APPLICANT'S RESPONSES TO ISSUES RAISED AT DEADLINE 9

Drax Bioenergy with Carbon Capture and Storage

Infrastructure Planning (Examination Procedure) Rules 2010

Document Reference Number: 8.10.9

Applicant: Drax Power Limited

PINS Reference: EN010120

REVISION: 01

DATE: 17 July 2023

DOCUMENT OWNER: Drax Power Limited

AUTHOR: Various

APPROVER: Cassie Fountain

PUBLIC

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1. INTRODUCTION

1.1. PURPOSE OF THIS DOCUMENT

1.1.1. On 23 May 2022, Drax Power Limited ("the Applicant") made an application ("the Application") for a Development Consent Order (DCO) to the Secretary of State for Business, Energy and Industrial Strategy ("the SoS"). The Application relates to the Drax Bioenergy with Carbon Capture and Storage (BECCS) Project ("the Proposed Scheme") which is described in detail in Chapter 2 (Site and Project Description) of the Environmental Statement (ES) (APP-038).

1.1.2. The Application was accepted for Examination on 20 June 2022.

1.1.3. Representations from Biofuelwatch, Just Transition Wakefield, Mr Hewitt, Climate Emergency Planning and Policy (CEPP), Mr Tranter and Mr Farrar were received by PINS at Deadline 9.

1.1.4. This document, submitted at Deadline 10 of the Examination, contains the Applicant's responses to these representations, where appropriate. The Applicant has focussed on responding to points that have not already been made and responded to by the Applicant. The Applicant has not responded to the representations from Mr Tranter and Mr Farrar as they state issues addressed previously or that are not relevant to the Proposed Scheme.

2. ENVIRONMENT AGENCY

Table 2-1 Environment Agency - Any further information requested by the ExA under Rule 17 (REP9-034)

Para No / Response Ref.	Comment	Applicant's Response
Bullet point 1 / 2.1.1	In relation to Ecology, the Environmental Statement, Chapter 8, Section 8.7.2 states that "The survey data obtained for these projects have been reviewed as per CIEEM's advice note on the lifespan of ecological reports and surveys (CIEEM, 2019)." As CIEEM's advice note on the lifespan of ecological reports and surveys should be followed we would expect to see the validity of the existing data being assessed again before the construction phase starts to check if any significant changes have occurred in the interim via an updated Preliminary Ecological Appraisal. The need for this survey update should be included within the proposed/updated timescales.	The Applicant can confirm that the validity of existing survey data will be assessed again before the construction phase starts. Ref ID E13 of the Register of Environmental Actions and Commitments (REP9-019) states that a pre-construction ecological walkover will take place at least three months ahead of commencement in order to re-assess the ecological baseline conditions and determine if any additional mitigation is required. This is secured through Requirement 14 of the Draft Development Consent Order (REP9-005). Species specific pre-commencement survey requirements are also set out in the Register of Environmental Actions and Commitments and similarly secured through Requirement 14.

3. BIOFUELWATCH

Table 3-1 Biofuelwatch's comments in response to the Rule 17 Questions of 22 June 2023 (R17QB) (REP9-029)

Para No / Response Ref.	Comment	Applicant's Response
Para 1 / 3.1.1	Biofuelwatch believes that this delay and proposed extension could have a number of impacts: a. The regulatory environment could have changed significantly within that time frame b. Accelerating climate breakdown is likely to contribute to such changes c. There is likely to be more information/research in a few years time on amine breakdown products d. There may be more information and research into CCS at this scale, its viability and associated environmental impacts, to inform the permitting process	The Environmental Impact Assessment (EIA) has taken into account the current baseline, as well as the future baseline, identified on a topic by topic basis. The assessment also considers the current regulatory and policy framework. This complies with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, which state in Regulation 14(3)b that the environmental statement must '*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.'* In the Applicant's response to the ExA's Request for Further Information submitted at Deadline 9 (REP9-026) the Applicant considered whether, should the construction of the Proposed Scheme not commence until seven years post consent, this would change the outcomes of the assessments carried out including baseline, assessments and conclusions of the EIA. The Applicant considers that the change in the programme is not significantly different compared to the assessments carried out and reported in the Environmental Statement for the Proposed Scheme. In relation to construction, the time that it would take to construct the Proposed Scheme and the phasing

		of construction activities would stay the same; they are just moved potentially further into the future. As such the assessment of the construction programme is the same, and the consideration is only whether the years in which the works take place changing would affect the assessments. In relation to the baseline against which operational effects are assessed, it is also considered that generally there would not be a significant change in baseline conditions that would result in a change in assessment outcome. Further information was provided in relation to the potential impacts on baseline, survey work, worst case construction programme and outcomes of the Environmental Impact Assessment (EIA) for each topic assessment in Table 0.1 of Appendix A within The Applicant's Responses to Rule 17 Questions from Letters of 22 June and 29 June 2023 (R17QB and R17QC) (REP9-026). Other, similar developments have also adopted and been granted a 7 year window within which to commence development and this is equally appropriate for this development. The rationale for the Applicant's request for a 7 year window is made in the Explanatory Memorandum submitted at Deadline 9 (document reference 3.2, para 4.35 referencing Article 19 in model provisions). Regulatory regimes are constantly evolving and being updated across all sectors of industry. At the point of submission and throughout the examination process, the state of the relevant regulatory regimes, including the draft National Policy Statements, have been assessed and updates provided regarding the Proposed Development's compliance as well as

		progress of other relevant applications, e.g. the Environmental Permit. The decision of the Secretary of State must be made against the policy and legislative framework (including published emerging policy) that exists at the time of decision, it cannot be made against some uncertain guess at what the future framework may be. This is also true for the position on amines and CCS performance more generally – the Applicant has based its assessments on the latest research (as is the requirement in the emerging NPS) and on the basis that the permitting process will regulate CCS performance accordingly, as the emerging NPS also requires the Secretary of State to do. Finally, it seems somewhat counter-intuitive that on the one hand, Biofuelwatch are referencing the accelerating climate breakdown and then suggesting that determination of the Proposed Scheme, which is specifically designed to assist in the UK's transition to a Net Zero economy, be delayed.
Para 2 / 3.1.2	In response to R17QB.3 specifically: a. There could very well be implications to baselines, other smaller scale developments may well have an impact on air quality baselines meaning this aspect would need to be reviewed. b. There should be a requirement for additional survey work to be undertaken as there could be significant changes to the local ecology within this timeframe. The application included information from surveys as long ago as 2017	As detailed in the Applicant's Responses to Rule 17 Questions (REP9-026) submitted at Deadline 9, it is unlikely that there would be any significant impacts on the baseline air quality used in the Air Quality Assessment. In particular, pollutant concentrations and their deposition to surfaces are likely to decrease over time as emissions of key pollutants (NOx, PM, SOx etc.) from all sectors are reduced. The decrease in emissions per vehicle, as technology improves and electrification of fleet increases, will likely more than offset the any increase in general traffic levels, resulting in a net decrease in roadside pollutant concentrations and scheme impacts.

	(e.g. [APP-142], [APP-143], [APP-144], [APP-146] and [APP-147]). Other surveys (such as [APP-137], [APP-138] and [APP-139]) were done in 2020 or 2021 but even these would be very out of date by the time the proposal would be completed. c. There are likely to be implications for conclusions drawn as a result of this extended commencement period due to a variety of changes that could take place within this extended time period, exacerbated by the impacts of accelerating climate breakdown examples of which include: i. Updated flood risk modelling ii. Further temperature increases (increasing the risks arising from what appears to be an already inadequate maximum design temperature of 35^{o}C) iii. Changes to local ecology	The Applicant can confirm that the validity of existing data will be assessed again before the construction phase starts. Ref ID E13 of the Register of Environmental Actions and Commitments (REP9-019) states that a pre-construction ecological walkover will take place at least three months ahead of commencement in order to re-assess the ecological baseline conditions and determine if any additional mitigation is required. This is secured through Requirement 14 of the Draft Development Consent Order (REP9-005). It is unlikely there would be any significant changes to the baseline used in the Water Environment Assessment if the Proposed Scheme did not begin until seven years post-consent as, in accordance with the Water Framework Directive, the condition of the water environment should improve. A range of flood risk scenarios have been assessed to account for climate change uncertainty and, in any event the Environment Agency has agreed in its Deadline 9 submissions that there are suitable mitigations in place (specifically through the wording of Requirement 11) to deal with the flood risk position in the future even with an extended pre-commencement period. The climate change resilience assessment uses 30 year time slices to assess future baseline climate projections. The assessment of climate impacts has been undertaken for the 2020s (2010-2039) and the 2050s (2040-2069) aligning with the 25 year design life of the project. These time slices take account of an extension to the DCO approval and commencement of the Proposed Development. The mitigation measures identified in Chapter 14 and Appendix 14.1 of the 2022 ES, which include asset monitoring, fire detection,

		protection and management measures, emergency power, material specification and improved cooling are considered sufficient to account for increasing temperature events. It is considered that the findings of the Climate Change Resilience Chapter (Chapter 14), remain valid. Regarding changes to local ecology, this has already been addressed in the Applicant's Responses to Rule 17 Questions (REP9-026). In summary, background concentrations and deposition rates of gaseous pollutants are likely to reduce up to and beyond 2031 (as stated in relation to point A, above). As such, background air pollution is likely to be more favourable for ecological features within the Zone of influence of the Proposed Scheme in 2031 than in earlier years. With a 2031 commencement date, the ecological surveys used to inform the assessment would be increasingly out of date and there would, therefore, be less certainty regarding their findings and associated conclusions. However, this is countered by the requirement for pre-commencement ecological surveys, as secured by Requirements 7 (Provision of landscape and biodiversity mitigation and enhancement) and 14 (Construction Environment Management Plan) of the draft DCO (REP8-005). Furthermore, the Ecology chapter of the Environmental Statement already includes consideration of a future baseline scenario based on the anticipated programme at the time of the Application. It is therefore considered that implications for changes to local ecology have already been taken into account.
Para 3 / 3.1.3	The delay further heightens a number of Biofuelwatch's concerns such as:	a. The Applicant has already addressed the question of uncertainty in Appendix B of the Applicant's Response to

	a. The need to model impacts with the non-BECCS units not operational at all and continuous operation of the non-BECCS units. The delay further increases the already significant uncertainty arising from the assumed 4,000 hours of operation of the non-BECCS units. b. 'Given the age of the plant, with no plans included in the proposal to replace the aging pollution abatement technology with up to date technology, it is questionable whether carbon capture on such an old plant (with large amounts of public money expected) can be considered to be economically sustainable and the “right type” of proposal in the “right place” required by NPPF' (paragraph 374 of Biofuelwatch's deadline 2 submission [REP2-073]. c. 'Prolonging the plant’s use when biomass combustion is increasingly recognised as not in accordance with climate objectives' (paragraph 376 of [REP2-073]) d. The predictions are based on an ADMS Chemistry Module that is itself based on 2011 research without updates to reflect the most recent scientific research on nitrosamine formation. Future updates to the ADMS Chemistry Module are likely. There may also be future validation studies of the software.	Relevant Representations and Additional Submissions (PDA-002), and responses in the Applicant’s Responses to Issues Raised at Deadline 1 (REP2-067), the Applicant’s Responses to Issues Raised at Deadline 2 (REP3-020) as well as in the Applicant’s Responses to Issues Raised at Deadline 6 (REP7-017). As stated in Appendix A of the Applicant’s Responses to Rule 17 Questions (REP9-026), there would be no material impact on the conclusions of the Environmental Statement in relation to delayed operation of the plant. In any event, any later start point of the BECCS units is a separate question to what happens with the non-BECCS units, which are not the subject of the DCO application. As the Applicant has set out, the mid-merit scenario is appropriate for those units. b. Drax Power Limited is an experienced operator and takes its responsibilities as a generator of electricity seriously. The plant and infrastructure within the power station, including abatement equipment is regularly maintained and inspected to ensure that it continues to operate efficiently. The plant at Drax has to comply with specific industry codes and Best Available Techniques (BAT) in order to continue to operate safely, efficiently and in an environmentally compliant way. The maintenance regime at Drax requires significant investment to update and upgrade plant and equipment, for example burner upgrades and improvements to manage emissions in line with the Environmental Permit. Drax is required to comply with emissions limits as defined within its environmental permit and is regularly required to undertake BAT reviews and OMA audits with the Environment Agency, and thus must invest accordingly

		to keep to those commitments. The site is also a Lower Tier COMAH site and has regular audits conducted by the HSE. On this basis the Applicant considers that there would be no issues in installing CCS to Units 1 and 2 whether in 2027 or 2031. In any event, it will be for the Government to consider the economic sustainability of supporting the installation of BECCS at Drax in determining whether to give financial support. The proposal is the 'right type' in the 'right place' because Government and the CCC have both recognised the need for carbon capture to existing plants throughout the country, and, the role of BECCS in delivering Net Zero. c. As discussed in the Deadline 3 Cover Letter (REP3-014), the Applicant has confirmed its position in previous responses to Hearings, Relevant Representations and Written Representations in full on these matters and does not wish to repeat its position. Further details can be found in Table 10.1 of the Applicant's Responses to Relevant Representations and Additional Submissions (PDA-002) and the Applicant's Responses to Issues Raised at Deadline 1 (REP2-067). In any event, it is important to note that extending the commencement period to 7 years does not, in and of itself, prolong the existing plant's use. Drax Power Station has consent and can continue to operate no matter how long it takes for CCS infrastructure to be installed. D. In response reference 9.16 in the Applicant's Responses to Issues Raised at Deadline 2, (REP4-020), the Applicant explains in detail why the ADMS suite of models has been used. The Applicant also reiterates their response above to ref

		3.1.1, specifically that the air quality assessment was done with the most up to date model available at the time of writing, in compliance with both the EIA Regulations and the emerging NPS.
Para 4 and 5 / 3.1.4	It is therefore highly likely that risks could be reduced and better quantified without compromise to the proposed start date of the proposal by delaying the DCO decision (or refusing the DCO decision and requiring reapplication closer to the proposed commencement of development). In addition, in relation to the proposed pipeline which is a prerequisite for the 'storage' element of BECCS, delaying the DCO decision would allow for a clearer picture of whether this, and the other necessary, related storage aspects will be in place within the timescales required	The Applicant has addressed the delay of the submission of the Humber Low Carbon Pipeline in the Applicant's Responses to Rule 17 Questions of 6 June 2023 (REP8-029). The Applicant's responses to R17QA.20 and R17QA.21 provide further detail on its position in relation to delaying the Proposed Scheme. In short, the UK's need to meet Net Zero cannot afford to wait – all projects need to be consented so that there is sufficient certainty for all parties (including the Government in making its funding decisions and planning its energy scenarios for the next 30 years) that every aspect of the CCS system will be brought forward.

Table 3-2 Biofuelwatch Comments on Report on the Implications for European Sites (REP9-030)

Para No / Response Ref.	Comment	Applicant's Response
Para 3 / 3.2.1	The reclassification of Lower Derwent Valley SAC habitat from 'acid grassland' to 'calcareous grassland' led to the change in conclusion regarding acid deposition impacts on the Lower Derwent Valley SAC and Ramsar referred to in paragraph 3.012. Biofuelwatch is unaware of evidence to show that 'acid grassland' is not present within the Lower Derwent SAC and Ramsar site. Paragraph 4.2.59 considers that "that neutral grassland was the most abundant broad habitat type and that more of the plots sampled were in the 'calcareous' rather than 'acid' or acid-neutral' pH ranges" but this suggests that there are plots with acid or acid-neutral pH ranges. Paragraph 4.2.59 says "It agreed that it was therefore more appropriate to apply the CLo for calcareous grassland rather than acid", but does not explain why a CLo that is not a reasonable worst case nor precautionary should be considered to be "more appropriate". More explanation is required to justify what appears to be a non-precautionary assumption and therefore also a non-precautionary assessment. It should be assumed by the applicant, Natural England and the ExA that acid grasslands may exist within this SAC unless there	The underpinning evidence used by the Applicant to determine that the 'calcareous grassland' acid deposition critical load is appropriate, is set out in Lower Derwent Valley Habitats and Soil Analysis Technical Note (REP3-009). This sets out a comprehensive analysis of soil and habitat data gathered by Natural England as part of long-term monitoring of the SAC. REP3-009 paragraph 3.1.2 clearly sets out the split of plots analysed in terms of their soil pH. and details that 4% had acid soil, 4% had acid-neutral soil, 52% of plots had neutral soil, and 40% of plots had calcareous soils. As such, the Applicant has already acknowledged and reported the presence of a small number of plots that are at the acidic end of the soil pH spectrum in REP3-009 and considered this in their analysis of potential air quality impacts on Lower Derwent Valley SAC and Ramsar Site. In terms of habitat (as against soils) data, the Natural England data reports the presence of almost exclusively 'neutral grassland' habitat types, with no 'acidic grassland' habitats reported. In light of the above it is not necessary, as Biofuelwatch contend, that '…*It should be assumed by the Applicant, Natural England and the ExA that acid grasslands may exist within this SAC unless there is strong evidence to show it does not…'*., as there is sufficient evidence to classify the habitats present with a high degree of confidence without making assumptions.

	is strong evidence to show it does not. Derbyshire County Council make several references to “acid grassland” in the Derbyshire Peak Fringe and Lower Derwent Area so there is reason to consider acid soils are likely to be present in at least some of the Lower Derwent Valley.	The ’precautionary principle’ referred to by Biofuelwatch exists to protect the environment where insufficient data exists to allow potentially significant effects to be discounted. There is sufficient evidence available via the Natural England long-term monitoring data to complete a thorough analysis of the potential effects of acid deposition on Lower Derwent Valley SAC and Ramsar and to make a judgement based on that scientific knowledge. Both the Applicant and Natural England therefore agree that it is beyond reasonable scientific doubt to take this approach and reach the conclusions that have been made. In relation to the Derbyshire Peak Fringe and Lower Derwent Landscape Character Area, this occurs entirely within Derbyshire. The Landscape Character Area relates to the River Derwent that runs through Derbyshire, not the one that runs through Yorkshire (there are several ‘River Derwent’s’ in the UK). Any reference to acid grassland in the Derbyshire Peak Fringe and Lower Derwent Landscape Character Description is entirely irrelevant to the Lower Derwent Valley SAC and Ramsar, as none of the SAC/Ramsar is located in Derbyshire.
Para 4 / 3.2.2	Paragraph 3.1.1 says, “the Applicant concluded that there would be no LSE on Thorne and Hatfield Moors SPA and its qualifying features in relation to Thorne and Hatfield Moors SPA … IPs did not dispute this conclusion during the Examination.” This is incorrect. Biofuelwatch did dispute this conclusion and continues to dispute this conclusion.	The Applicant notes Biofuelwatch’s observation. The Applicant has completed a robust assessment of the potential for LSE/AEOI of European Sites. The Applicant has concluded there would be no LSE on the Thorne and Hatfield Moors SPA. This has been agreed with Natural England from early in the Examination process, as set out in Rev01 of the Statement of Common Ground between Natural England and the Applicant (AS-032).

Para 5 / 3.2.3	Biofuelwatch's comments in [AS-040] were in relation to Natural England's comments in [RR-025]. Biofuelwatch considers paragraph 4.2.7 of [PD-020] to misrepresent Biofuelwatch's comments because the preceding paragraphs of [PD-020] may be understood to imply Biofuelwatch agrees with Natural England's assessment of all potential impacts on international (and nationally) designated sites. Biofuelwatch does not agree with all of Natural England's conclusions.	Noted.
Para 6 / 3.2.4	Paragraph 4.2.40 says "The realistic worst case scenario would be the mid-merit scenario, i.e. two Carbon Capture and Storage (CCS) units operating at full load for the entire year and in addition two non-CCS units operating at full load for 4000 hrs." The report includes no information to justify this scenario to be "the realistic worst case". Since the proposal is for carbon capture and storage, it is doubtful that conditions can be lawfully applied to require a minimum and maximum number of hours of operation of the non-BECCS units. The following scenarios may be worse than this scenario: a. two Carbon Capture and Storage (CCS) units (with their associated biomass combustion units) operating at full load for the entire year and two non-CCS biomass combustion units operating at full load for the entire year	The Applicant has responded previously on the scenarios used for air quality modelling. These responses can be found in The Applicant's Responses to Relevant Representations (PDA-002), particularly in response reference 5.28, and in Appendix B of that document. Appendix B does also explain why the Full Load scenario (two BECCS units and two non-CCS units in operation for 8760 hours a year) included in point A is not a likely worst case, however this scenario has been assessed and the results explained. In response reference 5.11 of the Applicant's Responses to Issues Raised at Deadline 6 (REP7-017), the Applicant also outlines their position regarding scenario B, which would be unrealistic due to market factors and demand for energy. Since that submission, National Grid ESO has published the latest 2023 version of the Future Energy Scenarios, which envisage a role for BECCS and biomass in 2050 in all four potential development scenarios – see Appendix A. Non-BECCS unit operation is therefore not a realistic scenario to be considered.

	b. two Carbon Capture and Storage (CCS) units (with their associated biomass combustion units) operating at full load for the entire year with the non-CCS biomass combustion units not operating at all. Scenario a. may include greater overall emissions and so has the potential to result in higher nitrogen and acid deposition at some European ecological sites. Scenario b. may result in emissions of lower temperature and velocity and so could potentially result in higher pollution levels and deposition at some European ecological sites nearer the Drax site. Changes to the economic environment, regulations, the electricity market, biomass availability and regulation of biomass export within other countries could all affect the future operation/economic viability of the non-CCS biomass combustion units so both a. and b. are realistic scenarios. The applicant has dismissed scenario b. as "unrealistic and irrelevant" but the growth of genuinely renewable electricity generation in the UK is rapid and may change the need for electricity generated from biomass. Fire, or other accident, could lead to the non-CCS units being non-operational for an extended time. The explanation provided by the applicant in Appendix B of [AS-038] does not show why, for particular sites, scenarios a. and b. may not lead to higher impacts.	As biomass is required in all future scenarios, then it may be the case that CCS units would then need to be applied to those four units – in that scenario the planning consent for those installations would consider the impacts at that relevant time (as would the environmental permitting process). There is therefore no situation in this DCO where the BECCS units are not operating or a change to their operation in a manner that could impact upon emissions is not controlled. The Applicant reiterates that the worst-case mid-merit scenario which has been assessed in the Environmental Statement is robust, and the formal consideration of a scenario in which the non-BECCS units do not operate at all is not required. In relation to outages resulting from fires or other accidents, hourly and daily mean impacts from the operation of BECCS units without the non-BECCS units are already assessed in the ES in the mid-merit scenario, using an assumption that such operation could occur at any time of the year (i.e. the hours between mid-merit and full load). It is un-necessary to assess the impacts from an extended downtime on annual mean impacts since a) the mid-merit scenario already accounts from some periods of BECCS only operation and b) it is unrealistic to consider prolonged outage over several years that would cause impacts, particularly in light of the Applicant's on-going maintenance regime which applies across the Existing Drax Power Station, discussed in response to 3.1.3 above. .

Para 7 / 3.2.5	It is disappointing that [PD-020] says, with reference [REP7-018], that "Biofuelwatch remains concerned about the air quality modelling and operational emissions of pollutants on the European sites" (paragraph 4.2.77) without also explaining and addressing Biofuelwatch's concerns (such as those listed in [REP7-018] regarding Natural England's responses to Biofuelwatch's questions).	The Applicant has responded to Biofuelwatch's concerns throughout the Examination, particularly in respect of its concerns about the air quality modelling undertaken.
Para 8 / 3.2.6	The assessment of impacts [PD-020] is reliant on the applicant's predictions of pollution impacts. In paragraph 4.2.67 [PD-020] it says "It [Natural England] noted that the Applicant had used precautionary/conservative assumptions in the model to mitigate for the uncertainty and that the modelling had been undertaken in accordance with good practice". As explained in [REP2-073], some of the potential sources of uncertainty are considerable. As explained in [REP7-018], not all modelling assumptions are precautionary and there is insufficient evidence that the assumptions that are precautionary are sufficient to outweigh the assumptions that are not precautionary. As explained in [REP2-073], ADMLC Guidance describes good practice and the applicant's modelling predictions do not conform to important aspects of ADMLC Guidance. The apparent acceptance that "the modelling has been undertaken in accordance with good practice"	The Applicant has addressed the issue of uncertainty and the precautionary nature of their assessment on numerous occasions, not least in responses presented in Table 5-1 of Applicant's Responses to Issues raised at Deadline 1 (REP2-067), Table 5-1 of the Applicant's Responses to Issues Raised at Deadline 6 (REP7-017); and has also considered the ExA's queries on these issues in its response to the ExA's Rule 17 request (REP8-029). The Applicant stands by these previous responses.

	appears misplaced and deserves explanation in light of the ADMLC Guidance. Without further evidence, the apparent acceptance that precautionary/conservative assumptions mitigate for the uncertainty (when the uncertainties have not even been quantified) also appears misplaced.	
Para 9 / 3.2.7	Natural England has not commented on important sources of uncertainties raised by Biofuelwatch in [REP2-073]. To mention just four examples of the many uncertainties raised: a. The assessment of impacts on European sites has made no allowance of modelling prediction uncertainties arising from the modelling software even though the ADMS developer's own validation shows significant uncertainties in modelling predictions and even though research such as that carried out by M. Theobald et al (referred to in [REP2-073]) shows the two most widely used air dispersion modelling systems can give very different results. b. The applicant has used a modelling software version for which the applicant has provided no validation reports and the validation reports on the ADMS developer's website (which are for a different software version) are not independent and use scenarios known to the developer when the software was written. It is therefore to be expected that the modelling software uncertainties shown by the developer's	The Applicant has addressed the issue of uncertainty and the precautionary nature of their assessment on numerous occasions, not least in responses presented in Table 5-1 of Applicant's Responses to Issues raised at Deadline 1 (REP2-067), Table 5-1 of the Applicant's Responses to Issues Raised at Deadline 6 (REP7-017); and has also considered the ExA's queries on these issues in its response to the ExA's Rule 17 request (REP8-029). The Applicant stands by these previous responses.

	validation reports will be minimum uncertainties and likely to be exceeded. c. The deposition velocities used by the applicant were recommended by AQTAG (Air Quality Technical Advisory Group) in 2014, but AQTAG did not state they were worst case nor did AQTAG supply supporting evidence. Neither Natural England nor the ExA have provided any evidence that the AQTAG deposition velocities used by the applicant are precautionary or worst-case. No attempt has been made to quantify the uncertainty arising from the deposition velocities used. d. The uncertainties arising from the assumption that the flue gases from the BECCS and non-BECCS units will mix completely. The characteristics of all current Drax flue gases are very similar but the proposal will result in BECCs flue gases having a much lower temperature and reduced velocity. Any evidence provided by the applicant of good mixing of flue gases from the existing plant is therefore not sufficient to show flue gases from the proposal will mix perfectly. The applicant has made no estimate of the modelling prediction errors that may arise from its assumption of perfectly mixed gases at the point of release.	
Para 10 / 3.2.8	In Landelijke Vereniging tot Behoud van de Waddenzee v Staatssecretaris van Landbouw,	The Applicant has addressed the issue of uncertainty and the precautionary nature of their assessment on numerous

	Natuurbeheer en Visserij (Case C-127/02) [2005] 2 CMLR 31, the Grand Chamber of the European Court of Justice considered that the Habitats Directive must be interpreted in accordance with the Precautionary Principle. Natural England recognises the importance of the Precautionary Principle on the habitats assessment (paragraph 4.2.55). Whilst Natural England's response in [REP6-050] recognised uncertainty, Natural England provided no quantified level of uncertainty. Biofuelwatch listed many sources of uncertainty. These remain unquantified by the applicant, Natural England and the ExA. Natural England and the ExA appear to have made an assessment using predictions that are not worst case and without quantifying cumulative uncertainty and without even considering the potential impact of some sources of uncertainty on possible impacts. It is difficult to see how such an assessment can be considered consistent with the precautionary principle making it potentially vulnerable to a judicial review.	occasions, not least in responses presented in Table 5-1 of Applicant's Responses to Issues raised at Deadline 1 (REP2-067), Table 5-1 of the Applicant's Responses to Issues Raised at Deadline 6 (REP7-017); and has also considered the ExA's queries on these issues in its response to the ExA's Rule 17 request (REP8-029). The Applicant stands by these previous responses and considers their air quality modelling suitably conservative to meet the requirements of the precautionary principle and ensure that judgements in the HRA are able to be made with best scientific knowledge.
Para 11 / 3.2.9	Natural England said "For European sites, a key consideration is always whether the proposal will undermine the conservation objectives of the site – for example, will it counteract overall actions to restore deposition of air pollutants to below critical loads. … In this case, Natural England agreed with the conclusions in the applicant's HRA that the proposed development will not impact on measures	The Applicant agrees with Natural England's response to the ExA at row BIO.2.3 of Table 2a in Natural England's response to the Examining Authority's (ExA's) second written questions. This highlights the multiple sources of evidence used by the Applicant when considering the potential for significant air quality effects on European sites. The Applicant continues to assert that these support a finding of no AEOI in relation to Thorne Moor SAC, the only European Site which experiences

	to reduce emissions from existing sources (such as Drax itself, via increasingly stringent environmental permit conditions and the National Emissions Ceiling Regulations) and from the dominant sources of N deposition in the area (agricultural operations and imports from other countries via long range transport)" [REP6-050]. Natural England's argument is flawed because: a. There is no guarantee that any measures to reduce emissions from existing sources and from other sources will be successful. Any such measures that may exist may not be successful in reducing deposition at all and are independent (or largely independent) of the proposal under consideration. Any conditions imposed by the ExA cannot mandate these other reductions so there is a risk that these reductions may not materialise. b. Even if these other measures do result in a reduction in deposition, there is no evidence that they will be sufficient to reduce deposition below critical thresholds.	in-combination air quality impacts >1% of critical load after mitigation. The Applicant has set out a detailed consideration of historic and predicted future trends in air quality in the HRA Report (REP8-014) and does not intend to repeat this here. In addition, these are not solely relied on when reaching a conclusion of no AEOI, with multiple other sources of evidence considered. In relation to predicted future trends in air quality, The Nitrogen Futures project[1] is also of relevance here, as referenced by Natural England in their response to the ExA's June 6 Rule 17 Request (REF). In their response, Natural England state: '…*In practice, emissions and deposition are likely to decline to 2030 –NOx emissions by approximately 34% and N deposition by approximately 13% (though ammonia being largely unchanged). This is based on the "Business as usual" scenario in Nitrogen Futures, so allowed for only adopted/implemented N-reduction policies at the time of the N-Futures assessment. However, by not relying on this reduction, the applicant had assessed against a worst-case baseline – and this worst case is still applicable (and even more conservative) assuming a delay in the construction/operation timescales*…' It should be noted that the 'Business As Usual' (BAU) forecasts referred to by Natural England include nitrogen reduction

[1] JNCC (2020) JNCC Report: No. 665, Nitrogen Futures

		measures that are already adopted. There is therefore a high degree of confidence in their implementation and efficacy.
Para 12 / 3.2.10	It is obvious that a significant increase in deposition of air pollutants will frustrate a conservation objective to restore deposition of air pollutants below critical levels especially when there is no plan in place sufficient to give high confidence that all loads/levels will be reduced below critical thresholds. The logic of Natural England's assessment is flawed. It is irrational to consider a proposal that will cause a significant increase in deposition of air pollutants above critical levels to be consistent with conservation objectives requiring reductions of air pollutants below critical levels.	As a point of clarity, the Applicant would highlight that 'deposition of air pollutants' is measured against critical loads, not 'critical levels'. The Applicant would contend that Biofuelwatch are not using the term 'significant' correctly here. The Proposed Scheme will, lead to only one European Site experiencing *potentially* significant air quality impacts: Thorne Moor SAC. The magnitude of impact is only sufficient to trigger the 1% screening criterion when considered in-combination with other plans and projects. As the Applicant and Natural England have both previously and independently explained, exceeding the 1% screening threshold does not automatically mean this will trigger any harm to a European Site, or frustrate achievement of the sites Conservation Objectives. It simply means that, as set out in the HRA Report (REP9-021), further assessment is required to investigate the potential for harm. This is the process used by Natural England for air quality impacts for all types of projects across the UK and has been vigorously considered in numerous appeals, DCO Examinations and Court cases. There can therefore be no suggestion that this approach is irrational. The Applicant has completed a detailed assessment of potential air quality impacts in the HRA Report and has agreed with Natural England that there will be no LSE/AEOI of European Sites. The Applicant stands by this assessment.

Para 13 / 3.2.11	Natural England considers "However, having regard to the site specific considerations in this case, including evidence provided by the applicant in the appropriate assessment (section 4.3.75-4.3.85 of the HRA), and the fact that effective and reliable mitigation is proposed for the BECCS project itself, Natural England was able to accept the conclusion that the additional nitrogen and acid deposition would not result in an adverse effect to integrity of the SAC." [REP6-050] Considering the reasons given by Natural England in this statement: a. "site specific considerations": the same section of [REP6-050] shows Natural England's apparent consideration of "site specific considerations" to be underpinned by Compton v Guildford Borough Council 2019. Compton v Guildford Borough Council 2019 is a very different scenario for the reasons given in [REP7-018]. Significant increases above critical thresholds can be expected to cause significant harm. b. "effective and reliable mitigation": whilst Natural England may consider the mitigation proposed to be effective and reliable, the applicant has not shown the mitigation	The Applicant has completed a detailed assessment of potential air quality impacts on European Sites in the HRA Report (REP9-021), and has concluded there would be no LSE/AEOI of any European Sites. The Applicant stands by this assessment. In relation to point 'a' from Biofuelwatch, the principle of Compton v Guildford Borough Council holds true and has been considered and applied by the Applicant. The following text is taken directly from paragraph 207 of the Compton v Guildford Borough Council judgment[2] (emphasis added by the Applicant): '*It is perfectly clear, in my judgment, that Guildford BC, whose task it was to undertake the HRA, did consider whether significant adverse effects were likely from the development proposed in the Local Plan; it then undertook an appropriate assessment to see whether there would be no adverse effect on the SPA.* ***That could not be answered, one way or the other, by simply considering whether there were exceedances of critical loads or levels, albeit rather lower than currently. What was required was an assessment of the significance of the exceedances for the SPA birds and their habitats…***' In line with this aspect of the ruling, the Applicant has produced an assessment of the significance of the exceedances of the 1% screening criterion for the qualifying interest habitats of Thorne Moor SAC (which are, in any event, not of a significant amount). This is set out in full in section 4.3 of the HRA Report.

[2] Compton PC v Guildford BC, CO/2173,2174,2175/2019 (HIGH COURT OF JUSTICE, QUEEN'S BENCH DIVISION, ADMINISTRATIVE COURT, PLANNING COURT 1 04, 2019

	sufficient to prevent likely impacts. Natural England has not shown why it considers mitigation to be sufficient for it to "accept the conclusion" when the applicant's own modelling still shows significant likely impact.	The Applicant's HRA Report is therefore consistent with the Compton v Guildford Borough Council ruling, which affirms that exceedances of critical loads and levels and/or exceedances of the 1% screening criterion do not automatically trigger AEOI, or 'significant harm' as contended by Biofuelwatch. In relation to point 'b' from Biofuelwatch, the Applicant considers Biofuelwatch are misrepresenting the impacts and potential effects of the Proposed Scheme. The Applicant has incorporated operational emissions abatement measures into the Proposed Scheme that would reduce the air quality impacts of the Proposed Scheme to below the 1% significance screening criterion for all European Sites apart from Thorne Moor SAC, which is why the latter was then subject to further consideration, post accounting for mitigation. The mitigation is achieved via reliable and proven technologies that have been operated in the UK for decades and will be delivered through the permit – policy dictates that the decision maker must consider that the permitting system will achieve its goals, unless given reason by the regulator to consider otherwise, which is not the case here.
Para 14 / 3.2.12	Such extremely weak reasons are clearly inadequate in light of the "extra caution" that Natural England considers to be necessary "when critical loads for a protected site are exceeded in the background" [REP6-050].	The reasons presented by the Applicant for concluding no AEOI are neither weak nor inadequate. The Applicant stands by the assessment presented in Section 4.2 and 4.3 of the HRA Report.
Para 15 / 3.2.13	Table 1.17 of Appendix 6.5 [REP8-012] shows the modelled cumulative annual nitrogen deposition at Thorne Moor SAC/SSSI in excess of the 1%	Biofuelwatch have stated that '*Any increase in excess of the 1% significance threshold is not "negligible" but "significant'*… and *…' it may not be possible to measure small increases in*

	significance threshold. In paragraph 4.2.61, "NE agreed that the Applicant's conclusion that the level of deposition and the potential consequential vegetative change continues to fall within the bounds of natural variation and would lead to negligible (and imperceptible) effects on the SAC appeared justified based on the evidence presented and the overall comparatively low levels of in-combination nitrogen deposition." Even small increases in average deposition over a long period are known to cause ecological harm. Any increase in excess of the 1% significance threshold is not "negligible" but "significant". It may be "imperceptible" in that it may not be possible to measure small increases in nitrogen deposition and attribute them to the proposal, but such increases can be expected to cause significant harm. A comparison of levels of deposition with the "bounds of natural variation" is not sufficient to ensure LSE because, whatever the natural variation in levels, increased deposition will increase those levels. Since the levels are already above the critical load, this can be expected to result in greater environmental harm. As considered above, Natural England's reasoning does not demonstrate the "extra caution" it considers to be necessary.	*nitrogen deposition and attribute them to the proposal, but such increases can be expected to cause significant harm*…'. As set out above, this is a misrepresentation of how the 1% significance screening criterion should be used. Exceedances of the 1% significance threshold do not automatically result in '*significant harm*' as suggested by Biofuelwatch, they simply indicate that further investigation and assessment of potential effects is required. This is consistent with Natural England's advice into Examination of the Proposed Scheme, Natural England's own published guidance[3], and advice from the Chartered Institute of Ecology and Environmental Management[4]. This is the process used by Natural England for air quality impacts for all types of project across the UK and has been vigorously considered in numerous appeals, DCO Examinations and Court cases. There can therefore be no suggestion that this approach is not appropriate. The Applicant has completed a robust assessment of the potential air quality impacts and effects of the Proposed Scheme on European Sites, as set out in the HRA Report (REP9-021). This has been agreed with Natural England, as set out in the Statement of Common Ground between Natural England and Drax Power Ltd (REP8-019).

