and SDC expressed concerns with the Outline LBS [REP2-026]. NYCC and SDC have made suggestions such as referring back to key impacts in the ES [APP-078] to identify the 'need' for mitigation, compensation and enhancement requirements; and in that context considering wider options for landscape and biodiversity mitigation. i. Explain how the Outline LBS [REP2-026] addresses the concerns and recommendations set out by the NYCC and SDC in the submissions at D4 [REP4-021] [REP4-020].

- 7.1.1 REP4-021 and REP4-020 were submitted for Deadline 4. Responses in relation to both letters (the letters were drafted in July 2018 and October 2018 respectively), have been dealt with in both the Applicant's position statement on Landscape and Visual Amenity Effects The Appropriateness of Proposed Mitigation (Examination Library Reference: REP2-033) submitted for Deadline 2 and the Applicant's response to the Local Impact Report submitted for Deadline 3 on 8 November 2018 (Examination Library Reference: REP3-026).
- 7.1.2 It should be noted that REP4-021, dated 23 July 2018 relates to the Outline Landscape and Biodiversity Strategy (OLBS) (Examination Library Reference APP-135) submitted alongside the application documents and not OLBS REV 002 submitted at Deadline 2 (Examination Library Reference REP2-026). OLBS REV 002 was revised following discussions with both NYCC and SDC over the content and structure of the document.
- 7.1.3 Key concerns regarding the OLBS drawn from both REP4-021 and REP4-020 are summarised under the headings below with an accompanying response from the Applicant:

7.2 Point 1 – Addressing significant effects through mitigation, compensation and offsetting

Points made in REP-020 and REP4-021:

- The OLBS "lacks clarity and would provide only limited landscape and visual benefit in its current form" (REP 4-020).
- REP4-020 states that "the Strategy is too heavily focussed on optioneering a select number of sites, rather than on need and how it can be achieved, or a review of the wider options to compensate by improving green infrastructure...". The focus should be on "investigating positive opportunities for mitigation, compensation and enhancement" rather than on commercial interests and justifying what cannot be achieved".



- REP4-020 states that OLBS should explain what mitigation and compensation needs are required to reduce the "adverse landscape and visual effects of the Proposed Scheme, particularly within the 3 km study area". This includes undertaking as stated in REP4-021 and active "review of all operational and non operational land within their control."
- REP4-021 goes on to state that the mitigation / enhancement described in the OLBS (Rev 001) "is either short term reinstatement work or is yet to be resolved" through the OLBS. REP4-021 continues stating that "[E]very opportunity should be taken to reduce adverse effects and minimise impacts on visual amenity and impacts on the local community as far as reasonably practicable, in line with current national policy". Mitigation "should be substantive and reflect the scale, significance and likely lifespan of the development with consideration to sensitive receptors".
- 7.2.1 The Applicant has responded to these concerns in the Applicant's response to the Local Impact Report paragraphs 2.8.8 to 2.8.12 (REP3-026) and repeated below for reference:
 - 2.8.8 In response to this, please see the Applicant's position statement on Landscape and Visual Amenity Effects Appropriateness of Proposed Mitigation submitted for Deadline 2 on 8 November 2018 (Examination Library Reference REP2-033). In this position statement the Applicant sets out the measures taken to minimise the effects of the Proposed Scheme on landscape and visual amenity, and has demonstrated why further measures are not reasonably practicable. This position statement concludes that due to the scale and size of the Proposed Scheme it is not feasible to eliminate the localised visual effects on visual receptors and aesthetic, experience and perceptual effects on Landscape Character Areas and the River Derwent Locally Important Landscape Area (ILA), but that the mitigation measures proposed do minimise the effects of the Proposed Scheme as far as reasonably practicable (in line with the requirements of paragraphs 2.6.5 and 2.6.8 of NPS EN-2). As EN-2 states:

"It is not possible to eliminate the visual impacts associated with a fossil fuel generating station. Mitigation is therefore to reduce the visual intrusion of the buildings in the landscape and minimise impact on visual amenity as far as reasonably practicable." (paragraph 2.6.5)

