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EGD5.2

Proof of Evidence of Paul R Foster on behalf of Egdon Resources U.K. Limited

Planning Application for the retention of the Wressle-1 Wellsite and access track for the Production of Hydrocarbons, together with an extension of the site by 0.12ha for the installation of additional security facilities; site reconfiguration to facilitate the installation of a new impermeable membrane, French drain and surface water interceptor; construction of a bund, tanker loader plinth and internal roadway system; installation of up to 2 additional groundwater monitoring boreholes and deepening of 3 existing groundwater monitoring boreholes; well operations; installation of production facilities and equipment; installation of gas engine and electrical grid connection; oil and gas production for a temporary period of 15 years; and restoration to arable land.

Wressle-1 Wellsite, Lodge Farm, Appleby, Scunthorpe

October 2019

Prepared for:

Wressle-1 Wellsite, Lodge Farm, Appleby, Scunthorpe

Prepared by:

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Proof of Evidence of
Paul R Foster on behalf of
Egdon Resources UK Limited

Planning Application for the retention of the Wressle-1 Wellsite and access track for the Production of Hydrocarbons, together with an extension of the site by 0.12ha for the installation of additional security facilities; site reconfiguration to facilitate the installation of a new impermeable membrane, French drain and surface water interceptor; construction of a bund, tanker loader plinth and internal roadway system; installation of up to 2 additional groundwater monitoring boreholes and deepening of 3 existing groundwater monitoring boreholes; well operations; installation of production facilities and equipment; installation of gas engine and electrical grid connection; oil and gas production for a temporary period of 15 years; and restoration to arable land

Wressle-1 Wellsite, Lodge Farm, Appleby, Scunthorpe

Ref EGD/5.2

Proof of Evidence of:	Paul R Foster AECOM Saxon House 27 Duke Street Chelmsford CM1 1HT Tel: 07407 116782
Venue:	Hobbies Centre Wesley Road Scunthorpe DN16 1SA
Date of Inquiry:	5 November 2019
Inspector: Planning Inspectorate References:	Phillip Ware APP/Y2003/W/19/3221694
MPA Refs:	PA/2018/1316
Ref:	60612151/Wressle
Date:	October 2019

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1. INTRODUCTION

Qualifications and Experience

1.1 My name is Paul Richard Foster. I am the Head of Minerals and Waste at AECOM, one of the largest independent multi-disciplinary practices in the UK. I am based in the Chelmsford office of the Company and my team specialises in all forms of mineral planning applications within the UK, including conventional and unconventional hydrocarbon exploration and production. AECOM employs more than 7,000 personnel in 48 offices within the UK and around 230 planners, environmental specialists and support staff.

1.2 Prior to joining AECOM, I was a Planning Director for eight years at Barton Willmore in the Cambridge office where I was responsible for providing town planning consultancy advice to a number of UK onshore oil and gas companies.

1.3 I hold a BSc (Honours) degree in Town Planning Studies and a Diploma in Town Planning with distinction from the University of Wales Institute of Science and Technology (now part of the University of Cardiff). I am a Member of the Royal Town Planning Institute, a Member of the Royal Institution of Chartered Surveyors and a Member of the Petroleum Society of Great Britain.

1.4 I have more than 30 years' experience in town planning in both the public and private sectors. Prior to joining Barton Willmore Planning in 2001, I held a senior post in the Planning Policy team in a Kent Local Planning Authority. Prior to that, I worked as a senior planning officer in the South East regional office of the Department of the Environment and in the Planning Department of Essex County Council.

1.5 I appeared as the expert planning witness on behalf of Egdon Resources U.K. Limited ("Egdon") at a public inquiry in November 2017 following the refusal by North Lincolnshire Council ("NLC") to grant planning permission for hydrocarbon production at the Wressle wellsite. Prior to that, I was the expert planning witness in 2011 on behalf of Moorland Energy for a hybrid application for gas production in the North York Moors National Park, an underground pipeline and a gas processing facility at Thornton-le-Dale in North Yorkshire. I also appeared as the expert planning witness in 2009 on behalf of Wingas Storage UK Limited for an application under the Gas Act 1965 for underground gas storage at Saltfleetby in Lincolnshire. I appeared as the expert planning witness in 2007 for a waste recycling and recovery facility in Burghfield, Berkshire. I gave evidence to a public inquiry in 2007 on behalf of a local action group (a Rule 6 party) against a proposal for mineral extraction and non-inert landfill at Horsted Keynes in West Sussex.