[3] Natural England. (2018). *Natural England's approach to advising .* Peterborough: Natural England
[4] CIEEM. (2021). *Advice on Ecological Assessment of Air Quality Impacts.* Winchester: Chartered Institute of Ecology and Environmental Management

Para 16 / 3.2.14	The above analysis makes it difficult to understand why different reasons have been given for no LSE on the qualifying feature (nightjar) of the Thorne and Hatfield Moors in paragraph 3.0.7. In paragraph 3.0.7, a distance of 9.1km and the lack of heathland, moorland, woodlands with large clearings and recently felled plantations within or adjacent to the application site are considered sufficient to show no LSE. However, the modelling predictions show significant impacts at the Thorne and Hatfield Moors so a distance of 9.1km is clearly not sufficient to show there will be no LSE. The lack of particular habitats at or adjacent to the site clearly does not prevent impacts on habitats further from the site such as at Thorne and Hatfield Moors. Neither the reasons provided in paragraph 3.0.7 nor those given by Natural England in [REP6-050] are sufficient to show no LSE. Biofuelwatch do not understand why [PD-020] includes the flawed reasons in paragraph 3.0.7 but does not consider the predicted increases above critical thresholds in light of the conservation objectives of Nightjar, that explicitly refer to the changes that may result from exceeding critical values of air pollutants (see [REP2-073]).	The Applicant considers it likely that Biofuelwatch are misreading the ExA's Report on the Implications for European Sites (RIES) (PD-020) and the Applicant's HRA Report. The Applicant has considered a range of impact pathways when assessing the potential for LSE on nightjar (the sole qualifying interest of the Thorne and Hatfield Moors SPA). In relation to potential impacts on functionally-linked land[5], the distance to the SPA and the lack of suitable habitat for nightjar in the vicinity of the Site are valid reasons for discounting LSE, as identified in the RIES. In the case of air quality impacts, HRA Appendix 5 (APP-193) clearly sets out AQ assessment parameters in relation to nightjar for Thorne and Hatfield Moors SPA. This uses information within the Air Pollution Information system (APIS) which confirms nightjar is not considered sensitive to air quality effects on its woodland habitats or elevated NH_3 or acid deposition on its heathland habitats. In relation to nitrogen deposition onto Thorne and Hatfield Moors SPA heathland habitats which may be used by nightjar, there are no exceedances of the 1% screening criterion alone or in-combination. There are therefore no '*increases above critical thresholds*', as contended by Biofuelwatch.

[5] Land outside the boundary of a European Site, but which provides a supporting function to the qualifying interests for which that European Site has been designated.

Para 17 / 3.2.15	In paragraph 212 of [REP2-073] Biofuelwatch raised concerns, based on a study for Norway's CO2 Technology Centre Mongstad, about the impact of amine deposition (and subsequent nitrosamines and nitramines). Biofuelwatch were not satisfied by the applicant's response, see [REP6-034] in response to [REP4-020]. The amine critical loads used by the applicant are not precautionary. Also: a. The deposition level predictions provided in [REP4-020] have presumably been made based on an amine deposition velocity that is essentially just an educated guess (see paragraph 241 of [REP2-073]) and not necessarily precautionary. b. The applicant appears to have predicted deposition of nitrosamines and nitramines but not the nitrosamine and nitramine concentrations that would arise from the breakdown of amines after deposition. The Norway's CO_2 Technology Centre Mongstad study shows the risk that amine breakdown products could exceed limits. Concentrations of amine breakdown products arising after amine deposition must be modelled for the assessment to be robust. Amine breakdown products can persist for long "periods risking harmful elevated environmental concentrations (paragraphs 212-214 of [REP2-073]).	The Applicant has responded to concerns relating to the deposition of amines and their degradation products and remains of the opinion that their assessment is appropriately conservative. These comments can be seen in the Applicant's Responses to Issues Raised at Deadline 8 (REP9-023) and also the Applicant's Responses to Issues Raised at Deadline 7 (REP8-026).

Para 18 / 3.2.16	Paragraph 4.2.56 of [PD-020] shows Natural England also raised concerns about amine impacts and "considered amine impacts for ecological receptors only in terms of deposition and not concentration". Whilst paragraph 1.3.18 of [APP-127] refers to the derivation of amine deposition fluxes at all receptor and grid locations, [REP8-012] (and early versions of Appendix 6.5) includes neither tables showing amine depositions nor tables showing amine concentrations. Biofuelwatch is unclear what deposition impacts Natural England considers have been carried out at ecological receptors.	The Applicant has assessed the impacts of amine and degradation products via their contribution to nitrogen deposition. The proportion of nitrogen deposition arising from emissions of NOx, NH3 and amines is not provided explicitly since the critical loads are set for total nitrogen deposition and not for individual species of nitrogen. The contribution could easily be calculated by reference to the annual mean NOx and NH3 concentrations, with the remainder (a negligible contribution) arising from amines.
Para 19 / 3.2.17	The comparison with a critical level for a different chemical, ammonia, in paragraph 4.2.57 gives false confidence because different pollutants have very different impacts and very different critical levels. It is therefore difficult to understand why the applicant's consideration of a level against a threshold for a different pollutant to have "addressed all its concerns" (paragraph 4.2.58). Biofuelwatch requests the ExA provide much more explanation to justify its faith in Natural England's confidence.	Paragraph 4.2.57 relates to concentrations and deposition of amines, nitramines, and nitrosamines, including comparison of the predicted concentrations arising from the Proposed Scheme with the critical level for ammonia (NH_3). The Applicant has addressed this and related points extensively in previous submissions and does not intend to repeat those here. The Applicant has considered the potential for concentrations of these pollutants in air to have effects on ecological receptors. The Applicant has also considered the potential for these to deposit to and have effects on ecological receptors, both as pollutants in their own right and also as part of overall nitrogen deposition arising from the Proposed Scheme and other plans and projects. The Applicant would refer the ExA to its responses in rows 9.23 to 9.27 in Table 9.1 of Applicant's responses to issues raised at deadline 2 (updated) (REP4-020).

Para 20 / 3.2.18	Ecological assessments of European sites require an in-combination assessment but the consideration of impacts from amines and their breakdown products has been made without determining: a. levels of amines arising from biomass combustion b. background levels of amines and their breakdown products c. other potential sources of amines and their breakdown products (paragraph 190 of [REP2-073]) which may combine with the proposal's emissions Without consideration of amines (and their breakdown products) from other sources (including natural sources), the assessment is not robust. Biofuelwatch considers such an assessment does not meet legislative requirements which require in-combination assessments. Without information to the contrary, a precautionary approach must assume that background levels of amines together with those arising from combustion of biomass may already result in levels of amines (and their breakdown products) in excess of levels that cause ecological harm.	The Applicant has addressed this and related points extensively in previous submissions and does not intend to repeat those here. The Applicant has considered the potential for concentrations of these pollutants in air to have effects on ecological receptors. The Applicant has also considered the potential for amines to deposit to and have effects on ecological receptors, both as pollutants in their own right and also as part of overall nitrogen deposition arising from the Proposed Scheme and other plans and projects. The Applicant would refer the ExA to our responses in rows 9.23 to 9.27 in Table 9.1 of Applicant's Responses to Issues Raised at Deadline 2 (updated) (REP4-020). The Applicant reiterates that amines represent a very small proportion of the total N deposition, and that concerns relating to background levels of these products are, in any practical sense, irrelevant since they act on both the with and without BECCS scenarios and do not affect the modelled impact of the use of BECCS.
Para 21 / 3.2.19	Paragraph 4.2.60 says "NE considered that the proposed monitoring, recording, and reporting to the EA was appropriate to ensure emissions from	It is agreed between the Environment Agency and the Applicant (REP8-018), and between Natural England and the Applicant (REP8-019) that the proposed monitoring is sufficient. The

	the Proposed Development remained within the limits used for the assessments." Monitoring and reporting something is not the same as controlling or limiting something. Biofuelwatch considers Natural England's confidence that simply monitoring, recording and reporting will be sufficient for emissions to remain with limits to be misplaced.	Environmental Permit includes Emissions *Limit* Values (ELVs) which *control* the concentrations of emissions which enter the environment. ELVs are defined under the Industrial Emissions Directive or the Large Combustion Plant Directive. These emissions are monitored and reported, and a breach of those values would be a breach of the permit, which the EA would be able to consider whether it has occurred when receiving the monitoring results. When referring to the Environmental Permit the term 'Control' appears numerous times demonstrating the operator's responsibilities regarding the management and operation of the installation.
Para 22 / 3.2.20	With regard to 4.2.60, Natural England recommended that "the Applicant undertake operational monitoring at the European sites … to support the Applicant's claims that acid deposition and other pollution was decreasing at the European sites" but later considered this was "unnecessary as it would not be possible to identify triggers for further measures". This shows Natural England recognised there to be a risk that acid deposition and other pollution may not decrease. The recommendation for monitoring was only abandoned when the Applicant raised the concern "that such monitoring would be unlikely to be able to distinguish between impacts arising from the Proposed Development and from other sources". This shows Natural England identified a risk from acid deposition and other pollution and recognises that the control measure it originally proposed could	The conclusions of no LSE / no AEOI reached in the Applicant's HRA Report (REP9-020), as agreed to by Natural England (REP8-019) are reached on the basis of a range of evidence. This includes the operational emissions abatement measures as would be secured via the variation to the Drax Power Station Environmental Permit, and the associated monitoring by the Environment Agency. As highlighted by Biofuelwatch, Natural England have stated that monitoring of the designated sites themselves '…*is not a necessary measure to ensure protection of the sites…'.* The Applicant has highlighted numerous times the conservative assumptions in the dispersion (air quality) modelling, e.g. that for the in-combination assessment all other emitting projects modelled are assumed to operate at full load 100% of the time. This is a scenario which in reality is very unlikely to occur. This and other conservative assumptions included in the dispersion

	not control the risk because “it would not be possible to identify triggers”. There is therefore a risk to a European site sufficient to warrant control measures but for which no satisfactory control measure can be identified. Such a risk of harm to a European site that cannot be adequately controlled is unacceptable. It shows the necessity of further emissions reductions to avoid the risk of harm and shows the location to be inappropriate for the proposed emissions.	modelling provide confidence that predicted impacts will not be exceeded. The Applicant does not consider further emissions reduction measures are required and maintains their position that monitoring of the protected sites themselves is of no value to monitoring the potential effects of the Proposed Scheme.
Para 23 / 3.2.21	Paragraph 1.1.5 considers the applicant has not identified any potential impacts but [REP6-021] says "For some European Sites, LSE were identified for a proportion of the qualifying interests." LSEs (Likely Significant Effects) are "potential impacts". 5.1.5 of [REP6-021] acknowledges that other plans and projects could exacerbate the impact. Whilst 5.18 of [REP6-021] concludes that "the Proposed Scheme would not have an adverse effect" this is after mitigation (paragraph 5.1.6 of [REP6-021]). The need for mitigation shows a "potential impact". Biofuelwatch therefore considers paragraph 1.1.5 does not correctly represent the information the ExA has received.	Paragraph 1.1.5 of the RIES states that “the Applicant has not identified any potential impacts on European sites in any EEA States... Only UK European sites are addressed in this Report.” This sentence in the REIS is referring to European Sites in other non-UK countries where no impacts have been predicted. Paragraph 1.1.5 in the RIES is therefore accurate and points raised in the BfW response are not relevant.
Para 24 / 3.2.22	Paragraph 2.1.5 should say “that the European sites identified by the Applicant were the European sites that were relevant to the assessment.”	As the RIES is concerned only with European Sites, only potential effects on European Sites can and should be considered within it. Confirmation that the Councils considered

	Biofuelwatch have found no confirmation in [REP3-012] that the Councils referred to by the ExA considered the HRA to include all sites relevant to the assessment (which include sites that are not European sites).	the HRA to include all relevant European sites is provided in row 4.9.3 of Table 4.9 of the draft Statement of Common Ground between North Yorkshire Council and Drax Power Limited (REP8-017, Rev 07 to be submitted at Deadline 10). Natural England has also at no time suggested that other European Sites need to be considered.

4. CLIMATE EMERGENCY PLANNING AND POLICY (CEPP)[6]

4.1.1. In responding to these submissions, the Applicant would draw the ExA's attention to two recent Court judgments, which are relevant to CEPP's submissions as well as the Finch case previously referenced in both parties' submissions on carbon matters.

4.1.2. Firstly, the High Court's decision in respect of the Sizewell Nuclear Power Station (judgment appended at Appendix B), which dealt with water supply issues for the new power station. The key points arising from this are the following:

i. it was acceptable for a decision maker to consider a utility supply project as separate from the power station development because the utility supply would be taken forward by a different company, under a different regime, and would be required for other reasons as well as supplying the plant in question;

ii. for all development projects dealing with how to assess the utility supply for their projects, the judge made clear that, if projects were required to properly assess details of those utility supply projects, "decisions on those development projects would have to be delayed until the company is able to define and decide upon a proposal…." that approach would lead to sclerosis in the planning system which it is the objective of the legislation and case law to avoid; and

iii. such projects should only be assessed cumulatively when that is actually possible to do, and when undertaking in-combination assessments that are required under the Habitats Regulations, the judge reaffirmed that a decision maker can rationally decide to defer consideration of the cumulative impacts of a subsequent development to a later consent stage – if the plan for that development is not yet fully formed.

4.1.3. Secondly, the High Court's decision in respect of challenge by Dr Boswell against the Secretary of State for Transport's consenting of three projects on the A47 in Norfolk, a case which focussed on the approach to carbon assessment (judgment appended at Appendix C). Whilst focussed on a transport matter, where the NPS is different, it sets out useful guardrails in respect of carbon assessments, building on a 2022 TCPA decision in respect of Southampton Airport's extension plans. The key points arising from this are the following:

i. the question of the approach to evaluating carbon assessments, particularly cumulative ones, are all matters of evaluative judgment for the SoS. The question for a Court is whether the evaluative judgment made by the SoS was outside the range of reasonable decisions open to him. The views of the SoS (and the Planning Inspectorate) are entitled to considerable weight;

[6] This table is a summary of CEPP's points.

ii. because there is no single approach to assessing carbon emissions, the approach to assessing carbon differs from other Environmental Statement topics and this is supported by IEMA industry guidance;

iii. EIA is a process that starts but does not end with the environmental statement. Significant scrutiny was applied to carbon assessment during the Examination (including Dr Boswell's contribution) and in the SoS' decision letters – this is all 'environmental information' for the SoS to consider; and

iv. compliance with independent guidance does not, of itself, demonstrate compliance with [the EIA Regulations] but is one legitimate way for the Court to assess the exercise of judgment in circumstances where there is no single prescribed approach to the assessment of cumulative carbon impacts or to gauging the significance of the climate impacts of a development project in the EIA.

4.1.4. Both cases also make it clear that it is appropriate to assess carbon emissions against carbon budgets and that it is the government's role to determine how best to balance emissions reductions across the entire economy. Any net emissions increase from a particular policy or project, that is determined through the Secretary of State's evaluative judgement can therefore be seen by the Secretary of State in the context that such emissions are to be managed within the government's overall strategy for meeting carbon budgets and the net zero target for 2050, as part of an economy-wide transition.

4.1.5. **These points are considered in the Applicant's responses below, in the overall context that these submissions, as well the previous correspondence in Examination between the two parties, is part of the environmental information that will be before the Secretary of State**.

Table 4-1 Climate Emergency Planning and Policy Deadline 9 Submission (REP9-032)

Para No / Response Ref.	Comment	Applicant's Response
Section 5, Part A **Sections 3.1, 3.5, 3.9, 4.1** **/** **Applicant's ref. 4.1.1**	**Direct and Indirect effects in EIA Assessment - Summary** *I have analysed the development – a Schedule 1, paragraph 23 development under the 2017 regulations – and shown how the likely significant (direct and indirect) effects should be classified for the EIA purpose. The Applicant failed to do this process correctly, or even at all. The Application is in error of law from the EIA Scoping report onwards. The error infects all subsequent processes including the decision.* The GHG emissions from the upstream combustion plant are causally connected and are an indirect effect of the development, therefore estimation and assessment of their likely significant effects is required under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the "2017 Regulations"). The Applicant has not addressed the difference between direct and indirect effects, and no reasons are provided as to why the combustion emissions should be estimated as zero. **Section 3.5** details how the Applicant's	Both direct and Indirect emissions from the Proposed development have been included within the assessment appropriately. These have been very clearly labelled with the PAS2080 lifecycle stages, which not only indicate to the reader if the emissions are direct or indirect but also which project stage they are related to. All material upstream emissions related to the development have been included. This has been dealt with at length in other submissions, in particular in Response Ref 5.8 in the Applicant's Responses to Issues Raised at Deadline 4 (REP5-028), as well as in the Applicant's Responses to Issues Raised at Deadline 2 (REP3-020) and in the Summary of Oral Case at Issue Specific Hearing 1 (REP-028). The emissions from the combustion of biomass have been assessed and are zero rated. This has been dealt with at length in other submissions, including Response reference 5.1 in the Applicant's Responses to Issues Raised at Deadline 4 (REP5-028) as well as in the Applicant's Responses to Issues Raised at Deadline 2 (REP3-020) and in the Summary of Oral Case at Issue Specific Hearing 1 (REP-028). In light of the case law discussed above, it is noted that in respect of upstream emissions, the Secretary of State has been

	GHG Chapter does not distinguish between direct and indirect effects. CEPP believes that the upstream and downstream developments should have their emissions assessed as indirect effects as they are causally related to the development, and the Proposed Scheme cannot function without them. "*These should have been included for cumulative assessment even if the precise details are not known at this stage: this in itself is a breach of the 2017 regulations." (Section 3.1, para 18*) *Although this operation may be dealt with a later planning application, the Applicant should provide information on the indirect significant effects, as they are known at this stage, and it has not done so. The transport and storage of CO2 requires significant energy input which itself would have a carbon footprint. Although it may not be precisely calculated at this stage, estimates of the GHG impacts should have been provided and assessed as a likely significant downstream indirect effect. This is a further flaw in the Applicant's ES.* Section 3.9, para 47.	given the figure that Dr Boswell is concerned about in Appendix 15.1 of the ES. Whilst for the reasons given here and in previous submissions, the Applicant considers it is robust for these emissions to be treated as zero rated, the Secretary of State has the emissions figure before him as part of the 'environmental information' he can consider in his decision making. The Secretary of State can therefore report on his considerations on this matter and would have discharged his duty in respect of the EIA Regulations accordingly. Furthermore, it is noted that both the existing EN-1 and the new EN-1 in considering new projects recognises that "*Operational emissions will be addressed in a managed, economy-wide manner, to ensure consistency with carbon budgets, net zero and our international climate commitments. The Secretary of State does not, therefore need to assess individual applications for planning consent against operational carbon emissions and their contribution to carbon budgets, net zero and our international climate commitments".* Whilst the Applicant's position remains that the Proposed Scheme is not a new generating plant creating new operational emissions, this policy sets the framework against which the Secretary of State would consider operational emissions if he did consider taking existing emissions at the Existing Power Station into account, including not zero rating biomass emissions. In terms of downstream emissions (the transport and storage of CO_2), these will be consented through a separate planning application. Even if these emissions were in the scope of the assessment as indirect effects, or to be considered cumulatively,

		information related to the magnitude of these emissions is high level at this time. However, it is noted that in respect of the Humber Low Carbon Pipeline project, which would potentially comprise the onshore elements of the transport infrastructure, GHG emissions estimates were given in its statutory consultation PEIR as follows: For construction: **Table 19.3: Estimated Embodied Emissions** **Material** | **Embodied Carbon (tCO_2e)** Steel | 112,152 National Grid | October 2022 | Humber Low Carbon Pipelines 20 **Table 19.4: Estimated Emissions for the Transport of Materials to Site** **Material** | **Transport to Site (tCO_2e)** Steel | 1,778 **Table 19.5: Estimated Plant Use Emissions During Construction** **Item** | **Total (tCO_2e)** Construction Plant | 2,886 For operation (including leakage):

Table 19.6: Estimated Operational GHG Emissions per annum

Item	Total (tCO_2e)
Operational Energy	2,320
Maintenance works	6,320
Total	**8,640**

For decommissioning:

Table 19.7: Estimated Plant Use Emissions During Decommissioning

Item	Total (tCO_2e)
Decommissioning Plant	2,886

Table 19.8: Estimated Emissions for the Transport of Waste (Steel) for Disposal

Disposal Method	Transport to Site (tCO_2e)
Landfill	71

Table 19.9: Estimated GHG Emissions from the Disposal of Waste

Disposal Method	Emissions (tCO_2e)
Landfill	1,878

The offshore elements (being the cabling and storage) of the Northern Endurance Partnership (that BECCS captured carbon would potentially utilise) are still under consideration, but the figures from the Scoping Report for the works, provided to the Net Zero Teesside Examination, are as follows:

Table 3-2: Offshore Greenhouse Gas Emissions estimates

Offshore GHG emissions		Activity	GHG Emissions (tCO_2e)
Offshore Construction		Seabed infrastructure	702

Offshore GHG emissions		Activity	GHG Emissions (tCO_2e)
	Embodied carbon of materials & products	Flow Lines	3,500
		Teesside Pipeline	126,400
		Power & communications cables	4,100
		Wells	1,950
		Total embodied carbon from material & fabrication processes	***136,652***
	Transport of materials to site		14,892
	Construction activities	Vessel emissions	172,852
		Well water washing	303
		Total construction activities GHG emissions	***173,155***
Total Offshore Construction emissions (3 years)			***324,699***
Offshore Operations	Vessel emissions		28,196
	Fugitive emissions		2,792
Total Operational emissions (25 years)			***30,988***
Decommissioning	Vessel emissions		1,721
Total Decommissioning			**1,721**
Total Offshore GHG emissions			**357,408**

As noted above, it is for the Secretary of State to determine whether these impacts should be considered as indirect effects of the Proposed Scheme.

In light of the recent Sizewell judgment, the Applicant would note in that regard that:

- given recent developments the precise routing, extent and timetable for that project is still not clear;

		• the project will not only be utilised for BECCS, but will also be required for projects across the Humber; and • it will be subject to its own approvals. As such, it would appear clear that the HLCP should not be considered to be part of the same project as BECCS, and for the same reason cannot be considered to be an indirect effect of purely BECCS – it is the indirect effect of many other projects, with only a small % that could be truly said to be 'allocated' to BECCS. However, even if it is considered that they are, and noting that they arise on two schemes which will be carrying carbon from BECCS but also a number of other projects (and so ultimately themselves provide net carbon savings) they are clearly very small when compared to the net benefit of the DRAX project and therefore are not considered to be material.
Section 5, Part B **Sections 3.2, 3.5, 3.12** **Applicant's Ref: 4.1.2**	**Errors in Scoping** Where the Applicant did classify GHGs and their effects, they made mistakes (for example, not scoping supply chain emissions in the Scoping Report and then later scoping them in in the ES) and created confusion. I have disentangled this as much as I can and reported it in this submission.	The Scoping stage provides an opportunity for developers and consultees to identify potential impacts and areas of concern that would need to be included in the assessment. As per the Planning Inspectorate's Advice Note 7[7], the scoping process *'enables the refinement of the assessment and ultimately the information required to form the ES'*. This means that matters not identified in the Scoping Report may later be scoped in due to

[7] https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-and-environmental-statements/#5

	Section 3.2 24 I submit that the Applicant has confused a number of issues at the Scoping Report stage, and this confusion has then infected the Environmental Statement and all subsequent stages. If not corrected, these issues will fatally infect the legitimacy of the decision process. The issues make the ES unlawful meaning that any subsequent decision will also be unlawful. In overview: (D) crucially what were direct effects and what were indirect effects for the EIA process have not been correctly identified; (E) cumulative effects such as the downstream transport and storage of CO2 have not been identified, or even reported in outline form (if the details are currently unknown); (F) rather than properly estimate, quantify and assess the combustion emissions, they have been estimated and reported as zero for the assessment stage of the development's operation (ie Table 15.11 in the ES) even though the Applicant knows the quantity of the CO2 produced by the combustion operation and provides a figure for it after being requested to do at the ISH1 (the combustion emissions are	discussions between the developer and consultees on potential impacts. The Applicant's position is that, whilst it has provided figures relating to biomass supply chain matters and combustion emissions, these are not indirect effects of the Proposed Scheme. This is because the Proposed Scheme is not seeking to consent the continued operation of the biomass units at the Existing Power Station – their operation is an entirely separate matter already controlled and consented. The Proposed Scheme is to install carbon capture equipment to existing units, not new units, as such it is not creating new upstream effects. The upstream effects of biomass combustion exist and will potentially continue to exist whether or not the Proposed Scheme is there (i.e. it is the baseline and the future baseline), so it cannot therefore be possible for the Proposed Scheme to be creating new indirect effects, which is what the EIA Regulations require you to do – assess the impacts of the development on the environment. Dr Boswell also seeks to argue that an indirect effect of the development is that it is likely to 'prolong the life' of the Existing Power Station and thus the emissions of the Existing Power Station's operations thus also constitute an indirect effect. Noting that this is therefore seeking to suggest that the EIA Regulations cover the indirect effect of an indirect effect, which is both not correct and would lead to absurdities if applied through all developments that go through EIA, the Applicant notes that it is also not an effect of 'the development'. Any number of factors could affect the ability of the Existing Drax Power Station to

	estimated as 19,383,135tCO2/yr at the Table on PDF page 34 on REP-028); (G) the Applicant has provided no description of forecasting methods or evidence used to determine its estimate of the combustion emissions, contrary to Schedule 4, paragraph 6 of the 2017 regulations. Instead, it estimates the emissions as zero and says it justifies this estimation method because other regimes, totally disconnected and not material to the EIA Regulations and 2014 Directive7, “zero rates” the emissions. This is contradictory, and unlawful, when the applicant does estimate the combustion emissions as 19,383,135tCO2/yr at the Table on PDF page 34 on REP-028 but fails to explain (under Schedule 4, Paragraph 6) why the emissions (a likely indirect significant effect, see below) are then estimated as zero in Table 15.11 in the ES.	continue, not least Government decision making on the commercial subsidy regime. Furthermore, the operations of the Existing Drax Power Station are not ‘the environment’ against which the impacts of ‘the development’ will impact, which again is the focus of the EIA Regulations they are therefore not a ‘receptor’ that the Proposed Scheme can affect either directly or indirectly. It is therefore simply incorrect to consider the upstream emissions to be relevant indirect effects of the Proposed Scheme either now or in the future.D – Notwithstanding the above, the Applicant notes that a conservative approach to indirect emissions has been taken in the assessment already. The assessment includes **all** supply chain emissions in the assessment, even though these emissions are partially present in the baseline scenario of operating at 4,000 hours. This is to demonstrate the overall net negativity of the BECCS plant, ensuring all enduring emissions are fully accounted for regardless of whether they would have persisted in the baseline. The assessment has also assumed no further emission reductions of our biomass supply chain, despite emissions of Drax’s biomass supply chain reducing from 131kgCO2eq/MWh in 2018 to 96kgCO2eq/MWh in 2022. The Applicant is also in the process of setting verified targets under SBTI, and intends to further reduce emissions by 42% between 2020 and 2030, for both non-generation Scope 1 & 2 emissions and Scope 3 emissions. These commitments are not factored in, again for the sake of conservativeness. E – See response in the previous row.

		F & G – See submissions in the previous row in respect of the information that is before the Examining Authority and the Secretary of State. Treatment of biogenic emissions is in accordance with IPCC international conventions and all appropriate regulations e.g. UK ETS and UK renewables obligation, which provides the firmest basis for evaluating emission impact of bioenergy. Alternative approaches could rely on the reporting of the physical emissions as suggested by Dr Boswell. However, it is necessary to also account for removals that occur in the value chain to provide adequate distinction between the nature of the biogenic carbon cycle and fossil fuels, and to capture all carbon flows of the value chain. Under a strictly physical basis, all carbon in biomass emitted was originally sequestered from the atmosphere, and as such would provide removals equal to emissions. Ultimately, this would provide the same result as biomass CO2 emissions being zero-rated. Even, where relying on removals outside of the value chain rather than physical removals themselves, recent research points to 'contemporaneous carbon neutrality'[8], rather than the payback periods of decades Dr Boswell points to. As such, the 'zero-rating' approach remains a fair and reasonable, in terms of consistency with appropriate legislation, international accounting conventions and the latest science for sourcing regions applicable to Drax.

[8] Aguilar, F.X., Sudekum, H., McGarvey, R. *et al.* Impacts of the US southeast wood pellet industry on local forest carbon stocks. *Sci Rep* **12**, 19449 (2022). https://doi.org/10.1038/s41598-022-23870-x

		The Applicant equally acknowledges that biomass sustainability criteria such as those laid out in the Renewables Obligation Order 2015 as amended, play a key role in ensuring that only biomass that has a neutral or positive impact on the land sector/biological carbon cycle is sourced. In light of the A47 judgment, the Applicant considers that the application of this current guidance is a legitimate and reasonable approach to take to this question; and in the absence of any guidance to the contrary, it would in fact be unreasonable to take any other approach. It does not matter that such Guidance is not referenced by the Regulations directly, and the A47 judgment is entirely clear that what matters is whether the approach is in the bounds of reasonableness. The Applicant fails to see any reason to consider why its approach would not be considered to be such.
Section 5, Part C **Section 3.3** **Applicant's Ref. 4.1.3**	**Combustion Emissions in Baseline and 'Do Something' Scenarios** *"The Applicant did scope in the biomass combustion emissions although it put these and other emissions in both the baseline and the development scenarios which is a further confusion/error. However, biomass combustion emissions should be scoped in, and into the development scenario, as they are a downstream likely significant indirect effect of the Schedule 1, paragraph 13 development*."	The baseline is a scenario without the Proposed Scheme in place. The Proposed Scheme is for CCS technology, not for biomass combustion (which is already consented). Therefore the baseline includes the combustion of biomass (as well as emissions from supplying this biomass). Therefore the correct approach was used in developing the GHG chapter. The Applicant's position on the inclusion of combustion emissions has been set out previously in response ref 5.1 of The Applicant's Responses to Issues Raised at Deadline 4 (REP5-028) and above.

	Use of incorrect baseline in Chapter 15 which means that biomass supply and combustion emissions are included in both the Baseline and Do Something scenarios. Different assumptions on the biomass supply chain are used in both baseline and Do Something scenarios (Section 3.3 para 26).	
Section 5, Part D **Section 4.11** **Applicant's Ref 4.1.4**	**Errors in Estimation of combustion emissions** Having scoped in biomass combustion emissions, the application then failed to estimate them correctly. Having estimated them outside [in REP-028] the EIA Assessment table at Table 15.11 as over 19MtCO2/yr from the whole site (or over 9 MtCO2/yr from the Units 1 and 2 which are the functionally inter-dependent units with the Schedule 1, paragraph 23 carbon capture development), the Applicant then estimated the emissions as zero in the assessment table (ie Table 15.11). This is not just contradictory, but it is an error of law. *The obligation to assess GHG emissions, therefore, did not reach UK statute until 2017. I*	This is related to UK Government guidance, 'Greenhouse gas reporting: conversion factors 2022'[9] that biomass combustion should be reported outside of scope. This is not a contradiction but an application of that guidance. This is detailed in previous submissions, including Response Ref 5.1 in the Applicant's Responses to Issues Raised at Deadline 4 (REP5-028) as well as in the Applicant's Responses to Issues Raised at Deadline 2 (REP3-020) and in the Summary of Oral Case at Issue Specific Hearing 1 (REP-028). Whether a GHG assessment of the Existing Drax Power Station was considered at the time it was built or when it converted to Biomass operations in 2014 is not the relevant question. These operations are now in place, with carbon reporting undertaken pursuant to the Applicant's regulatory requirements. This has enabled the Applicant to provide the figures that it has done in Appendix 15.1 and during the Examination.

[9] Section 5, Part B

https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2022

	believe that the GHG emissions of the existing Drax facility have never been assessed under the 2014 Directive, or the 2017 regulations. It would be helpful for the Applicant to provide the examination with details of the previous consenting process and any environmental impact assessment carried out so that this point is clear. Section 4.11, paragraph 87	As set out above these figures have been provided to enable full understanding of the baseline context, but not to inform the assessment. This is clearly explained in the ES and is not contradictory.
Section 5, Part E **Applicant's ref. 4.1.5**	The Applicant provided no reasoning under Schedule 4, Paragraph 6 of the 2017 Regulations as to why the estimated figures, between REP-028 and Table 15.11 varied so much. This is a further breach of the 2017 Regulations.	The difference between the numbers presented in Table 15.11 and the various numbers in REP-028 is that the numbers in REP-028 cover different scenarios, different sets of emissions sources, and different time periods. However, comparing like for like between the two documents there is no difference between the numbers reported in the ES and the numbers reported in REP-028.
Section 5, Part F **Section 3.3** **Applicant's Ref 4.1.6**	**EIA Methodology** The Applicant has relied upon conventions from other regimes, and outside the EIA regulations, and not material to the EIA Regulations, to support estimating the emissions as zero (in the applicant's terminology "zero rating"). The Applicant's justifications for estimating the biomass combustion emissions as zero cannot lawfully apply to reporting the likely significant indirect effects of the development. **Section 3.3**	As detailed in response ref 5.1 in the Applicant's Responses to Issues Raised at Deadline 4 (REP5-028), as well as in the Applicant's Responses to Issues Raised at Deadline 2 (REP3-020) and in the Summary of Oral Case at Issue Specific Hearing 1 (REP-028), the Applicant has complied with current guidance when completing the GHG assessment. In light of the A47 judgment, the Applicant considers that the application of this current guidance is a legitimate and reasonable approach to take this question; and in the absence of any guidance to the contrary, it would in fact be unreasonable to take any other approach. It does not matter that such Guidance is not referenced by the Regulations directly, and the A47

	26 Table 15-8 of the ES provides the operation baseline, and includes “Operational Energy Use, B6” (with the biomass combustion stage emissions estimated at zero). This line is also repeated in the Table 15-11 on the operational emissions from the scheme. Table 15-8 also includes “Biomass supply chain GHG Emissions (Operational) – D” and this is also in Table 15-11. The Applicants thinking is extremely confused here: (a) First, the figures given for the biomass supply chain are significantly different (558,778 tCO2/yr vs 1,223,723 tCO2/yr) because the baseline figures are assuming 4000 hours of annual operation whilst the scheme emissions are assuming 8,760 hours of annual operation. This is just one example of discrepancies (the largest one). the key point is that the same assumptions should be used for baseline and “Do Something” scenarios, and the Applicant has not done so. (b) On page 36 of REP-028, the Applicant claims that “This is because GHG assessments for EIA are required to quantify the impact of the proposed development through a Baseline vs Do-Something comparison”. However, this is not what the Applicant is doing. The Applicant has included the biomass supply emissions and the combustion emissions in both the “Baseline” and	judgment is entirely clear that what matters is whether the approach is in the bounds of reasonableness. The Applicant fails to see any reason to consider why its approach would not be considered to be such. **Section 3.3** 26 a – There is no inconsistency. The same assumption for carbon intensity of the biomass value chain is used for both scenarios. The baseline scenario assumes running hours of 46% of the CCS scenario – consequently, the baseline scenario utilises 46% less biomass and so has 46% fewer emissions. 26 b – Biomass supply chain emissions are fully included for the sake of transparency on the absolute emissions, to provide assurance that the project does not provide a carbon benefit in the ‘do something’ scenario, but that ultimately delivers negative emissions when factoring in the full value chain. By only including the difference between scenarios, the 558,778 tCO2 ‘residual’ emissions would not be presented, only the 664,945tCO2 difference between the ‘baseline’ and ‘do something’ scenario. Taking our approach therefore not only distinguishes the difference between the two scenarios, but also presents the necessary information to determine the overall ‘net negativity’ of the process. Note that for combustion emissions, taking a strictly ‘physical’ approach to emission and removal reporting would result in removals from land sector carbon sequestration proportional to emissions and so would not change across

	the “Do Something” scenarios. So these cannot be genuinely “Baseline” and “Do-Something” scenarios. (c) This is important when we come to consider the likely significant effects because it must be clear where each of the supply chain emissions and combustion emissions fall (ie: in the baseline or the “Do Something”?). By including them in both, the Applicant fails to clearly define what the emissions are, baseline or “Do Something”, for the EIA assessment.	scenarios. i.e. such an approach would not change the approach of ‘zero-rating’. 26 c – See above.
Section 5, Part J **Applicant’s Ref. 4.1.7**	It should be noted that the development is for 25 years. When the likely significant (direct and indirect) effects of the development are considered in a full life-cycle analysis, as I have done in this submission, then the GHG effects of the development are not net negative but net positive. *By incorporating the biomass combustion emissions, (as not 0), CEPP has produced new calculations which show that the Proposed Scheme is a net emitter, producing over 2 million tonnes of CO2 a year even if CCS efficiency attained 90%. (From summary)*	This statement is related to the incorrect assertion that biomass emissions should not be zero rated, which has been discussed previously in response ref 5.1 in the Applicant’s Responses to Issues Raised at Deadline 4 (REP5-028) as well as in the Applicant’s Responses to Issues Raised at Deadline 2 (REP3-020) and in the Summary of Oral Case at Issue Specific Hearing 1 (REP-028). In light of the recent case law, it is for the Secretary of State to consider the reasonableness of approach, comparing that which has been accepted by national and international bodies, or by CEPP seeking to go against that grain. Taking the latter approach would be irrational.
Section 5 Part K,	**6th Carbon Budget**	The assertion that the Proposed Scheme produces emissions that would form part of the carbon budget is based on the incorrect assumption that biomass emissions should not be zero