- 2.8.9 It is considered that the mitigation of local landscape character and associated features is as much as can be reasonably and practicably provided based on the constraints outlined in Section 4 of the position statement and in light of the disproportionality and unfeasibility of providing further mitigation as set out in Section 6 of the position statement. The mitigation provided in the Outline Landscape and Biodiversity Strategy (Examination Library Reference REP2-026) is proportionate and, whilst the residual visual effects of the Proposed Scheme are acknowledged, they should be given limited weight in accordance with EN-2 paragraphs 2.8.8 to 2.8.13.
- 2.8.10 This is on the basis that additional mitigation would not in any meaningful way reduce the significant adverse effects on visual receptors within a 3 km radius of the Site or on the localised effects on the aesthetic, experiential and perceptual qualities of specific Landscape Character Areas and Types and the Lower Derwent ILA (refer to Figure 1.1 of the Applicant's position statement on Landscape and



Visual Amenity Effects – Appropriateness of Proposed Mitigation (Examination Library Reference REP2-033) which demonstrates the extent of mitigation required for an area covering 1 km radius from the Proposed Scheme). The benefits of providing further mitigation would be disproportionately low (the significance of effect would not change) compared to the disbenefits (primarily land take of Best and Most Versatile agricultural land and the resultant sterilisation of land) associated with such further mitigation. Accordingly, the Applicant considers that it has taken the necessary measures to minimise the effects of the Proposed Scheme on landscape and visual amenity as far as reasonably practicable as required by paragraphs 2.6.5 and 2.6.8 of EN-2. Such measures are considered in the context of the existing Site and decisions taken in relation to the location, layout and design of the Proposed Scheme. Measures are based on the current baseline as it is today and not on the original Power Station Site.

- 2.8.11 The Applicant has actively reviewed all operational and non-operational land within their control and this is reflected in Section 2 of the revised Outline Landscape and Biodiversity Strategy (Examination Library Reference REP2-026). Opportunities have also been explored for further mitigation as evidenced in the Applicant's position statement on Landscape and Visual Amenity Effects Appropriateness of Proposed Mitigation (Examination Library Reference REP2-033).
- 2.8.12 With respect to LIR paragraphs 7.11 and 7.12, the Applicant has explored opportunities for further mitigation. Further opportunities with partnerships in the local area will not mitigate the direct landscape / visual impact of the Proposed Scheme as evidenced in the Applicant's position statement on Landscape and Visual Amenity Effects Appropriateness of Proposed Mitigation (Examination Library Reference REP2-033). The Applicant does however acknowledge that, whilst unlikely to directly reduce the landscape and visual effects of the Proposed Scheme, additional compensation measures via local partnerships may contribute to improving health, well-being and education.

7.3 Point 2 - Timescale for delivery

Points made in REP-020 and REP4-021:

 REP4-020 states that whilst a commitment to monitoring and management are welcomed the "focus should be on the timescale for delivery of the 'need' rather than just a standard maintenance period. For some areas of land, management for the life of the development may be justified".

Applicant's Response:

- 7.3.1 The Applicant has responded to these concerns in the Applicant's response to the Local Impact Report paragraphs 2.8.55 (REP3-026) and repeated below for reference:
 - 2.8.55 With respect to paragraph 7.70, the Applicant has previously agreed the 25 year time scale with the Councils and considers that such time frame is appropriate. Timescales for ongoing management and maintenance were discussed at the LPA meeting on 12 June 2018. The minutes from this meeting refer to a 25 year timescale and this is evidenced by comments from NYCC's Principal Ecologist who



stated "a target should be set for 25 years reflecting a commitment by Drax to mitigate the identified effects. The Strategy should recognise that over a 25 year period the overall aim of what may be achieved could change. It should also refer to regular checks by relevant people to determine whether the aims / objectives identified are being achieved, and if not actions to remedy any issues where they arise." The point is further iterated by NYCC Principal Ecologist who adds that "a table detailing key impacts, aims / objectives, proposals and targets/ indicators as well as the duration of monitoring, interventions and responsibilities would give LPAs the certainty of knowing that Drax is committed to achieving the objectives over the next 25 years". The Applicant considers that a 25 year timescale for the maintenance is appropriate in terms of extent and nature of impacts and in line with consultation with the local planning authority. The timescale allows for trees to mature and a post establishment maintenance period.

7.3.2 In addition to the above, and in response to extending "the timescale for the delivery of the need rather than just a standard maintenance period" the Outline Landscape and Biodiversity Strategy (Outline Landscape and Biodiversity Strategy Rev 003 submitted for Examination Deadline 6) states in paragraph 1.2.14 that prior to the commencement of any part of the numbered works for Stage 1 and 2 "a detailed Landscape and Biodiversity Strategy(ies) which includes an overarching management, maintenance and monitoring plan and detailed mitigation plans, and which is to be prepared in accordance with this Outline Landscape and Biodiversity Strategy, would be submitted for approval in respect of that numbered work." The Strategy refers to Requirement 7 [note, now requirement 8 of the draft DCO Rev 4, REP5-011], Schedule 2 of the draft DCO (Examination Library REP5-011) which states under clause 3 that strategies must include details of the "proposed timings of such planting" and "a proposed implementation timetable".