1.6 Since January 2008, I have worked for a number of clients involved in the oil and gas industry, securing planning permission for exploratory and production well sites. These have included sites for conventional hydrocarbon production in the North York Moors National Park, Lincolnshire, Nottinghamshire, Teesside and Dorset on behalf of Warwick Energy, Viking UK, Third Energy, Egdon and Moorland Energy.

1.7 I have been fully involved in the planning process for the Wressle-1 wellsite since Egdon first instructed Barton Willmore in August 2011 to undertake a scoping review for the Wressle Prospect. I was responsible for overseeing the site selection analysis within the search area and I have visited the site on many occasions. I have met with Andrew Law, who has been the same case officer at NLC throughout this time. I oversaw the preparation and submission of all seven planning applications that Egdon has submitted to NLC. I am familiar with the plans and documents relevant to this Inquiry.

References in my Proof of Evidence

1.8 For ease of reference, the following terms are used throughout my Proof to distinguish between the different planning applications and appeals that have been submitted by Egdon to NLC since 2013 as they relate to the appeal site:

- "Original Permission" (OP) refers to planning permission ref MIN/2013/0281 which was granted by NLC on 18 June 2013 for the construction of the Wressle wellsite, exploratory drilling, testing and restoration;
- "Production Application 1" (PA1) refers to planning application ref MIN/2016/810 which was refused by NLC on 11 January 2017 for long term production of hydrocarbons at the Wressle wellsite and includes radial drilling;

- "Production Application 2" (PA2) refers to planning application ref PA/2017/696 which was refused by NLC on 3 July 2017 for long term production of hydrocarbons at the Wressle wellsite and excludes radial drilling;
- "Temporary Extension Application 1 (TEA1)" refers to planning application ref PA/2017/268 which was refused by NLC on 3 July 2017;
- "Groundwater Borehole Permission" refers to planning permission ref PA/2016/808 which was granted by NLC on 11 January 2017;
- "Temporary Extension Application 2 (TEA2)" refers to planning application ref PA/2018/794 which was refused by NLC on 6 August 2018;
- **"Production Application 3" (PA3) refers to planning application ref PA/2018/1316, which was submitted to NLC by the Appellant on 4 July 2018 and refused by the Council on 29 November 2018, and is the subject of this appeal**;
- "Appeal A" refers to appeal ref APP/Y2003/W17/3173530 against the refusal of PA1 which was dismissed by Inspector Mr K Williams on 4 January 2018;
- "Appeal B" refers to appeal ref APP/Y2003/W/17/3180606 against the refusal of PA2 which was dismissed by Inspector Keri Williams on 4 January 2018;
- "Appeal C" refers to appeal ref APP/Y2003/W/17/3182879 against the refusal of TEA1 which was allowed by Inspector Keri Williams on 4 January 2018;
- "Appeal D" refers to appeal ref APP/Y2003/W/18/3212137 against the refusal of TEA2 which was allowed by Inspector Elizabeth Pleasant on 24 January 2019;
- "Appeal E" refers to the current appeal ref APP/Y2003/W/19/3221694.

Reason for Refusal

1.9 This appeal is against the refusal of planning permission by NLC for the retention of the Wressle-1 wellsite and access track for the production of hydrocarbons, together with an extension of the site by 0.12ha for the installation of additional security facilities; site reconfiguration to facilitate the installation of a new impermeable membrane, French drain and surface water interceptor; construction of a bund, tanker loader plinth and internal roadway system; installation of up to 2 additional groundwater monitoring boreholes and deepening of 3 existing groundwater monitoring boreholes; well operations; installation of production facilities and equipment; installation of gas engine and electrical grid connection; oil and gas production for a temporary period of 15 years; and restoration to arable land at Wressle-1 wellsite, Lodge Farm, Appleby, Scunthorpe.