Section 2.1, 3.14 **Applicant's ref. 4.1.8**	The development produces a net positive GHG footprint of over 2 MtCO2/yr. The development consumes 26% of the residual emissions specified for the Power sector in the CBDP for the 6th carbon budget. The Secretary of State must also consider if in using one quarter of the allocated residual emissions space for the Drax BECC (not BECCS) facility, there is sufficient emission pace left for the other carbon intensive Power schemes that the Secretary of State envisages – for example, gas power plants and blue hydrogen plants which even with CCS consume GHGs from the residual emissions space from both CO2 generation and downstream methane leakage in natural gas supply. "*The important figure for the discussions in this document is the residual emissions for the Power sector in the 6th carbon budget. This is 42 MtCO2 for the five-year period 2033-2037, or an average of 8.4MtCO2e per year. The meaning of this figure in the CBDP is that net GHG emissions from the Power sector are required to fall to this level for these years, along with the residual emissions in all other sectors, for the 6th carbon budget to be met. In fact, the Government already acknowledge that there is a 32MtCO2e shortfall for the 6th carbon budget – in other words, we already not on track, on the*	rated. This has been dealt with at length in other submissions, particularly in response ref 5.1 of the Applicant's Response to Issues Raised at Deadline 4 (REP5-028), as well as in the Applicant's Responses to Issues Raised at Deadline 2 (REP3-020) and in the Summary of Oral Case at Issue Specific Hearing 1 (REP-028). In addition BECCS (of which the proposed development is an example), is a key part of the CCC's balanced pathway to net zero as published within the' 6th carbon budget report, as well as the UK Government's Strategy for delivering net zero 'Powering Up Britain'. This should be seen in the context that the UK carbon budgets are science-based targets that sit within Government's legally binding GHG reduction target for 2050. What is key is that these targets aim to mitigate the greatest effects of climate change by limiting GHG emissions for the whole of the UK economy and society. Notwithstanding the estimates set out in the CBDP, the UK Government has decided not to set national targets on a sector-by-sector basis. Some government policies may result in GHG emissions but they are nonetheless promoted in order to achieve other policy goals. It is the government's role to determine how best to balance emissions reductions across the entire economy. Any net emissions increase from a particular policy or project is therefore managed within the government's overall strategy for meeting carbon budgets and the net zero target for 2050, as part of an economy-wide transition.

	basis of largely theoretical policy, to meet it." (Section 2.1, para 7). *Further, the modelling of the Power sector for PUB and CBDP is based on the complex Dynamic Despatch Model (DDM) which is effectively a black box. This means that no risk assessment of the delivery of the Power sector in the CBDP can be made on a project basis, as all the projects are combined into a single model. There is an urgent need to review the residual emissions for the 6CB against all the planned projects for power CCUS, power BECCS and blue hydrogen, including Drax. (Section 2.1, para 9)*	The Secretary of State will therefore be able to make their decision on BECCS in that context.
Section 3.1 **Applicant's ref. 4.1.9**	**The development under the 2017 Regulations and the Assessment of Cumulative Effects** 15 The Applicant has submitted that the Drax BECCS project is a development which falls under Schedule 1, paragraph 23 of the 2017 Regulations [APP-115, 1.4.1] as follows: "The Proposed Scheme falls under Schedule 1, paragraph 23 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ("EIA Regulations) as 'Installations for the capture of carbon dioxide streams for the purposes of geological storage pursuant to Directive 2009/31/EC from	The outcome of the cumulative assessment for the Proposed Scheme is reported in Chapter 18 (Cumulative Effects) (REP4-035) and its supporting Figure (REP4-007) and Appendices (REP4-002 – REP4-005 and APP-175). Where developments have sufficient environmental information available for a proportionate assessment, a cumulative assessment has been carried out. This is the case for the other projects in the Zero Carbon Humber cluster, including the Humber Low Carbon Pipeline (which is included in the Short List as ID102) and impacts, where available, assessed. As stated in Table 18.2 of Chapter 18, and in accordance with the IEMA Guidance, the GHG assessment is inherently cumulative as it takes into account various contextual scales and compares the Proposed Scheme GHG emissions against the annual emissions of Selby

	installations referred to in this Schedule, or where the total yearly capture of carbon dioxide is 1.5 megatonnes or more.' The Proposed Scheme will capture 4.1 megatonnes of carbon dioxide per annum per biomass unit and is therefore classified as 'EIA development' and as such the DCO Application will be supported by an EIA." 16 This is also stated by the Applicant at Chapter 1 of the Environmental Statement [APP 037,1.3.1]. 17 The development is therefore defined for EIA purposes as a carbon capture and storage facility. 18 I draw the ExA's and SoS's attention to the fact that the Application does not address the transport of captured carbon from the site, nor the geological storage part. So the development would be best termed a carbon capture ("CC") facility with carbon transport and storage to be dealt with by a separate upstream development, or developments. Meaning the development under application would be better termed Drax BECC (no S). No substantive information appears to have been provided for the functionally inter-dependent downstream developments, despite these being directly causally related to the development, and it cannot function without	and North Yorkshire and the UK carbon budgets. This approach is supported by the case law introduced at the start of this section. In any event, further information is provided above in relation to downstream effects, which are demonstratively minimal compared to the carbon savings of the Proposed Scheme. As such the Applicant's approach is in accordance with current policy framework and guidance and, through the use of carbon budgets, sufficiently considers cumulative effects.

	them. These should have been included for cumulative assessment even if the precise details are not known at this stage: this in itself is a breach of the 2017 regulations.	
Section 3.5 / 4.1.10	**Applicant's Problem with EIA Scoping and subsequent ES – elements of the existing Drax operation have been conflated and confused with the development under application.** 32 The Applicant's problem is that they have conflated operations Up(-2) and Up(-1) with CC to different extents in the EIA Scoping Report. As the distinction between the operations is blurred (conflated), the Applicant's Scoping Report on GHGs (Chapter 15 of [APP-115]) does not properly distinguish between likely significant "direct effects" and "indirect effects" for the purposes of EIA: in fact, for GHGs, it does not even identify direct and indirect effects. The scoping report analysis appears to have been focussed on "PAS 2080" typography assignations, but failed to clearly determine which effects are "direct" and which are "indirect". The PAS 2080 typography of GHGs types is a helpful tool but it does not substitute for correct EIA assignation, and assessment,	These matters are responded to in the Applicant's responses above.

	between direct and indirect effects under the 2017 Regulations. 33 Critically, CC(0) is the only operation which comprises the development under this planning examination. However, critically, the Applicant uses the word operation in an umbrella sense which conflates the upstream operations with the CC operation itself. As noted, the Applicant's umbrella use of operation also does not correctly identify the downstream operations, CO2 transport and storage, and the carbon payback process for EIA purposes. 34 However, the operation of the development, CC(0), is functionally inter-dependent with the upstream and downstream operations. The carbon capture operation cannot take place (or functionally exist) without the upstream and downstream operations. The upstream and downstream operations have likely significant environmental effects associated with them. In the proper understanding of the 2017 Regulations, these are indirect effects. They are likely to cause very significant effects and, therefore, should be scoped-in to the ES. 35 The Applicant has not addressed the Down(1) operations and Down(2) processes at all.	

	36 The outline above, of identifying direct effects (from the development itself), and indirect effects (for function inter-dependent development with a strong causal relationship) is a general principle which applies to all environmental factors under the 2017 Regulations. There is no Greenhouse Gas exceptionalism: the proper understanding is that each environmental factor (as listed at Regulation 5(2); Schedule 4, para 4; and Schedule 4, para 5(f)) is treated in the same way. 37 Therefore what I describe below for GHGs may also apply to other environmental factors under the regulations such as air quality and noise meaning that the 2017 regulations may have been breached in the ES for these factors too. 38 However, I now explain the confused approach of the Applicant in terms of GHGs, only, and the different operations and processes.	

5. MR JAMES HEWITT

Table 5-1 Submission of James E Hewitt for Deadline 9 (REP9-043)

Para No / Response Ref.	Comment	Applicant's Response
Section 1 / 5.1.1	The current date for publishing the Biomass Strategy has been delayed yet again. It is now due shortly after the planning process closes, perhaps not by coincidence.	The decision by Government as to when to publish the Biomass Strategy is made by Government. The decision as to the submissions made to this Examination are made by the Applicant.
Section 2 / 5.1.2	The two year delay in implementing the proposed works is incompatible with the climate emergency, and is inconsistent with the Track 1 go-ahead given to the East Coast Cluster, to whose infrastructure the Applicant's CO_2 would be transported. Implementation is now so far in the future – when circumstances will greatly differ from those now current - that it would be inappropriate to do anything other than either recommend against approval of the DCO or postpone judgement on it.	As set out in its Deadline 9 submissions, the Applicant does not wish to delay the project by 2 years, but is seeking the flexibility for that delay to happen if it needs to in light of the need for progress to be made following recent Government decisions. As set out above, the Secretary of State's decision needs to be made against the regulatory framework that exists at the time of decision, not hypothecating as to what any future framework might be. If no decision were made until any future possibilities do or do not happen, then no progress will be made in the fight against Net Zero.
Section 3 / 5.1.3	The Application is presented as if it were a BECCS project – misrepresenting the reality. If this is not apparent in the DCO, I wonder whether it should be.	The DCO is clear in its scope as to what is consented, as set out in Schedule 1 to the DCO.

Section 4.1 / 5.1.4	The Secretary of State might approve the DCO (whatever the Examining Authority's recommendations), doing so partly on the assumption that post-combustion emissions (in addition to sequestration foregone and loss of soil carbon) should be deemed zero in perpetuity – regardless of potential changes in government, revised policy, the evidence and the(long imminent) re-evaluation of the Biomass Strategy. Whether it should or would provoke Judicial Review remains to be seen. If those post-combustion emissions were zero, there would be no need for the proposed works – whose sole purpose (other than to generate subsidies for the Applicant) is to capture those implicitly non-existent post-combustion emissions. Drax power station remains the largest single point source of such greenhouse gas in the UK.	The Applicant has set out an explanation of the Need for the Proposed Scheme in the context of the zero rating of biomass emissions in its Needs and Benefits Statement [APP-033] and explained the calculations that underpin the benefit of the Proposed Scheme leading to net carbon negative position in Appendix 1 to its Summary of Oral Submissions at ISH1 and OFH1 [REP1-028]. This means that even if in the future (which as explained above and below is not a relevant consideration) the policy position changed such that biomass was not considered to be 'zero rated' the Proposed Scheme would still lead to carbon savings. Recent assessments of global CO2 concentrations and modelling of future CO2 concentrations suggest that we will overshoot the target to remain below the 1.5 degree figure which has been identified to reduce the worst effects of climate change. In order to redress this, Greenhouse Gas Removal (GGR) sometime referenced as Carbon Dioxide Removal (CDR) techniques are required. This need for BECCS is recognised in Government policy, the CCC's most recent report and National Grid ESO's Future Energy Scenarios.
Section 4.2 / 5.1.5	The same could be said if the DCO were approved on the assumption that those emissions are immediately sequestered. There is currently no contractual requirement, whether or not including payment, for landowners to ever sequester all or any of those emissions - rather than any other CO_2	As set out in its previous submissions, the Applicant is not seeking to consent the continued operation of biomass at the Existing Power Station and so does not respond to questions as to biomass sustainability here – its responses are set out in its Responses to Relevant Representations [PDA-002].

	emitted closer to their land. The countries from which the applicant imports that woody biomass are all net emitters of greenhouse gas. There may also be no de facto legal requirement for clear-felled forest to be restored. The text below further considers the imported woody biomass which is burned at Drax power station and the related post-combustion emissions.	The Applicant reports on its biomass-related emissions to Ofgem under legislative requirements (including the Renewable Obligation ("RO") and Contracts for Difference) for its current operations.
Section 5 / 5.1.6	The cumulative impact on the counties and districts from which the Applicant's woody biomass derives is not taken into account. That impact is attributable to increased forest fragmentation which, along with clear felling of individual tracts, changes the albedo (contributing to increased temperatures and drought). Cumulative impacts (and immediate local impacts) – including in relation to environmental justice areas adjacent pellet mills - are ignored by the (contested) regional certification scheme of the Sustainable Biomass Program "SBP". The Applicant's subsidies do not depend on the sustainability of forest management of the tracts which are the source of the wood raw material of the biomass burned in Drax power station. Neither do they require any carbon accounting. All that is needed is that the supply chains of that woody	

	biomass commence within a region covered by that SBC scheme. The eligibility for subsidy of the woody biomass which the Applicant burns is being contested with increasing frequency – including in the House of Lords and an enquiry by Ofgem. The contractor which the Applicant hires to collate its submissions to Ofgem (for purposes of substantiating requests for subsidy payments) has been hired to as the contractor for the Ofgem enquiry (in effect, to mark its own homework). The remit of the enquiry has not been published, but it might require no more than checking that the entities from which the Applicant imports woody biomass assert that that the wood raw material derives from regions covered by the SBP's regional scheme. The following question, posed by Baroness Blake of Leeds, exemplifies the most recent House of Lords debate on the 3rd of July 2023. *"My Lords, when Ofgem opened its investigation into Drax's biomass sustainability reporting a month ago, it made clear it would act if it found breaches of the rules—the right approach, surely, to a single case. However, what assessment have the Government made of wider compliance with reporting requirements and what steps are they*	

	taking to improve monitoring, particularly with regard to the origin of fuel sources?" During that debate, Lord Callanan, representing the government, stated that he would take action if Drax were found to not be meeting Ofgem's sustainability criteria – which, as implied above seem to be over-ridden by the SBP's regional scheme.	
Section 6 / 5.1.7	Emissions attributable to two sources of CO_2 in particular should be considered. One is that associated with the energy penalty – which would have to be matched by combustion of fossil fuel (which is not zero-rated). The other is the supply chain emissions of the two (or three) biomass units whose post-combustion emissions are not being captured. Including the latter is crucial because, without the subsidies which operation of the unabated generating units seeks to maximise, Drax power station would probably not be commercially viable. Further, recommendation R2023-124 of the Climate Change Committee's recently published "Progress in reducing emissions 2023 Report to Parliament" states that there should be unabated biomass-fuelled power stations should not operate at high load factors beyond 2027. Amongst other things, this implies that the Applicant's proposal – which assumes continued operation of all four biomass units – is based on a business model	The Applicant has outlined its position on the energy penalty, in Issue Specific Hearing 1, (see paragraph 2.4.93 of REP-028 for further details), as well as response ref 5.13 in the Applicant's Issues Raised at Deadline 1 (REP2-067) – there is no requirement that any replacement of energy supply for the 'energy penalty' would have to be replaced by fossil fuel. Financial viability and the use of subsidies is also discussed in Table 14.1 of the Applicant's Responses to Relevant Representations (PDA-002). As discussed during ISH1, (see paragraph 2.4.24 of REP-028), Units 3 and 4 are running under a subsidy regime ending in 2027 but nothing changes in planning terms as the operation of these (including their supply chain) do not form part of the application. Crucially, therefore, the impacts of these units are not part of the impacts of the Proposed Scheme as they are in no way affected by BECCS and therefore do not fall to be assessed as part of the Applicant's assessments. It is simply incorrect to suggest that the energy penalty associated with Carbon Capture must be matched by a fossil

	which is flawed (depending on revenue from sale of electricity dispatched and from subsidies from all four rather than at most two units).	fuelled plant, bearing in mind that the energy mix within the UK is demonstrating a reduction in carbon intensity. The text below is derived from a document titled 'Updated energy and emissions projections 2021 to 2040' published by the Department for Business, Energy and Industrial Strategy (October 2022). *"We project that the low carbon share of UK electricity generation will rise from 59% in 2020 to 87% in 2040, accounting for EEP-ready electricity supply policies. This is the proportion of all generation from renewables, nuclear or Carbon Capture and Storage (CCS) power producers. Hence the likelihood going forwards that the energy penalty indicated will be supplanted by low carbon sources is clearly demonstrated by these data."* The recommendation from the CCC's report to Parliament (2023) states the following: *"Ensure that large-scale unabated biomass power plants are converted to BECCS as early as feasible, and are not given extended contracts to operate unabated at high load factors beyond 2027."* The Proposed Scheme involves the conversion of 2 biomass fired units to BECCS and has employed a scenario of operation involving mid-merit operation of the remaining 2 unabated biomass units. This is exactly in line with the CCC's recommendation. As discussed above, the Future Energy Scenarios 2023 also envisage a role for both biomass and BECCS power supply in 2050 in all four scenarios.

Section 6 / 5.1.8	CO_2 is an asphyxiant (implicitly a handicap to emergency vehicles dependent on carburettors). The risk of a rupture in the pipeline between the Drax power station site and the supposedly permanent store is real (and should be deemed substantial in the context of the variability in the performance of the proposed carbon capture works if it is ever built. Perhaps the most recent rupture was in Satartia, Mississippi. A number of people nearly died as a result of that rupture. It is as if the Applicant's proposal seeks subsidy not only by continuing to cause environmental harm and CO_2 emissions through its supply chains and the energy penalty, but also by creating risk of direct harm to people from post-combustion. The UK has no infrastructure for (and implicitly no expertise in) transporting super-critical phase CO_2 in pipelines such as those proposed. Such matters do not yet seem to be reflected in the draft DCO. The most recent draft DCO does not refer to the need to comply with regulations concerning the supply of imported woody biomass. It does not refer to how the performance of the proposed works will be regulated (or whether subsidies would be payable only for amounts actually transported to the supposedly permanent store).	The draft DCO does not need to deal with the supply of biomass to the Existing Drax Power Station, as it does not seek to consent such activities, or the continued operation of the Existing Drax Power Station. The environmental performance of the CCS will be regulated by the DCO Requirements and the Environmental Permit and these controls will also regulate the performance of the transport infrastructure that is put into place through the DCO and permit that is sought by the promoters of that infrastructure. The subsidy regime for CCS, including its interaction with transport infrastructure, is not a planning matter, being one for Government to separately determine.

Section 7 / 5.1.9	Norway has recently admitted that two of its most prestigious CO2 storage projects (Snøhvit and Sleipner) are not performing as predicted, especially in relation to the amount of storage. "Norway's carbon capture and storage projects augur geological risks in global aspirations to bury carbon dioxide" Institute for Energy Economics and Financial Analysis. 14 June 2023.	The Government will consider the proposed performance of the stores being developed across the UK both through the offshore licensing processes and the business model development that is currently being undertaken. Each store will be different and the performance of the store, and the connection of emitters to it, will be managed by the Government. As set out in numerous Examination submissions, the consenting of BECCS will help ensure that the Government's policy expectations for storage will be able to be met.

6. JUST TRANSITION WAKEFIELD

Table 6-1 Just Transition Wakefield's Response to R17QB.3 (REP9-035)

Para No / Response Ref.	Comment	Applicant's Response
Para 1.0, 1.1 and 1.2 **/** **6.1.1**	Our first set of comments provide important context to the decision framework which has been altered by the seven year commencement proposal compared to a simple two year delay. Our interpretation of this is that the applicant reserves the right to delay use of the compulsory purchase powers, and therefore to begin construction, until 2030 – this delay is significant, and is likely to extend the operation of any BECCS plant built well after 2050, by which time the UK is legally required to have attained net zero. There are a number of implications of this seven-year commencement date, which could take the project start date to 2030 and the operational date to well after 2030. 2030 is a significant date for a number of reasons including: a. The UK Government has enshrined in law that by 2030, UK emissions must be cut by 68% from 1990 levels, to followed by further cuts to 78% by 2035, a mere five years later;	It is first important to note that the achievement of Net Zero by 2050 does not mean that the actions being taken today and in the coming years must then stop. Net Zero is something that be achieved and then maintained post 2050. As such, even if the Proposed Scheme's start is delayed (which the Applicant emphasises, it does not desire, but requires the flexibility if matters outside its control means this is required) the continued operation of BECCS past 2050 will continue to be important. Notwithstanding this, the future regulation of the energy market in the approach to 2050 and beyond is entirely a matter of speculation and as such not a matter for the examination. Given all the points that JTW raise, the Applicant agrees that all efforts to achieve the interim and full Net Zero targets must be made and wishes to be part of the solution for achieving them. Preventing BECCS being implemented simply by dint of letting the time run out earlier than external factors allow it to commence would be the opposite of making all efforts. Indeed JTW's comments appear to be inherently contradictory – seemingly recognising that BECCS is important to meeting targets, whilst also seeking for it not to be consented. The

	b. Recent government action on climate, particularly but not exclusively under the current Prime Minister, has been heavily criticised from public figures including Lord Deben, retiring chair of the UK Climate Change Committee. This criticism has focused on both lack of action and inappropriate action (such as licencing new oil and gas fields in the North Sea); c. The IPCC have been explicitly clear that to stay within a 1.5oC global average rise in surface air temperature, global emissions need to be cut by at least 45% by 2030. However, we also know that the later the emissions are cut, the bigger the required cut to maintain the same statistical likelihood of staying within 1.5ºC. d. It remains our contention that this application is incompatible with net zero, however loosely that is defined, and so it is our view that the seven year commencement, extending the operating life beyond 2050, provides further weight to our assertion that this application should not be recommended for approval by the Secretary of State. Therefore, to attain the legally binding 68% emissions reductions by 2030, UK action on climate will have to accelerate within these seven years to 2030. This is not our conjecture,	Applicant stands ready to deliver BECCS once the regulatory, funding and T+S position is made clear by Government. The Applicant is not aware of any conflict between the use of CCS technology and the achievement of Net Zero by 2050. The draft NPS EN-1 that was published for consultation in March 2023 confirms at Paragraph 3.5.1 that: '*there is an urgent need for new carbon capture and storage (CCS) infrastructure to support the transition to a net zero economy*.' Paragraph 3.5.2 of the draft NPS confirms the position of the Climate Change Committee that CCS is '*a necessity not an option*'. The Applicant's position is that there is no incompatibility between the use of CCS and the achievement of Net Zero, and that in fact BECCS can and should play an important role in achieving Net Zero. JTW make reference to the most recent (June, 2023) Report from the CCC; however, the CCC is unequivocal on the need for CCS and specifically BECCS.

	but necessary to meet the UK's legally binding targets. This fact will necessarily impact on government policy between now and 2030. Further, if commencement of the compulsory purchase powers is delayed until 2030, the project will put the 78% emissions reductions by 2035 at risk along with the requirement to achieve net zero by 2050.	
Para 1.3 **/** **6.1.2**	It is not possible to say which policy areas will be strengthened to facilitate meeting these UK binding targets named in 1.2 above. However, likely policy areas are those which are already controversial, particularly within energy policy. These are likely to be new and recent oil and gas licences, but also biomass policy which is attracting significant attention in both Houses of Parliament.	All planning decisions need to be made in line with the policy and legislative framework that exists at the time of decision, not to guess what that future framework might be, which would be irrational in public law terms. Current energy policy supports biomass and BECCS in supporting the achievement of Net Zero and that is the policy context against which the decision will be made.
Para 1.4 **/** **6.1.3**	There has been recent press and political interest shown in global carbon accounting rules which are known to contain anomalies. These anomalies include shipping and biomass emissions as well as those from flying. It is reasonable to expect that such carbon accountancy frameworks will be strengthened to account for emissions with greater accuracy and to specify the inclusion of emissions currently	The Applicant has set out an explanation of the Need for the Proposed Scheme in the context of the zero rating of biomass emissions in its Needs and Benefits Statement [APP-033] and explained the calculations that underpin the benefit of the Proposed Scheme leading to net carbon negative position in Appendix 1 to its Summary of Oral Submissions at ISH1 and OFH1 [REP1-028]. This means that even if in the future (which as explained above and below is not a relevant consideration) the policy position

	excluded in order to allow nations to hit their own legally binding targets, including the UK.	changed such that biomass was not considered to be 'zero rated' the Proposed Scheme would still lead to carbon savings.
Para 1.5 **/** **6.1.4**	The implication of 1.4 above is that to protect the public purse and to control damaging climate emissions, it would be wise to leave "get-out clauses" in any permissions and consents on projects associated with both fossil fuels and biomass. Biomass in particular, even when abated through CCS, is problematic compared to fossil fuels. This is because of as yet unaccounted emissions from the biomass supply chain (such as soil carbon losses), to the excessively long payback times (decades to centuries) and the loss of vital active carbon sinks. It is therefore our contention that the extension of the commencement date to potentially seven years has significant implications for the Examining Authority who has to make recommendations that comply with current government policy, but also can be altered to reflect unknown but predictable future government policy.	As set out throughout the Examination, this application does not seek to consent continued operation of the Existing Drax Power Station. The merits of biomass are therefore not a consideration for the determination of this application. All planning decisions need to be made in line with the policy and legislative framework that exists at the time of decision, not to guess what that future framework might be, which would be irrational in public law terms. Current energy policy supports biomass and BECCS in supporting the achievement of Net Zero and that is the policy context against which the decision will be made.
Para 1.6 **/** **6.1.5**	In relation to 1.5 above, we further note that publication of the UK Government's Biomass Strategy has again been delayed and will not be available until after the close of this enquiry. This will mean that the entire planning enquiry into a major and controversial infrastructure project will	As set out throughout the Examination, this application does not seek to consent continued operation of the Existing Power Station. The merits of biomass are therefore not a consideration for the determination of this application.

	have been undertaken on outdated policy which is known to be on the point of replacement. This leaves the Examining Authority in a very difficult position. For example, should Interested Parties be asked to comment on the Biomass Strategy after the close of the enquiry, to give the Examining Authority the best available advice to support decision making on recommendations? If not, will the Examining Authority be able and expected to use the anticipated Biomass Policy to influence their recommendations?	The publication date of the Biomass Strategy, and how that is dealt with in the determination of the BECCS DCO application will be a matter for the Secretary of State to determine.
Para 2.0 **6.1.6**	CO_2 pipeline and undersea storage. This delay or extension proposed by the applicant is due at least in part to the notice given by National Grid Pipelines that they intend to sell the project, most probably to the Northern Endurance Partnership. This reinforces a statement that we made in an early submission, that it makes no sense to consider 3 linked projects on entirely separate timelines. Indeed, because Drax's BECCS application is entirely dependent on the pipeline AND saline aquifer storage facility being granted planning and operating permissions and consents, it would still make sense to delay recommendations for this application until the necessary permissions and permits are granted for the systems on which this application depends. We still believe that this is a material consideration.	The Applicant has addressed the delay of the submission of the Humber Low Carbon Pipeline in the Applicant's Responses to Rule 17 Questions of 6 June 2023 (REP8-029). The Applicant's responses to R17QA.20 and R17QA.21 provide further detail on its position in relation to delaying the Proposed Scheme. In short, there is no commercial imperative for the Applicant to build BECCS until the transport and storage infrastructure is in place, but waiting for that infrastructure to gain consent before granting consent for BECCS provides no certainty to any party that the policy recognised need for CCS as a whole will be able to be delivered.

Para 3.0	In addition to the general points and the context provided above, it is clear to us that there are specific impacts of the delay that will be material and predictable, even though they are necessarily future projections.	Responded to below.
Para 3.1 **/** **6.1.8**	Impacts of climate change in the next seven years. We are receiving regular reports and updates from scientists that include: a. Arctic and Antarctic ice sheets melting earlier, more quickly and this melt accelerating; • Significant ocean surface temperature anomalies; b. Higher than predicted and accelerating releases of methane to the atmosphere, from both natural and man-made sources, which will further accelerate global heating. c. Continuing increase in atmospheric greenhouse gas concentrations which will also accelerate global heating; d. Reductions in atmospheric aerosols that will in the short term further accelerate global heating. The above observations indicate that weather patterns will continue to change as further heating occurs, with heat, drought and flood increasing in frequency and severity. This is likely to affect the availability of cooling water derived from the river and from ground water for	In the Applicant's response to the ExA's Request for Further Information submitted at Deadline 9 (REP9-026) the Applicant considered whether, should the construction of the Proposed Scheme not commence until seven years post consent, this would change the outcomes of the assessments carried out including baseline, assessments and conclusions of the EIA. The Applicant considers that the change in the programme is not significantly different compared to the assessments carried out and reported in the Environmental Statement for the Proposed Scheme. Further information was provided in relation to the potential impacts on baseline, survey work, worst case construction programme and outcomes of the Environmental Impact Assessment (EIA) for each topic assessment in Table 0.1 of Appendix A within The Applicant's Responses to Rule 17 Questions from Letters of 22 June and 29 June 2023 (R17QB and R17QC) (REP9-026). The climate change resilience assessment (presented in Chapter 14 of the 2022 ES) outlines the future climate baseline. The climate projection data informing the assessment uses Representative Concentration Pathway (RCP) 8.5. The RCPs are a method of capturing assumptions made about the economic, social and physical changes to our environment that will influence climate change. RCP 8.5 represents a 'high'

	some periods during the plant's operation. Provision will have to be made for such periods, such as a required shut-down of the CCS facility – with consideration of the plant operating unabated in such conditions which has significant climate implications. The above observations indicate that sea level rise will accelerate. Whether this on its own will impact on the plant within its operating period is not knowable. However, it is reasonable to assume that the risks of extreme rainfall events coinciding with storm tidal surges, intensified by sea level rise, will increase in probability. This will need to be reconsidered prior to commencement in the light of further observation and evidence throughout this decade.	emissions scenario where greenhouse gas emissions continue to grow unmitigated, leading to a best estimate global average temperature rise of 4.3°C by 2100. The approach is considered to be consistent with the precautionary principle (i.e., 'worst case' scenario). The climate change resilience assessment uses 30 year time slices to assess future baseline climate projections. The assessment of climate impacts has been undertaken for the 2020s (2010-2039) and the 2050s (2040-2069) aligning with the 25 year design life of the project. These time slices take account of an extension to the DCO approval and commencement of the proposed development. The Climate Change Resilience assessment has considered the impacts of precipitation, temperature, wind humidity and sea level rise using a high emissions scenario (RCP 8.5) for the timeframe covering the 25 year design life, inclusive of an extension to the DCO approval. In response to the consideration of cumulative impacts *"the risks of extreme rainfall events coinciding with storm tidal surges, intensified by sea level rise, will increase in probability."*, potential impacts to the Proposed Development were identified relating to flooding, overwhelmed drainage and deterioration of materials. These impacts can arise from rainfall events, sea level rise and tidal surges. Existing, and where required, additional mitigation measures were identified for these impacts and presented in the ES. The mitigation measures identified supports resilience to these measures and the Applicant will be responsible for monitoring of climate risks and impacts through their existing EMS (as noted in paragraph 14.13.3 of Chapter 14

		of the ES) during the operation of the Proposed Development, with operational maintenance and improvement measures implemented to address climate vulnerability as required. In relation to flood risk over time more generally, the Environment Agency agrees with the Applicant that this is able to be managed pursuant to the protections within Requirement 11 of the draft DCO. It is therefore considered that the assessment of climate impacts on the Proposed Scheme would not change should construction not start until seven years post consent, and that adequate mitigation has been identified and secured in relation to potential impacts.

Para 4.0, Para 4.1, 5.0 and 5.1 **/** **6.1.9**	Carbon Capture and Storage. At the present time, CCS does not have an impressive track record, with the majority of projects either closing early because of unacceptably high costs or failing to deliver promised capture rates, and other projects not progressing to the build stage, cancelled on grounds of cost and financial risk. With the delay, and proposed seven year period for commencement, by 2030 there will be more evidence from the UK of operational CCS projects at different scales. This evidence should be collated to inform final consent for this project, giving ministers the option to reconsider with both climate and the public purse in mind. The delay to commencement of this project will allow for further research to be completed, including: a. A better understanding of the chemistry of the various solvent mixes and their breakdown under different atmospheric conditions; b. The cumulative impacts on both human and ecological health of amines and their degradation products, based on both real-life experience from other UK CCS facilities and on further academic research; c. Plume studies to better understand how amine plumes will behave at different	The Applicant's view is that there are already a number of Carbon Capture and Storage projects which have been operational for a number of years, as set out in its Response to Relevant Representations. Furthermore CCS is recognised as key to achieving Net Zero by the Government, the CCC and IPCC. The operation of the Proposed Scheme will be controlled by the Environment Agency under the terms of the Environmental Permit, which will require the use of Best Available Technology. Amine chemistry has been studied for many years and, as noted on many occasions in the Examination (and the responses to Biofuelwatch above), the Applicant has undertaken a conservative assessment that adopts an appropriately precautionary approach to dealing with residual uncertainties and in line with policy and EA requirements – all impacts will be able to be regulated through the permit. A delay to the commencement of this project is scientifically un-necessary and would delay the wider benefits of the Proposed Scheme relating to carbon capture.

	temperatures, and the effects of multiple CCS projects creating a cumulative plume that has not yet been modelled but again is predictable based on current government policy to retrofit CCS to a number of incinerators and gas turbines. Amines and their degradation products. We and others have raised questions about public and ecological health impacts of amine emissions and subsequent degradation products such as nitrosamines which are known to be harmful to life.	
Para 5.2 **/** **6.1.10**	Monitoring equipment. Current technology is not able to detect, measure and monitor amines and their degradation products effectively. This is likely to change in the coming years as more amine solvent CCS systems become operational globally. Therefore any recommendations to the Secretary of State need to be sufficiently flexible to allow them to reconsider permission to commence based on a review of developing science.	Monitoring requirements will be specified within the Environmental Permit for the facility, as varied to account for CCS. Moreover, the Permitting process, including on-going review of best available technology, is the appropriate route by which to ensure that the operation of the facility does not result in unacceptable environmental impacts as science and techniques evolve.
Para 6.0, Para 6.1, Para 6.2 **/** **6.1.11**	In Summary. It is clear that there are predictable and significant uncertainties over future climate impacts and greenhouse gas emissions which will become more apparent over this decade as well as further into the future. Therefore, it is our assertion that if the Examining Authority is	If so minded, the Secretary of State can impose any additional Requirements it considers necessary, but in light of the submissions set out in this document and its response to the ExA's Rule 17 request, it is considered that none are required. Waiting to give consent until some unknowable time in the future waiting for regulation and Government decision making to

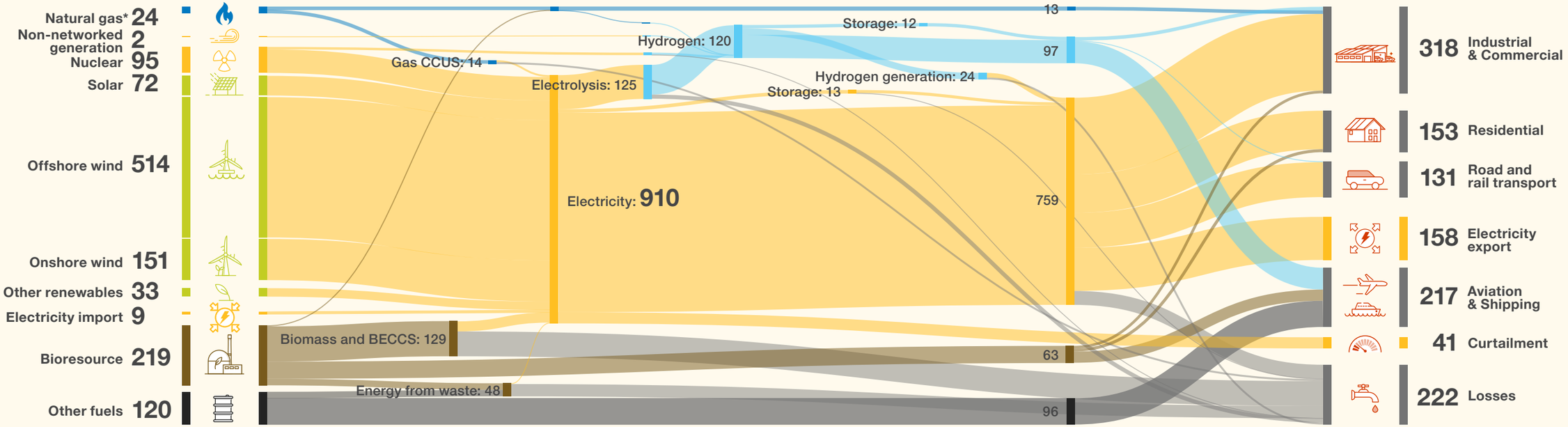
	minded to recommend approval to the Secretary of State, that this recommendation should be phrased in terms that give the Secretary of State sufficient flexibility to change their mind or impose additional conditions. Alternatively, if the Examining Authority is minded to recommend approval, they should seek permission to delay the decision until commencement is imminent. This will sit well with the precautionary principle of not tying the nation to decisions that may be regretted within the foreseeable future. Therefore, it remains our assertion that this proposal to retrofit CCS at Drax is not justified on climate, global biodiversity, sustainability or financial grounds and should not be recommended for approval by the Secretary of State.	catch up creates more uncertainty rather than less – issuing consent now means that other decisions are able to be made, and, it is hoped, project delay therefore to be reduced.