7.4 Point 3 – Consideration of Green Infrastructure

Points made in REP-020 and REP4-021:

REP 021 emphasised that consideration should be given to policies within the Leeds
City Region Green Blue Infrastructure Strategy and the Dales to Vales Rivers Network
Catchment Partnership area. Following the submission of the revised OLBS Rev 002,
REP4-020 states the OLBS does not demonstrate the spirit of policies within the
documents referred to, by engaging existing green infrastructure or providing new
green infrastructure in order to mitigate, offset or minimise significant landscape and
visual effects.

Applicant's Response:

7.4.1 The Applicant has responded to these concerns in the Applicant's response to the Local Impact Report paragraphs 2.8.20 to 2.8.25 (REP3-026) and repeated below for reference:

2.8.20 - The Applicant supports the "spirit" of local green infrastructure and has reviewed the Leeds City Region Green Infrastructure Strategy 2017 – 2036 and the objectives of the Dales and Vales Network Catchment Partnership to determine whether, through the Proposed Scheme, opportunities could be sought to directly mitigate the impacts of the Proposed Scheme as well as respond to green infrastructure objectives.



- 2.8.21 Through the Outline Landscape and Biodiversity Strategy (Examination Library Reference REP2-026), opportunities were considered to plant more trees, manage more trees and woodland, manage water and reduce flood risk as well as improve connectivity visually and through the creation of new landscape features and associated habitats. Paragraph 3.1.36 of the Outline Landscape and Biodiversity Strategy states that "[t]he Strategy has also considered the context of the Proposed Scheme as well as opportunities to improve connectivity to the green infrastructure network linking with adjacent landscape features as well as visually with extensive blocks of planting on Barlow Mound to the west.
- 2.8.22 Opportunities to meet the objectives defined in the Leeds City Green Infrastructure Strategy and more specifically the Ouse Catchment Management Plan (Ref 1.16), have also been reviewed and the Strategy has sought to support management of flood water flows into the River Ouse through the introduction of both riparian and floodplain woodland planting where feasible.
- 2.8.23 Specific areas in the Outline Landscape and Biodiversity Strategy which respond to green infrastructure objectives include Additional Areas 1 and 2 and Compensation Areas J and K.
- 2.8.24 Opportunities to respond to green infrastructure are limited by a number of siting and operational constraints and other limitations. Such constraints / limitations are outlined in Section 6 of the Applicant's position statement on Landscape and Visual Amenity Effects Appropriateness of Proposed Mitigation submitted for Deadline 2 on 8 November 2018 (Examination Library Reference REP2-033). Constraints include the extent of Best and Most Versatile agricultural land (Grade 1 and 2) in the immediate vicinity of the Existing Drax Power Station Complex.

7.5 Point 4 - Consideration of design principles as guidelines for further detailed work

Points made in REP-020 and REP4-021:

 REP4-021 states that "[A]dditional to the wider effects, the proposals directly affect the operational site and contractors' accommodation area. While the exact detailed site design is still to be resolved, the design principles should be clearly set out in the LABS as guidelines for further detailed work to follow".

Applicant's Response:

- 7.5.1 The need for design principles where further detailed work is required has been reflected in the revised OLBS Rev 002 and a response to these concerns is summarised in Applicant's response to the Local Impact Report paragraph 2.8.39 (REP3-026) and repeated below for reference:
 - 2.8.39 In response to paragraph 7.51, where the Authorities state that the existing landscape around the Existing Drax Power Station Complex has become eroded and weakened over time due to the expansion of the existing complex and that proposed on site landscape mitigation is limited and weak, it is considered that the proposed mitigation outlined in the Outline Landscape and Biodiversity Strategy and accompanying strategic and internal design objectives redresses this issue (Examination Library Reference REP2-026). Strategy objectives associated with the



Compensation Areas (on site mitigation) and Additional Areas (off site mitigation), and internal design objectives are defined. The internal design objectives are a suite of objectives proposed where the exact detailed site design has yet to be determined. The objectives will form the basis for detailed mitigation plans within specific locations and many of the objectives reiterate the landscape design objectives reflected in Weddle's landscape management report. These objectives are within the Outline Landscape and Biodiversity Strategy, which is secured via the draft DCO.