1.10 The Case Officer recommended planning permission be granted subject to conditions. All the conditions, including the pre-commencement conditions, had been agreed by both parties prior to the Planning Committee meeting held on 28 November 2018.

1.11 Planning permission was refused unanimously at Planning Committee on 28 November 2018 and the decision notice was issued on 29 November 2018.This states that:

> **"The additional information submitted by the applicant, in support of the proposal, fails to allay the concerns of the local planning authority with regard to ground contamination from both water run-off and the infiltration of water used in the development into water courses.**
>
> **"The proposal would therefore have an unacceptable impact on local residents, the community and the local economy. The proposed development is therefore considered to be contrary to saved policies M23, DS13 and DS15 of the North Lincolnshire Local Plan (2003) and policy CS18 of the North Lincolnshire Core Strategy (2011)."**

1.12 This evidence submitted in support of the appeal demonstrates that the Appellant provided a comprehensive, up to date suite of information to the MPA when the Company applied for planning permission to enable the Planning Committee to be satisfied that there would be no unacceptable impact on local residents, the community and the local economy as a result of the proposed development.

1.13 NLC has now withdrawn its evidence in respect of defending its decision to refuse planning permission. It has agreed a set of conditions with the Appellant and as a result, has no objection to the proposed development.

Relationship of My Evidence to Other Witnesses' Evidence

- James Dodds will present the main evidence about the HFRA and how the Assessment has addressed the previous Inspector's concerns with regard to the actual risk of ground contamination. He will refer to the measures that have been embedded in the design to ensure ground water protection. He will also show that the quality and quantity of water resources will not be adversely affected.
- Jonathan Foster will present evidence about how the wellsite was originally constructed and describe the works to be undertaken as proposed in the planning application to reconfigure the site layout for production purposes.
- Jonathan Foster will demonstrate the interaction between the planning system and other statutory regulatory frameworks. He will refer to previous consents for environmental permitting that have been issued for the Wressle site;
- Mark Barwood will present evidence about the CSDS and how it has addressed the earlier concerns with regard to the actual risk of ground contamination. He will demonstrate that the proposal incorporates environmental protection measures that are adequate to mitigate the impacts arising from a long-term permanent site.
- Both James Dodds and Jonatan Foster will present evidence which responds to residual issues considered within the JBA Consulting Review (CDA16).
- Both Jonathan Foster and James Dodds will present evidence to show clearly that the measures that Egdon has proposed will ensure that the proposed production wellsite will be safe and have no material adverse impact upon the ground and groundwater.
- Mark Abbott will present evidence about the benefits of the development including impacts upon the local economy.
- My evidence draws upon the other witnesses' findings in demonstrating that the proposed development complies with the relevant Development Plan policies.
- My evidence will cover the compliance with National Planning policy and Energy and Climate Change policy and the degree of weight to be given to the Development Plan policies;
- I will cover the planning balance.
- With regard to other matters raised by Third Party representations:
    - My evidence will cover ecology, transport, landscape and the industrialisation of the countryside, disruption to residents and climate change;
    - The evidence of Jonathan Foster will cover the level of risk associated with well failure and health, safety and environmental management;
    - The evidence of Mark Abbott will cover corporate matters, the proposed well operations to enable production of oil and gas to start, the community liaison group and community funding;

Structure of My Evidence

1.14 The structure of my Proof of Evidence is as follows:

- Chapter 2 refers to the Site and Surroundings which are described in the Statement of Common Ground (SoCG) (CDC6)
- Chapter 3 sets out the planning history and the background leading up to the current planning appeal. The planning history has been agreed with NLC and is set out in the SoCG (CDC6);
- Chapter 4 summarises the key findings of the previous Inspector's Decision Letter (CDD6), describes the additional technical assessments that were undertaken to address the Inspector's concerns and how these assessments have helped in the design of the current scheme;
- Chapter 5 summarises the updates to the supporting assessments that have been made to PA3 that accompanied the planning application;