APPENDIX A – EXTRACT OF FUTURE ENERGY SCENARIOS, NATIONAL GRID 2023, PAGES 110-113

Energy supply and demand in 2050

Consumer Transformation (1239 TWh)

- Home heating, transport and industry largely electrified
- High levels of energy efficiency combined with large-scale electrification lead to lowest consumer energy demands across the scenarios excluding aviation
- High levels of renewable generation with low hydrogen production leads to the highest levels of electricity curtailment and export of any of the scenarios
- Two thirds of hydrogen produced is used in aviation, with another 20% used for electricity generation, to help meet security of supply

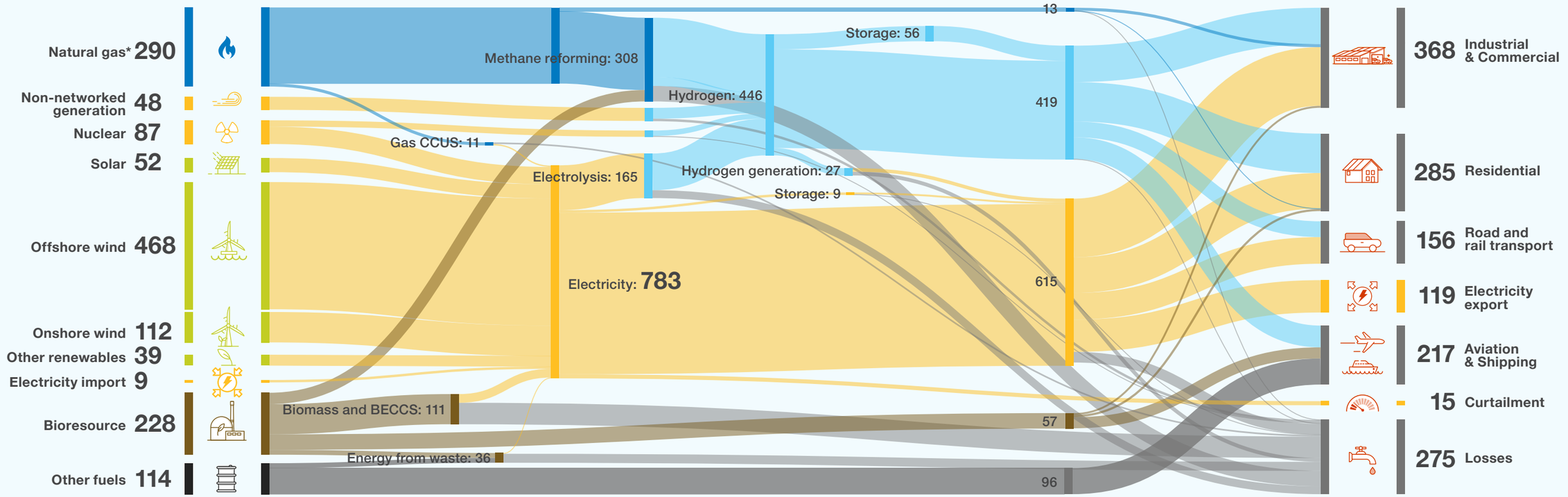


*excluding exports

Energy supply and demand in 2050

System Transformation (1447 TWh)

- Highest proportion of hydrogen across the scenarios with widespread use for home heating, industry and HGVs
- High natural gas use for hydrogen production from methane reformation
- Highest level of bioresource use - bioenergy used to produce both hydrogen and electricity, mostly alongside CCUS for negative emissions
- Electricity production more than double that of today, partly to meet highest demand for electrolysis

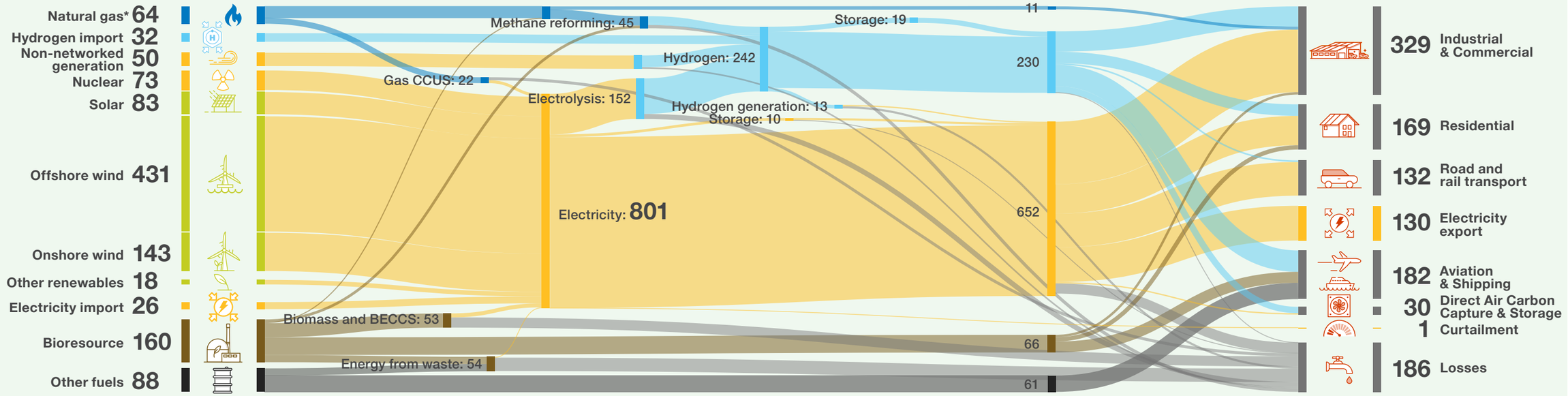


*excluding exports

Energy supply and demand in 2050

Leading the Way (1167 TWh)

- Combination of hydrogen and electricity used in industry and to heat homes
- Lowest level of electricity curtailment across the scenarios, due to the highest level of flexibility
- Lower bioresource use for negative emissions due to emissions reduction from land use change and Direct Air Carbon Capture and Storage (DACCS)
- Zero carbon fuels meet two thirds of aviation demand

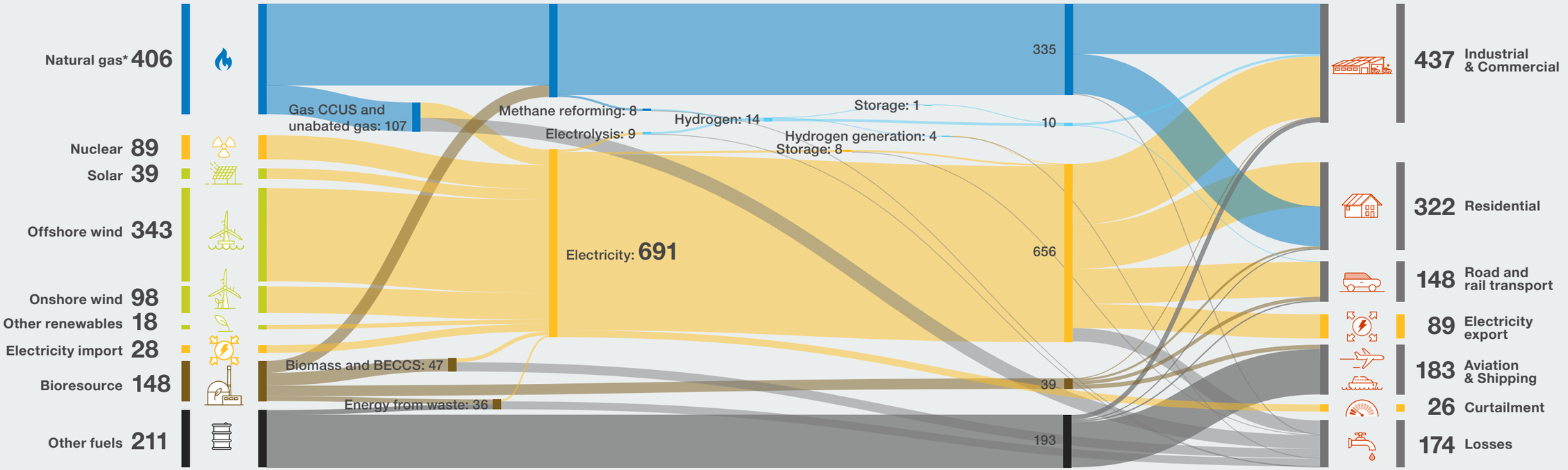


*excluding exports

Energy supply and demand in 2050

Falling Short (1380 TWh)

- Continued high usage of natural gas, particularly for domestic heating and industry
- Small private vehicles fully electrified (including some plug-in hybrids) whilst HGVs rely on fossil fuels
- Low use of hydrogen as production isn't decarbonised
- Highest total end-user energy demand due to minimal increase in energy efficiency measures and reliance on inefficient fossil fuels



*excluding exports

APPENDIX B – COURT JUDGEMENT: R (TOGETHER AGAINST SIZEWELL C LIMITED) V SECRETARY OF STATE FOR ENERGY SECURITY AND NET ZERO

Neutral Citation Number: [2023] EWHC 1526 (Admin)

Case No: CO/3147/2022

IN THE HIGH COURT OF JUSTICE
KING'S BENCH DIVISION
PLANNING COURT

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 22/06/2023

Before :

THE HON. MR. JUSTICE HOLGATE

- -

Between :

THE KING

on the application of

TOGETHER AGAINST SIZEWELL C LIMITED	**Claimant**
– and –	
SECRETARY OF STATE FOR ENERGY SECURITY AND NET ZERO	**Defendant**
– and –	
NNB GENERATION COMPANY (SZC) LIMITED	**Interested Party**

- -
- -

David Wolfe KC, **Ashley Bowes and Ruchi Parekh** (instructed by **Leigh Day Solicitors**) for the **Claimant.**
James Strachan KC and **Rose Grogan** (instructed by **Government Legal Department**) for the **Defendant.**
Hereward Phillpot KC and **Hugh Flanagan** (instructed by **Herbert Smith Freehills)** for the **Interested Party.**

Hearing dates: 22 and 23 March 2023

- -

APROVED JUDGMENT

Mr Justice Holgate:

Introduction

1. The claimant seeks to challenge by judicial review under s.118(1) of the Planning Act 2008 ("the 2008 Act") the decision dated 20 July 2022 made under s.114 of that Act to make the Sizewell C (Nuclear Generating Station) Order 2022 (SI 2022 No. 853) ("the Order") under s.114 of that Act. That decision was made by, and the proceedings were brought against, the Secretary of State for Business, Energy and Industrial Strategy. However, with effect from 3 May 2023 the relevant functions have been transferred to the Secretary of State for Energy Security and Net Zero and he has therefore been substituted as the defendant.

2. The Order grants development consent for the construction, operation, maintenance and decommissioning of a nuclear power station comprising two UK European Pressurised Reactors, each with a net electrical output of 1,670 MW, and a total capacity of 3,340 MW.

3. The claimant, Together Against Sizewell C Limited ("TASC"), is a private company. It was set up on 8 July 2022 by members of a local community group as a special purpose vehicle for the bringing of this claim and to receive public donations to that end. TASC was established in 2013 to oppose the project. It has had about 280 supporters. The group responded to pre-application consultations and participated in the statutory Examination of the draft order. It made written representations on a range of subjects and oral representations at "issue-specific hearings" ("ISHs") held during the Examination.

4. The Order granted development consent to the interested party, NNB Generation Company (SZC) Limited ("SZC").

5. The application for consent was made on 27 May 2020. The defendant appointed a panel of five inspectors ("the Panel") to conduct the Examination of the application under Chapter 4 of Part 6 of the 2008 Act. The Examination took place between April and October 2021.

6. At the time of the Examination, SZC was unable to identify a permanent supply of potable water for the project, because this was to be decided as part of the preparation and publication by Northumbrian Water Limited ("NWL") of a Water Resources Management Plan pursuant to s.37A of the Water Industry Act 1991 ("the 1991 Act") for Essex and Suffolk over the period 2025 to 2050 (referred to as WRMP24).

7. SZC produced a Water Supply Strategy Report in September 2021 which identified the amounts of potable water required during the construction, commissioning and operational phases of Sizewell C. When the station is operating the peak demand will be up to 2,800 m^3/day. This is an entirely separate issue from the cooling water needed in connection with electricity generation, which is obtained directly from the sea.

8. The Panel's Report ("PR") was submitted to the defendant on 25 February 2022. In its assessment of the benefits of the project as part of the overall planning balance the Panel relied upon the contribution of the power station to low-carbon energy production. It would meet the aim of Government policy to achieve delivery of major energy infrastructure including new nuclear electricity generation. They considered that "there is clearly an urgent need for development of the type proposed" and gave "very substantial weight" to the contribution that the scheme would make to meeting that need (PR 7.5.4).

9. Because the project is likely to have a significant effect on "European sites", an "appropriate assessment" was required to be carried out under reg.63(1) of the Conservation of Habitats and Species Regulations 2017 (SI 2017 No. 1012) ("the Habitats Regulations"). The Panel concluded that an adverse effect on the integrity of the marsh harrier feature of the Minsmere-Walberswick SPA resulting from noise and visual disturbance during the construction phase could not be excluded (PR 6.4.598). Under reg.64 the Panel advised that there were no "alternative solutions" to the proposed development (PR 6.6.12) and the defendant could conclude that the project must be carried out for "imperative reasons of overriding public interest" ("the IROPI test"). The public interest reasons included the continuing growth in the demand for electricity, the retirement of existing generation capacity, the shortfall in generation of 95GW by 2035, the scale of the need for nuclear new build, the UK's commitment to the net zero target for 2050, the continuity and reliability of supply delivered by nuclear energy as part of a diverse energy mix and the urgent need for new nuclear power stations (PR 6.7.4 and 6.7.9). The Panel also identified some additional areas where the information before them was insufficient for the purposes of the Habitats Regulations, but those matters do not give rise to any legal challenge.

10. However, there remained the outstanding issue about a permanent supply of potable water. The power station could not be licensed by the Office for Nuclear Regulation ("ONR") under the Nuclear Installation Act 1965 ("the 1965 Act") and could not be operated without such a supply. The Panel said that because an assured supply of potable water had not been identified, the cumulative environmental effects of the proposed development and that supply could not be assessed (PR 7.5.7) They stated that they could not recommend approval of the application without additional information and assurance on the provision of a permanent water supply. They regarded this "as an important matter of such magnitude that it should not be left unresolved to a future date" (PR 7.5.8). Subject to the permanent water supply issue, the Panel considered that the benefits of the proposal strongly outweighed the adverse impacts. But in view of that unresolved issue as at the close of the Examination, the Panel considered that the case for the grant of development consent had not yet been made out (PR 7.5.9 and 10.3.1)

11. On 18 March 2022 the defendant requested further information from SZC, the Environment Agency ("EA"), Natural England ("NE") and the ONR. The defendant referred to a letter from NWL's Solicitors of 23 February 2022 advising that the company was unable to meet the project's long-term demand for water supply from existing resources and that a number of demand

management and supply side options were being appraised. The defendant asked SZC to explain the progress being made to secure a permanent solution so that he could reach a reasoned conclusion on the cumulative environmental effects of different permanent water supply solutions (see DL 4.29).

12. SZC responded to that request on 8 April 2022. In summary, they relied firstly upon the duty of NWL under the 1991 Act to identify through WRMP24 new water resources to meet the demand forecast for its region, including Sizewell C. NWL would carry out an integrated environmental assessment of the Plan, including strategic environmental assessment ("SEA") under The Environmental Assessment of Plans and Programmes Regulations 2004 (SI 2004 No.1633) and a Habitats Regulations Assessment ("HRA"). These assessments would be completed before Sizewell could receive the new supply (DL 4.32). SZC submitted that the long-term planning of water supply was subject to the separate requirements of the 1991 Act and could not yet be identified for the power station (and other developments). Indeed, it could change again during the lifetime of the power station as the water undertaker manages its resources in response to *inter alia* changing demand. In accordance with national policy, the decision under the 2008 Act should be taken on the assumption that other statutory regimes will be properly applied (DL 4.33). SZC submitted that there was insufficient information on the permanent solutions that might come forward for any meaningful assessment to be made at that stage.

13. Secondly, SZC said that in the unlikely event of NWL being unable to provide a permanent supply for the power station, SZC could develop a permanent desalination plant. SZC considered that such a plant would be unlikely to generate any new or materially different significant environmental effects (DL 4.30 and 4.66).

14. On 25 April 2022 the defendant invited comments from interested parties on the responses he had received. TASC replied on 23 May 2022. They raised objections to a permanent desalination plant but offered no comments on the WRMP route. TASC maintained their position that the lack of a guaranteed water supply meant that not all significant environmental effects were being assessed at the development consent stage.

15. The defendant's decision letter was issued on 20 July 2022. The briefing to the Secretary of State for his consideration of SZC's application included the Panel's Report of some 1500 pages, the final HRA for Sizewell C and the draft decision letter, which itself ran to nearly 190 pages.

16. The defendant addressed the potable water supply issue at some length in DL 4.43 to 4.69 (reproduced in the Annex to this judgment). He was satisfied with the tankering arrangements and the temporary desalination plant proposed for the construction period and the assessment of their impacts (DL 4.43). Those conclusions are not challenged in these proceedings.

17. The defendant concluded that the proposed development and NWL's WRMP24 are separate "projects" (DL 4.49). On that basis there was no requirement for an assessment to be made of the permanent water supply solution as a part of the

power station project. He then went on to consider the Panel's view that the cumulative impacts of that water supply should nonetheless be considered at the development consent stage for the power station. The defendant concluded firstly, that a long-term water supply for Sizewell C is viable. Secondly, any proposal for the supply of water by NWL will be properly assessed under the WRMP24 process and other relevant regulatory regimes. Thirdly, no further information was required on that subject for the application for development consent to be determined (DL 4.67). Disagreeing with the Panel, the defendant did not consider the present uncertainty over the permanent water supply strategy to be a barrier to granting development consent for the project (DL 4.68).

18. The remainder of this judgment is set out under the following headings:

The grounds of challenge

19. In summary the claimant seeks to advance the following grounds of challenge:

> **Ground 1**: Contrary to reg.63(1) of the Habitats Regulations the defendant failed to assess the environmental impacts of the "project" (including the necessary permanent potable water supply solution).
>
> **Ground 2**: In the alternative, contrary to reg.63(1), the defendant failed to assess cumulatively the environmental impacts of the power station together with those of the permanent potable water supply solution.
>
> **Ground 3**: The defendant failed to supply lawfully adequate reasons for departing from the advice of NE that the permanent water supply should be considered to be a fundamental component of the "operation of the project" and its effects at this stage.
>
> **Ground 4**: Contrary to reg.64(1) of the Habitats Regulations, the defendant also failed lawfully to consider "alternative solutions" to the power station before concluding that there were imperative reasons of overriding public interest justifying the environmental harm it would cause.
>
> **Ground 5**: The defendant took into account a legally irrelevant consideration (because it was supported by no evidence), namely the contribution the power station might make to reducing greenhouse gas ("GHG") emissions by 78% from 1990 levels by 2035.
>
> **Ground 6**: The defendant also acted irrationally in concluding that the power station site would be clear of nuclear material by 2140 and/or failed to supply adequate reasons for rejecting the claimant's case on that point.
>
> **Ground 7**: The defendant also erred in law in concluding that the power station's operational GHG emissions would not have a significant effect on the UK's ability to meet its climate change obligations.

20. On 19 October 2022 Kerr J refused the claimant permission to apply for judicial review on the papers.

21. On the same day the claimant filed an application to amend its statement of facts and grounds to add a new ground 8. The claimant then renewed its application for permission on grounds 1 to 7.

22. On 14 December 2022 I refused permission for the claimant to add ground 8. Having regard to the parties' submissions, I also ordered that the renewed

application for permission should be adjourned to a rolled-up hearing. On 10 January 2023 the claimant withdrew its renewed application for permission to argue ground 8.

23. Projects such as Sizewell C may attract both strong opposition and strong support. It is therefore necessary to reiterate what was said by the Divisional Court in *R (Rights: Community: Action) v Secretary of State for Housing, Communities and Local Government* [2021] PTSR 553 at [6]:

> "6. It is important to emphasise at the outset what this case is and is not about. Judicial review is the means of ensuring that public bodies act within the limits of their legal powers and in accordance with the relevant procedures and legal principles governing the exercise of their decision-making functions. The role of the court in judicial review is concerned with resolving questions of law. The court is not responsible for making political, social, or economic choices. Those decisions, and those choices, are ones that Parliament has entrusted to ministers and other public bodies. The choices may be matters of legitimate public debate, but they are not matters for the court to determine. The court is only concerned with the legal issues raised by the claimant as to whether the defendant has acted unlawfully. The claimant contends that the changes made by the SIs are radical and have been the subject of controversy. But it is not the role of the court to assess the underlying merits of the proposals. Similarly, criticism has been made of the way in which, or the speed with which, these changes were made. Again, these are not matters for the court to determine save and in so far as they involve questions concerning whether or not the appropriate legal procedures for making the changes were followed."

Statutory framework

The Planning Act 2008

24. The 2008 Act provides a dedicated regime for applications to be made for the grant of development consent orders for "nationally significant infrastructure projects" ("NSIPs"). The framework of the Act has been set out in a number of authorities and need not be repeated in detail here. I refer in particular to the decision of the Supreme Court in *R (Friends of the Earth Limited) v Secretary of State for Transport* PTSR 190 at [19] to [37].

25. One of Parliament's aims was to make the application of development control to NSIPs more efficient and to reduce delays in decision-making. Issues such as the need for different types of infrastructure and the policy of the Government on such development was to be settled in advance by National Policy Statements ("NPSs"). A draft version of a NPS is subject to SEA, HRA, consultation, public involvement and Parliamentary scrutiny before being designated by the relevant Minister by statutory instrument under s.5 of the 2008 Act.

26. Under s.104(2), when determining an application for development consent, the Secretary of State must have regard to any NPS which "has effect" in relation to development of the description to which that application relates (a "relevant NPS"). Under s.104(3) he must determine the application in accordance with that relevant NPS, save to the extent that one or more of the exceptions in s.104(4) to (8) applies. Section 105 applies in relation to an application for an order granting development consent if s.104 does not apply. Section 105(2) provides that in deciding the application the Secretary of State must have regard to *inter alia* any matters which he considers are both important and relevant to his decision. Section 106 enables the Secretary of State to disregard any representation (including evidence) which he considers *inter alia* relates to the merits of policy set out in a NPS. Section 106 applies whether an application is subject to s.104 or to s.105.

27. In the present case there were two relevant NPSs, the Overarching National Policy Statement for Energy (EN-1) and the National Policy Statement for Nuclear Power Generation (EN-6). Both documents were "designated" by the defendant in July 2011.

28. Paragraphs 3.1.1 to 3.1.4 of EN-1 set out the approach for deciding applications for development consent. The UK needs all the types of energy infrastructure covered by the NPS, which include nuclear power, in order to achieve energy security and reduce GHGs dramatically. Applications should be determined on the basis that the need for these types of infrastructure has been demonstrated in the NPS. There is an urgent need for new nuclear power generation which will play an increasingly important role (para 3.5.1). It is Government policy that new nuclear power should be able to contribute as much as possible to the UK's need for new capacity (para. 3.5.2). New nuclear power stations will help to ensure a diverse mix of technology and fuel sources, increasing the resilience of the UK's energy system (para. 3.5.3). New nuclear power forms one of the three key elements of the Government's strategy for moving towards a decarbonised, diverse electricity sector by 2050 (para. 3.5.5). Given the urgent need for low carbon forms of electricity, it is important that new nuclear power stations are constructed and operational as soon as possible "and significantly earlier than 2025." Accordingly, the sites identified in Part 4 of EN-6 were those considered to be capable of deployment by the end of 2025 (paras 3.5.9 and 3.5.10).

29. EN-6 contains similar policy statements (paras. 2.2.1 and 2.2.2). In Part 4 of EN-6 Sizewell was identified as a potentially suitable site for a new nuclear power station along with Hinkley Point and six other sites.

30. On 7 December 2017 the Government issued a Written Ministerial Statement announcing a consultation document on designating in a NPS potentially suitable sites for nuclear power stations expected to be deployed after 2025 and before the end of 2035. The Government stated that EN-6 only has effect for the purposes of s.104 of the 2008 Act in relation to a project expected to be deployed before the end of 2025, that is when a station first begins to feed electricity into the national grid. The statement says that s.105 of the 2008 Act applies to EN-6 in so far as s.104 does not. For projects due to be deployed beyond 2025 the Government continues to give its strong in principle support to proposals for

those sites listed in EN-6. Both EN-1 and EN-6 contain information, assessments and statements which continue to be important for projects being deployed after 2025.

31. The Panel considered that the application for Sizewell C should be assessed under s.105 and that EN-1 and EN-6 were important considerations. There have been no relevant changes in circumstances reducing the weight to be given to those policies. The acceptability of the proposal in terms of planning policy should be assessed primarily against the nuclear-specific policies in the NPSs. The defendant agreed with the Panel (DL 4.4 and 4.5).

32. The defendant also agreed with the Panel's assessment of the need for nuclear power projects, to which he attached substantial weight. Thus, there is an urgent need for new nuclear energy generating infrastructure of the kind proposed at Sizewell. The contribution that the development would make to the delivery of low carbon energy would assist in the decarbonisation of the UK economy in line with the UK's obligations under the Paris Agreement (DL 4.5 to DL 4.11).

33. The main consequence of s.105 of the 2008 Act applying to the determination of SZC's application was that the presumption in s.104(3) did not apply. Thus, the defendant did not have to decide the application in accordance with the NPS unless one or more of the exceptions in s.104(4) to (8) applied. Nevertheless, it is relevant to note that where s.104 is engaged, the balancing exercise described in s.104(7) may not be used to circumvent s.106(1)(b), which has the effect of preventing challenges to the merits of policy in a NPS in an Examination or before the Secretary of State. So, for example, changes of circumstance after the designation of a NPS are to be addressed instead through the process under s.6 for a formal review of a NPS (*R (ClientEarth) v Secretary of State for Business, Energy and Industrial Strategy* [2021] PTSR 1400 at [105]; *R (Spurrier) v Secretary of State for Transport* [2020] PTSR 240 at [106] to [110]).

34. There is no dispute that the NPSs were material considerations for the defendant to take into account under s.105 when determining SZC's application. Section 106 applies to a determination by the Secretary of State under s.105 just as it does to a decision under s.104. Accordingly, the provisions in the 2008 Act preventing challenges to the merits of policy in a NPS were applicable. Although a review of EN-6 under s.6 of the 2008 Act is being carried out, the defendant has decided not to exercise the power in s.11 to suspend either EN-1 or EN-6 pending the completion of that review.

Water Industry Act 1991

35. Section 37(1) lays down a general duty on every water undertaker in the following terms:

> "(1) It shall be the duty of every water undertaker to develop and maintain an efficient and economical system of water supply within its area and to ensure that all such arrangements have been made—

> (a) for providing supplies of water to premises in that area and for making such supplies available to persons who demand them; and
>
> (b) for maintaining, improving and extending the water undertaker's water mains and other pipes,
>
> as are necessary for securing that the undertaker is and continues to be able to meet its obligations under this Part."

This primary duty is enforceable by the Secretary of State or OFWAT under s.18 of the 1991 Act.

36. Water undertakers are legally obliged to plan to meet demand within their area through a Water Resource Management Plan. Section 37A provides so far as material:

> "(1) It shall be the duty of each water undertaker to prepare, publish and maintain a water resources management plan.
>
> (2) A water resources management plan is a plan for how the water undertaker will manage and develop water resources so as to be able, and continue to be able, to meet its obligations under this Part.
>
> (3) A water resources management plan shall address in particular—
>
> (a) the water undertaker's estimate of the quantities of water required to meet those obligations;
>
> (b) the measures which the water undertaker intends to take or continue for the purpose set out in subsection (2) above (also taking into account for that purpose the introduction of water into the undertaker's supply system by or on behalf of water supply licensees);
>
> (c) the likely sequence and timing for implementing those measures; and
>
> (d) such other matters as the Secretary of State may specify in directions (and see also section 37AA).
>
> (4) The procedure for preparing and publishing a water resources management plan (including a revised plan) is set out in section 37B below.
>
> (5) Before each anniversary of the date when its plan (or revised plan) was last published, the water undertaker shall —
>
> (a) review its plan; and

> (b) send a statement of the conclusions of its review to the Secretary of State.
>
> (6) The water undertaker shall prepare and publish a revised plan in each of the following cases—
>
> (a) following conclusion of its annual review, if the review indicated a material change of circumstances;
>
> (b) if directed to do so by the Secretary of State;
>
> (c) in any event, not later than the end of the period of five years beginning with the date when the plan (or revised plan) was last published,
>
> and shall follow the procedure in section 37B below (whether or not the revised plan prepared by the undertaker includes any proposed alterations to the previous plan).
>
> (7) …."

37. Under s.37AA(8) before preparing its WRMP the water undertaker must consult *inter alia* the EA, OFWAT and the Secretary of State.

38. Section 37B lays down the procedure for the preparation and publication of a WRMP. The undertaker is obliged to publish a draft of the plan so that representations may be made on its proposals to the Secretary of State (s.37B(3)). The WRMP must be sent to *inter alia* OFWAT, the EA, NE and Historic England so that they too may make representations (see reg.2 of The Water Resources Management Plan Regulations 2007 (SI 2007 No.727)). The undertaker may then comment on those representations (s.37B(4)). The Secretary of State may cause a public inquiry or hearing to be held to consider any issues arising (s.37B(5) and reg.5 of the 2007 Regulations). The Secretary of State has the power to direct that the WRMP must differ from the draft sent to him and the undertaker must then comply with that direction (s.37B(7)). The undertaker must publish the final version of the plan (s.37B(9)).

39. The duties of a water undertaker under s.37A and s.37B are enforceable by the Secretary of State under s.18.

40. Where the owner or occupier of premises in the area of a water undertaker requests a supply of water for non-domestic purposes it is the undertaker's duty, in accordance with terms and conditions determined under s.56, to take steps to provide that supply. Those terms and conditions are to be determined by agreement between the parties or, in default, by OFWAT according to what appears to it to be reasonable. Section 55(3) qualifies the duty under s.55:

> "A water undertaker shall not be required by virtue of this section to provide a new supply to any premises, or to take any steps to enable it to provide such a supply, if the provision of that supply or the taking of those steps would—

> (a) require the undertaker, in order to meet all its existing obligations to supply water for domestic or other purposes, together with its probable future obligations to supply buildings and parts of buildings with water for domestic purposes, to incur unreasonable expenditure in carrying out works; or
>
> (b) otherwise put at risk the ability of the undertaker to meet any of the existing or probable future obligations mentioned in paragraph (a) above."

Any dispute arising under s.55(3) is determined by OFWAT (s.56(2)).

The Nuclear Installations Act 1965

41. The use of a site for the installation and operation of a nuclear reactor is prohibited unless authorised by a nuclear site licence by the "appropriate national authority", the ONR (ss. 1 and 3). When granting a licence the ONR must attach such conditions as it considers necessary or desirable in the interests of safety and may also attach conditions to the licence at any time (s.4(1)). Conditions may be attached providing for *inter alia* the design, construction, operation, siting or modification of any plant or other installation on the site (s.4(3)(b)).

The Conservation of Habitats and Species Regulations 2017

42. The defendant is a "competent authority" for the purposes of the Habitats Regulations. Regulations 63 and 64 apply in relation to the making of an order granting development consent under the 2008 Act (regs. 62(1) and 84(1)).

43. In so far as is material, reg.63 provides:

> "(1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which—
>
> (a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and
>
> (b) is not directly connected with or necessary to the management of that site,
>
> must make an appropriate assessment of the implications of the plan or project for that site in view of that site's conservation objectives.
>
> (2) A person applying for any such consent, permission or other authorisation must provide such information as the competent authority may reasonably require for the purposes of the assessment or to enable it to determine whether an appropriate assessment is required.

> (3) The competent authority must for the purposes of the assessment consult the appropriate nature conservation body and have regard to any representations made by that body within such reasonable time as the authority specifies.
>
> (4) It must also, if it considers it appropriate, take the opinion of the general public, and if it does so, it must take such steps for that purpose as it considers appropriate.
>
> (5) In the light of the conclusions of the assessment, and subject to regulation 64, the competent authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be).
>
> (6) In considering whether a plan or project will adversely affect the integrity of the site, the competent authority must have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions subject to which it proposes that the consent, permission or other authorisation should be given.
>
> …"

The "appropriate nature conservation" body in this case was NE (reg.5(1)).

44. Regulation 64(1) provides:

> "(1) If the competent authority is satisfied that, there being no alternative solutions, the plan or project must be carried out for imperative reasons of overriding public interest (which, subject to paragraph (2), may be of a social or economic nature), it may agree to the plan or project notwithstanding a negative assessment of the implications for the European site or the European offshore marine site (as the case may be)."

It is not suggested that reg.64(2) was engaged in this case.

45. In relation to the application of regs.63 and 64 to the development consent procedure, reg.84(2) provides:

> "(2) Where those provisions apply, the competent authority may, if it considers that any adverse effects of the plan or project on the integrity of a European site or a European offshore marine site would be avoided if the order granting development consent included requirements under section 120 of the Planning Act 2008 (what may be included in order granting development consent), make an order subject to those requirements."

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

46. Regulation 4 of the Infrastructure Planning (Environmental Impact Assessment Regulations 2017 (SI 2017 No. 572) ("the EIA Regulations") prohibits the Secretary of State from making an order granting development consent for "EIA development" under the 2008 Act unless EIA has been carried out (reg.4). Sizewell C constituted EIA development. By reg.5 "EIA" is a process consisting of the preparation of an "environmental statement" ("ES"), the carrying out of consultation under the EIA Regulations and compliance by the defendant with reg.21. Regulation 21 required the defendant when deciding whether to make the development consent order, to examine the environmental information and, taking that into account, to reach a reasoned conclusion on the significant effects of the development on the environment to integrate that conclusion into the decision on whether to grant the order, and to consider whether it was appropriate to impose monitoring measures. Environmental information "means the ES and the representations made by statutory consultees and other persons about the environmental effects of the development" (reg.3(1)).

47. Regulation 5(2) and (3) of the EIA Regulations provides:

> "(2) The EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on the following factors—
>
> (a) population and human health;
>
> (b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;
>
> (c) land, soil, water, air and climate;
>
> (d) material assets, cultural heritage and the landscape;
>
> (e) the interaction between the factors referred to in sub-paragraphs (a) to (d).
>
> (3) The effects referred to in paragraph (2) on the factors set out in that paragraph must include the operational effects of the proposed development, where the proposed development will have operational effects."

48. Regulation 14 prescribes the contents of an ES. It must include a description of "the likely significant effects of the proposed development on the environment" (reg.14(2)(b)). By reg.14(2)(f) the ES must contain any additional information specified in sched. 4 relevant to "the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected". Paragraph 5 of sched. 4 refers to:

> "A description of the likely significant effects of the development on the environment resulting from, *inter alia* –

> …
>
> (e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;
>
> …"

49. Regulation 14(3) provides (so far as is relevant):

> "The environmental statement referred to in paragraph (1) must–
>
> (a) …
>
> (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; and
>
> (c) … "

Ground 1

A summary of the claimant's submissions

50. The claimant submits that in breach of reg.63 of the Habitats Regulations the defendant failed to make an appropriate assessment of the implications of the "project" for European sites because he wrongly excluded from that project the permanent potable water supply solution without which the project is incomplete and cannot function. As at the date of the decision to make the order, that solution would potentially give rise to further impacts on protected areas which have not been assessed and could not be ruled out.

51. The permanent potable water supply was a fundamental component of the operation of the power station according to NE (para. 2.1.2. of representations in October 2021). The defendant agreed with the ONR that in order to satisfy the conditions of any nuclear site licence for the project, SZC will have to put in place a reliable supply of water before any nuclear safety related activities can take place that are dependent on such a supply.

52. The nuclear power station is functionally interdependent with the permanent water supply solution (*R (Wingfield) v Canterbury City Council* [2020] J.P.L 154 at [64]).

53. The reasons advanced by the defendant as to why the permanent water supply did not form part of the power station project are irrelevant. The claimant relies in particular upon *R (Ashchurch Parish Council) v Tewksbury Borough Council* [2023] EWCA Civ 101.

NWL's position on water supply

54. SZC's Water Supply Strategy Report (September 2021) summarised NWL's position as at that stage. The local "water resource zone" Blyth WRZ would be unable to supply water to meet the needs of the power station. NWL had identified the possibility of a connection being made to the Northern/Central WRZ which might have sufficient capacity in the River Waveney, subject to completion of NWL's part of the Water Industry National Environment Programme ("WINEP") study led by the EA. This would require the construction of a new transfer main from Barsham Water Treatment Works to Saxmundham, a distance of 28km, and other water network enhancements. The proposed transfer main would connect into the local Blyth distribution network at Saxmundham Water Tower and at other locations. "These local connections have the potential to provide significant legacy benefit by increasing capacity and resilience of the distribution network" (para 3.2.3 and DL 4.53). The main would benefit consumers in the local area and not simply Sizewell. There were issues affecting the availability of a sustainable supply across the whole of the East of England, which, if confirmed, would require a strategic response by NWL so that it could discharge its duties under the 1991 Act. Accordingly, longer term plans would need to be put in place by NWL "to serve the region and its committed growth."

55. In the decision letter the defendant noted that the transfer main from Barsham to Saxmundham did not form part of SZC's application for development consent (DL 4.59). But SZC had been able to provide information on the environmental impact of that pipeline and concluded that this would not give rise to any new or different significant cumulative impacts (DL 4.65). The defendant agreed (DL 4.51 to 4.52).

56. On 14 September 2021 the Panel held Issue Specific Hearing 11 ("ISH 11"), which covered water supply issues (DL 4.18). SZC provided a written note on issues arising out of that hearing, including the legal framework for WRMPs and the legal obligations of NWL.

57. On 5 October 2021 the Panel held ISH 15. A statement of common ground was agreed between NWL and SZC on 8 October 2021. In that statement NWL said that it would confirm whether it would be able to meet Sizewell C's long-term needs from the Northern/Central WRZ following completion of the WINEP modelling. If it could not, then NWL would have to develop new supply schemes through WRMP24, but that would not meet Sizewell C's long-term needs until the late 2020s at the earliest. The parties agreed 2032 as the backstop date for this long-term supply to be fully available.

58. NWL was represented by counsel at ISH 15 and agreed with SZC's position at the hearing. SZC pointed out that the Water Resources Planning Guidelines state that water undertakers must ensure that their planned property and population forecasts and resulting supply "must not constrain planned growth". Accordingly, even if NWL could not at that stage identify a water supply for Sizewell C, it was obliged to do so. NWL confirmed that that was the case.

59. After the Examination had closed on 14 October 2021, NWL's solicitors wrote to the defendant on 23 February 2022 to provide an update on the permanent supply of potable water. They said that the WINEP modelling showed that NWL would "not be able to supply all forecast household and non-household demand, including the Project's long-term demand, from existing water resources". "NWL will therefore need to identify new water resources to meet the forecast demand". NWL had included SZC's demand figures from 2032 in its WRMP24 demand forecast for the Suffolk supply area.

60. NWL stated that in addition to demand management options (e.g. reduction in leakage from networks and compulsory metering of households), it was appraising options which included:

    (i) Imports from Anglian water (subject to exporting water from the Essex WRZ);

    (ii) Nitrate removal at Barsham water treatment works to reduce raw sewage outages;

    (iii) Effluent re-use and desalination;

    (iv) Winter reservoirs post-2035.

    The options in the WRMP24, due for submission to Defra by October 2022, would depend on the final WINEP modelling of abstraction in the River Waveney.

61. NWL reiterated its commitment to providing a long-term supply for Sizewell C, although it was unlikely to be available before the late 2020s at the earliest. This was dependent on finalising and funding new supply schemes to meet future demands in Suffolk, including the power station.