- 7.5.2 In addition, the Applicant's position statement on Landscape and Visual Amenity Effects The Appropriateness of Proposed Mitigation document states the following under paragraph 5.1.6 to 5.1.8 (REP2-033):
 - 5.1.6. In response to NYCC's Principal Landscape Architect's request to explore further options to introduce mitigation measures within the Existing Drax Power Station Complex boundary, a set of internal design objectives were defined.
 - 5.1.7 The internal design objectives will be secured through the detailed landscape design which will be set out in the detailed Landscape and Biodiversity Strategy(ies) and accompanying detailed mitigation plans pursuant to requirement 7 in Schedule 2 of the draft DCO (Examination Library Reference AS-012, a revised version of which is submitted at Deadline 2 (Applicant's document reference 3.1, now Rev 2)) [note, now requirement 8 of the draft DCO Rev 4, REP5-011] and will form the basis of the detailed mitigation plans for Development Parcels C, E, F and I. The internal design objectives reiterate the landscape design objectives reflected in Weddle's landscape management report whilst others repeat objectives defined for Compensation Areas A, B, C, F, J, K and Additional Areas 1, 2 and 3. Internal design objectives will be considered against the operational requirements and constraints of the Existing Drax Power Station Complex and where an objective cannot be met then the detailed Landscape and Biodiversity Strategies (as required under draft DCO requirement 7 [note, now requirement 8 of the draft DCO Rev 4, REP5-011]) will explain the reasons for this.
 - 5.1.8 The internal design objectives include a set of overarching objectives and site specific objectives relating to:
 - Open space;
 - Infrastructure (new proposed structures Unit X and Unit Y and associated facilities);
 - Site entrances, New Road and margins; and
 - Site car parks (where these form part of the Proposed Scheme).

7.6 Additional Mitigation proposed subsequent to Deadline 5

7.6.1 Further to the position statement on Landscape and Visual Effects – Appropriateness of Proposed Mitigation (REP2-033) and the Applicant's response to the Local Impact Report (REP3-026), the Applicant has presented two areas of further mitigation for consideration; the "Bingley Land" and the Trans Pennine Trail to NYCC and SDC for discussion. The first, the Bingley Land, introduces mitigation measures on land between the Gas Receiving Facility and Wren Hall Lane and would include a 25 m wide area of broadleaved woodland as well as additional hedgerows and semi improved grassland. The Applicant is in active discussions with the landowner over this proposed mitigation. The second relates to resurfacing along the Trans Pennine Trail within 3 km of the Proposed Scheme.



7.6.2 Mitigation measures relating to the Bingley Land would be agreed with the landowner through a land agreement outside of the DCO (and confirmation of agreement between the Applicant and the landowner in this respect will be provided to the ExA prior to the end of the Examination). Work on the Trans Pennine Trail would need to be agreed with NYCC and SDC and third parties. Further details of each proposal are outlined in the Applicant's rebuttal paper in response to NYCC's Off Site Mitigation Strategy (REP4-016) which the Applicant has submitted for Deadline 6 (Applicant's document ref 8.4.11). The paper includes an assessment of the landscape resource and visual effects and concludes that for both proposals, the Bingley Land and the Trans Pennine Trail, there would be no change in the significance of effects relating to landscape. In terms of visual effects, such effects are likely to reduce as a result of the mitigation proposed on the Bingley Land, due to the extent of planting albeit such effects would remain significant. Receptors who would benefit following the implementation of mitigation and by Year 15 include residents of Wren Hall, users of Wren Hall Lane and users of PRoW 35.26/2/1 and 35.26/5/1. The assessment of the Trans Pennine Trail concludes that there would be no change in visual effects since works would not result in a direct change in visual effects. The benefits of improving the Trans Pennine Trail relate to objectives identified in the Leeds City Green and Blue Infrastructure Strategy which is referred to in the Off Site Mitigation Strategy and seeks "to enhance green and blue corridor and networks" and "heighten community access to and enjoyment of green and blue infrastructure".

Table 7-2 - ExA Written Question - LV 2.3

ExA Ref	Question to	Question
LV 2.3	Applicant	Paragraph 3.16.13 of the draft SoCG with NYCC and SDC [REP4-008] states that the Applicant does not agree with the contents, observations, conclusions and recommendations of NYCC's D4 submission entitled Drax Re-Power Off-Site Mitigation Strategy [REP4-016]. i. Set out the main concerns with the submission in terms of the scope of its recommendations, and the proposed financial contribution.
		ii. Explain how it can be revised to address concerns.