- Chapter 6 summarises the key elements of the proposed development;
- Chapter 7 assesses the degree of compliance of the proposed development against the relevant policies of the Development Plan, which comprises the North Lincolnshire Local Plan 2003, the North Lincolnshire Core Strategy 2011 and the Appleby Parish Neighbourhood Plan 2019;
- Chapter 8 addresses other relevant non-development plan policies and guidance against the proposal, notably, the NPPF, the relevant PPGs, the Economic Growth Plan for North Lincolnshire, National Energy and Climate Change policy and Written Ministerial Statements;
- Chapter 9 summarises the responses from the Environment Agency ("EA") and JBA Consulting ("JBA") to PA3;
- Chapter 10 summarises the responses from Third Parties to the planning application and the appeal and responds to the issues raised, including climate change impacts;
- Chapter 11 refers to the Conditions that have been agreed with NLC and which can be found in the SoCG (CDC6).
- Chapter 12 sets out my conclusions and the planning balance.

1.15 My evidence should be read in conjunction with the documents submitted in support of the planning applications, notably the Planning and Sustainability Statement and the additional information submitted by Egdon in support of PA3, and in the light of the evidence of Mark Abbott, Mark Barwood, Jonathan Foster and James Dodds.

1.16 The evidence which I have prepared for this inquiry is true and is given in accordance with the guidance of my professional institution, the Royal Town Planning Institute. I confirm that the opinions expressed are my true and professional opinions.

2. THE SITE AND SURROUNDINGS

2.1 The description of the Site and the Surroundings are agreed between the parties and is set out in the SoCG (CDC6).

3. PLANNING HISTORY AND THE BACKGROUND UP TO THE CURRENT PLANNING APPEAL

3.1 The planning history for the application site at Lodge Farm, Clapp Gate, Appleby is agreed between the parties and is set out in the SoCG (CDC6). For ease of reference, it is summarised in the table below in chronological order.

Table 3.1: Planning History

Planning Application/ Appeal Reference	Summary Description of Development	Decision	Date	Implemented
MIN/2013/0281 ("Original Permission")	Construction of a temporary wellsite for drilling of an exploratory borehole with associated structures and works	Granted	18 June 2013	Yes – 29 April 2014
MIN/2016/0810 ("Production Application 1")	Retention of the existing 'Wressle-1' wellsite and access road for the long-term production of hydrocarbons	Refused	11 January 2017	n/a
Appeal ref APP/Y2003/W/17/3173530 ("Appeal A")	Appeal against the refusal of planning permission for the retention of the existing 'Wressle-1' wellsite and access road for the long-term production of hydrocarbons (MIN/2016/0810)	Dismissed	4 January 2018	n/a
PA/2016/0808 ("Groundwater Borehole Permission")	Installation of four groundwater monitoring boreholes at the existing Wressle-1 well site	Granted	11 January 2017	Yes – 6 February 2017
PA/2017/696 ("Production Application 2")	Retention of the existing 'Wressle-1' wellsite and access road for the long-term production of hydrocarbons (resubmission)	Refused	3 July 2017	n/a
Appeal ref APP/Y2003/W/17/3180606 ("Appeal B")	Appeal against the refusal of planning permission for the retention of the existing 'Wressle-1' wellsite and access road for the long-term production of hydrocarbons (PA/2017/696)	Dismissed	4 January 2018	n/a
PA/2017/268 ("Temporary Extension Application 1")	Variation of Condition 24 of planning permission ref MIN/2013/0281	Refused	3 July 2017	n/a
Appeal ref APP/Y2003/W/17/3182879 ("Appeal C")	Appeal against the refusal of planning permission for a variation of condition 24 of planning permission ref MIN/2013/0281	Allowed	4 January 2018	Yes – 4 January 2018
PA/2018/794 ("Temporary Extension Application 2")	Variation of Condition 11 of planning permission APP/Y2003/W/17/3182879	Refused	6 August 2018	n/a
Appeal ref APP/Y2003/W/18/3212137 ("Appeal D")	Appeal against refusal of planning permission for a variation of Condition 11 of planning permission APP/Y2003/W/17/3182879	Allowed	24 January 2019	Yes – 24 January 2019
PA/2018/1316 ("Production Application 3")	Retention of the existing 'Wressle-1' wellsite and access road for the long-term production of hydrocarbons	Refused	29 November 2018	n/a