62. On 8 April 2022 SZC provided its response to the defendant's request dated 18 March 2022 for further information. The document summarised the submissions and information already supplied and stated that there was no difference between the positions of SZC and NWL. SZC summarised the range of options being considered by NWL, which included water transfer. It emphasised that WRMP24 would be subject to SEA and HRA. NWL had said that after submitting its plan for consultation it would work with SZC to negotiate an agreement under s.55 of the 1991 Act. Paragraphs 2.1.16 and 2.1.17 read as follows:

> "2.1.16 It is because the long-term planning of water supply is the subject of separate statutory provisions and processes that the identification of the source of Sizewell's long-term supply cannot be known at this stage. Indeed, the source may well change during the lifetime of the power station as the undertaker develops and manages its water resources in response to changing demand and other considerations. For the same reasons, and because on the evidence the source of supply is unlikely to be a constraint to the construction and operation of

> the new power station, the source does not need to be known for the purposes of the DCO.
>
> 2.1.17 NPS EN-1 is clear that that the DCO decision maker should work on the assumption that other regimes and regulatory processes will be properly applied and enforced so that decisions on DCO applications should complement but not seek to duplicate other processes (NPS EN-1 paragraph 4.10.3). That same principle is clear from paragraph 188 of the NPPF, i.e. planning decisions should assume that regimes will operate effectively."

SZC stated that it had put in place plans for a temporary desalination unit which would cover the project's water requirements up to the commissioning of unit 1 of the power station. That would give NWL 10 years to plan for and deliver a permanent water supply.

63. TASC sent to the defendant representations in response by letters dated 8 April 2022 and 23 May 2022. The first made criticisms of the proposal for a temporary desalination plant and said nothing about WRMP24. The second objected to a possible location for a permanent desalination plant and again said nothing about WRMP24. They made a general point to the effect that SZC had failed to assess impacts on receptors in relation to a permanent water supply solution, relying on the views of NE.

64. On 16 June 2022 SZC responded to the defendant's request for further information about any progress made with NWL. They said that NWL had confirmed that draft WRMP24 would make full provision for the long-term demand from Sizewell C and that, subject to the necessary approvals from Defra and OFWAT, it is likely to be possible to deliver the necessary infrastructure. NWL and SZC had agreed to begin negotiations under the 1991 Act in October 2022 for funding the design and delivery of infrastructure specific to Sizewell C, so as to be ready to sign an agreement once NWL's Business Plan had been approved by OFWAT, most likely in early 2024. SZC said that there was no reason to think that a new water supply scheme for a "critical NSIP" would not be approved in the 2024 Price Review and every reason to expect that NWL, using reasonable endeavours, would be able to deliver the necessary infrastructure for the permanent water supply connection before the end of construction of Sizewell C (see also DL 4.42).

The decision letter

65. This material on NWL's position regarding a permanent water supply was well summarised in the defendant's decision letter at DL 4.12 to 4.42. At DL 4.44 the defendant considered that the options identified by NWL were potentially viable solutions, as was the "fall back" of SZC providing a permanent desalination plant. He concluded that if development consent were to be granted for the power station, there was a "reasonable level of certainty" that a permanent solution could be found before the commissioning of the first reactor. Plainly in arriving at that conclusion the defendant would have taken into account his further conclusions about the need for environmental impacts to be

assessed and considered. The defendant's confidence that a permanent solution would be provided before operation of the power station was a matter for his judgment.

66. The defendant also noted that if, and only if, the WRMP process fails to provide a solution, SZC will have to consider providing its own permanent desalination plant (DL 4.60). He noted the objections which had been raised to this possible option and said that a detailed assessment of the impacts would be required if it were to be pursued. The defendant had not asked for an assessment at this stage because (a) this option did not form part of the proposed development and (b) SZC's position was that it was unlikely to be required (DL 4.61).

67. The defendant dealt with environmental assessment in relation to a mains link to Barsham water treatment works, the WRMP process and the possible fallback of a permanent desalination scheme between DL 4.43 to DL 4.69 in some detail. That section needs to be read as a whole.

68. Part 6 of Sched.19 to the Order contains provisions for the protection of NWL. Paragraph 70 states that subject to either condition 1 or condition 2 being satisfied, and subject to the terms of any agreement made under s.55 or determination made by OFWAT under s.56 of the 1991 Act, NWL will use its reasonable endeavours to supply Sizewell C with the quantities of water required for its operational phase as soon as reasonably practicable. Condition 1 is that the EA confirms the new annual licensed quantities which may be abstracted from the River Waveney and NWL confirms to SZC that there is a sufficient resource in the Northern/Central WRZ to meet forecast demand from its existing and future customers, including demand for Sizewell C (paras.71 to 72). Condition 2 is satisfied if there are new supply schemes in WRMP24, the Secretary of State for Environment, Food and Rural Affairs approves the publication of the final version of WRMP24 and OFWAT approves "the required supply schemes" from the approved WRMP24 in its Final Determination for the 2024 Price Review (paras. 73 to 75).

Discussion

69. Neither the Habitats Regulations nor the EIA Regulations define a "project". It is common ground in this case that principles in the case law on the EIA Regulations are applicable when considering the scope of a project under the Habitats Regulations.

70. The question of what is the project in any particular case is a matter of judgment for the decision-maker, here the Secretary of State. That judgment may only be challenged in this court on *Wednesbury* principles (*Bowen-West v Secretary of State for Communities and Local Government* [2012] Env.L.R. 22 at [39] to [42]; *Smyth v Secretary of State for Communities and Local Government* [2015] PTSR 1417; *Wingfield* at [63] and *Ashchurch* at [81], [83], [100] and [105].) In the present case the issue is whether the defendant took into account a consideration which was legally irrelevant and, if not, whether his judgment was otherwise irrational. The threshold for irrationality in the making of such a judgment is a difficult obstacle to surmount (see e.g. *Newsmith Stainless Limited*

v Secretary of State for the Environment, Transport and the Regions [2017] PTSR 1126).

71. The courts have been astute to detect "salami-slicing", that is the device of splitting a project into smaller components that fall below the threshold for "EIA development" so as to avoid the requirement to carry out EIA altogether (*R v Swale Borough Council ex parte RSPB* [1991] 1 PLR 6 at [16]; *Preston New Road Action Group v Secretary of State for Communities and Local Government* [2018] Env.L.R 18 at [69]).

72. In *R (Larkfleet Limited) v South Kesteven District Council* [2016] Env.L.R. 4 stated at [36] that it is clear from the legislation that the mere fact that two sets of proposed works have a cumulative effect on the environment does not make them a single project. Instead, they may constitute two projects but with cumulative effects which need to be assessed. The court went on to discuss a second type of salami-slicing ([37]-[38]). It acknowledged that the scrutiny of cumulative effects between two projects may involve less information than if the two sets of works are treated together as one project. Accordingly, a planning authority should be astute to ensure that a developer has not sliced up what is in reality one project in order to try to make it easier to obtain planning permission for the first part of the project and thereby gain a foot in the door in relation to the remainder. But the Directives and jurisprudence of the European Court of Justice recognise that it is legitimate for different development proposals to be brought forward at different times, even though they may have a degree of interaction, if they are different "projects". The Directives apply in such a way as to ensure appropriate scrutiny to protect the environment, whilst avoiding undue delay in the operation of the planning control system. Undue delay would be likely if all the environmental effects of every related set of works had to be definitively examined before any of those works could be allowed to proceed. Where two or more linked sets of works are in contemplation, which are properly to be regarded as distinct "projects", the objective of environmental protection is sufficiently secured under the Directives by consideration of their cumulative effects, so far as that is reasonably possible, when permission for the first project is sought, combined with the requirement for subsequent scrutiny under the Directives for the second and each subsequent project.

73. In *Wingfield* at [64] Lang J indicated some factors which *may* be taken into account in determining the extent of a project:

> "64. Relevant factors may include:
>
> i) Common ownership – where two sites are owned or promoted by the same person, this may indicate that they constitute a single project (*Larkfleet* at [60])
>
> ii) Simultaneous determinations – where two applications are considered and determined by the same committee on the same day and subject to reports which cross refer to one another, this may indicate that they constitute a single project (*Burridge* at [41] and [79]);

> iii) Functional interdependence – where one part of a development could not function without another, this may indicate that they constitute a single project (*Burridge* at [32], [42] and [78]);
>
> iv) Stand-alone projects – where a development is justified on its own merits and would be pursued independently of another development, this may indicate that it constitutes a single individual project that is not an integral part of a more substantial scheme (*Bowen-West* at [24 – 25])"

The judge made it clear that these factors were not exhaustive. The weight to be given to them will depend upon the circumstances of each case and is a matter for the decision maker.

74. Interdependence would normally mean that *each* part of the development is dependent on the other, as, for example, in *Burridge v Breckland District Council* [2013] JPL 1308 at [32] and [42].

75. At DL 4.46 the defendant referred to para 5.15.6 of EN-1 which requires the decision-maker to take into account the interaction of a proposed project with WRMPs (DL 4.46). He had regard to SZC's analysis of the obligations of NWL under the 1991 Act to prepare WRMP24 and to supply water (e.g. DL 4.47, 4.49 to 4.50, 4.55 to 4.60, 4.64 to 4.65 and 4.67). He accepted the key components of that analysis.

76. The defendant's conclusions included the following:

(i) SZC's preferred solution was a link to Barsham *provided by NWL*. SZC's cumulative assessment stated that the pipeline would follow existing roads and boundaries wherever possible. Cut and fill would progress quickly and would impact upon a single receptor for a small number of days at most. Given the footprint and locations of the works ecological impacts "would be minimal and avoidable or mitigable". There would be no significant cumulative effects. The defendant agreed. (DL 4.50 to DL 4.52 and 4.58);

(ii) If NWL's solution for the permanent supply of potable water should require a change to that pipeline connection, that would be subject to its own environmental assessment, including HRA. This would be for NWL to assess (DL 4.56 and 4.58);

(iii) WRMP24 will need to identify new water resources to meet long-term demand in Suffolk, both household and non-household demand. Those new supplies are not limited to meeting the demand for Sizewell C (DL 4.55);

(iv) Sizewell C and the WRMP24 process for identifying new water sources are separate or standalone projects, given that NWL has a duty to undertake WRMP24 regardless of whether Sizewell C proceeds. These two projects have separate "ownership" and "are subject to distinct and

asynchronous determination processes". The WRMP process is carried out by NWL and is not something that SZC can dictate (DL 4.49 and 4.60);

(v) Assessment of potential environmental impacts associated with the permanent water supply to be provided by NWL could not be carried out because of the stage reached in the WRMP24 process and the fact that the preferred solution was unknown (DL 4.50 and 4.59);

(vi) Any pipeline or connection needed for the solution adopted by NWL will be the subject of a separate application by that company. That infrastructure does not form part of the current application (DL 4.57 and 4.59);

(vii) The defendant was satisfied with the control that will be exercised by the ONR through the conditions of the nuclear site licence, which will require a reliable supply of potable water to be in place before any nuclear safety-related activities can take place. The cumulative or in-combination environmental effects will be assessed under NWL's WRMP24 process, including a HRA, before operation can commence (DL 4.64);

(viii) The provision of a permanent water supply is not an integral part of the Sizewell C proposal (DL 4.65).

77. Plainly this is not a case where the promoter of a project has sliced up the development in order to make it easier to obtain consent for the first part of a larger project. Sizewell C was initially promoted on the basis that NWL would meet its obligations under the 1991 Act by providing a permanent water supply at Barsham and a transfer main to Saxmundham. Accordingly, the provision of that infrastructure by NWL was not included in SZC's application for development consent. The present uncertainty about what form the long term supply will take only emerged subsequently. In the circumstances, it is inappropriate for the claimant to say that SZC has caused uncertainty by "keeping its options open". SZC has had to react to the changing circumstances of the WINEP modelling and NWL's evolving response to that assessment. SZC has made it plain that it wishes to rely upon the solution that NWL says it will be able to deliver through the WRMP24 process and not upon permanent desalination on-site. On the other hand the defendant's decision recognises that in the unlikely event of NWL being unable to provide a solution, SZC would seek to provide a desalination plant (DL 4.66).

78. In summary, the claimant submits that the defendant took into account the following irrelevant considerations:

(i) The current uncertainty as to the final source of the water supply was irrelevant. The lack of definition of that supply cannot "of itself" provide the answer to the question whether that supply forms part of the project;

(ii) The infrastructure for the potable water supply did not form part of the application for development consent;

(iii) The potable water supply would be subject to a separate and asynchronous decision process;

(iv) Separate ownership.

79. The claimant seeks to base these criticisms upon *Ashchurch*. That case concerned the grant of planning permission for a bridge over a railway line. This is sometimes referred to as "the bridge to nowhere", because when viewed in isolation it served no purpose. It did not connect to any existing road or development. It was a bridge in the middle of a field. It would only begin to be used if and when housebuilders obtained planning permission for and developed a link road and housing site. The claim for judicial review had to succeed in any event because the officer's report wrongly directed the defendant's planning committee that they could take into account the benefits which would arise from the housing development anticipated but not any of the harm that that development would cause. The benefits of the additional development could not be realised without the concomitant harms. So the decision involved a failure to take into account an obviously material consideration and was irrational (grounds 1 and 2 at [32] to [69]).

80. The claimant relies upon the later part of the judgment of Andrews LJ which dealt with ground 3 at [70] to [104] and the defendant's decision that the bridge should be treated as a single project for the purposes of the EIA Directive. She held that the identification of a project is a fact-specific matter. Consequently, other cases, decided on different facts, are only relevant to the limited extent that they indicate the type of factors which might assist in determining whether a proposed development forms an integral part of a wider project.

81. Andrews LJ referred to the principle under the EIA Regulations that where EIA is required, it should generally be carried out as early as possible. As Lang J said in her second judgment in *Wingfield* [2019] EWHC 1974 (Admin) at [72]-[77] there is no objective in the Habitats Directive (92/43/EEC) requiring appropriate assessment at the earliest possible stage. Instead, the Directive focuses on the end result of avoiding damage to a European site. In the case of a "multi-stage consent" (or a multi-consent) it may be a subsequent rather than the first consent which authorises the implementation of the project (see also *No Adastral New Town Limited v Suffolk Coastal District Council* [2015] Env.L.R.28 and *R (Swire) v Canterbury City Council* [2022] J.P.L. 1026 at [94] to [95]).

82. The central flaw in the Council's decision in *Ashchurch* was its failure even to consider whether the bridge formed an integral part of a wider project for the purposes of the EIA Regulations ([82] to [84] and [96]). The court rejected the notion that in a case where the specific development for which permission is sought clearly forms an integral part of an envisaged wider future scheme, without which that development would never take place, there *can only* be a single project if the wider scheme has reached the stage where it could be the subject of an application for planning permission ([88] and see also [101]).

83. The Court then stated that the mere "difficulty" of carrying out any assessment of the impacts of a larger future project which is lacking in detail, is irrelevant

to the question whether the application under consideration forms an integral part of that larger project ([90]). *Ashchurch* was a case where it was possible to carry out some assessment of the future scheme. It was not a case where that was impossible ([91] to [92]).

84. At [102] and [104] Andrews LJ held that the fact that the EIA Regulations would require EIA to be carried out on the future wider scheme could not be conclusive on the issue of whether the earlier phase, the bridge, should be treated as a standalone project. But the Court did not suggest that this factor was altogether irrelevant and therefore must be disregarded. For example, it could be relevant to an assessment of whether the procedure being followed would have the effect of avoiding the requirements of the legislation, as in a salami-slicing case.

85. In the present case, unlike *Ashchurch*, the defendant considered whether the provision of a permanent water supply formed an integral part of the Sizewell C development and concluded that it did not. In reaching that conclusion the defendant did not take into account any irrelevant considerations.

86. The defendant did not rely upon the mere "difficulty" of carrying out an assessment of the water supply solution or the mere lack of detail on any option. Rather, WRMP24 had yet to be published in draft. NWL's solution to the water supply issue for Suffolk was unknown and would remain so until that process was completed. There was no option to assess. In any event, the defendant did not treat this factor as conclusive. Instead, it was one of a number of matters to which he had regard in the exercise of his judgment.

87. The defendant was entitled to take into account the fact that the permanent water supply had not formed part of the application for development consent and would be dealt with under a subsequent, separate process and subject to an integrated environmental assessment. He did not treat those matters as conclusive. His approach was lawful in accordance with *Wingfield* at [64] and *Ashchurch*.

88. I understand that "separate ownership" in DL 4.49, read in context, to be a reference to the separate responsibilities of SZC, for Sizewell C, and NWL, for WRMP24 and the supply of water. As the defendant noted, NWL is under a statutory duty to prepare and publish WRMP24 and SZC has no control over that process. Undoubtedly this was a relevant factor which the defendant was entitled to take into account.

89. The claimant alleges that there is functional interdependence between the Sizewell C scheme and the provision of a permanent water supply. This argument relies upon the assertion that "the need for the permanent potable water supply arose from the power station development." The implication would appear to be that there would be no such need in the absence of that development and so there is interdependence. This was not an argument which appears to have been pursued before the Panel during the Examination or subsequently before the Secretary of State. The claimant has not identified any evidence to support its assertion. Rather NWL stated that they would need to make additional water supplies available to meet the forecast demand and not just the demand from Sizewell C. The defendant had regard to NWL's

obligation to undertake WRMP24 so as to be able to meet its duties under the 1991 Act. Beyond that the defendant took into account the requirement for the permanent water supply to be available before Sizewell C can operate under a nuclear site licence.

90. I have already summarised the considerations to which the defendant had regard in deciding that the provision by NWL of additional water sources for Suffolk is not part of the Sizewell C project. There is no basis upon which the defendant's evaluative judgment can be said to be irrational.

91. The claimant's argument has much wider implications. The need for the supply of utilities such as water is common to many, if not all, forms of development. A utility company's need to make additional provision so as to be able to supply existing and new customers in the future does not mean that that provision (or its method of delivery) is to be treated as forming part of each new development which will depend upon that supply. The consequence would be that where a new supply has yet to be identified by the relevant utility company, decisions on those development projects would have to be delayed until the company is able to define and decide upon a proposal. That approach would lead to sclerosis in the planning system which it is the objective of the legislation and case law to avoid (*R (Forest of Dean (Friends of the Earth)) v Forest of Dean District Council* [2015] PTSR 1460 at [18]).

92. Lastly, in his reply Mr. Wolfe chose to focus more on the complaint that a permanent desalination plant was not treated as forming part of the Sizewell C project. He submits that SZC could have put forward a design for assessment. He claims that the absence of that information and an assessment was unlawful by virtue of *Ashchurch* at [90] and [92]. I disagree. In *Ashchurch* the bridge was only going to be constructed in order to serve the wider development in the Masterplan area. As Andrews LJ said, although it was a matter for the local authority to address on a redetermination, it was difficult to see how the bridge could not be treated as an integral part of the wider project ([100]). The unassessed wider project was a real proposal. But there is no obligation to assess a hypothetical scheme (*Preston New Road* at [75]). Here SZC considered that a permanent desalination plant was unlikely to be necessary and was not currently proposing that option. The defendant's decision that such a desalination plant was not an integral part of the Sizewell C project cannot be faulted.

93. For all these reasons ground 1 must be rejected.

Ground 2

94. On the assumption that the defendant was entitled to treat Sizewell C and the provision of a permanent water supply as separate projects, the claimant argues that the defendant acted in breach of reg.63 of the Habitats Regulations by failing to assess the cumulative impacts of both. The defendant relies upon the Panel's conclusion that even if the water supply did not form part of the project, nevertheless those cumulative effects should be assessed at the development consent stage (PR 5.11.284 to 5.11.287 and 7.5.7).

95. The claimant accepts that the adequacy of the information in an assessment is a matter for the judgment of the competent authority, the defendant, subject to a legal challenge on *Wednesbury* principles, whether under the Habitats Regulations or the EIA Regulations (*R (Champion) v North Norfolk District Council* [2015] 1 WLR 3710 at [41]; *Wingfield* at [97]; *R (Friends of the Earth Limited) v Secretary of State for Transport* [2021] PTSR 190 at [142] to [148]). The claimant submits that the defendant exercised his judgment irrationally and in breach of the principle stated in *Ashchurch* at [90] and [92] (see above). It is also suggested that the approach taken by the defendant is inconsistent with the decision in *R v Rochdale Metropolitan Borough Council ex parte Milne* [2001] Env.L.R. 22 (referred to by Andrews LJ in Ashchurch at [76] and [88]).

96. In this case the grant of development consent depended upon the IROPI test being satisfied. Mr. Wolfe submits that if assessment of the cumulative effects of power station and water supply are left to a subsequent decision, the IROPI test cannot be applied properly at that stage. By that he means that it cannot be applied in the same way as if the cumulative impacts were being assessed before the decision on whether to grant the development consent order was made. He suggests that the prior grant of the Order under the 2008 Act will make it easier for the public interest in Sizewell C going ahead to override cumulative harm or, indeed, that that would "automatically" be the outcome.

Discussion

97. It is well-established that a decision-maker may rationally reach the conclusion that the consideration of cumulative impacts from a subsequent development which is inchoate may be deferred to a later consent stage (e.g. *R (Littlewood) v Bassetlaw District Council* [2009] Env.L.R. 21; *Larkfleet* at [37]-[38]; Forest of Dean at [13] to [18]; *R (Khan) v Sutton London Borough Council* [2014] EWHC 3663 (Admin) at [121] – [134] approved in *Preston New Road* at [67] and *R (Finch) v Surrey County Council* [2022] PTSR 958 at [15(4)]).

98. In the present case the defendant referred to the possibility that new sources of water might enable a connection to be made by NWL providing a tunnel to Barsham. He accepted the assessment that that option would not give rise to additional cumulative impacts (e.g. DL 4.52). Beyond that, he decided that the new sources of water and any consequential need for a different connection were simply unknown and could not be assessed at the development consent stage. He agreed that they would instead be appropriately assessed under the WRMP process. Those judgments cannot be faulted as irrational.

99. Ground 2 is predicated upon ground 1 having failed. In other words the provision of the permanent water supply does not form part of the Sizewell C project for the purposes of the decision under challenge. On that basis the claimant's suggestion that the insufficiency of detail could have been addressed by the defendant assessing a "*Rochdale* envelope" is misconceived. *Rochdale* was concerned with the grant of outline planning permission for a project which *included* uncertain components. In any event, the claimant did not develop this submission so as to show how an "envelope" could even be defined (and then assessed) covering possible options for additional water supplies and the

connections that could be necessary, all of which would be outside the development site at Sizewell C. The suggestion was wholly unrealistic.

100. The defendant's conclusion that an assessment of the permanent water supply could not be carried out does not conflict with *Ashchurch* at [90] and [92]. Those paragraphs were concerned with whether subsequent works formed part of the current project (i.e. ground 1 of this challenge). They do not detract from the principles in the case law referred to in [97] above.

101. Mr. Wolfe made a faint attempt to rely upon the decision in *Pearce v Secretary of State for Business, Energy and Industrial Strategy* [2022] Env. L.R. 4 as requiring cumulative impacts of the permanent water supply to be assessed in the decision on whether to make the Order. The decision in *Pearce* turned on its own special facts (see e.g. [118] to [119]). The circumstances of the present case are completely different. Furthermore, in *Pearce* the promoter had been able to produce a cumulative impact assessment and the reasons given by the decision-maker for deferring consideration of that material were legally flawed. Here options for providing a permanent water supply were unknown at the time of the decision.

102. I do not think there is any merit in Mr. Wolfe's IROPI point. If a future assessment should show that the water supply option chosen would adversely affect the integrity of a European site, whether by itself or in combination with Sizewell C, IROPI would have to be applied according to the language of the Habitats Regulations and the relevant principles in the case law. It would not be appropriate to take into account the overall *benefits* of Sizewell C without also taking into account the overall *harms* of that project. The court has not been shown any authority in which deferral of the consideration of the cumulative impacts to a subsequent consent stage has caused the application of the IROPI test to be distorted or biased or watered down in some way. I note that in *Forest of Dean* Sales LJ (as he then was) stated at [19] that the earlier grants of planning permission for the original project in that case created no presumption and added no force to the contention that planning permission should subsequently be granted for the spine road that connected the two sites. The earlier permissions had not been granted on the footing that the development of those two sites was dependent upon the spine road.

103. True enough, in this case Sizewell C cannot be operated without a permanent water supply. But although the development consent has been granted in the knowledge that the power station is dependent on the future provision of a water supply, (a) it is not dependent on the provision of any particular form of supply and that is currently unknown and (b) the cumulative impact will have to be assessed properly in accordance with the legislation without any bias or distortion. The benefits of Sizewell C could not be taken into account in that future IROPI assessment without also taking into account the disbenefits. I understood Mr. Strachan KC for the defendant and Mr. Phillpot KC for SZC to adopt this analysis. They both submitted that the defendant's decision has not allowed SZC to have a "foot in the door".

104. I also note that, according to the evidence before the defendant, NWL and SZC expect a s.55 agreement to be signed in early 2024 following the WRMP process

in which the integrated environment assessment will have been carried out. It is also expected that the water supply scheme will be approved in the 2024 Price Review. Paragraph 75 of sched.19 to the Order under the 2008 Act has been drafted on that basis (see [68] above).

105. Accordingly, ground 2 must be rejected.

Ground 3

106. NE is the "nature conservation body" for the purposes of the Habitats Regulations. In this case it performed the role of providing specialist advice within its remit to the defendant as the competent authority. There is no dispute that the defendant is entitled to disagree with NE. But the claimant complains that when the defendant did so in the present case he failed to comply with the line of authority which indicates that the decision-maker is expected to give significant weight to the views of an expert body such as NE and to give "cogent reasons" for disagreeing with their views (see e.g. *R (Akester) v Department for Environment, Food and Rural Affairs* [2010] Env.L.R. 33 at [112] and *R (Wyatt) v Fareham Borough Council* [2023] Env.L.R. 14 at [9(4)]).

107. But it is important to note two additional points. First, this issue arises in the context of s.116 of the 2008 Act by which the defendant is obliged to prepare a statement of his reasons for deciding to make an order granting development consent. Even when disagreeing with the expert views of a body such a NE, the relevant standard to apply in assessing the adequacy of the reasons given is that set out in *Save Britain's Heritage v Number 1 Poultry Limited* [1991] 1 WLR 153 and *South Bucks District Council v Porter (No.2)* [2004] 1 WLR 257 (see Sales LJ in *Mordue v Secretary of State for Communities and Local Government* [2016] 1 WLR 2682 at [26] and Sir Keith Lindblom SPT in *East Quayside 12 LLP v Newcastle upon Tyne City Council* [2023] EWCA Civ 359 at [51], drawing also a parallel with *R (Mott) v Environment Agency* [2016] 1 WLR 4338 at [69] to [77]).

108. Second, the basis for the deference given to the decision of an expert body such as NE in proceedings to review their own decisions was explained more fully by Beatson LJ in *Mott* at [69] to [77]. He also stated at [64] that the court may insist upon being provided with a sufficiently clear and full explanation of the reasons for that decision as a *quid pro quo* for that deference. In my judgement similar considerations apply where a decision-maker is expected to show deference to the advice of an expert body. The level of reasoning which the law expects of a decision-maker disagreeing with the view of an expert body may depend upon whether that view is an unreasoned statement or assertion, or a conclusion which is supported by an explanation and/or evidence. It may also depend upon the nature of the subject-matter. Some advice may not call for reasoning and/or supporting evidence, other advice may do.

109. The views of NE shown to the court were sent in a submission dated 12 October 2021. They provided comments to the defendant on a Report by the Panel on the implications of the proposed development for European protected sites and species which had been submitted to the defendant. The claimant has not relied upon any other document from NE. In paragraphs 2.1.1. and 2.1.2. NE said:

> "2.1.1. It is Natural England's advice that pushing any Habitats Regulations Assessment (HRA) conclusions for integral and inextricably linked elements of the project down the line into other consenting regimes beyond the Development Consent Order (DCO) raises the likelihood that cumulative and 'in combination' impacts in these regards may get missed/ downplayed, and we wish to draw the Examining Authority's attention to this point.
>
> 2.1.2. For example, the current Water Supply Strategy proposes a mains pipeline to the site from the central/ northern Suffolk Water Resource Zone (WRZ). The environmental impacts of this pipeline have not yet been fully assessed through the HRA process. Neither have the interim solutions of a desalination plant as proposed through Change 19 [PD-050] (not considered within the RIES) and tankered water supply. Currently, the Applicant's position is 'no likely significant effects (LSE)' to any European sites from water use as stated in [REP7 -073] and summarised in paragraph 3.2.55 of the REIS. Clearly, such works could lead to a LSE on those European sites already scoped into the HRA or European sites further afield through the pipeline works, abstraction of this magnitude and other associated works to facilitate it. The water supply is a fundamental component of the eventual operation of the project, and the potential impacts of its construction should be clearly assessed in accordance with sections 4.2 and 5.15 of National Policy Statement EN-1 (NPS EN-1), sections 3.7 and 3.9 of NPS EN-6 and paragraph 3.3.9 of the Planning Inspectorate's Scoping Opinion for the Proposed Sizewell C Nuclear Development (July 2019) [APP-169]…"

110. In essence NE said no more than:

(i) The water supply is a fundamental component of the eventual operation of the project and potential impacts of its construction should be assessed with Sizewell C;

(ii) Pushing any HRA for integral and inextricably linked elements of the project down the line into other consenting regimes beyond the development consent order raises the likelihood that cumulative and in combination impacts may be missed or downplayed.

In relation to NE's comments on the pipeline connection to Barsham and the temporary desalination plant, the defendant has explained why he is satisfied with the assessment of the impacts from those elements. There is no legal challenge to that part of his decision.

111. The two bare points set out in [110] above were not so much advice as assertions without any reasoning or supporting evidence. There was no explanation as to why the water supply should be considered part of, or integral to, the project, nor any application of considerations of the kind indicated in *Wingfield.* Why

should relevant impacts be altogether missed in a subsequent assessment, any more than if assessed as part of the power station project? The same statutory regime will be applicable and NE will scrutinise the environmental information provided by NWL. Why should those impacts be downplayed without any consultee noticing, or downplayed by the decision-maker? It should not be forgotten that the water supply solution is to address a regional issue. On any view, it will be a project in its own right and the normal standards of assessment will apply to the proposal as a whole, including any connection to Saxmundham. Why should any cumulative impact of NWL's proposal not take into account cumulative impacts with Sizewell C? None of these points were addressed by NE to justify their apparent concerns.

112. I also note that, notwithstanding the national importance of the proposed project, SZC found it necessary to complain about the "unfairness" of NE having failed to attend Examination hearings to which they had been specifically invited, so that their views could be clarified and tested, in the same way as those of experts relied upon by SZC and other participants (see para. 1.3.1 of SZC's written summary of oral submissions made at ISH 15 held on 5 October 2021).

113. NE's views were summarised by the Panel in PR 5.11.284. No complaint is made about the adequacy of that summary, nor could there be. To the limited extent that NE expressed any views on this subject, they were before the defendant.

114. In my judgment the defendant did adequately explain in DL 4.65 why he disagreed with the bare assertions of NE, all the more so when that paragraph is read properly in the context of the other parts of the decision letter dealing with the same subject. The present case illustrates the inappropriateness of relying upon statements in the *Akester* line of authority as a mantra, rather than looking properly at the materials in any given case in context. Ground 3 should never have been raised by the claimant.

Ground 4

115. The defendant concluded that the project would have an adverse effect upon the integrity of the breeding marsh harrier feature of the Minsmere – Walberswick SPA arising from noise and disturbance during the construction phase (DL 5.20). Accordingly, under reg.64(1) of the Habitats Regulations the defendant had to be satisfied that there were no "alternative solutions" to the project. At DL 5.33 he did so conclude, in agreement with the Panel.

116. The claimant made representations in the Examination that there were alternative means of achieving the objective of generating electricity compatibly with the Climate Change Act 2008 which do not involve the use of nuclear power. It submits that the defendant failed to comply with the requirement in reg.64(1) to consider alternative solutions by failing to consider how that objective could be met without relying upon new nuclear power. In so far as nuclear power is considered to have particular benefits, those matters ought to have been assessed as part of a wider consideration of alternative methods of generating electricity and their respective benefits. The defendant acted unlawfully by basing his conclusion on too narrow a policy objective, namely

to provide additional nuclear power. However, if the defendant was legally entitled to adopt that approach, the claimant does not contend that he failed to assess "alternative solutions" lawfully.

117. The claimant submits that the decision-maker must consider alternative solutions which fulfil the "core policy objectives" or the "central policy objective", these being legal terms of art. They are not simply factual descriptions of a decision-maker's policy position. They fall to be identified not by the "mere election of the decision-maker", but with reference to the purpose of reg.64(1) and case law. The central policy objective should not be drawn so narrowly as to curtail the ability of the Habitats Regulations to inhibit unnecessarily harmful development in favour of less harmful alternatives. Furthermore, the phrase "alternative solutions" means that the "central policy objective" must comprise, or closely relate to, a problem "capable of solutions".

118. The claimant submits that the policy goal of providing nuclear power is "artificially limiting", to the extent that it "cannot logically be characterised as 'central'". The claimant says that, by contrast, the provision of comparatively clean energy does qualify as a central policy objective because that goes to the heart of what is sought to be achieved. Relying on its submission that the "solutions" referred to in the Habitats Regulations correspond to problems, the claimant asserts that a lack of nuclear energy is not a problem. Instead, a lack of clean energy is a problem capable of a range of alternative solutions, and so it is the provision of clean energy which qualifies as a central policy objective.

119. Lastly, the claimant suggests that the defendant erred in law by treating NPS EN-6 as determinative in deciding what were the appropriate policy objectives and alternative solutions.

Discussion

120. That last point can be rejected immediately. There is no basis for suggesting that the defendant in his decision treated the NPSs, or either of them, as conclusive on the issue of what could be considered to be relevant objectives or alternative solutions. Plainly, they were treated as "important" considerations (see e.g. DL 4.9), about which no complaint could possibly be made.

121. NPS EN-1 and EN-6 treat the need for nuclear power generation as having been demonstrated as part of the national strategy for achieving the net zero target in 2050 and ensuring diversity of supply and energy security. The Government's Energy White Paper, "Powering our Net Zero Future" (published in December 2020), announced a review of the suite of the energy NPSs but confirmed that they would not be suspended under s.11 of the 2008 Act in the meantime (DL 4.9). The White Paper includes as a "key commitment" the aim to bring at least one large-scale nuclear project to the point of Final Investment Decision by the end of the current Parliament (pp.16 and 48). The British Energy Security Supply Strategy (April 2022) states that the Government's aim is that by 2050 up to 25% of the electricity consumed in Great Britain will be generated by nuclear power, a deployment of up to 24GW (see p.197 of the defendant's HRA and DL 4.656 and 8.10).

122. The Panel accepted SZC's case that there is an urgent need for new nuclear energy generating infrastructure of the kind proposed for Sizewell C, the proposed development responds directly to that need and would make a significant contribution to low-carbon electricity generation. Furthermore, that need case accords with Government policy (see e.g. PR 5.19.1 to 5.19.18, 5.19.90 to 5.19.110, 5.19.129 to 5.19.138, 5.19.261 to 5.19.266, 6.6.4 to 6.6.5, 6.7.4, 6.7.8, 7.2.1. to 7.2.4, 7.5.4, 7.5.9 and 10.2.19).

123. The defendant's conclusions on need in the HRA and in his decision letter were based upon the Panel's assessment (see e.g. HRA at pp.189 to 190 and 196 to 201 and DL 4.1 to 4.11, 4.242, 7.1 to 7.4 and 7.13 to 7.15). The need for new nuclear power was seen as an integral part of the strategy for tackling climate change by achieving the net zero target.

124. In the same vein, the Panel rejected submissions by the claimant and others that alternative technologies should be considered and that the approach taken by SZC was too narrow (see e.g. PR 5.4.106 to 5.4.108 and 6.6). The defendant accepted those conclusions (DL 4.133 and 4.148 to 4.152 and 4.155).

125. The claimant seeks to base its approach to the identification of objectives and alternative solutions upon the judgments of the Divisional Court and the Court of Appeal in the legal challenge to the "Airports National Policy Statement" designated in June 2018 (*Spurrier* and *R (Plan B Earth) v Secretary of State for Transport* [2020] PTSR 1446).[1] But they lend no support to the claimant's case.

126. The Court of Appeal held that the standard of review in relation to both art.6(3) and art.6(4) of the Habitats Directive, and therefore reg.64 of the Habitats Regulations, is the *Wednesbury* standard ([77] to [79]). Subject to those principles, it is a matter for the decision-maker to determine the relevant objectives which need to be met and which alternative solutions would or would not meet that need.

127. At [92] and [93] the Court of Appeal addressed the problem of when objectives are defined in an unlawfully narrow manner. It endorsed the approach of the Divisional Court that an option that does not meet the core objectives of a policy statement is not an alternative solution for the purposes of reg.64(1). Such objectives must be both "genuine and critical", in the sense that a development which failed to meet those objectives would have no policy support. But it would clearly be insufficient to exclude an option simply because, in the decision-maker's view, it would meet those policy objectives to a lesser degree than the proposed or preferred option. The extent to which an option meets those policy objectives is different from an option failing to meet them at all. The judgments of the Divisional Court and the Court of Appeal provide no support for any of the additional glosses which the claimant now seeks to place on reg.64.

128. In *Plan B Earth* the objectives of the NPS under challenge were to increase airport capacity in the south east *and* to maintain the international "hub status" of the UK. The NPS rejected the option of a second runway at Gatwick as an

[1] I mention for completeness that this issue was not before the Supreme Court.

"alternative solution" to a north west runway at Heathrow because expansion at Gatwick would not enhance, rather it would threaten, the UK's hub status ([64] to [65]). The Court of Appeal held that the Secretary of State had been legally entitled to reach that conclusion ([87] to [93]). The "hub objective" had been one of the "central", or "essential", or "genuine and critical", objectives of the policy. That objective had not been constructed with deliberate and unlawful narrowness so as to exclude other options improperly.

129. The objectives of EN-1 and EN-6 include the generation of clean energy but the central or essential objectives of those policies is not limited to that aim. They also include diversity of methods of generation and security of supply. The Government sees new nuclear power as an essential component of those objectives, just as wind and solar power. That has remained the Government's policy in its recent statements (see also [28] to [32] above). Accordingly, there can be no legal challenge to the approach taken by the Panel and by the defendant which excluded alternative technologies as alternative solutions. In the light of the Court of Appeal's decision in *Plan B Earth* the legal position is crystal clear.

130. The claimant's argument depends upon an illegitimate attempt to rewrite the Government's policy aims by pretending that the central policy objective is at a higher level of abstraction, namely to produce clean energy, without any regard to diversity of energy sources and security of supply. But it is not the role of a claimant, or of the court, to rewrite Government policy, or to airbrush objectives of that policy which are plainly of "central" or "core" or "essential" importance.