- 7.6.3 With respect to part i) and part ii) the Applicant has submitted a rebuttal paper in response to NYCC's Off Site Mitigation Strategy (REP4-016), which the Applicant has submitted for Deadline 6 (Applicant's document ref 8.4.11). This paper sets out the Applicant's concerns in relation to the Off Site Mitigation Strategy covering policy, extent of significant effects, nomenclature, planning tests and recommendations as well as a response to the proposed financial contribution.
- 7.6.4 This paper also includes an assessment of additional mitigation proposed by the Applicant in relation to the Bingley Land and the Trans Pennine Trail, and undertakes an assessment of Recommendations 1 to 4 presented in the Off Site Mitigation Strategy.



- 7.6.5 The two areas of mitigation / enhancement proposed by the Applicant have been discussed with NYCC and SDC. The first area of mitigation, referred to as the Bingley Land, seeks to introduce through a land agreement outside of the Order Limits further planting on an adjacent landowner's land in relation to plots 11 and 12. Proposals seek to introduce new broadleaved woodland planting, new native hedgerow planting, infill hedgerow and tree planting and semi improved grassland. Proposals would result in a reduction in localised visual effects.
- 7.6.6 The second area of mitigation /enhancement relates to the Trans Pennine Trail and the resurfacing of the trail within 3 km of the Proposed Scheme for a cost of approximately £50,000. Whilst the proposals would not reduce landscape and visual effects, the proposals would meet some of the green infrastructure objectives referred to in the Off Site Mitigation Strategy.

Table 7-3 - ExA Written Question - LV 2.4

ExA Ref	Question to	Question
LV 2.4	Applicant	The Applicant submitted revised Viewpoints and Additional Photomontage as part of its D5 submissions [REP5-017]. However: i. Figures 1.1 and 1.4 do not have labels for the photomontage locations; these have to be referenced from previously submitted documents. Provide a revised version of the Figures with the photomontage locations labelled on the Figures. ii. Section 4.1.9 states that new information on site topography has been provided, such that although the stacks associated with Units X and Y would increase in height by up to 3m, the difference in height between the stacks and the existing cooling towers would remain the same. Confirm that the correct topographical information has been used in the construction of all of the photomontages and that all of the submitted photomontages are accurate representations.
		iii. Sections 4.2.3 and 4.3.2; confirm which character area or viewpoints are referred to in the statements " G / given the oblique angle from which the stacks would be viewed" or otherwise clarify the statement.

7.6.7 Part (i) of the question refers to discrepancies between the labels in Figures 1.1 and Figure 1.4 of Examination Library Reference: REP5-017 Rev 003 and earlier versions. Rev 003 includes the same figures and labels as earlier versions and therefore it is unclear where the discrepancies lie. The position of the photomontages has not changed and therefore the figures (Figure 1.1 and 1.4) were not amended. However, we have now amended the figures to improve clarity and referred on the figures to the accompanying existing field verified views followed by the suffix "A", photomontages of the submitted Proposed Scheme followed by the suffix "B" and photomontages of the Proposed Scheme taking into account



- the non-material amendments followed by the suffix "C". The document has been resubmitted for Deadline 6.
- 7.6.8 With respect to part (ii) of the question, relating to Section 4.1.9 we confirm that all the correct topographical information was used for the construction of all the photomontages and that all of the submitted photomontages are accurate representations based on receipt of the latest model and layout plans (which were also submitted at Deadline 5).
- 7.6.9 With respect to part (iii) of the question, in terms of Sections 4.2.3 and 4.3.2, the statements referring to "the oblique angle from which the stacks would be viewed" means that when the view of the power station is close (i.e. within a 500 m radius), the eye would tend to be drawn upwards towards the proposed stacks which would be foreshortened by the viewing angle. The statement has been redrafted as follows and included within the Revised Viewpoints and Additional Photomontage Rev 004 (Applicant's ref: 8.4.1) submitted for Deadline 6:

"Given the height difference between the existing cooling towers and the proposed stacks would remain at 6 m and in views close to the power station (i.e. within a 500m radius such as viewpoint 3 and 9) the eye would continue to be drawn up to the proposed stacks which would be foreshortened by the viewing angle (as previously assessed), it is considered that the increase in the height of the stacks would be barely perceptible."



8 NOISE AND VIBRATION

Table 8-1 - ExA Written Question - NV 2.1

ExA Ref	Question to	Question
NV 2.1	Applicant	Implications of stack height changes for noise emissions
		The parameters of the stack heights have been amended in the dDCO [REP3-008]. This increases the stack heights to 123m AGL (129m AOD) from 120m (126m). A minimum stack height is set at 122.5m AGL (128.5m AOD).
		Confirm what implication the change in stack height will have for noise levels at receptor locations and whether this affects the conclusions of significance in the noise and vibration assessment.

- 8.1.1 The noise model calculations assumed a stack height of 120m. The change in stack height (to be between 122.5m 123m) will increase the distance between the noise source (stack termination) and the receptor locations. This increases the propagation path for noise which therefore reduces the noise level. As the change is small (2.5m 3m) relative to the distance between site and receptor locations (580m to closest receptor, NSR 1 Wren Hall), there would be no overall change in the predicted noise level at the receptor locations.
- 8.1.2 The change in stack height does not affect the conclusions of significance in the noise and vibration assessment.



9 TRAFFIC AND TRANSPORT

Table 9-1 - ExA Written Question - TT 2.1

ExA Ref	Question to	Question
TT 2.1	North Yorkshire County Council Selby District Council	Outline Public Rights of Way Management Plan Comment on the Outline Public Rights of Way Management Plan submitted at D5 [REP5-018].

9.1.1 The Applicant has been in discussion with North Yorkshire County Council (NYCC) and Selby District Council (SDC) to update the Outline Public Rights of Way Management Plan. The Applicant included amendments proposed by NYCC and SDC in the Outline Public Rights of Way Management Plan submitted at D5 [REP5-018]. Subsequent minor amendments have been agreed between the Applicant, NYCC and SDC in the Outline Public Rights of Way Management Plan submitted at D6.

Table 9-2 - ExA Written Question - TT 2.2

ExA Ref	Question to	Question
TT 2.2	Applicant	Agreement regarding Footbridge
	North Yorkshire County Council	Provide an update regarding progress towards any further provisions or agreements required in respect of the footbridge.

9.1.2 The Applicant is still in discussions with NYCC in relation to any further agreements required in respect of the footbridge. It is agreed that the draft DCO includes all necessary provisions to enable the Applicant to construct and use the pedestrian footbridge. Any further agreement entered into between the Applicant and NYCC will confirm the responsibilities and duties of each party in relation to the maintenance, operation and dismantling of the bridge.



Table 9-3 - ExA Written Question - TT 2.3

ExA Ref	Question to	Question
TT 2.3	Applicant	SoCG with Highways England
		Provide an update on progress regarding the draft SoCG with Highways England [REP2-028], in particular with respect to:
		 The movement of Abnormal Indivisible Loads by water; The Outline Construction Traffic Management Plan and Outline Construction Workers Travel Plan; and J36 of the M62 at Goole.

- 9.1.3 With respect to the first bullet point, the Applicant has been in discussion with Highways England regarding the movement of abnormal loads and the Highways England 'Water preferred policy guidelines for the movement of abnormal indivisible loads' (January 2016). The Applicant has set out the reasons for its preferred strategy of moving AILs via the Port of Goole rather than the existing Drax jetty:
 - A wholescale redevelopment of the Drax jetty would be required. The jetty requires the following facilities: a new jetty or Ro Ro Facility, at least one mobile crane for the placement of Ro Ro ramps, associated security lighting, fencing, storage and welfare facilities and laydown areas.
 - The road route associated with the use of the jetty is not currently strong enough or wide enough to cope with the AIL vehicles. Significant construction works would be required to remedy this.
 - The use of the jetty for AILs would result in significant additional environmental effects. Sensitive residential and terrestrial ecological receptors would be affected by the construction works both to the jetty and its associated road route. Dredging required at the jetty would impact both terrestrial ecological receptors such as otters and marine protected ecological receptors such as river lamprey.
 - The delivery of AILs will only be required during the construction phase. It was
 considered that the additional engineering works, environmental effects and costs
 associated with bringing the jetty into use was not proportionate to the number of
 deliveries required. Tidal and vessel restrictions would mean that upgrades to the jetty
 would be of limited use for transport of other materials for this, or other future projects.
- 9.1.4 The Applicant has submitted to Highways England further details on this matter. The Applicant expects that it will reach an agreed position with Highways England in relation to the movement of abnormal loads via the Port of Goole, and this will be reflected in the final form SoCG to be submitted to the Examination at a future deadline.
- 9.1.5 With respect to the second bullet point, Highways England agrees that the potential adverse impact on the Strategic Road Network (SRN) (the roads for which Highways England has responsibility) during construction will be adequately monitored and managed through the "Construction Worker Travel Plan" set out in Appendix 5.1 (Examination Library Reference REP4-013), and the "Construction Traffic Management Plan" set out in Appendix 5.2 of the