131. The absurdity of the claimant's argument was well-demonstrated by Mr. Strachan KC and by Mr. Phillpot KC for the defendant and SZC respectively. The implication of ground 4 would be that a decision-maker dealing with a proposal for a solar farm or wind turbine array, obliged to comply with reg.64(1), would have to consider as alternative solutions nuclear power and, as the case may be, wind power or solar power options, But in my judgment there is nothing artificial or unlawfully limiting about a Government policy which identifies as core objectives the need to provide a mix of new electricity generation technologies, comprising solar, wind and nuclear power. Indeed, in para. 9.1.1 of the HRA the defendant noted a decision of the CJEU that the objective of ensuring security of supply may constitute IROPI.

132. For these reasons, ground 4 must be rejected. In my order providing for a rolled up hearing, I directed the claimant to review the legal merits of its various grounds, taking as an example its failure to address (a) the content of the Government's policy on nuclear power as part of a mix of energy sources and (b) the decision in *Plan B Earth*. The claimant should have abandoned ground 4, but chose instead, in effect, to try to continue its challenge to the merits of Government policy through the means of judicial review. The use of the court's process in that way is wholly inappropriate.

Ground 5

133. The claimant submits that when the defendant carried out his IROPI assessment he took into account a legally irrelevant consideration and/or one which was

"unevidenced", namely that the project would contribute to achieving the objective of reducing GHG emissions by 78% by 2035 from the UK's 1990 baseline (para. 74 of skeleton).

134. I interpose to make one point straight away. The claimant's two propositions cannot both be correct. Either a consideration is irrelevant or it is not. If it is, then it does not matter whether any evidence was before the decision-maker on the point. Not surprisingly, it turns out that the claimant does not really contend that this consideration is incapable of being relevant. Instead, the complaint is that the defendant drew a conclusion which was unsupported, or "insufficiently" supported, by evidence (skeleton paras. 76 and 80 to 81).

135. The claimant points out that, according to SZC's Construction Method Statement, it is expected that the first of the two reactors would be operational at the end of 2033 and the second by mid-2034. But that depends upon a number of assumptions, including the provision of a permanent potable water supply before the power station can be operated. The claimant submits that there was no evidence that that water supply would be implemented before 2035. It is said that SZC's expectation does not take into account uncertainty and delay in resolving that issue (paras. 75 to 76 of skeleton). The claimant complains about the absence of a timeline for the provision of the water supply and of evidence as to the degree of contribution Sizewell C would make to "the 2035 target". These are said to have been "obviously material considerations", applying the irrationality test laid down by the Supreme Court in the *Friends of the Earth* case. But ultimately, the criticism that the contribution to reducing GHG emissions by 2035 was not estimated comes down to an allegation that the timescale for determining and providing a permanent potable water solution was unclear (para. 85 of skeleton).

136. The claimant also submits that the defendant could not maintain that there was insufficient information about the eventual water supply to assess its environmental impacts (under ground 2) and at the same time rely upon the environmental benefits of Sizewell C where its operation is dependent upon that supply.

Discussion

137. A reduction in GHG emissions by 78% by 2035 relates to the Sixth Carbon Budget ("CB6") which was set under the Climate Change Act 2008 by the Carbon Budget Order 2021 (SI 2021 No. 750). It requires the UK's net carbon account not to exceed 965 Mt CO_2e over the period 2033-2037 (see *R (Friends of the Earth Limited) v Secretary of State for Business, Energy and Industrial Strategy* [2023] 1 WLR 225 at [2] to [12]). This is said to equate to a reduction in GHG emissions from the 1990 baseline by 78% by 2035.

138. Initially the claimant's argument was a little difficult to follow because the main sources upon which it relied in the Statement of Facts and Ground and its skeleton do not address the 78% target. Instead, it referred to the IROPI case for Sizewell C, which was based upon the national importance and urgent need for new nuclear power generation, including:

(i) The continuing growth in the UK's electricity demand, the retirement of existing electricity capacity and "a generation shortfall of 95GW by 2035".

(ii) The UK's commitment to reducing GHG emissions to net zero by 2050 (page 195 of the defendant's HRA and see also paras. 8.1, 8.3.4 and 8.3.5).

Similarly, the HRA rejected alternatives which would involve a significant delay to the construction programme, because Sizewell C would not contribute to addressing the shortfall in generation capacity of 95GW in 2035.

139. Likewise, the Panel had referred in its Report to the 95GW shortfall in 2035 and the contribution which Sizewell C could make (PR 6.6.4 and 6.7.4). But Mr Bowes showed how that issue was linked to the CB6 target, relying upon PR 5.19.137. That explained that in a report by the Climate Change Committee making recommendations for the sixth carbon budget, the "Balanced Net Zero Pathway", which they treated as a central scenario, assumed that it would be necessary for the power sector to reach zero emissions by 2035, or to decarbonise completely.

140. The defendant and SZC sought to argue that the focus of the decision letter was on the net zero target for 2050 rather than any 2035 target along the way. But I do not agree. The Panel's conclusions took into account the contribution that Sizewell C could make to meeting a shortfall in generating capacity by 2035 and not simply the net zero target for 2050. Although one part of the decision letter referred in broad terms to the contribution of Sizewell C to limiting climate change in accordance with the objectives of the Paris Agreement (DL 5.35), other parts rely upon the Panel's Report at PR 7.5.4 (i.e. DL 7.3). PR 7.5.4 was based in turn upon the detailed assessment in PR 5.19. That section of the Report relied upon the urgent need for new nuclear power to contribute to electricity generation by 2035 (see e.g. PR 5.19.78, 5.19.136 to 5.19.137 and 5.19.163).

141. Furthermore, the defendant's decision also took into account his HRA. In that document he decided that the IROPI test was satisfied, basing himself upon the policy context for the project, its benefits as presented by SZC and the UK's commitment to decarbonising the electricity sector by 2035 (pp.195-6). In his overall conclusion on IROPI the defendant also relied upon section 6.7 of the Panel's Report which, as we have seen, was based upon section 5.19 of that document. Accordingly, it cannot be said that the project's claimed contribution to addressing the shortfall in 2035 in electricity generation did not materially influence the defendant's decision on the application of the Habitats Regulations as well as his decision to grant development consent. That leaves the gravamen of the claimant's complaint, namely the claimed lack of evidential support for the Secretary of State's view that the project would make such a contribution by 2035.

142. I have previously summarised under ground 1 much of the material before the Examination and the defendant on the steps which NWL and SZC stated would

be followed in relation to WRMP24 so that NWL will comply with its duties under ss. 37, 37A and 37B.

143. In a statement of common ground between NWL and SZC dated 8 October 2021, NWL acknowledged that 2032 had been identified by SZC in discussion as "the backstop date" for the permanent water supply to be "fully available". The Panel referred to this date in its Report (PR 5.11.283).

144. In its letter to the defendant dated 23 February 2022 NWL confirmed that the water demand figures for the operational phase of Sizewell C had been included in WRMP24 from 2032 and that new schemes would be required in that Plan to meet all the forecast demand in the Suffolk supply area, including that of the project. NWL reiterated its commitment to providing the supply required for Sizewell C. That would be reliant upon the finalisation of new supply schemes and their identification in WRMP24, the completion of a s.55 agreement under the 1991 Act and "the costs approval process". The defendant was informed that the draft WRMP would be submitted to Defra by October 2022.

145. The position of both NWL and SZC was that after the submission of the draft WRMP for statutory consultation, they would work together from October 2022 to negotiate an agreement under s.55, which would include funding for the design and delivery of any infrastructure specific to Sizewell C.

146. SZC pointed out that the WRMP24 would be subject to a fully integrated environmental appraisal, including SEA and, where necessary, HRA. That would involve consultation with *inter alia* NE. The final version of the plan would have to be compliant with the Habitats Regulations and by definition that would have to precede the installation of a permanent water supply. I also note that the defendant has already stated in his decision letter that he is satisfied with the assessment of the Barsham transfer pipeline if that connection should be chosen.

147. The provision of a *temporary* supply by SZC (which has been assessed in the process under the 2008 Act and is not itself the subject of legal challenge) gives NWL 10 years within which to provide a permanent solution. In addition, SZC indicated (in para. 2.2.5 of its response dated 8 April 2022) that, subject to detailed assessment, the lifespan of the temporary desalination plant could be extended for a short period after the end of the construction phase, if necessary.

148. Subsequently, SZC informed the defendant that an agreement with NWL under s.55 and/or s.56 of the 1991 Act would be likely to be ready to be signed once NWL's Business Plan had been approved by OFWAT most likely in 2024. There was no reason to suppose that a new water supply scheme for a critical NSIP would not be approved in the 2024 Price Review.

149. This material was carefully summarised in the decision letter (DL 4.12 to 4.42). The weight to be given to it was a matter for the defendant. He concluded that there was a reasonable level of certainty that a permanent water supply solution can be found before the first reactor is commissioned (DL 4.44). He was satisfied on the basis of the information supplied on the WRMP process under

the 1991 Act that "there is a requisite degree of confidence that a long-term solution is deliverable" (DL 4.64).

150. In my judgment the material before the defendant was legally adequate to entitle him to reach those conclusions. It is impossible to say that his judgment on such an evaluative subject looking into the future was irrational. Once that position is reached, there is no legal reason why the defendant could not take into account the contribution which Sizewell C is expected to make to reducing the shortfall in electricity generation in 2035 (or to the target for reducing GHGs).

151. Lastly, there is no internal contradiction in the decision letter between the approach taken by the defendant to the assessment of cumulative effects arising from the permanent water supply for Sizewell C and his reliance upon environmental benefits which are dependent upon the provision of that supply. As to the former, the defendant decided that there was no option under the WRMP24 process which could be assessed at the stage when the decision letter was issued. As to the latter, the defendant was sufficiently confident that a solution would be found through the WRMP24 process (after having been subject to environmental assessment) and then completed before the operation of the power station is expected to begin in 2033. It is therefore apparent from the decision letter that there is no inconsistency in the defendant's reasoning or lack of coherence. The two conclusions are self-evidently compatible.

152. For all these reasons, ground 5 must be rejected.

Ground 6

153. The claimant submits that the defendant acted irrationally in concluding that the Sizewell C site would be clear of nuclear material by 2140 and/or failed to give legally adequate reasons for rejecting the claimant's case on this subject. Inadequacy of reasoning depends upon the claimant showing a lacuna in the decision raising a substantial doubt as to whether it was tainted by a public law error (see *Save* and *South Bucks*).

154. The Panel noted that it is a requirement of Government policy that spent fuel be stored on a new nuclear site such as Sizewell C until a UK Geological Disposal Facility ("GDF") becomes available (PR 5.20.57 and 5.20.97). NPS EN-6 states that the key factors in determining the duration of on-site storage are the availability of a GDF and the time needed for spent fuel to cool sufficiently for disposal in a GDF (PR 5.20.96.).

155. The claimant submits that the defendant was aware of an estimate provided by SZC that a GDF would not be available to accept spent fuel from a new build project until 2145. Furthermore, during the Examination the claimant had relied upon information provided by the ONR in relation to Hinkley Point C which, according to the claimant, suggested that spent fuel would need to be kept at the Sizewell C site until about 2165.

156. The claimant submits that it was irrational for the defendant to proceed on the basis that spent fuel would be removed from the site by 2140. The modelling of future sea levels, storm events and the adequacy of the coastal defences only ran

to 2140. It was irrational for the defendant not to engage with the risk of the site being flooded from the sea while spent fuel remains on site after 2140 and before the site is decontaminated.

Discussion

157. It is well-established that an enhanced margin of appreciation is to be afforded to a decision-maker relying on scientific, technical and predictive assessments (*Mott* at [69] to [78]). Plainly that principle is engaged when dealing with the evaluation of predictions far into the future about such matters as the effects of climate change on sea levels, the availability of a GDF and the life span and decommissioning of a project such as Sizewell C. It is also clear that a decision-maker deciding whether to grant development consent for such a project does so in the context of a range of statutory regimes which address changes in circumstance (and predictions) as they occur during the remainder of this century and well into the next. Those regimes are obviously material considerations.

158. SZC stated in the Examination that for the purposes of the EIA of the project it is assumed that the operation of the power station will end in the 2090s and by 2140 the interim spent fuel store will have been decommissioned (PR 5.20.19 to 5.20.20). Under its nuclear site licence SZC is required to demonstrate that the on-site facilities for interim storage of spent fuel can be designed, operated and decommissioned in a safe manner that ensures any risks to *inter alia* the environment are suitably and sufficiently controlled, including risks from flooding (PR 5.20.55). At PR 5.20.104 the Panel noted that Suffolk County Council and East Suffolk Council had raised no concerns regarding radioactive waste and said that that was to be expected because ONR would regulate on-site radioactive waste management and the EA would regulate gaseous and aqueous emissions.

159. The Panel summarised objections to the modelling work made by the claimant (e.g. at PR 5.20.59).

160. The Panel referred to the Government's firm policy commitment to the GDF for the long-term storage of high-level radioactive waste, in order to meet the UK's international obligations (PR 5.20.123 to 5.20.125). SZC's assumptions regarding on-site storage of spent fuel had been based upon there being a GDF available for transfer in the long term. The Panel considered that to be a reasonable assumption (PR 5.20.130), although it acknowledged that there was a degree of uncertainty in relation to the timing of the GDF (PR 5.20.131). The Panel reached the judgment that there was sufficient evidence to be able to conclude that the policy tests for the handling of the waste were met, taking into account SZC's statement that spent fuel would be removed from Sizewell C by 2140 (PR 5.20.133 to 5.20 134). They said that this issue should not weigh against the making of the Order (PR 7.4.195 to 7.4.202).

161. On 7 August 2020 the ONR had provided information in an email which responded to questions sent to them by the claimant on 15 June 2020. Those questions covered a range of issues. One question asked ONR whether, in the light of a comment made by the Nuclear Decommissioning Agency (NDA), the

spent fuel from Sizewell C would not be accepted at the GDF until about 140 years from the end of operations, and so would have to remain on site for about 200 years from start up. ONR responded that they did not have information on this subject in relation to Sizewell C. But for Hinkley Point C their understanding was that:

(i) The cooling period was dependent upon the burn-up rate assumed for the fuel used in a reactor. The NDA had used a maximum peak burn-up rate and had not taken into account a number of aspects of the strategy for Hinkley Point C. The average burn-up for spent fuel at that power station would be lower than the NDA had assumed and would therefore have a lower heat output;

(ii) The thermal output of a dry disposal canister containing four spent fuel assemblies is dependent upon a mixing strategy which combines high and low burn-up fuel assemblies within a single cannister;

(iii) An analysis had shown that a storage period of 55-60 years after the end of operation would be needed to meet the assumed GDF thermal limits for disposal for all fuel assemblies, using the strategy for Hinkley Point C;

(iv) Accordingly, on the assumption that generation at Hinkley Point C begins in 2025 and ends in 2085, that fuel would be sufficiently cool to transfer to the GDF in 2140-2145. Assuming that it takes just over 9 years to remove fuel to the GDF, all fuel would be transferred from Hinkley Point C by between 2150 and 2155, which would determine the end of use of the fuel stores at that site.

The ONR also stated that the "assumed availability date for the GDF" to accept fuel from new reactors is around 2130, which is earlier than the date relied upon by the claimant taken from a document produced by SZC (see [155] above).

162. The ONR's response also stated that if there were to be a subsequent acceleration in the effects of climate change, so that the impacts were greater or more rapid than currently predicted, that would involve timescales of several decades, so that monitoring would be able to inform decisions under the conditions of the nuclear site licence on the protective measures required. "Managed adaptive options", such as an increase in the height of a coastal defence, with trigger points, would ensure that the site remains safe under the terms of the nuclear site licence.

163. In its representations to the Panel dated 24 September 2021 the claimant relied upon the email from the ONR and submitted that, assuming Sizewell C begins operation in 2035 and ceases to operate in 2095, a 60-year cooling period would end in 2155 and the removal of spent fuel off site would take until 2165.

164. In its representations to the Panel in September 2021 after ISH 11, SZC stated that the Fourth Addendum to the Environmental Statement for the project assumed that Sizewell C would cease to operate in the 2090s, the fuel store will have been decommissioned by "the 2140s" and 2190 was "the theoretical

maximum site lifetime". An EIA for decommissioning would be required in the years leading up to the end of electricity generation (paras. 1.11.1 to 1.11.2 on p.14).

165. An Addendum to the Flood Risk Assessment for the main development site, produced by SZC in January 2021, had increased the height of the proposed "hard coastal defence feature" to 14.6m above Ordnance Datum. Updated modelling was said to show that this would be sufficient to protect the site against events up to 2190 under reasonably foreseeable climate change scenarios. More extreme events are to be dealt with in SZC's safety case which will be assessed by the ONR (para. 1.36 of the Flood Risk Assessment and the Panel's Report at PR 5.8.91).

166. The issues concerning the adequacy of coastal defence proposals and long-term flood risks impact not only on-site radiological waste management but also a number of other subjects. The issues were considered by the Panel in some detail in a number of sections of their report, such as sections 5.7, 5.8 and 5.20. The Panel's Report has an interlocking structure and needs to be read as whole. The Panel was well aware of the objections on this point raised by the claimant and by other participants, such as Professor Blowers. The Report provided a good summary of the material submitted, including that provided by SZC (e.g. PR 5.7.35 to 5.7.40, 5.8.252 and 5.8.259 to 5.8.260, 5.8.276, 5.8.295 to 5.8.296, 5.20.6, 5.20.18 to 5.20.20, 5.20.59 and 5.20.98). In several places in its Report the Panel expressed satisfaction with *inter alia* the "adaptive design" for the proposed coastal defences, the monitoring of future sea levels through the Coastal Processes Monitoring and Mitigation Plan ("CPMMP") and future modifications of the design through the controls exercisable by the ONR and EA (e.g. 5.8.97, 5.8.99, 5.8.231, 5.8.239, 5.8.259 to 5.8.260, 5.8.299, 5.8.315 to 5.8.320, 5.20.98 to 5.20.102). At PR 5.8.313 the Panel noted that the design parameters of the sea defences would be secured by Requirement 19 of the development consent.

167. Participants continued to make representations after the close of the Examination. For example, a Mr. Parker returned to the subject of the lifetime and adequacy of the sea defences at Sizewell C. The EA and ONR provided a joint response dated 7 June 2022 which was forwarded to the defendant. At DL 4.366 the Secretary of State relied upon this response which he had summarised at DL 4.365:

> "4.365 The Secretary of State notes the post-Examination representations submitted by IPs related to flood risk, including Mr Bill Parker who raised concerns regarding the protection from flooding during operation, decommissioning and the residual time spent fuel is stored on site. The Secretary of State notes the EA's letter to Mr Bill Parker of 7 June 2022 which confirmed that the FRA extended to 2190, and that for the Reasonably Foreseeable actual risk up to 2190, there would be no inundation of the main platform or SSSI crossing from overtopping of the HCDF or the remaining lower northern and southern sand dunes/shingle defences in all events up to the 0.1% annual probability flood events in 2019. The EA's letter also

> included a subsection titled 'ONR' response, confirming that during the operation of a nuclear licenced site, it is a regulatory expectation for the licensee to periodically review the validity of the safety case for all facilities on site against external hazards, to ensure the site remains protected, including the dry fuel store and taking updated climate change projections into account for coastal flood hazard."

The ONR specifically said that the design of the sea defences had been based upon the period running up to 2140, but if the life-time of the station extended beyond that year, SZC would need to demonstrate that the sea defences will continue to protect the site adequately, and if not provide additional protection.

168. In DL 4.250 the defendant agreed with the conclusions of the Panel summarised in DL 4.244 to DL 4.248. In DL 4.295 he expressed satisfaction with the modelling of sea level rises to 2140 for reasonably foreseeable events, including up to the 1 in 10,000 year event and in DL 4.246 with the adaptive design to provide a feasible means of increasing the crest height of the Hard Coastal Defence Feature to cope with a "credible maximum sea level rise". The defendant also relied upon further work carried out by SZC and the EA after the close of the Examination which had resolved all of the Agency's outstanding concerns at that stage. The defendant was also satisfied that matters such as the monitoring of climate change and adaptive measures would be adequately addressed by the ONR through the nuclear site licensing regime (DL 4.235 to DL 4.241, 4.247 and 4.250).

169. The defendant returned to these issues at DL 4.279 which summarised the Panel's views as follows:

> "4.279 The ExA considers [ER 5.8.232 et seq.] the adequacy of the proposed climate change adaptation measures and the resilience of the Proposed Development to ongoing and potential future coastal change during its operational life and any decommissioning period including the scope for the HCDF to undergo design adaptation to maintain nuclear safety against predicted sea level rises. The Sizewell Coastal Defences Design Report [REP8-096] provides a design description of the HCDF Adaptive Design at section 3.11 and is designed to protect the Proposed Development from a 1 in 10,000 year storm event with reasonably foreseeable ("RF") climate change effects up to the end of its design life in 2140. The ExA consider that the Applicant recognises that, given the inherently uncertain nature of climate change, the RF climate change scenario may be exceeded. ONR and EA guidance requires that the sea defence be capable of adaptation to a credible maximum sea level rise [ER 5.8.252]. The sea defences have therefore been designed to allow for future adaptation to accommodate the credible maximum scenario, should it develop. The Adaptive Design would provide a simple means of increasing the crest height of the HCDF to reach a crest level of 16.4m OD [ER 5.8.252]. The implementation of measures to enact the Adaptive Design would

> be driven by progressively observed effects of climate change, specifically mean sea level rise. The MDS FRA [AS-018] confirms that the impacts of climate change on sea level rise would be monitored and assessed at set intervals to determine the trajectory of the projections, and consider whether there is any change from either the current considered projections or the climate change guidance as applied in the application [ER 5.8.253]. A number of issues were raised by IPs in relation to Adaptive design and its implementation [ER 5.8.254 et seq.]. Having considered the submissions and responses from the Applicant [ER 5.8.252 et seq.] the ExA takes the view that as indicated in relation to the SMP, and having regard to the details and explanation provided by the Applicant, that the HCDF, including the Adapted Design, would be positioned as landward as possible. In addition, the requirement 19 in the Order would provide a means whereby the design details of various aspects of the HCDF would require ESC approval in consultation with the MMO and the EA before commencement of that work. The ExA considers that this would provide an appropriate safeguard at detailed design stage in relation to matters relating to layout, scale and external appearance of the HCDF, and its integration with other marine infrastructure [ER 5.8.256]."

The defendant agreed (DL 4.293) (and see also DL 4.280, 4.284, 4.285 and DL 4.290).

170. DL 4.261 referred to the Fourth Addendum to the Environmental Statement (see [164] above) and additional modelling work carried out during the Examination. DL 4.266 referred to the suitability of the CPMMP to provide controls in the future for coastal defence. Certain extreme events are to be left to regulation by the ONR (DL 4.267).

171. The decision letter began to deal with radiological issues at DL 4.583 and in that context it returned to the subject of climate change, sea levels and the safe storage of fuel rods. The defendant summarised the views of the Panel at DL 4.589 to DL 4.597. At DL 4.598 the defendant agreed with the Panel's conclusions and referred to the further information on coastal defence modelling and the requirement for a nuclear site licence.

172. The claimant relied upon DL 4.590 which states:

> "The issues of coastal defences, and the impact of climate change on the modelling for the safety of those defences, were considered by the ExA in section 5.8 and section 5.7 of the ExA Report respectively. The ExA considers [ER 5.20.101] that the coastal defences have been designed so they can be modified if it is necessary to do so, with the monitoring of the sea levels secured through the CPMMP, and this is further reinforced by the obligations required by the NSL regime regulated by the ONR and the permits regulated by the EA. The ExA is persuaded [ER 5.20.102] that the Applicant's conclusions are predicated on

> the basis that the site will be clear of nuclear material by 2140, the period which has been modelled for coastal defences, and under these circumstances the ExA consider the tests set out in paragraph 2.11.5 of NPS EN-6 would be met."

The claimant places a good deal of emphasis on the last sentence, and also upon DL 4.245. These paragraphs refer to an assumption that spent fuel will be removed from Sizewell C by 2140, which is also the year to which the modelling for predicted extreme sea levels runs.

173. The claimant complained that the defendant failed to give reasons addressing its reliance upon the ONR's email dated 7 August 2020. In my judgment he was under no legal obligation to do so. The limitations of that material produced in 2020 were obvious on the face of the document itself, without there being any need for the Panel or the defendant to spell that out by simply repeating them. The comments by the ONR related to the Hinkley Point C project in the absence of information on Sizewell C. They were not of any real significance. Naturally the Panel and the defendant would focus on later material produced in 2022 which specifically related to the Sizewell C project (see e.g. [167] above). An application for a nuclear site licence for that scheme had yet to be submitted. SZC said to the Examination that the fuel store would be decommissioned by the 2140s, that is not necessarily by 2140 (DL 4.252). Although the ONR had estimated in 2020 that the GDF would be available by 2130, the claimant relies upon an alternative prediction, 2145, emanating from SZC. The Panel stated that it was reasonable to assume that storage would be available in a GDF in the long term, but added, not surprisingly, that there is a degree of uncertainty (PR 5.20.131), referring no doubt to timing.

174. It is obvious that the issue of how far into the next century spent fuel will need to remain at Sizewell C is subject to uncertainty. But that is not the only uncertainty about the future. The ONR, EA, SZC and others have addressed the possibility that climate change may cause sea levels to increase more quickly. Estimates about the availability of facilities and projections are having to be made an unusually long way into the future. On any fair reading of the Panel's Report and the decision letter, that uncertainty was recognised. I agree with counsel for the defendant and for SZC that what matters is how that subject was addressed.

175. The claimant's ground 6 is a classic example of a failure to read the decision letter fairly and as a whole. It is plain that in DL 4.590 the defendant also relied upon the adaptive nature of the design for the coastal defences, the monitoring of sea levels through the CPMMP and the controls which will be applied by the ONR and the EA through their respective regulatory regimes. That paragraph has to be read in the context of the many passages in the Panel's Report and in the decision letter where those matters were explained and relied upon. The suggestion by the claimant's counsel that the defendant did not rely upon those matters when addressing the future adequacy of coastal defences in relation to the storage of spent fuel is wholly untenable. The point was made clear in relation to the ONR and the nuclear site licence, for example in DL 4.365. The defendant relied, as he was entitled to do, upon the normal assumption that those

other regulatory regimes will be operated properly. The defendant's reasoning cannot be treated as irrational or legally inadequate.

176. In addition, Requirement 19 of the development consent requires details of coastal defence features to be submitted and approved by the local planning authority, before construction of those works may commence, which must include a monitoring and adaptive sea defence plan that sets out periodic monitoring proposals and the trigger point for when the crest height of the sea defence would need to be increased to 16.9m above Ordnance Datum.

177. Accordingly, ground 6 must be rejected. In reaching that conclusion, I have not found it necessary to consider the application of s.31(2A) or (3C) and (3D) of the Senior Court Act 1981.

Ground 7

178. This ground is concerned with GHG emissions from the operation of Sizewell C. The claimant refers to DL 4.248 and DL 4.250 in which the defendant agreed with the Panel that "emissions of the magnitude demonstrated would not have a significant effect on the UK's ability to meet its carbon budget commitments or the ability of the Government to meet the UK's obligations under the Paris Agreement". The claimant then says that that conclusion is inconsistent with this part of DL 8.9:

> "Operational emissions will be addressed in a managed, economy-wide manner, to ensure consistency with carbon budgets, net zero and our international climate commitments. The Secretary of State does not, therefore need to assess individual applications for planning consent against operational carbon emissions and their contribution to carbon budgets, net zero and our international climate commitments."

179. The claimant submits firstly, that DL 8.9 should be read as meaning that the defendant has made no assessment of the contribution of *operational* GHG emissions to the carbon budgets and secondly, there was no evidential basis upon which he could conclude in DL 4.248 and DL 4.250 that operational emissions from Sizewell C would not have a significant effect on the UK's ability to meet its climate change obligations (skeleton paras. 106 to 110).

Discussion

180. DL 8.9 appears in section 8 of the decision letter which is entitled "Other Matters". Under that heading DL 8.8 to DL 8.9 refer to the Climate Change Act 2008 and the Net Zero Target in broad terms. The context for the part of DL 8.9 which the claimant quotes is set by the opening two sentences to which it did not refer. Thus, the context is the continuing significance of the NPSs and the need for nuclear generation of the kind represented by Sizewell C in accordance with those policy statements.

181. EN-1 states that carbon emissions from a new nuclear power station are likely to be much less than from a fossil fuelled plant (para. 3.5.5.). New nuclear power

forms one of the three key elements of the Government's strategy for moving towards a decarbonised, diverse electricity sector by 2050, along with *inter alia* renewable electricity generation (para. 3.5.6 and see also para 3.5.10). I agree with the defendant and SZC that the part of DL 8.9 which the claimant seeks to criticise is entirely consistent with para 5.2.2 of EN-1 which states:

> "5.2.2. CO_2 emissions are a significant adverse impact from some types of energy infrastructure which cannot be totally avoided (even with full deployment of CCS technology). However, given the characteristics of these and other technologies, as noted in Part 3 of this NPS, and the range of non-planning policies aimed at decarbonising electricity generation such as EU ETS (see Section 2.2 above), Government has determined that CO_2 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). Any ES on air emissions will include an assessment of CO_2 emissions, but the policies set out in Section 2, including the EU ETS, apply to these emissions. The IPC does not, therefore need to assess individual applications in terms of carbon emissions against carbon budgets and this section does not address CO_2 emissions or any Emissions Performance Standard that may apply to plant."

182. Section 4 of the decision letter is entitled "Matters considered by the ExA [the Panel] during the Examination." DL 4.232 to DL 4.250 dealt with climate change and resilience. Within that part DL 4.242 to DL 4.243 addressed GHG emissions and the carbon footprint. DL 4.244 to DL 4.250 summarised the Panel's overall conclusions on various climate change issues and stated that the defendant agreed with the Panel on those matters.

183. DL 4.242 and DL 4.248 referred back to the parts of the Panel's Report which summarised the quantitative analysis before the Examination, the responses of other parties to that material, and the Panel's conclusions at PR 5.7.56 to PR 5.7.100. That summary covered the quantitative analysis in the ES and in the subsequent Life Cycle Analysis carried out for SZC.

184. At PR 5.7.90 the Panel concluded:

> "The ExA concludes that the ES [APP-342], as updated by [AS-181, REP2-110], and [REP10-152], demonstrates that construction emissions from the Proposed Development would be less than 1% of the UK Government's carbon budget for the relevant period, and would not be significant in accordance with the criteria as described in Chapter 26 [APP-342]. The ExA is therefore content that those emissions would not materially affect the ability of the Government to meet the UK's obligations under the Paris Agreement. Similarly, the gross emissions associated with the operational phase have been found to be less than 1% of relevant periods in which they arise. The ExA also

> recognises the support provided by national policy for low carbon power generation projects such as the Proposed Development, and that the importance for the UK's carbon budgets should also be considered from the perspective of the carbon emissions that would otherwise be produced by other sources, if they were not generating. The national policy support for such low carbon generation projects has been considered in detail in section 5.19 of this Report."

That conclusion was then carried forward to PR 5.7.100. It is also relevant to note the reference here to the policy support for new nuclear power generation because of the contribution it makes to reducing GHGs that would otherwise be produced from other sources (as opposed to the "gross" emissions from a nuclear power station taken in isolation).

185. The defendant's decision letter accepted both PR 5.7.90 and PR 5.7.100. There was therefore ample quantitative material to support the conclusions of the Panel and, in turn, the Secretary of State. Mr. Wolfe KC relies once again upon a dictum in *R (Association of Independent Meat Suppliers) v Food Standards Agency* [2019] PTSR 1443 at [8]. But for the reasons set out in *R (Goesa Limited) v Eastleigh Borough Council* [2022] PTSR 1473 at [19] that passage does not alter the well-known *Wednesbury* principles applied by the Courts (see also *R (Law Society) v Lord Chancellor* [2019] 1 WLR 1649 at 98]).

186. The claimant then complains that there is no evidence that the defendant personally considered the quantitative assessment carried out for SZC, whether in the ES or the Life Cycle Assessment. This is yet another attempt to rely upon part of the judgment of Sedley LJ in *R (National Association of Health Stores) v Secretary of State for Health* [2005] EWCA Civ 154 without reading the relevant passages as a whole. The High Court has analysed the principles in *R (Transport Action Network Limited) v Secretary of State for Transport* [2022] PTSR 31 at [60] to [73] and *R (Save Stonehenge World Heritage Site Limited*) *v Secretary of State for Transport* [2020] PTSR 74 at [62] to [66] and [178]. A Minister is entitled to rely upon a summary prepared by his officials of the material which his department has received. The issue is therefore the narrower one of whether there are any grounds for criticising the legal adequacy of that summary in the context of ministerial decision-making. In my judgment the Secretary of State was not required himself to delve into the ES or the Life Cycle Assessment in the way the claimant suggests. The summary provided in the Panel's Report and in the draft decision letter, both of which were provided to the defendant for him to consider, were as, a matter of law, perfectly adequate.

187. Ground 7 is utterly hopeless and must be rejected.

Conclusions

188. The court is faced with a similar situation to that which arose in the Heathrow litigation where, having heard full submissions in a rolled-up hearing (in that case dealing with five different claims), it had to decide whether permission to apply for judicial review should be granted on each ground (*Spurrier* at [667]). In the present case as in *Spurrier*, the mere fact that the court has had to consider

in a rolled-up hearing, and in a judgment, a substantial amount of material and legal submissions, does not mean that the grounds raised pass the threshold for arguability.

189. I consider that each of grounds 3 to 7 is totally without merit (CPR 23.12). Accordingly, permission must be refused in relation to those grounds.

190. In relation to grounds 1 and 2 I conclude that both are unarguable and permission should be refused.

191. The application for permission to apply for judicial review is dismissed.

Annex: Paragraphs 4.43 – 4.69 of the Secretary of State's Decision Letter

The Secretary of State's Consideration of Water Supply

4.43 The Secretary of State has considered the supply of water during the construction period. He is satisfied with the Applicant's assurance that potable water will be supplied via a combination of tankers and a temporary desalination plant. The Secretary of State notes that the Applicant reaffirmed its commitments in the Water Supply Strategy for supply of non-potable water throughout the construction period. The Secretary of State is satisfied that there will be an adequate supply of both potable and non-potable water during the construction period and that the impacts of the water supply during the construction period have been properly assessed as part of this application and where relevant are considered elsewhere in this letter.

4.44 The Secretary of State has considered the Applicant's response to his questions on the matter of long-term water supply, as well as the comments submitted by IPs on this matter in light of the ExA's report. The Secretary of State notes that paragraph 8 of the letter from Walker Morris on behalf of NWL, of 23 February 2022, provides that, in addition to demand management options, NWL is also appraising other options that include (but are not limited to): an import from Anglian Water; nitrate removal at Barsham WTWs; effluent reuse and desalination; and longer term (post-2035) winter storage reservoirs. The Secretary of State considers that these represent potentially viable solutions for the water supply strategy as would the fall back of the Applicant's own permanent desalination plant if those solutions cannot be used. The Secretary of State is therefore content that if consent is granted for the development, there is a reasonable level of certainty that a permanent water supply solution can be found before the first reactor is commissioned.

4.45 With regard to the Applicant's case that the permanent water supply to be supplied by Essex & Suffolk Water/NWL will be assessed as part of the separate regulatory processes associated with WRMP24, the Secretary of State has considered the relevant policy. Paragraph 4.10.3 of NPS EN-1 (EN-1), states that the decision-maker 'should work on the assumption that the relevant pollution control regime and other environmental regulatory regimes, including those on land drainage, water abstraction and biodiversity, will be properly applied and enforced by the relevant regulator. It should act to complement but not seek to duplicate them.' This text is carried forward in paragraph 4.11.5 of the draft revision of EN-1.

4.46 Paragraph 5.15.4 of EN-1 states 'The considerations set out in Section 4.10 on the interface between planning and pollution control therefore apply. These considerations will also apply in an analogous way to the abstraction licensing regime regulating activities that take water from the water environment, and to the control regimes relating to works to, and structures in, on, or under controlled water.' This text is carried forward to paragraph 5.16.6 of the draft revision of EN-1. Paragraph 5.15.6 states that the decision-maker 'should also consider the interactions of the proposed project with other plans such as Water Resources Management Plans'. This text is carried forward to paragraph 5.16.9 of the draft revision of EN-1.

4.47 The Secretary of State notes the EA's water resources planning guideline, updated on 4 April 20227, which states that water companies in England or Wales must prepare and maintain an WRMP that sets out how a water company intends to achieve a secure supply of water for its customers and a protected and enhanced environment. This guideline notes that the duty to prepare and maintain a WRMP is set out in sections 37A to 37D of the WIA and that a water company must prepare a plan at least every 5 years and review it annually. Part 3.1 of this guideline details the legal requirements relevant to the preparation and publication of a WRMP, including the need to take account of relevant legislation including the Conservation of Habitats and Species Regulations 2017. Part 3.3.1 notes that statutory consultees for the WRMP process includes the EA, and also notes that if possible options affect a designated site in England then the water company must contact NE. Part 4.1.1 notes that a water company should carry out a HRA as part of the WRMP process, including an appropriate assessment, as set out in the Conservation of Habitats and Species Regulations 2017 (as amended), if a preferred plan would be likely to have a significant effect on a European site (either alone or in combination with other plans or projects).

4.48 The Secretary of State notes the policy in Section 4.2 of EN-1. Paragraph 4.2.7 acknowledges that 'In some instances, it may not be possible at the time of the application for development consent for all aspects of the proposal to have been settled in precise detail.' This text has been carried forward to paragraph 4.2.5 of the draft revision of EN-1.