- Environmental Statement (Examination Library Reference <u>REP4-014</u>). Both documents have been revised since the submission of the Application, taking into account comments made by Highways England.
- 9.1.6 Highways England has agreed that each of those plans is adequately secured by requirements 18 and 19 to the draft DCO (Examination Library Reference REP5-011).
- 9.1.7 With respect to the third bullet point, whilst there is the potential for an adverse impact on the SRN (being junction 36 of the M62 at Goole) during construction, as noted above, Highways England is satisfied this can be appropriately monitored and mitigated by the measures the Applicant has proposed.
- 9.1.8 The agreed position with Highways England is set out in the draft SoCG [REP2-028] and will be included in the final SoCG to be submitted prior to the end of the Examination.



APPENDICES



DCO - APPENDIX A - NYCC CORRESPONDENCE



Tumwine, Patricia

From: Sarah Morton < Sarah. Morton@northyorks.gov.uk>

Sent: 09 January 2019 12:40
To: COLEMAN Alexis
Cc: GRIFFITHS Richard

Subject: [EXTERNAL] RE: Drax Repower - Drax Development Consent Order - phasing

requirement [PM-AC.FID3169416]

Thanks for clarifying Alexis – I can confirm we are agreeable to the wording

Thanks

Sarah Morton

Senior Solicitor (Business and Environmental Services)

For Assistant Chief Executive (Legal and Democratic Services) and Monitoring Officer

North Yorkshire County Council | County Hall | Northallerton | North Yorkshire | DL7 8AD Direct Line: 01609

532414

Email: sarah.morton@northyorks.gov.uk

Document: 112784/01114908

From: COLEMAN Alexis [mailto:Alexis.Coleman@pinsentmasons.com]

Sent: 09 January 2019 12:24

To: Sarah Morton < Sarah. Morton@northyorks.gov.uk >

Cc: GRIFFITHS Richard < Richard. Griffiths@pinsentmasons.com>

Subject: RE: Drax Repower - Drax Development Consent Order - phasing requirement [PM-AC.FID3169416]

Hi Sarah

Thanks for your email. I would prefer not to change the drafting to "shall" as this is not in line with the <u>PINS Advice</u> <u>Note 15</u> which says, in relation to drafting conventions, that applications should "avoid use of the words 'shall' or 'will' (because of ambiguity over whether they are an imperative or a statement of future intention);". Please could you let me know if you are agreeable.

Thanks Alexis

Alexis Coleman Senior Associate for Pinsent Masons LLP

D: <u>+44 20 7490 6261</u> M: I: <u>816261</u>

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From: Sarah Morton [mailto:Sarah.Morton@northyorks.gov.uk]

Sent: 09 January 2019 12:15

To: COLEMAN Alexis

Cc: GRIFFITHS Richard

Subject: [EXTERNAL] RE: Drax Repower - Drax Development Consent Order - phasing requirement [PM-

AC.FID3169416]

Hi Alexis,

Please can the word 'must' in sub-para's (2) and (3) be changed to 'shall'. Subject to this, it is approved by the Authorities.

Many thanks

Sarah Morton

Senior Solicitor (Business and Environmental Services)

For Assistant Chief Executive (Legal and Democratic Services) and Monitoring Officer

North Yorkshire County Council | County Hall | Northallerton | North Yorkshire | DL7 8AD Direct Line: 01609

532414

Email: sarah.morton@northyorks.gov.uk

Document: 112784/01114852

From: COLEMAN Alexis [mailto:Alexis.Coleman@pinsentmasons.com]

Sent: 08 January 2019 14:33

To: Sarah Morton < Sarah. Morton@northyorks.gov.uk >

Cc: GRIFFITHS Richard < Richard. Griffiths@pinsentmasons.com >

Subject: RE: Drax Repower - Drax Development Consent Order - phasing requirement [PM-AC.FID3169416]

Hi Sarah

Happy new year to you too.

Further to my email below, we have amended this proposed requirement slightly, just to delete the reference to "permitted preliminary works". We considered this wording was not necessary, given the intention of this requirement is controlling the phasing of Unit Y.

This is the version we will be submitting at tomorrow's deadline.

Many thanks Alexis

Phasing of authorised development

- 1.—(1) No part of the authorised development is to commence (including the permitted preliminary works) until a written scheme setting out the phasing of construction of numbered works 1, 2 and 3 has been submitted to and approved by the relevant planning authority.
- (2) The scheme submitted and approved pursuant to sub-paragraph (1) must be substantially in accordance with the phasing as detailed in chapter 3 (site and project description) of the environmental statement and must include details of timescales for the reinstatement or restoration of the temporary construction laydown areas comprised in numbered works 6C, 6D, 7B and 9, in line with the outline landscape and biodiversity strategy.
- (3) The scheme submitted and approved pursuant to sub-paragraph (1) must be implemented as approved.

Alexis Coleman Senior Associate for Pinsent Masons LLP D: <u>+44 20 7490 6261</u> M: I: <u>816261</u>

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From: Sarah Morton [mailto:Sarah.Morton@northyorks.gov.uk]

Sent: 02 January 2019 10:24

To: COLEMAN Alexis Cc: GRIFFITHS Richard

Subject: [EXTERNAL] RE: Drax Repower - Drax Development Consent Order - phasing requirement [PM-

AC.FID3169416]

Hi Alexis,

Happy New Year.

We will consider this and come back to you as soon as possible.

Thanks

Sarah Morton

Senior Solicitor (Business and Environmental Services)

For Assistant Chief Executive (Legal and Democratic Services) and Monitoring Officer

North Yorkshire County Council | County Hall | Northallerton | North Yorkshire | DL7 8AD Direct Line: 01609

532414

Email: sarah.morton@northyorks.gov.uk

Document: 112784/01108815

From: COLEMAN Alexis [mailto:Alexis.Coleman@pinsentmasons.com]

Sent: 20 December 2018 12:34

To: Sarah Morton < Sarah. Morton@northyorks.gov.uk >

Cc: GRIFFITHS Richard < Richard. Griffiths@pinsentmasons.com >

Subject: RE: Drax Repower - Drax Development Consent Order - phasing requirement [PM-AC.FID3169416]

Hi Sarah

I hope you're well.

At the ISH on the DCO we undertook to provide a draft phasing requirement, and we said we would share this with you. We have prepared the draft requirement below, and would be grateful if you could please consider it and confirm whether this is agreed by NYCC / SDC prior to Deadline 5 (9 January – when we are required to submit a revised DCO to the Examination).

Many thanks Alexis

Phasing of authorised development

- 1.—(1) No part of the authorised development is to commence (including the permitted preliminary works) until a written scheme setting out the phasing of construction of numbered works 1, 2 and 3 has been submitted to and approved by the relevant planning authority.
- (2) The scheme submitted and approved pursuant to sub-paragraph (1) must be substantially in accordance with the phasing as detailed in chapter 3 (site and project description) of the environmental statement and must include details of timescales for the reinstatement or restoration of the temporary construction laydown areas comprised in numbered works 6C, 6D, 7B and 9, in line with the outline landscape and biodiversity strategy.
- (3) The scheme submitted and approved pursuant to sub-paragraph (1) must be implemented as approved.

Alexis Coleman Senior Associate for Pinsent Masons LLP

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From: Sarah Morton [mailto:Sarah.Morton@northyorks.gov.uk]

Sent: 13 December 2018 14:45

To: COLEMAN Alexis

Subject: [EXTERNAL] RE: Drax Repower - Drax Development Consent Order - PINS submission version - Deadline

4.DOC [PM-AC.FID3169416]

Hi Alexis,

Please see attached proposed amendments to the draft DCO, which we intend to submit today for D4.

Thanks

Sarah Morton

Senior Solicitor (Business and Environmental Services)

For Assistant Chief Executive (Legal and Democratic Services) and Monitoring Officer

North Yorkshire County Council | County Hall | Northallerton | North Yorkshire | DL7 8AD Direct Line: 01609

532414

Email: sarah.morton@northyorks.gov.uk

Document: 112784/01101296

From: COLEMAN Alexis [mailto:Alexis.Coleman@pinsentmasons.com]

Sent: 05 December 2018 14:24

To: Sarah Morton <Sarah. Morton@northyorks.gov.uk>

Subject: Drax Repower - Drax Development Consent Order - PINS submission version - Deadline 3.DOC [PM-

AC.FID3169416]

Hi Sarah

Please see attached the draft DCO submitted at D3.

Thanks Alexis

Alexis Coleman Senior Associate for Pinsent Masons LLP

D: <u>+44 20 7490 6261</u> M: I: <u>816261</u>

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