4.49 The Secretary of State considers that the Proposed Development and the WRMP24 process for the sourcing of water are separate projects. This is evident from their separate ownership and because they are subject to distinct and asynchronous determination processes. The Secretary of State also considers that these projects are stand-alone, given that NWL has a duty to undertake its WRMP24 regardless of whether or not the Proposed Development proceeds

4.50 The Secretary of State has considered the ExA's view [ER 7.5.7] that, even if the Proposed Development and the water supply are considered to be two separate projects, the cumulative effects associated with it should be assessed at this stage. As set out below, the Secretary of State has considered the cumulative assessment of the proposed pipeline from the North/Central WRZ and agrees with the Applicant's assessment that the pipeline is not likely to give rise to new or significant effects to those already identified in the ES. In addition, the Secretary of State agrees with the Applicant that the detail of the potential environmental impacts (including cumulative impacts) associated with the proposed permanent water supply to be provided by NWL will be sufficiently assessed and that the WRMP24 process is the appropriate means of undertaking that assessment. The Secretary of State agrees that further detailed assessment cannot be undertaken by the Applicant at this stage as the preferred option for long-term supply is not yet known given the current status of the separate WRMP24 process, which falls to be considered as a separate plan or project. The Secretary of State considers that it is because the long-term planning of water supply is subject to separate statutory provisions and processes, including those set out in paragraph 4.47 above, that the identification of the source of the

Proposed Development's long-term water supply cannot be known by the Applicant at this stage.

4.51 The Applicant's original and preferred water supply connection was a direct link from Barsham and the Applicant provided information about this, the cumulative effects of its preferred water supply solution of in Table 1.1 of the ES Addendum, Volume 3, Chapter 2, Appendix 2.2.D Water Supply Strategy submitted in January 2021. This refers to potable water transfer options and envisages that a supply of potable water via a direct link from Barsham would be provided by Essex and Suffolk Water. Table 1.1 notes that the provision of this link does not form part of the Application, however it provides a cumulative assessment of the Proposed Development with this link at Chapter 10 of the ES Addendum at paragraphs 10.4.229-10.4.250. The cumulative assessment states that "it is proposed that the detailed route alignment of the pipeline will follow existing roads and boundaries where possible" and that "it is anticipated that the earthworks for the cut and fill, and the pipelaying task for the preferred water supply proposal will progress quickly along the route and works would only impact upon a single receptor for a small number of days at most". In relation to Terrestrial ecology and ornithology it finds that "Given the footprint of the works and the proposed locations for working, ecological impacts would be minimal and avoidable or mitigable" and for all the other impacts assessed concludes that "no significant cumulative effects are anticipated in relation to the preferred water supply proposal and there would be no change to the residual cumulative effects as presented in Volume 10, Chapter 4 of the ES".

4.52 The Secretary of State has seen no subsequent evidence to suggest that anything has changed in that regard. The Secretary of State is satisfied that, based on current knowledge, there are no additional cumulative impacts if the Barsham pipeline were to be pursued. The Secretary of State has considered the information provided by the Applicant on cumulative effects and does not agree with the ExA's criticisms and considers there is sufficient information on which he can base his conclusion.

4.53 Section 3.2.3. of the revised Water Supply Strategy submitted at Deadline 7 in September 2021 stated that 'there is some potential spare capacity in the WRZ at NWL's Barsham Water Treatment Works near Beccles which is located in their Northern /Central WRZ, from which water is proposed to be transferred to Sizewell via a 28km pipeline. This transfer will also require other water network enhancements, which NWL are currently investigating. The proposed transfer main would connect into the local Blyth distribution network at Saxmundham Water Tower, and at other locations subject to detailed design. These local connections have the potential to provide significant legacy benefit by increasing capacity and resilience of the distribution network.'

4.54 The Statement of Common Ground agreed between NWL and the Applicant records that the proposal to transfer water from Barsham relies on abstraction from the River Waveney and its associated Waveney Augmentation Groundwater Scheme (WAGS) operated by the EA. It further records that on 26 August 2021 the EA informed NWL that a sustainability reduction may be applied to NWL's abstraction licence for the River Waveney and WAGS abstraction licenses which could reduce NWL's allowable annual quantities of

abstraction by up to 60% and that further modelling work is being carried out by NWL to investigate this.

4.55 The Secretary of State further notes the letter from Walker Morris on behalf of NWL on 23 February 2022 states that NWL will not be able to supply all forecast household and non-household demand, including the Proposed Development's long-term demand, from existing water resources, and that NWL will need to identify new water resources to meet the forecast demand. The Secretary of State notes that the letter states that in addition to demand management options, NWL is appraising options including (but not limited to) nitrate removal at Barsham WTWs to reduce raw water quality driven water treatment works outage. While noting that the ultimate source of supply has yet to be identified by NWL, the Secretary of State considers that the information provided demonstrates sufficiently, in principle, the viability of a mains connection pipeline to the Proposed Development if some or all of the supply were able to come from that location.

4.56 The Secretary of State is satisfied that if NWL, through the regulatory processes associated with the WRMP24, put forwards a solution to the supply of potable water supply which requires a change to the pipeline connection to the Proposed Development (once it has established where it will source the water for the Proposed Development from) any such solution will be subject to its own environmental assessments, including those under the HRA. The Secretary of State has not seen any information at this stage to suggest that a different pipeline connection (if it were to be required) would not be viable or its impacts unacceptable. However, this will be for NWL to assess once the source of the permanent water supply is known.

4.57 The Secretary of State notes that any such pipeline or connection will be applied for separately to the Proposed Development once there is certainty around its route and specification.

4.58 As set out above, the Secretary of State does not have detailed information as to the route or specification of the pipeline that would convey water to the Proposed Development given that it is subject to the outcome of the WRMP24 process which has not yet been completed. However, the Secretary of State considers that he has sufficient information for the purposes of taking a decision on the Proposed Development to conclude that there is the potential for a viable connection to be provided in principle. The Secretary of State considers that if the pipeline connects to a supply at Barsham it is not likely to give rise to significant environmental effects additional to those already identified in the Environmental Statement, but this will also fall to be re-examined and be subject to assessment once any such pipeline connection is finalised. If a different solution is required, then any such different solution will need to be the subject of its own assessments in due course.

4.59 The Secretary of State notes that in light of the matters identified above it is not possible for the Applicant to provide more specific details regarding the route or specification of the pipeline, or other connection, that will provide the Proposed Development with a connection to the water main or water supply at this stage, and notes that such a pipeline or alternative connection does not form

part of the Application. This is due to the fact that the specific details of the route remain unknown until NWL identifies the source of the water that the pipeline will connect the Proposed Development to. The Secretary of State considers that such a pipeline or alternative connection cannot be subject to more detailed assessment as part of this Application given it is subject to the WRMP24. The Secretary of State notes that whilst the Water Supply Strategy submitted in January 2021 identified that the pipeline between Barsham and the Proposed Development did not form part of the Application, a cumulative assessment of the Proposed Development with that pipeline was undertaken, and that the Application was accepted on that basis. The Secretary of State agrees that in light of the present state of knowledge, it is not possible for the Applicant to conduct any meaningful assessment of any different solution to emerge from the WRMP24 process but that any such different solution will necessarily be subject to its own assessment before it can proceed.

4.60 The policy set out in NPS EN-1 is clear that a decision-maker should work on the assumption that relevant environmental regulatory regimes, including the abstraction licencing regime regulating activities that take water from the water environment, will be properly applied and enforced by the relevant regulator, and that a decision-maker should not seek to duplicate these regimes. The policy is also clear that the decision-maker should have regard to the interaction between the proposed project and other plans, and references Water Resource Management Plans as a specific example of such plans. The Secretary of State notes the acknowledgement in Section 4.2 of EN-1 that it is not always possible for all aspects of a proposal to be settled in precise detail. The fact that there is a lack of detailed information available regarding the source of a permanent water supply via NWL means that it is not possible for the Applicant to have assessed the effect, including the cumulative effects of all of the potential means of conveying water to the Proposed Development. The WRMP process is conducted by the water company and is not something that the Applicant can dictate. If (and only if) the WRMP process fails to provide a solution, the Applicant will have to consider its own permanent desalination plant.

4.61 The Secretary of State notes the concerns raised by IPs regarding the prospect of a permanent desalination plant. The Secretary of State agrees with the Applicant that further detailed assessment of the impacts associated with a permanent desalination plant would be required if the Applicant were ultimately to pursue this option as part of its water supply strategy which is not the current intention. The Secretary of State has not requested further detailed assessment from the Applicant of this option given that it does not form part of the Proposed Development and the Applicant's position is that a bespoke permanent desalination plant for the Proposed Development is unlikely to be required. The Secretary of State notes the Applicant's position that a permanent desalination plant is not likely to generate any materially new or materially different significant environmental effects on the marine environment (see paragraph 2.2.8 of the Applicant's response to the Secretary of State's letter of 18 March 2022) and on the terrestrial environment (see paragraph 2.2.10 of the Applicant's response to the Secretary of State's letter of 18 March 2022). The Secretary of State has also considered the concerns raised by IPs regarding the fact that the Applicant had previously discounted desalination from its water

supply options. The Secretary of State notes that the revision 1.0 of the Applicant's Water Supply Strategy produced in May 2020 noted that benefits of desalination include potentially short lead times with equipment available for hire, and that it could be useful for temporary top-ups or in times of drought. The limitations of desalination were listed as 'desalinated water being aggressive in pipe network and may require remineralisation'.

4.62 The Secretary of State acknowledges (above) that the Applicant's conclusion in January 2021, in Appendix 2.2.D Water Supply Strategy of the ES Addendum Volume 3 Chapter 2, was to discount the installation of a modular desalination plant on the MDS and the abstraction of seawater for treatment and notes that the Applicant also stated in the same document that Essex and Suffolk Water had 'identified means to provide a viable supply of potable water to Sizewell C' with this option referred to as 'transfer of surplus potable water via a new pipeline from Barsham'. This reflected the Applicant's position that a new mains pipeline is preferable to a permanent desalination plant.

4.64 The Secretary of State notes that revision 2.0 of the Water Supply Strategy published in September 2021 sets out the important role that a temporary desalination plant would play in the overall strategy. The Secretary of State acknowledges that the Applicant's position on desalination has therefore changed between January 2021 and September 2021 as a result of new information becoming available to the Applicant regarding the preferred mains connection via NWL. The Secretary of State is content that it is reasonable for the Applicant to rely on revision 2.0 of the Water Supply Strategy submitted during the Planning Inspectorate's examination of the Proposed Development in light of the new information that became available via NWL in terms of the important role that a temporary desalination plant would play in the overall strategy. The Secretary of State considers that if, contrary to expectation, the Applicant were to seek to provide water from a permanent desalination plant, that would require its own consent and would be subject to further detailed assessment at that stage before it could proceed. Accordingly, for essentially the same reasons as identified above in respect of the other potential solutions to the supply water strategy, the Secretary of State does not consider it necessary for the effects of any such solution to be assessed in more detail as a permanent desalination plant does not form part of the Proposed Development and the Applicant is not relying on it as an integral part of the Proposed Development.

4.64 The Secretary of State notes and agrees with the position of the ONR that in order to fulfil the Licence Conditions of any nuclear site licence necessary to operate the power station, the Applicant will have to put in place a reliable source of water before any nuclear safety related activities can take place that are dependent on such a supply. Accordingly, the Secretary of State is satisfied that the issue of a sustainable water supply solution will be subject to control through the nuclear site licence application and a reliable source of water will need to be demonstrated before any nuclear safety related activities can take place. The Secretary of State notes that NWL has included the demand from the Proposed Development in its WRMP24 Demand Forecast and NWL remains committed to providing the Proposed Development with a long term water supply and is therefore satisfied that there is a requisite degree of confidence

that a long term solution is deliverable, that any such long term solution will be subject to its own environmental assessment, including any required under the Habitats Regulations, which will consider cumulative and incombination effects before it can proceed, and that the ability to deliver that solution will need to be demonstrated to fulfil the Licence Conditions of any nuclear site licence to enable the Proposed Development to generate power.

4.65 In relation to the Habitats Regulations, the Secretary of State does not agree with Natural England that the source of any permanent water supply is, in itself, integral to the application. There will need to be a permanent water supply solution and the Secretary of State is satisfied that such a solution can be found before the first reactor is commissioned. However, the Secretary of State does not consider that the source of that supply is an integral part of this application. There is no current certainty as to the final source of the permanent water supply, which does not need to be in place until the early 2030s. The Applicant has carried out a cumulative assessment of the potential pipeline route from Barsham/the North/Central WRZ which identifies that this will result in no new or different significant cumulative effects. However, it is not currently known whether this or some other means of connecting the development to the water supply network will be required and this is something that will only become known through the WINEP process. The Secretary of State agrees with the position of the Applicant that an assessment of the Habitats Regulations implications of the proposed permanent water supply solution will be undertaken by NWL. The Secretary of State does not agree with NE that any such assessment is likely to miss or underplay any effects of any kind, including any cumulative or in-combination effects.

4.66 In the unlikely event that NWL can find no solution, then the Applicant has confirmed that it would seek to take forward its own solution of the construction of a permanent desalination plant. As already noted, this in itself would require a further application, either to amend the DCO or for another form of planning consent and such an application would similarly trigger the requirement for the necessary environmental assessments including any required under the Habitats Regulations. Such assessment would consider the proposed permanent water supply solution in combination with the Proposed Development and address any cumulative effects

Overall Conclusion on Water Supply

4.67 The Secretary of State is satisfied that the Applicant has established an acceptable water supply strategy for the construction period. The Secretary of State is also satisfied that a long-term water supply is viable and that any proposed water supply solution to be supplied by NWL will be properly assessed under the WRMP24 process and/or other relevant regulatory regimes and considers that no further information is required regarding the proposed water supply solution for a decision to be taken on the Application.

4.68 The Secretary of State therefore disagrees with the ExA's conclusions on this matter and considers that the uncertainty over the permanent water supply strategy is not a barrier to granting consent to the Proposed Development

4.69 The Secretary of State considers that the matter of the water supply does not weigh for or against the Order being made, and attributes this matter neutral weight in the overall planning balance.

APPENDIX C – COURT JUDGEMENT: BOSWELL V SECRETARY OF STATE FOR TRANSPORT & NATIONAL HIGHWAYS

Neutral Citation Number: [2023] EWHC 1710 (Admin)

Case No: CO/2837/2022, CO/3506/2022,
CO/4162/2022

IN THE HIGH COURT OF JUSTICE
KING'S BENCH DIVISION
ADMINISTRATIVE COURT
PLANNING COURT

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 7th July 2023

Before :

The Hon. Mrs Justice Thornton DBE

- -

Between :

THE KING **(on the application of)** **ANDREW BOSWELL**	**Claimant**
- and - **SECRETARY OF STATE FOR TRANSPORT**	**Defendant**
-and- **NATIONAL HIGHWAYS**	**Interested Party**

- -
- -

David Wolfe KC, Peter Lockley and Ben Mitchell (instructed by **Richard Buxton Solicitors**) for the **Claimant**
James Strachan KC and Rose Grogan (instructed by **Government Legal Department**) for the **Defendant**
Reuben Taylor KC (instructed by **Womble Bond Dickinson (UK) LLP**) for the **Interested Party**

Hearing dates: 10th and 11th May 2023

- -

Approved Judgment

This judgment was handed down remotely at 11:00am on 7th July 2023 by circulation to the parties or their representatives by e-mail and by release to the National Archives.

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THE HONOURABLE MRS JUSTICE THORNTON DBE

The Hon. Mrs Justice Thornton :

Introduction

1. The Claimant, Dr Boswell, challenges three decisions of the Secretary of State for Transport, to grant consent for three road schemes along the A47 in Broadland, Norfolk. The schemes are all within a twelve-mile radius of Norwich. They are designated as nationally significant infrastructure.

2. Before deciding to grant consent for the schemes, the Secretary of State assessed the carbon emissions expected to be generated by each scheme, in particular, the emissions from vehicles using the roads once operational. He acknowledged that each scheme will lead to an increase in carbon emissions. However, he concluded that when compared with the UK's national carbon budgets which span the period from 2023 to 2037, the increase in emissions from each scheme is not significant (ranging from 0.001% - 0.004% of any carbon budget). In each case he concluded that the scheme is compatible with the UK's trajectory towards 'Net Zero'. The term 'Net Zero' refers to the statutory duty on the Secretary of State, under the Climate Change Act 2008, to ensure that the net UK carbon account for the year 2050 is at least 100% lower than the 1990 baseline.

3. The Claimant, Dr Boswell is a scientist with a background in computer modelling of complex phenomena, including climate change. The thrust of his challenge is that the Secretary of State is under a legal duty to assess the cumulation of environmental effects with other existing and/or approved projects and he acted unlawfully in failing to meaningfully assess the combined carbon emissions from the three road schemes. The particular focus of Dr Boswell's criticism at the substantive hearing of the claim was that, in coming to his view about the carbon impacts, the Secretary of State did not consider it necessary to compare the combined carbon emissions from the three A47 schemes against the UK's national carbon budgets.

4. Dr Boswell calculates that, together, the carbon emissions from the three schemes in combination with other developments in the local area, amounts to 0.47% of the UK's 6th national carbon budget). Dr Boswell contends that using up almost half a percent of the UK's 6th carbon budget for relatively small schemes in a small area of Norfolk is significant and leaves very limited emission space for other sectors of the economy. Considerable amounts of carbon will need to be offset somewhere else in the economy if the road schemes are built.

5. The question for the Court is whether the approach adopted by the Secretary of State in assessing cumulative impacts breaches the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (2017/572). If it does, the Court must then decide whether a fallback position adopted by the Secretary of State, of assessing the cumulative impacts for the second and third road schemes, is sufficient to correct any legal deficiency in the earlier decision making.

6. For the reasons that follow, I have reached the view that whilst, in parts, unhelpfully expressed, the approach taken to the assessment of the cumulative impacts of carbon emissions does not breach the Infrastructure Planning (Environmental Impact Assessment) Regulations and was lawful. My conclusion is based on the following:

i) The question of what impacts should be addressed cumulatively; how the cumulative impacts might occur; whether the effects are likely to be significant and if so, how they should be assessed are all matters of evaluative judgment for the Secretary of State (§43 and §77 of this judgment). The task for the Court is to consider whether the evaluative judgment(s) made by the Secretary of State in this respect fall outside the range of reasonable decisions open to him or whether there is a demonstrable flaw in the reasoning which led to his decision (§46). As the primary judges of the fact, the views of the Secretary of State and the Planning Inspectors who publicly examined the road schemes are entitled to considerable weight (§46).

ii) The carbon emissions from each road scheme were calculated and compared against the UK's national carbon budget (§54).

iii) Consideration was given to the cumulative impacts of carbon emissions from the three road schemes. A figure was produced for the combined emissions from the three schemes (and other local schemes), thereby satisfying the requirement of Schedule 4 paragraph 5 of the Regulations for a 'description' of the likely significant effects of the development on the environment resulting from the cumulation of effects with other existing and/or approved projects (§78). The figure produced was not however assessed for significance against the UK's national carbon budgets. This was a matter of evaluative judgment for the Secretary of State

iv) The Secretary of State's reasons for not comparing the combined emissions against the national target were, broadly speaking, threefold: 1) there is no single prescribed approach to assessing the cumulative impacts of carbon emission; 2) the approach to assessing the cumulative impact of carbon emissions differs from that of other environmental impacts because carbon impacts are not geographically limited to a local area and 3) the appropriate basis for assessing the significance of the emissions was to compare them against the UK's national carbon budgets (§63).

v) Recent caselaw confirms that, on the basis of current policy and law, it is permissible for a decision maker to look at the scale of carbon emissions relative to a national target (§69). The proposition that the impact of carbon emissions is not limited to a geographical boundary is a scientific assessment to which the Court should afford respect (§73).

vi) Accordingly; there is a logical coherence to the Secretary of State's decision not to compare the combined carbon emissions from <u>local</u> road schemes against the UK's <u>national</u> carbon target, when those carbon emissions do not have a local geographic limit. Independent guidance counsels against the arbitrary cumulation of projects in these circumstances. As Counsel for the Secretary of State put matters; for present purposes it does not matter whether the emissions are from a road in Norfolk or Oxford. Their impact is the same and the target against which they are being assessed is national not local (§81-83). A different approach might have been required had a different target been used (§86).

vii) Dr Boswell's concerns about the limited value of the exercise undertaken, of assessing the significance of an individual development project against a

national carbon target, is acknowledged in independent guidance and in recent caselaw (§85). However, on the state of present scientific knowledge, such an approach cannot be considered unlawful. Dr Boswell's case is, on analysis, a challenge to the acceptability of the carbon impacts from the three road schemes. Acceptability of impact is not a matter for the Courts, who must be astute to avoid being drawn into the arena of the merits of climate decision making (§84).

The legal framework for the challenge

The Planning Act 2008

7. The three road schemes are designated as nationally significant infrastructure projects under the Planning Act 2008 (sections 14(1)(h) and 22). Development consent is required for their development (section 31). A decision on consent is taken by the Secretary of State after the application has been examined by an Examining Authority and a report produced setting out the Examining Authority's recommendation on consent (section 83).

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

8. The Infrastructure Planning (Environmental Impact Assessment) Regulations (2017/572) ('the IEIA Regulations') form the basis of the challenge. They set out the process of environmental impact assessment for development consent under the 2008 Planning Act.

9. Regulation 4(2) provides that:

> "…the Secretary of State…must not make an order granting development consent…unless an EIA has been carried out in respect of that application."

10. Regulation 5 provides that:

> "(1) The environmental impact assessment (EIA) is a process consisting of
>
> a. The preparation of an environmental statement by the applicant
> b. The carrying out of any consultation, publication and notification as required under these Regulations…and
> c. the steps that are required to be undertaken by the Secretary of State pursuant to Regulation 21
>
> (2) The EIA must identify, describe and assess, in an appropriate manner, in light of each individual case the direct and indirect significant effects of the proposed development on the following factors –
> ……
> (c) land, soil, water, air and climate
> ……
> (5) The Secretary of State … must ensure they have or have access as necessary to sufficient expertise to examine the environmental statement."

11. Regulation 14 provides that:

> "(2) An environmental statement is a statement which includes at least
>
> a) a description of the proposed development…
> b) a description of the likely significant effects of the proposed development on the environment
> ……
> f) any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development …and to the environmental features likely to be significantly affected.
>
> (3) The environmental statement…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
>
> and;
>
> 4) In order to ensure the completeness and quality of the environmental statement
>
> a) the applicant must ensure that the environmental statement is prepared by competent experts and
> b) the environmental statement must be accompanied by a statement from the applicant outlining the relevant expertise or qualification of such experts."

12. Regulation 20 provides that where an examining authority is of the view that it is necessary for the environmental statement to contain further information, the information must be provided and consulted upon.

13. Regulation 21 provides that:

> "1) when deciding whether to make an order granting development consent for EIA development, the Secretary of State must
>
> a) examine the environmental information;
> b) reach a reasoned conclusion on the significant effects of the proposed development on the environment, taking into account the examination referred to in sub paragraph a) and where appropriate any supplementary information considered necessary;
> c) integrate that conclusion into the decision whether an order is to be granted…."

14. Schedule 4 is headed information for inclusion in environmental statements. Paragraph 3 requires a description of the current state of the environment and likely evolution so far as can be assessed on the basis of scientific knowledge. Paragraph 4 requires:

> "A description of the factors specified in regulation 5(2) likely to be significantly affected by the development: population, human health…..air, climate (for example greenhouse gas emissions, impacts relevant to adaptation)…"

15. Paragraph 5 requires in relevant part as follows:

> "A description of the likely significant effects of the development on the environment resulting from, inter alia—
>
> ……
>
> (e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;
>
> (f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;
>
> ……
>
> The description of the likely significant effects on the factors specified in regulation 5(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development……"

16. Paragraph 6 requires a description of the methods or evidence used to assess the significant effects on the environment, "including details of difficulties (for example technical difficulties or lack of knowledge) encountered compiling the required information and the main uncertainties involved."

The Climate Change Act 2008

17. The Secretary of State is subject to a duty to ensure that the net UK carbon account for the year 2050 is at least 100% lower than the 1990 baseline. This is commonly referred to as 'net zero' (section 1 of the Climate Change Act 2008). Section 4(1) of the same Act imposes a duty on the Secretary of State to set carbon budgets to cap carbon emissions in a series of five-year periods (subsection (1)(a)), and to ensure that the net United Kingdom carbon account for a budgetary period does not exceed the carbon budget (subsection (1)(b)). Carbon budgets must be set with a view to meeting the target for 2050 (section 8(2)). Thus, this ensures progress towards the 2050 target in the period before 2050. The process by which a budget is set has been summarised by the Court of Appeal in R (Packham) v Secretary of State for Transport [2021] Env L.R. 10 at §83. No issue arises in this respect and it is not necessary to repeat the process here.

18. The relevant statutory instruments specify a figure expressed in tonnes of CO2 equivalent which represents the total allowable net greenhouse gas ('GHG') emissions over the relevant budgetary period of 5 years. The budgets of relevance to the present claim are the 4th to 6th budgets. The fourth carbon budget is 1,950 MtCO2e for 2023 - 2027. This represents a reduction of 50% on 1990 levels of GHG over the 5 year period. The fifth carbon budget set a budget of 1,725 MtCO2e for 2028-2032. This represents an average reduction of 57% on 1990 levels of GHG over the 5 year period. The 6th carbon budget is 965 MtCO2e for 2033 – 2037. This represents a 78% reduction over the 5 year period. Carbon budgets have not yet been set for the remaining projected lifespan of the schemes (2038 – 2087).

The policy framework

19. Any application for development consent under the 2008 Planning Act must be determined in accordance with the relevant national policy statement (NPS), where one has effect (sections 5 and 104 Planning Act 2008). The NPS on National Networks (2015) is a national policy statement which sets out Government policy on the strategic road network. The following is said in relation to carbon emissions:

> "…the impact of road development on aggregate levels of emissions is likely to be very small." (5.16)
>
> *"*…It is very unlikely that the impact of a road project will, in isolation, affect the ability of Government to meet its carbon reduction plan targets…" (5.17)
>
> "the Government has an overarching national carbon reduction strategy (as set out in the Carbon Plan 2011) which is a credible plan for meeting carbon budgets. It includes a range of non-planning policies which will, subject to the occurrence of the very unlikely event described above, ensure that any carbon increases from road development do not compromise its overall carbon reduction commitments. The Government is legally required to meet this plan. Therefore, any increase in carbon emissions is not a reason to refuse development consent, unless the increase in carbon emissions resulting from the proposed scheme are so significant that it would have a material impact on the ability of Government to meet its carbon reduction targets." (5.18)

Factual background

The three schemes

20. The three schemes are:

(1) The A47 Blofield to North Burlingham scheme to upgrade a short section (2.6km (1.61 miles)) of the A47 to dual carriageway running between Blofield and North Burlingham and associated works. Development consent was granted on 22 June 2022 (Scheme 1).

(2) The A47 North Tuddenham to Easton scheme for 9km (5.59 miles) of offline construction of the A47 between North Tuddenham and Easton and associated works. Development consent was granted on 12 August 2022 (Scheme 2).

(3) The A47/A11 Thickthorn Junction scheme for a new connector road from the A11 to A47 and improvements to Thickthorn Junction and associated works. Development consent was granted on 14 October 2022 (Scheme 3).

The decision-making process

21. The Secretary of State made three separate decisions in relation to the development consent for each scheme. His decisions were made following separate examinations of each of the schemes which produced three reports by three different Planning Inspectors (the Examining Authority). In coming to their recommendation which was, in each case, to grant consent for the particular scheme the Planning Inspectors examined the environmental statement for the scheme under consideration. The environmental statement was produced by the applicant for consent, National Highways.

22. Dr Boswell actively participated the examinations and made representations in relation to a number of issues relevant to climate, including the approach to the cumulative impact assessment of carbon emissions.

The Secretary of State's assessment of the significance of the carbon impact

23. In each scheme the Secretary of State concluded that the net carbon impact of the scheme would be unlikely to have a material impact on the UK Government meeting the relevant UK carbon budget. Whilst the assessment was the same for each of the schemes, the most developed explanation for his view is set out in the decision letter for the third scheme and is as follows (the references to NPSNN are to the National Policy Statement on National Networks):

> *"Assessing carbon emissions and their significance*
>
> *93. The Secretary of State is aware that all emissions contribute to climate change but considers that there is no set significance threshold for carbon. The Secretary of State does not consider that net zero means consent cannot be granted for development that will increase carbon emissions. The Secretary of State considers that, as set out in NPSNN paragraph 5.18, it is necessary to continue to evaluate whether (amongst other things) the increase in carbon emissions resulting from the Proposed Development would be so significant that it would have a material impact on the ability of Government to meet its carbon reduction targets. The Secretary of State considers that the NPSNN allows for development consent if the Proposed Development's carbon emissions do not have a material impact on the Government's ability to meet its carbon reduction targets. Though the Secretary of State acknowledges that the Proposed Development will result in an increase in carbon emissions, adversely affecting efforts to meet the 2050 target, he does not consider that this means the increase would be so significant as to have a material impact on the Government's ability to meet its carbon reduction targets.*
>
> *94. The Secretary of State considers that the approach set out in the NPSNN continues to be relevant .....and aligns with the approach to significance set out in the Institute of Environmental Management & Assessment ('IEMA') 2022 guidance Assessing Greenhouse Gas Emissions and Evaluating their Significance ('the IEMA Guidance'). This sets out that the crux of significance is not whether a project emits GHG emissions, nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050 (section 6.2).*
>
> *95. The IEMA guidance also addresses significance principles and criteria in section 6.3 and Figure 5…*
>
> *…*
>
> *97. The Secretary of State notes that the carbon budgets are economy-wide and not just targets in relation to transport. The Secretary of State considers that the Proposed Development's contribution to overall carbon levels is very low and that this contribution will not have a material impact on the ability of Government to meet its legally binding carbon reduction targets. The Secretary of State therefore considers that the Proposed Development would comply with NPSNN paragraph*

> *5.18. The Secretary of State also considers that the Proposed Development's effect on climate change would be minor adverse and not significant and this assessment aligns with section 6.3 and Figure 5 of the IEMA guidance.*
>
> *……*
>
> *99. Overall, the Secretary of State considers that: over time the net carbon emissions resulting from the Proposed Development's operation will decrease as measures to reduce emissions from vehicle usage are delivered; the magnitude of the increase in carbon emissions (from construction and operation) resulting from the Proposed Development is predicted to be a maximum of 0.0015% of any carbon budget and therefore very small; the Government has legally binding obligations to comply with its objectives under the Paris Agreement; and there are policies in place to ensure these carbon budgets are met, such as the Transport Decarbonisation Plan and the Applicant's own Net Zero Highways plan. The Secretary of State is satisfied that the Proposed Development is compatible with these policies and that the small increase in emissions that will result from the Proposed Development can be managed within Government's overall strategy for meeting the 2050 target and the relevant carbon budgets. The Secretary of State considers that there are appropriate mitigation measures in place to ensure carbon emissions are kept as low as possible. The Secretary of State is therefore satisfied that the Proposed Development would comply with NPSNN paragraph 5.19. The Secretary of State also considers that the Proposed Development will not materially impact the Government's ability to meet the 2050 target."*

The assessment of the cumulative impacts of the carbon emissions for the three schemes

24. The approach to assessing the cumulative impacts of the carbon emissions from the three road schemes became a material issue at the public examination of all three schemes. All three Inspectors addressed the issue in their reports.

Scheme 1

25. The Inspector in Scheme 1 took relevant matters as follows:

> *"4.13.25 I asked the Applicant whether it was appropriate to include other major road schemes in the baseline and how, given the change in carbon emissions reported would primarily be as a result of the Proposed Development (DS-DM), this represented a cumulative assessment. On the matter of a cumulative carbon emission / climate change assessment, the Applicant maintained that a cumulative assessment of different projects (together with the Proposed Development) is inherent within the climate assessment methodology, given:*
>
> - *The inclusion of the Proposed Development and other locally committed development (including the A47 North Tuddenham to Easton NSIP scheme, the A47 / A11 Thickthorn Junction NSIP scheme and the Norwich Western Link) within the traffic model so as to understand the effects of the Proposed Development along with other committed developments in the ARN; and*

- *Consideration of the Proposed Development against the UK carbon budgets, which are inherently cumulative as they consider and report on the carbon contributions across all sectors.*

4.13.26. I have no substantive reasons to doubt the reliability of the Applicant's traffic model, the details of which can be found in the TA [REP1-044]. However, I asked the Applicant why, whilst embedded carbon emissions had been taken into account for the Proposed Development, this was not the case for the other committed developments considered, including the major road schemes identified. I also asked the Applicant at ISH2 (Action Point 12 of [EV-036a]) whether a cumulative effects assessment should take into account other proposed major road schemes, such as all those identified within RIS2.

4.13.27. The Applicant indicated that whilst such exercises could be carried out, it was not necessary for it to do so. This was primarily given that the Applicant considers its carbon emissions / climate change assessment complies with the NNNPS, EIA Regulations and relevant DMRB guidance. Further justification on this is provided by the Applicant at Appendix A of submission [REP7-025]" (4.13.25 – 14.13.27).

26. The Inspector was prepared to accept that the cumulative impact of the development with other relevant proposed road schemes in the Government's strategy for the strategic road network would not give rise to significant climate effects given they would not have a material impact on the UK carbon budgets but nonetheless stated that:

"the SoS may wish to consider further the adequacy of the Applicant's consideration of cumulative carbon emissions / climate change effects for the purposes of the NNNPS and EIA Regulations." (4.13.30)

27. In his decision letter for Scheme 1, the Secretary of State noted that concerns had been raised around the assessment of the cumulative impacts of carbon emissions but concluded that:

"59. The Secretary of State considers that as there is no single prescribed approach to assessing the cumulative impacts of carbon emissions, there are a number of ways such an assessment can acceptably be undertaken …

60. The Secretary of State is also conscious that the impact and effect of carbon emissions on climate change, unlike other EIA topics, is not limited to a specific geographical boundary and that the approach that needs to be taken to assess the cumulative impact of carbon emissions is different from other EIA topics. Noting this, and that there is no defined distance for assessing the impact of carbon emissions, the Secretary of State considers that the Applicant's approach to assessing the impact of the Proposed Development on carbon is acceptable as it takes into account the Proposed Development as well as all other developments likely to have an influence both on the Proposed Development and on the area the Proposed Development is likely to influence.

61. The Secretary of State also notes that the Applicant argued that consideration of the Proposed Development against the UK carbon budgets is inherently cumulative as these account for carbon contributions across all sectors [ER

4.13.25]. The Secretary of State agrees that assessing a scheme against the national carbon budgets is an acceptable cumulative benchmark for the assessment for EIA purposes with regard to both construction and operation. This is because carbon budgets account for the cumulative emissions from a number of sectors and it is therefore appropriate to consider how the carbon emissions of the Proposed Development compare against this."

Scheme 2

28. The Second Inspector noted that the issue of climate change and GHG emissions had featured prominently throughout the examination. He requested further information about the cumulative impacts.

29. The Inspector came to the following view about the approach taken by National Highways:

"5.7.70. The UKs government approach is one of adopting carbon budgets to control carbon emissions and ensure compliance with agreed national targets. These are set by sector, with surface transport being specifically identified. The purpose of these budgets is to ensure that the net UK carbon account for a budgetary period does not exceed the set carbon budget. These budgets are set nationally, with no legal duty to set carbon budgets at a smaller scale. Furthermore, I note that the Government's overall strategy for meeting carbon budgets, along with the net zero target, should be viewed as part of an economy-wide transition.

5.7.71. Therefore, from the evidence before the Examination, I am satisfied that the national carbon budgets represent the most appropriate figures against which to assess the carbon emissions from the Proposed Development.

5.7.74. On the basis of the above, I therefore consider that the carbon emissions from the Proposed Development, on its own, would be unlikely to have a material impact on the UK Government meeting the carbon reduction targets in place at the time of the assessment.

5.7.79. It is clear from the Applicant's own traffic model that the Proposed Development, once operational, will support additional traffic movements and therefore, ultimately result in an increase in vehicle emissions. However, this needs to be viewed against long-term Government policy which aims to remove all road emissions at the tailpipe, through the gradual switch to low emission vehicles. This Policy is one part of the Governments approach towards achieving Net Zero and should not be discounted. I am also mindful of the Government's legally binding obligation to comply with its objectives under the Paris Agreement.

5.7.82. I agree with Dr Andrew Boswell [REP6-020] and others that the emissions from Proposed Development should not be viewed in isolation.

5.7.83. The Applicant did not provide a separate assessment of cumulative impacts of the Proposed Development with other highway developments, either locally or nationally. However, they considered that the Government's carbon budgets are themselves cumulative [REP10-005]. Furthermore, they identify that the traffic

model used to assess the Proposed Development is also inherently cumulative for a number of reasons [REP10-005].

5.7.85. It is clear that there is no single or agreed approach towards the assessment of cumulative impacts of carbon emissions. There are a number of ways such an assessment can acceptably be undertaken. I accept that the impact and effect of carbon emissions on climate change, is not limited to a specific geographical boundary and that a different approach needs to be taken to assess the cumulative impact of carbon emissions, than would be used to assessed cumulative impacts associated with other EIA topics.

5.7.86. On this basis, and given the lack of a defined boundary against which to assess the impact of carbon emissions, along with the advice contained within DMRB and the NPSNN, I consider that the approach taken by the Applicant is reasonable.

5.7.87. In terms of Carbon Budgets, the Applicant position is that these are inheritably cumulative [REP10-005] as they include the total carbon emissions from a wide range of sectors. Due to the nature of the budgets and the lack of local figures, the Applicant was unable to produce a local, or regional baseline against which to assess the Proposed Development [REP10-005].

5.7.88. I accept that, the Carbon Budgets represent the only statutory targets in relation to carbon emissions. This approach is advocated by the NPSNN. Furthermore, I also accept that the Applicant's traffic model includes traffic generated from other developments and allows for growth in traffic levels, although I acknowledge that this was less than clear from the submissions.

5.7.89 I acknowledge the submissions of Dr Boswell and others in relation to the Applicants' cumulative assessment and agree that there may be more suitable ways to undertake such an assessment. However, based on the current policy framework and guidance, it is my view that the Applicant's approach, through the use of carbon budgets, sufficiently considers the cumulative effects with other projects or programmes."

30. In his decision letter in relation to Scheme 2 the Secretary of State agreed that emissions from the Proposed Development should not be viewed in isolation and acknowledged that the Applicant did not provide a separate assessment of cumulative impacts of the Proposed Development with other local or national highway projects but concluded that:

"95. Whilst noting the concerns raised and proposals by IPs around alternative approaches to assessing carbon cumulatively…..the Secretary of State agrees with the ExA that there is no single or agreed approach to assessing the cumulative impacts of carbon emissions as there are a number of ways such an assessment can acceptably be undertaken The Secretary of State also notes that the impact and effect of carbon emissions on climate change, unlike other EIA topics, is not limited to a specific geographical boundary and that the approach that needs to be taken to assess the cumulative impact of carbon emissions is different than would be used to assess the cumulative impacts associated with other EIA topics. Noting this and that there is no defined boundary for assessing the impact of carbon emissions, the

Secretary of State agrees with the ExA that the Applicant's approach to assessing the impact of the Proposed Development on carbon emissions and its cumulative impact is acceptable.

96. It is also noted that the Applicant considered that national carbon budgets are inherently cumulative as they include the total carbon emissions from a wide range of sectors (ER 5.7.87). The Secretary of State notes that the ExA concluded that the Applicant's approach, through the use of carbon budgets, sufficiently considers the cumulative effects with other projects and programmes (ER 5.7.89). The Secretary of State agrees that assessing a scheme against the national carbon budgets is an acceptable cumulative benchmark for the assessment for EIA purposes with regard to both construction and operation. This is because carbon budgets account for the cumulative emissions from a number of sectors and it is therefore appropriate to consider how the carbon emissions of the Proposed Development compare against this."

Scheme 3

31. The Third Inspector accepted the approach adopted by National Highways on the basis the only realistic comparator was the national level carbon budgets, accounting for information which is presently known and can be relied upon for decision making purposes and they are inherently cumulative.

32. The Secretary of State agreed, for the same reasons given in relation to Schemes 1 and 2, adding:

"*With regard to the Applicant's methodology for assessing emissions from the Proposed Development, the ExA concluded that it did not appear to conflict with current policy or guidance, also having regard to wider regulatory requirements (ER 5.11.75). The Secretary of State also agrees with this conclusion.*

109. The Secretary of State has considered all responses on this matter and notes that whilst various guidance may recommend an assessment of environmental impacts at a sub-national level, in relation to carbon emissions, the Secretary of State agrees with the ExA that the Applicant is not able to meaningfully assess the cumulative effects of carbon from the Proposed Development against anything other than the national level carbon budget (ER 5.11.81).

……

The Secretary of State is satisfied that an assessment against these budgets, as provided by the Applicant, is consistent with the NPSNN. Given this, the Secretary of State considers that the assessment carried out by the Applicant is reasonable against the information available, sufficient to understand the impacts of the Proposed Development on climate and is therefore compliant with the EIA Regulations."

The fall back position (Scheme 2 and 3)

33. By the time the Secretary of State came to issue his decision to grant development consent for Scheme 2, Dr Boswell had commenced these legal proceedings in relation

to Scheme 1 and had raised concerns about the cumulative carbon assessment in Scheme 2. The ministerial submission seeking a decision on content for Scheme 2 summarised his representations. Shortly before the decision on Scheme 2 was issued the Head of the Transport Infrastructure Planning Unit at the Department for Transport sent an email to the Minister's team in the following terms:

> *"This is an entirely new paragraph so was not referenced in the submission and was not included in the version of the decision letter that was attached to the submission to ministers. The line that we would like to ensure the Secretary of State is content with in particular, is the one highlighted below in yellow as this is a matter of judgement. The decision on this scheme is due out today. If it is not possible to get the Secretary of State's agreement, we can still issue the decision without this paragraph.*
>
> *1. The Secretary of State notes that Interested Parties like Dr Boswell have argued that a cumulative assessment requires one to consider the combined emissions from the Proposed Development alongside other developments that are included within the Do Minimum scenario, as against the Carbon Budgets. Whilst the Secretary of State does not agree that it is necessary to do this in addition to what has been done by the Applicant (for the reasons already stated) the Secretary of State notes that such combined emissions are reported within Table 14-9 of the Revised ES. This identifies that the total emissions in the Do- Something Scenario would be 12,190,870 tCO2e over the fourth, fifth and sixth carbon budget periods where the relevant carbon budget periods are set out in the same Table. <u>These combined emissions would therefore equate to approximately 0.263% of those combined budgets. The Secretary of State considers that such combined emissions also to be very small and not likely to affect the ability of the Government to meet its carbon reduction plan targets in any event.</u>"*
>
> (the underlining above is the 'yellow' section referred to above in the email from the official)

34. This fallback position was included in the decision letters for the second and third schemes.

<u>Criticisms of the environmental impact assessment</u>

35. On behalf of Dr Boswell, it is said that the Secretary of State acted in breach of the IEIA Regulations in failing to conduct any lawful cumulative assessment of the carbon emissions. In particular, the Secretary of State failed to assess the significance of the combined carbon emissions from the three schemes (and other local projects) by comparing and calculating them as a percentage of the UK's national carbon budgets. That calculation was only done for emissions for the particular scheme under scrutiny.

36. It is said that the related road schemes are 'existing and/or approved projects' for the purposes of paragraph 5(e) of Schedule 4 to the EIA Regulations. The Secretary of State was under a legal duty to account for greenhouse gas emissions in the environmental statement and to consider them in his decision pursuant to Schedule 4 paragraph 5. It was a legal requirement to assess the significance of the cumulative impacts of the Scheme with existing and/or approved projects. An environmental statement that failed to conduct this cumulative assessment is defective because it fails to meet the

requirements of the IEIA regulations read with Schedule 4 paragraphs 5(f) and Regulation 5(2). The Secretary of State's reliance on the environmental statement in this regard rendered his decision unlawful and his approach to the consideration of significant effects of the Scheme was contrary to that required by Regulation 21(1).

37. The decision to grant development consent must be based on an assessment of the significant effects of the proposed development on the environment which must, in turn, take account of a description of the likely significant effects of the development on the environment resulting from the cumulation of effects with other existing and/or approved projects. That involves three stages: 1) describing those cumulative effects (i.e. estimating the quantities of carbon emissions) 2) assessment of their significance and 3) integration of that assessment into the decision as to the grant of development consent. The carbon emissions from each individual scheme were compared against each carbon budget and expressed as a percentage of the budget and the Secretary of State then considered whether there could be a material impact from the scheme on the ability of the Government to meet the carbon budget in question. This was not however done for the combined emissions from the scheme and related projects which made it impossible to assess lawfully whether the combined emissions will materially impact on the ability of Government to meet the carbon reduction targets.

38. There was no challenge on behalf of Dr Boswell to the numerical analysis in the Environmental Statement.

39. As to the fall back position adopted by the Secretary of State, it is said that he did not have the necessary information in the briefing from officials to make the judgment he did. There was an obvious error in aggregating the carbon budgets. The analysis does not include the construction emissions for Scheme 2 which is a material consideration. The new material and figures should have been consulted on pursuant to Regulation 20 of the IEIA Regulations because this was a fresh exercise using the Secretary of State's own figures and not figures from the consultation material. A central aspect of the EIA regime is public involvement.

Discussion

The framework for the Court's review

40. The issue for the Court is whether the Secretary of State breached the IEIA Regulations. The parties were in dispute as to the framework for the Court's assessment in this regard. On behalf of Dr Boswell, it was submitted that the question is one of law. It is a legal requirement to assess the significance of the cumulative impacts of a proposed project with existing and/or approved projects (Schedule 4 paragraphs 4 and 5, Regulation 5(2), Regulation 14(2)). Despite accepting the relevance of cumulative impacts National Highways/the Secretary of State failed to conduct any meaningful assessment of their cumulative impact, thereby failing in their legal duty. On behalf of the Secretary of State and National Highways, it was submitted that the question is one of judgment for the decision maker, with supervisory oversight by the Court. The approach adopted to the assessment of cumulative impacts in the decision making cannot be said to have been irrational.

41. The submission on behalf of Dr Boswell, that the assessment of cumulative impacts is a question of law, has been repeatedly rejected by the Court of Appeal:

> "*27 I turn then to what I regard as the main question: whether the Secretary of State should have concluded that the largest scheme involved indirect, secondary or cumulative effects of the July 2009 proposal?*
>
> *28. First and foremost, this is, in my judgment, an issue of fact. Whether it is such or not has been at the centre of the argument to which we listened yesterday and today. But it is clear, as I see the matter, that it is indeed a matter of fact or of judgment: clear from the judgment of Sullivan LJ with whom Jacob LJ and Sir Mark Waller agreed in the case of Brown v Carlisle County Council: see paragraph 21. Sullivan LJ said in terms:*
>
> *'The answer to the question -- what are the cumulative effects of a particular development -- will be a question of fact in each case.'*
>
> *29 It is clear also from the words of the regulation itself: "such information as is reasonably required" and "a description of the likely significant effects". These formulations import, as it seems to me, the application of a measured judgment to the evidence. This is not contradicted by the learning, of which Mr Drabble reminded us yesterday, which shows that the term "likely" in the regulation means "possible": see R(Bateman) v South Cambs DC & Ors [2011] EWCA Civ 157.*
>
> *30. More deeply perhaps, Mr Drabble submitted on this part of the case that the question whether the effects of the larger scheme are cumulative effects of the smaller is itself one of law. This, with respect to Mr Drabble, is in my judgment a mistake. ....It seems to me that the texts are all consistent with the proposition that what are and what are not indirect, secondary or cumulative effects is a matter of degree and judgment."* (Laws LJ in Bowen-West v Secretary of State for Communities and Local Government Northamptonshire County Council & Ors [2012] EWCA Civ 321).

42. A more recent expression of the principle appears in R (Preston New Road Action Group) v Secretary of State Communities and Local Government [2018] Env LR 18:

> "*A principle well established ..is that the existence and nature of 'cumulative effects will always depend on the particular facts and circumstances of the project under consideration. (see Sullivan LJ's judgment in Brown v Carlisle City Council, at [21, and Laws LJ's judgment in Bowen-West v Secretary of State for Communities and Local Government [2012] Env. L.R. 22, at [28]). An equally robust principle is that an environmental statement is not expected to include more information than is reasonably required to assess the likely significant effects of the development proposed in the light of current knowledge*." (Lindblom LJ at [67])

43. Both cases were concerned with the EIA regime but it was common ground that the same principles apply to the IEIA Regulations. Regulation 5(2) of the IEIA Regulations provide that the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects. As is apparent from the underlined words, it is inherent in the language used that an evaluative judgment is required of the decision maker about the adequacy of the environmental assessment. More specifically, Regulation 14 deals with the requirements of an Environmental Statement. Regulation 14(2)(b) identifies that a statement is one which includes at least a "description" of "the likely significant effects of the proposed

development on the environment." Regulation 14(2)(f) requires the inclusion of any additional information specified in Schedule 4 'relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected". Regulation 14(3)(b) identifies that an environmental statement must include the information "reasonably required" for reaching a reasoned conclusion on the environment, "taking into account current knowledge and methods of assessment." Again, it is inherent in the language of the underlined wording that the question of what additional information specified in Schedule 4, needs to be included in an environmental statement is evaluative, as is the overall content of the statement. Further, the obligation is to identify, describe and assess the "significant effects" of proposed development, as is apparent from the repeated references to the phrase in the provisions listed above.

44. Counsel for Dr Boswell emphasised the analysis of the Court of Appeal in R (Larkfleet) v South Kesteven DC [2016] Env L.R 4. The EIA regulations do not permit technical or artificial steps that create loopholes or conceal or overlook environmental impacts. This is the root of the principle that large projects may not be carved up or 'salami sliced' to avoid EIA scrutiny. It is only lawful to divide up a series of works into separate EIA projects so long as the cumulative effect is considered in the environmental statement for each of the projects.

45. The claimant in Larkfleet, contended that the development proposals under scrutiny amounted to one project, an analysis rejected by the court. The fact that two development proposals might have a cumulative effect on the environment did not make them a single "project" for the purposes of the Directive. Where two or more distinct, but linked sets of proposals were contemplated, the environmental protection objective of the Directive was sufficiently secured by considering as far as possible their cumulative effects. In the present case however, Counsel for Dr Boswell did not suggest that the three schemes were one project. Nor did he suggest that the applicant had deliberately separated out ('salami sliced') the three projects so as to avoid the requirements for EIA. Each road scheme has undergone its own EIA. Whatever may have been the position earlier on in the proceedings, by the substantive hearing before me there was no challenge by the Secretary of State/National Highways to the proposition that the three schemes are related projects and a cumulative assessment was required. Before the Court, the core dispute between the parties was, on analysis, the adequacy of the assessment of cumulative impacts.

46. Accordingly; I proceed on the basis that the assessment of the cumulative impacts of carbon emissions from the three schemes requires the application of measured judgment to the evidence before the decision maker. In this context the task for the Court is to consider whether the decision arrived at falls outside the range of reasonable decisions open to the Secretary of State or whether there is a demonstrable flaw in the reasoning which led to it (R (Law Society) v The Lord Chancellor [2018] EWHC 2094 (Admin); [2019] 1 W.L.R. 1649 (§98). As the primary judges of fact, the views of the Planning Inspector and the Secretary of State are entitled to considerable weight (R (Bowen West) v Secretary of State (Laws LJ at §28, 29 and 30).

The assessment of carbon emissions in each of the road schemes

47. The methodology of the assessment of carbon emissions was the same for all three schemes and may be summarised as follows.

48. The carbon emissions from construction of the road were assessed on the basis construction would take twenty-two months. A figure of tonnes of carbon dioxide equivalent was arrived at using the Highways England Carbon tool. For Scheme 1 the amount was assessed at 25,765 tCO2e. For Scheme 2 the figure was 87,727 tCO2e and for Scheme 3 the figure was 25,946 tCO2e.

49. The bulk of the carbon emissions from the scheme will be from traffic using the roads once they are operational (end user traffic emissions). To assess these, traffic modelling was done for the existing road and wider network, collectively referred to as the affected road network (ARN). The traffic modelling drew on the Norwich Area Transport Strategy Model (NATS Model) which was developed in line with the Department for Transport: Transport Appraisal Guidance (TAG), as well as local traffic modelling.

50. The forecasts of future traffic took account of household and employment growth as well as future developments in the area with a 'more than likely' or 'near certain' probability of delivery. These included other major road schemes, including the Norwich West Link and, of particular significance to the claim, the two other road schemes. So, in the case of Scheme 1, the baseline included traffic growth from Scheme 2 and Scheme 3; and so on.

51. The carbon emissions from the Affected Road Network were calculated over three key years: base year (2015), year of expected opening of the road in question (2025) and design year (2040). These baseline emissions or baseline estimate are referred to as the 'Do minimum' scenario and provided a baseline of anticipated traffic growth without the road scheme under scrutiny in place but which included the two other A47 schemes. For Scheme 1 the baseline emissions were estimated to be 59,396,960 tCO2e.

52. A 'Do Something' figure of carbon emissions was then calculated. This comprised the carbon emissions from existing and future growth, including the two other A47 schemes, together with the proposed scheme in place. For Scheme 1 the figure was estimated to be 59,556,062 tCO2e. The figure was sub-divided into a figure for the 4th – 6th carbon budgets. For Scheme 1 the figure was 3,214,283 tCO2e for the fourth carbon budget period; 5,196,417 for the fifth carbon budget and 5,049,193 for the sixth carbon budget, with a remaining figure of 46,096, 170 for the period 2038 – 2087.

53. A comparison of the carbon emissions from the Do-Minimum scenario (without the Proposed Scheme) and Do-Something scenario (with the Proposed Scheme in place) was then undertaken. This produced a figure of the carbon emissions for the scheme only – i.e. an assessment of the carbon emissions associated with the project which was then compared against the three carbon budgets.

54. The net change in carbon emissions resulting from the road scheme in question was then estimated as a percentage of the UK carbon budgets.

55. For Scheme 1 the increase in carbon emissions as a result of the scheme was estimated to be 132,017 tCO2e, which when compared against the relevant carbon budget, would represent approx. 0.0001% of the fourth, fifth and sixth carbon budgets. In Scheme 2 the increase in carbon emissions resulting from the proposed scheme represents up to

approx. 0.004% of the UK's 4th 5th and 6th carbon budgets over their respective periods. In Scheme 3 the total increase in carbon represents no greater than 0.0015% of the total emissions in any five year carbon budget period.

56. The emissions from 2037 could not be compared against a carbon budget as no budgets have been set for this period. The result was that the comparator could only be used for approximately 39% of the increases in emissions. The remaining 61% of the increase in carbon emissions over the 60 year lifespan of the schemes will occur after 2037 (the end of the last currently published UK carbon budget).

The assessment of cumulative impacts

57. The methodology set out above was contained in a chapter on Climate which formed part of the Environmental Statement for each scheme. The Environmental Statement also included a separate chapter on cumulative environmental impacts. The chapter examined the cumulative impacts in relation to a number of environmental receptors, but said the following in relation to the cumulative impacts of carbon emissions:

> *"As the construction and operational phase traffic data includes traffic associated with other developments, the emissions assessment reported within the climate chapter is inherently cumulative. Not included in the CEA to avoid double counting.*
>
> …..
>
> *Some environmental topics in the preceding chapters of this ES, have relied wholly, or in part, on the forecasts derived from the traffic model. As the traffic model includes future other developments, the assessments of the Proposed Scheme's effects within these topics have included cumulative impacts by default and therefore the effects are already reported within their assessments."*

58. Nothing more was said in the Environmental Statement about cumulative carbon impacts. No reference was made to any applicable guidance or science to support the analysis or to provide explanatory context. The cursory reference to the traffic model as "inherently cumulative" is unclear. The Planning Inspector who examined Scheme 2 noted a lack of clarity about the traffic model in this regard ('I also accept that the Applicant's traffic model includes traffic generated from other developments and allows for growth of traffic levels, although I acknowledge that this was less than clear from the submissions "(§ 5.7.88 of the Inspector's Report into Scheme 2)). As it transpired, the reference in the Environmental Statement to the traffic data being 'inherently cumulative' may derive from guidance issued by the Planning Inspectorate which was shown to the Court at the hearing. The guidance provides that "Certain assessments, such as transport and associated operational assessments of vehicular emissions (including air and noise) may inherently be cumulative assessments. This is because they may incorporate modelled traffic data growth for future traffic flows. Where these assessments are comprehensive and include a worst case within the defined assessment parameters, no additional cumulative assessment of these aspects is required.".

59. Nonetheless; it was common ground at the hearing that the 'Do Something' figure represents the projected carbon emissions (in tonnes equivalent of carbon emissions) from existing and future growth, which includes the two other A47 schemes as well as the emissions estimated to be generated from the particular A47 scheme under consideration. Thus, as Counsel for Dr Boswell accepted, the 'Do Something' figure combined the carbon emissions from the three schemes. A 'Do Something' figure was calculated for each carbon budget.

60. Whilst accepting that the 'Do Something' figure contained information on the combined carbon emissions, Counsel for Dr Boswell submitted that what matters is what was done with the 'Do Something' figure. At the hearing, the focus of his criticism was that the Do Something figure was not compared against the UK's carbon budgets.

61. The Environmental Statement compared the 'scheme only' emissions against the carbon budgets. No reference was made to any further comparison against the budgets. Counsel for Dr Boswell focussed in his submissions on Schedule 4 paragraph 5 of the IEIA Regulations which sets out the information required in an Environmental Statement. However, EIA is a process that starts, but does not end with, the environmental statement. Regulation 5(1) provides that the environmental impact assessment is a process, a position confirmed by the Supreme Court in R (FoE) v Heathrow Airport Limited [2020] UKSC 52 at §142 and 143:

> "*143. As Sullivan J held in Blewett (paras 32-33), where a public authority has the function of deciding whether to grant planning permission for a project calling for an environmental impact assessment under the EIA Directive and the EIA Regulations, it is for that authority to decide whether the information contained in the document presented as an environmental statement is sufficient to meet the requirements of the Directive, and its decision is subject to review on normal Wednesbury principles. Sullivan J observed (para 39) that the process of requiring that the environmental statement is publicised and of public consultation "gives those persons who consider that the environmental statement is inaccurate or inadequate or incomplete an opportunity to point out its deficiencies". The EIA Directive and Regulations do not impose a standard of perfection in relation to the contents of an environmental statement in order for it to fulfil its function in accordance with the Directive and the Regulations that it should provide an adequate basis for public consultation. At para 41 Sullivan J warned against adoption of an "unduly legalistic approach" in relation to assessment of the adequacy of an environmental statement and said:*
>
> ……
>
> *'In an imperfect world it is an unrealistic counsel of perfection to expect that an applicant's environmental statement will always contain the 'full information' about the environmental impact of a project. The Regulations are not based upon such an unrealistic expectation. They recognise that an environmental statement may well be deficient, and make provision through the publicity and consultation processes for any deficiencies to be identified so that the resulting 'environmental information' provides the local planning authority with as full a picture as possible. There will be cases where the document purporting to be an environmental statement is so deficient that it could not reasonably be described as an*

environmental statement as defined by the Regulations …, but they are likely to be few and far between.'"

62. The Environmental Statements produced for each scheme were consulted upon and the relevant one was considered by each Planning Inspector for the scheme with which he was concerned. The issue of cumulative carbon impacts became a material issue at the examinations and the issue was considered by each Inspector. Dr Boswell made representations including writing a joint letter to the three Inspectors highlighting the concerns about the cumulative impacts and requesting a pause to the examinations for the matters to be considered further. The detail and authority of Dr Boswell's representations was acknowledged by the Inspectors and appears to have focussed minds. The process continued with the assessment by the Secretary of State in the three decision letters, which also acknowledged Dr Boswell's contribution. As Counsel for the Secretary of State pointed out, a formidable array of expertise had already been applied to the question of cumulative carbon emissions prior to the Court becoming seized of the issue.

63. In relation to cumulative impacts, the Secretary of State accepted the approach taken by National Highways in the Environmental Statement and provided further explanation. Although worded slightly differently in each scheme the substance is the same. It is apparent from the decision letters that the Secretary of State relied on three broad propositions in deciding not to compare the figure for the combined carbon emissions against the national carbon budgets:

    i) there is no single prescribed approach to assessing the cumulative impacts of carbon emissions

    ii) carbon emissions occupy 'a sui generis' category for the purposes of considering cumulative environmental effects in that their impacts do not have a geographic boundary, unlike other environmental impacts (e.g noise)

    iii) the appropriate comparator to assess the carbon emissions was the UK national carbon budgets and "consideration of the Proposed Development against the UK carbon budgets is inherently cumulative".

64. Starting with the third proposition: it relates to the use of the UK's national carbon budgets as the benchmark to assess the significance of the carbon emissions.

65. It is well-established that issues as to whether an effect is significant and the adequacy of any assessment of significant effects are matters of judgment for the decision-maker, in this case the Secretary of State. Such judgments are only open to challenge in the courts applying the conventional "Wednesbury" standard, the modern derivation of which is whether the decision falls outside the range of reasonable decisions open to the decision maker or whether there is a demonstrable flaw in the reasoning which led to it (R (Blewett) v Derbyshire County Council [2004] Env. L.R. 29 and R (Friends of the Earth Limited) v Secretary of State for Transport [2021] PTSR 190 at [142] to [145]) and R (Law Society) v The Lord Chancellor [2018] EWHC 2094 (Admin); [2019] 1 W.L.R. 1649 (at §98).

66. The environmental statement proceeded on the basis that the crux of significance for the purposes of assessing the carbon emissions was compliance with Net Zero. Each

scheme was compared against the national carbon budgets. The approach was adopted by the Secretary of State and is consistent with independent guidance published by the Institute of Environmental Management and Assessment (IEMA) in this respect:

> "*The crux of significance therefore is not whether a project emits GHG emissions, nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050*." (VI (6.2)).

67. The IEMA guidance explains that it is essential to provide context for the magnitude of GHG emissions reported in the EIA in a way that aids evaluation of these effects by the decision maker. The specific context for an individual project and the contribution it makes must be established through the professional judgement of an appropriately qualified practitioner, drawing on the available guidance, policy and scientific evidence.

68. Consideration was given to whether the A47 scheme under scrutiny, could or should, be assessed against different benchmarks but the conclusion was that the national targets were the only realistic benchmark:

> "*Therefore, the ExA is content that the Applicant is only able to realistically assess the cumulative effects of the GHG emissions for the proposed development against anything other than the national level carbon budgets accounting for information which is presently known and can be relied upon for decision making purposes* (ExA report on Scheme 3 at 5.11.81)
>
> *……*
>
> *109...the Secretary of State agrees with the ExA that the Applicant is not able to meaningfully assess the cumulative effects of carbon from the Proposed Development against anything other than the national level carbon budget*." (Secretary of State's decision letter for Scheme 3).

69. At the hearing, there was no challenge to the decision to use the UK's national carbon budgets as the comparator against which to assess the significance of carbon emissions. Recent caselaw confirms that, on the basis of current policy and law it is permissible for a decision maker to look at the scale of carbon emissions relative to a national target:

> "*The IEMA rightly pointed out that no criteria or thresholds had been set by which to measure the "significance" of the GHG emissions from a particular proposal. Furthermore, no one has suggested that there was any guidance for assessing the acceptability .... of that contribution, whether expressed as a percentage of national budgets or targets or otherwise. In other words, acceptability is for the judgment of the decision-maker. As a matter of principle there is nothing unlawful in a decision-maker using benchmarks he considers to be appropriate in order to help arrive at a judgment on those issues. The statutory carbon budgets are one example. ……*
>
> *There is simply no legal merit in the complaint that expressing project emissions as a percentage of a national budget or target does not enable a decision-maker to decide whether those emissions are compatible with achieving that benchmark.*

> *….On the basis of current policy and law it is permissible for a planning authority to look at the scale of the GHG emissions relative to a national target and to reach a judgment, which may inevitably be of a generalised nature, about the likelihood of the proposal harming the achievement of that target. There was nothing unlawful about the inevitably broad judgment reached in the present case*." (R (GOESA) v Eastleigh Borough Council [2022] EWHC 1221 (Admin) at §122 – 123).

70. The use of the term 'inherently cumulative' in the Secretary of State's decision letter to describe the use of the UK national carbon budgets in the decision making was vague and unhelpful for public understanding. Nonetheless, Counsel for the Secretary of State submitted, and I accept, that decision letters must be read in a fair and common-sense way. Nor is EIA intended to become an obstacle course for developers (R (Blewett) v Derbyshire County Council at §41). I take the reference to 'inherently cumulative' to be shorthand for the following well understood analysis. The UK Carbon budgets are science-based targets for the reduction of GHG emissions which have been created based on scientific projections and global carbon budgets. They sit within the UK's legally binding GHG reduction target for 2050 and have been assessed by the Climate Change Committee to be compatible with the required magnitude and rate of GHG emissions reductions required in the UK to meet the goals of the Paris Agreement. For present purposes, what is key is that these targets aim to mitigate the greatest effects of climate change by limiting GHG emissions for the whole of the UK economy and society. The UK Government has decided not to set national targets on a sector-by-sector basis. There is, in particular, no sectoral target for transport.

71. Some government policies may result in GHG emissions but they are nonetheless promoted in order to achieve other policy goals. It is the government's role to determine how best to balance emissions reductions across the entire economy. Any net emissions increase from a particular policy or project is therefore managed within the government's overall strategy for meeting carbon budgets and the net zero target for 2050, as part of an economy-wide transition" (R (Transport Action Network) v Secretary of State for Transport [2021] EWHC Admin 2091 at 46 and 54). The term used in R (Packham) v Secretary of State for Transport [2021] Env L.R. 10 at §87 was 'an economy wide transition'. EIA for any proposed project must therefore give proportionate consideration to whether and how that project will contribute to or jeopardise the achievement of these targets.

72. The second proposition relied on by the Secretary of State was that carbon emissions occupy a 'sui generis' category for the purposes of considering cumulative environmental effects. The environmental statement explains the point as "the impact and effect of carbon emissions on climate change, unlike other EIA topics, is not limited to a specific geographical boundary and the approach that needs to be taken to assess the cumulative impact of carbon emissions is different from other EIA topics". The proposition is supported by independent IEMA guidance which provides as follows:

> *"Cumulative GHG emissions*
>
> *The atmospheric concentrations of GHGs and resulting effect on climate change is affected by all sources and sinks globally… As GHG emission impacts and resulting effects are global rather than affecting one localised area, the approach to cumulative effects assessment for GHGs differs from that for many EIA topics*

> *where only projects within a geographically bounded study area would be included."*
>
> *For example air pollutant emissions are dispersed and diluted after emission and only the cumulative contributions of other relatively nearby sources contribute materially to the pollutant concentration and hence effect, as a particular sensitive reception in the study area. Due to the persistence of GHG's in the atmosphere, that same dispersion effect contributes to the global atmospheric GHG emissions balance. There is no greater local climate change effect from a localised impact of GHG emission sources (or vice versa).*
>
> *All global cumulative GHG sources are relevant to the effect on climate change and this should be taken into account in defining the receptor (the atmospheric concentration of GHGs) as being of 'high' sensitivity to further emissions."* (V-GHG emissions assessment methodology)

73. The proposition that carbon emissions occupy a sui generis category of cumulative impact assessment in EIA is based on scientific assessment of the behaviour of greenhouse gases, arrived at by those with appropriate expertise (as required by the IEIA regime (Regulations 5(5) and 14(4)(b)). The Court should allow a substantial margin of appreciation in this respect (R (Mott) v Environment Agency [2006] 1 WLR 4338 and R (Plan B Earth v Secretary of State for Transport [2020] PTSR 1446 at §176-177).

74. Counsel for Dr Boswell submitted that the drafters of the IEIA legislative framework have required consideration of the cumulative climate effects of projects, despite the impacts of climate change being global rather than local. The fact that climate is unlike noise in its wider impact has not led the statutory scheme to exclude consideration of cumulative effects of carbon emissions. I accept the submission as a point of statutory interpretation. However, consideration was given to cumulative impacts by the Secretary of State. Further, the Secretary of State did not base his approach simply on the particular characteristics of GHGs. He also based his approach on the use of national targets as the benchmark to assess significance.

75. The first proposition; that there is no single prescribed approach to assessing the cumulative impacts of carbon emissions or, in other words, that the approach was a matter of judgment is well established by caselaw (R (Bowen West) v Secretary of State and R (Preston New Road Action Group) v Secretary of State).

Breach of the IEIA Regulations?

76. Drawing together the analysis above.

77. The question of what impacts should be addressed cumulatively; how the cumulative impacts might occur; whether the effects are likely to be significant and if so how they should be assessed are all matters of evaluative judgment (Regulation 5(2); Regulation 14 (2) (3) and Schedule 4 paragraph 5 IEIA Regulations; R (Bowen West) v Secretary of State for Communities and Local Government [2012] EWCA Civ 321 at §28 cited

in R (Finch) v Surrey County Council [2022] PTSR 958 at §15(5)). The identification and assessment of the cumulative impacts of development is an aspect of the wider assessment of the significance of the environmental impact of the project.

78. Consideration was given in the Environmental Statement and in the decision letters to the cumulative impacts. Their relevance was acknowledged. The 'Do Something' figure provided information on the combined emissions from the three schemes, in conjunction with other existing/planned future development in the area, assessed in carbon tonnes. On its face, the information satisfies the specific requirement of Schedule 4 paragraph 5 of the Regulations for a 'description' of the likely significant effects of the development on the environment resulting from the cumulation of effects with other existing and/or approved projects and the broader requirement for a description of likely significant environmental effects in Regulation 14(2)(b). Further consideration was given to the question of cumulative impacts at each public examination of the schemes and the process continued with the Secretary of State reflecting on the assessment of each Planning Inspector and explaining his approach in the decision letters. On its face, the Secretary of State complied with Regulation 21 of the IEIA Regulations in that the environmental information was considered, a reasoned conclusion reached on significant effects and the conclusion was integrated into the decision making.

79. The decision makers chose to assess the significance of carbon emission against a national target (UK carbon budgets). Other benchmarks were considered but discounted. The benchmark for the assessment of significance was a matter of judgement for the decision maker and was not challenged before the Court. As the primary judges of fact, the views of the Planning Inspector and the Secretary of State are entitled to considerable weight (R (Bowen West) v Secretary of State (Laws LJ at §28, 29 and 30). More specific to the carbon context, the use of national carbon budgets as a benchmark for the assessment of carbon emissions has been confirmed as a lawful approach (R (GOESA) v Eastleigh Borough Council).

80. The decision makers also proceeded on the basis that there is no geographic limit to the impact of GHG emissions. Their impact is on the global atmosphere. That is a scientific assessment to which the Court affords respect (R (Mott)v Environment Agency).

81. In circumstances where the significance of carbon emissions is being assessed against a national target and the impacts of GHG emissions do not have a geographical limit, there is a logical coherence to the Secretary of State's decision not to undertake a comparison of combined emissions against the national target. The reason is explained in the IEMA Guidance, which expressly advises against the approach proposed by Dr Boswell:

> *"All global cumulative GHG sources are relevant to the effect on climate change and this should be taken into account in defining the receptor (the atmospheric concentration of GHGs) as being of 'high' sensitivity to further emissions.*
>
> *Effects of GHG emission from specific cumulative projects therefore in general should not be individually assessed as there is no basis for selecting any particular (or more than one) cumulative project that has GHG emission for assessment over any other."* (V- GHG emissions assessment methodology) (underlining is the Court's emphasis)

82. Compliance with independent guidance does not, of itself, demonstrate compliance with IEIA Regulations but it is, in my view, one legitimate way for the Court to assess the exercise of judgment in circumstances where there is no single prescribed approach to the assessment of cumulative carbon impacts or to gauging the significance of the climate impacts of a development project in the context of Environmental Impact Assessment (R (GOESA) v Eastleigh Borough Council at §122)

83. The IEMA guidance may be said to suggest that Dr Boswell's approach is arbitrary, from a scientific perspective at least. This is because it seeks to assess the significance of carbon emissions, which have no geographical limit to their impact, against a national target which has no sectoral limit, by reference to a collection of local, sector based, development (characterised on behalf of Dr Boswell as 'proximal' development). There is no scientific rationale for the selection of a particular collection of local schemes for comparison against a national target. As Counsel for the Secretary of State put it pithily, it does not matter whether the emissions are from a road in Norfolk or in Oxford because their impact is the same and the target against which they are being assessed is a national, not local, target.

84. On analysis therefore, Dr Boswell's approach to cumulative assessment becomes, in essence, a case about the acceptability of the impact, as may be evident in his conclusion that the combined emissions from the schemes (and related development) will amount to 0.47% of the UK's 6th national carbon budget and his concern about the extent of the emissions used up on relatively small schemes in a small area of Norfolk. However, the legislation does not deal with the acceptability of an effect identified by environmental information. That is a matter of judgement for the decision-maker, not a hard-edged point of law (GOESA at §122 – 123). The Courts must be astute to avoid being drawn into the arena of the 'forbidden merits'. Decisions to upgrade strategic roads and their effect upon climate change is a subject attracting many widely differing views, whether for or against.

> *"Judicial review is the means of ensuring that public bodies act within the limits of their legal powers and in accordance with the relevant procedures and legal principles governing the exercise of their decision-making functions. The role of the court in judicial review is concerned with resolving questions of law. The court is not responsible for making political, social, or economic choices. Those decisions, and those choices, are ones that Parliament has entrusted to ministers and other public bodies. The choices may be matters of legitimate public debate, but they are not matters for the court to determine. The court is only concerned with the legal issues raised by the claimant as to whether the defendant has acted unlawfully."* (R (Rights: Community: Action) v Secretary of State for Housing, Communities and Local Government [2021] PTSR 553, 559 at §6)

85. It was apparent that underlying the submissions on behalf of Dr Boswell is a concern about the value of the information produced by the approach adopted by the Secretary of State. That concern is acknowledged in the IEMA guidance which explains that comparing an individual development project against a national target for all sectors of the economy may have 'limited value' because the contribution of most individual projects to national level budgets will be small. In R (GOESA) v Eastleigh BC [2022] EWHC 1221 (Admin), another case about the cumulative impacts of carbon emissions, the Court referred to an 'inevitably generalised nature of any assessment and an 'inevitably broad judgment' as to acceptability.

86. As the IEMA guidance also acknowledges, it might have been necessary for the Secretary of State to adopt a different approach to cumulative impacts had the benchmark been a geographical or sector-bounded carbon target, but it was not:

> *"The contextualisation of GHG emissions as discussed in Section 6.4 should incorporate by its nature the cumulative contributions of other GHG sources which make up that context. Where the contextualisation is geographically or sector-bounded (eg involved contextualising emissions within a local authority scale carbon budget or a sector level net zero carbon road map, then the consideration of cumulative contributions to that context will be within that boundary)."* (V-GHG emissions assessment methodology).

87. At present however, any such concerns do not make the approach adopted by the Secretary of State unlawful. The IEMA guidance explains that '*The available contextual information base is rapidly developing and will continue to grow in the coming years…."*. The IEMA regime acknowledges that the limits of current scientific knowledge may place constraints on environmental impact assessment. Regulation 14(3)(b) provides that "the environmental statement…must include the information reasonably required…taking into account current knowledge and method of assessment." The same point is conveyed in Schedule 4 paragraph 3 and in particular paragraph 6 which requires the statement to set out details of the difficulties including lack of knowledge encountered compiling the required information and the main uncertainties involved.

88. Thus, the position was encapsulated by the Inspector who examined the Second scheme:

> *"I acknowledge the submissions of Dr Boswell and others in relation to the Applicants' cumulative assessment and agree that there may be more suitable ways to undertake such an assessment. However, based on the current policy framework and guidance, it is my view that the Applicant's approach, through the use of carbon budgets, sufficiently considers the cumulative effects with other projects or programmes."* (5.7.89)

89. The fact that there may be other approaches to the assessment of cumulative impacts, does not take the Secretary of State's approach outside the range of reasonable responses available to him as the decision maker, or mean that it was based on flawed reasoning. This remains the position even where an Examining Authority expresses the view, as here, that there may be more suitable approaches. It follows, therefore, that the Secretary of State succeeds on the primary issue raised by the challenge in that the Court is not persuaded that his approach to the assessment of cumulative carbon emissions was unlawful and/or in breach of the IEIA Regulations.

The fall back

90. In light of the Court's conclusion on the primary issue it is not necessary to address the subsidiary question, which the parties only addressed the Court on briefly, as to the lawfulness of the fall back analysis undertaken by the Secretary of State to assess the combined emissions from the three schemes against the national carbon budgets.

Conclusion

91. For the reasons set out above the claims fail.