Appeal ref APP/Y2003/W/19/3221694 ("Appeal E")	**Appeal against the refusal of planning permission for the retention of the existing 'Wressle-1' wellsite and access road for the long-term production of hydrocarbons**	**Pending**	**Inquiry begins 5 November 2019**	

3.2 I set out below the background to the current planning application which is the subject of this appeal.

Planning Application MIN/2013/0281

3.3 The original planning permission for the construction of the wellsite and the drilling of an exploratory borehole at Lodge Farm, Clapp Gate, Appleby was granted under delegated powers by NLC on 18 June 2013 (CDD1). The planning application was accompanied by a Planning and Sustainability Statement which included details of the reinstatement operations (CDH1).

3.4 Condition 1 of the permission states:

> **"The development must be begun before the expiration of three years from the date of this permission."**

3.5 Condition 24 of the permission states:

> **"The buildings, structures and works hereby permitted shall be removed and the use hereby permitted shall be discontinued and the land restored to its former condition within 3 years of development commencing, unless otherwise agreed in writing by the Local Planning Authority."**

3.6 The reason for condition 24 is "to define the terms of the planning permission and ensure that the site is returned to its former condition".

3.7 Egdon commenced works on 29 April 2014, completing the construction of the well site in July 2014. The exploratory borehole was drilled in July and August 2014 to a total depth of 2,240 metres.

3.8 Two phases of production testing were undertaken in 2015. The first phase began in January 2015 and was completed in April 2015; the second phase began in June 2015 and was completed in August 2015. The Wressle-1 well has flowed oil and gas from three separate reservoirs – the Ashover Grit, the Wingfield Flags and the Penistone Flags. This produced a total of 710 barrels of oil equivalent per day. Subsequently, an independent assessment has estimated a total of 14,180,000 barrels is in place of which 2,150,000 barrels is potentially recoverable.

Production Application 1 (PA1) - Planning Application ref MIN/2016/0810

3.9 As a result of the positive results from production testing, Egdon submitted a planning application to NLC on 31 May 2016 for the retention of the wellsite and access track at Wressle-1, Lodge Farm, Appleby for the long-term production of hydrocarbons (MPA ref MIN/2016/810). The application was validated on 20 June 2016.

3.10 A screening opinion was received by Egdon on 1 June 2016 by NLC, advising that the proposed development was not EIA development. This was subsequently confirmed in a second screening opinion, dated 30 November 2016.

3.11 The application for the long-term production of hydrocarbons was recommended for approval by officers and reported to NLC's Planning Committee on 11 January 2017 where it was refused by Members on the sole ground that:

> **"Insufficient information has been submitted in support of the planning application to allay the concerns of the local planning authority with regard to ground contamination from both water run-off and the infiltration of water used in the development into water courses. The proposal would therefore have an unacceptable impact on local residents, the community and the local economy. The proposed development is therefore considered to be contrary to saved policies M23, DS13 and DS15 of the North Lincolnshire Local**

Plan (2003) and policy CS18 of the North Lincolnshire Core Strategy (2011)."

3.12 The decision notice can be found at CDD2.

Groundwater Boreholes Permission – Planning Application ref PA/2016/0808

3.13 Planning permission was granted by NLC on 11 January 2017 for the installation of four groundwater monitoring boreholes at the Wressle-1 wellsite.

Production Application 2 (PA2) - Planning Application ref PA/2017/696

3.14 Egdon re-submitted a second planning application for the retention of the existing Wressle-1 wellsite and access road for long term production of hydrocarbons to NLC on 28 April 2017 (MPA ref PA/2017/696). The only substantive change to PA1 was that this second application did not include proposed radial drilling as a potential well stimulation operation. It was validated on 4 May 2017.

3.15 A screening opinion was issued by NLC on 9 June 2017, advising that the proposed development was not development that constituted an Environmental Impact Assessment (EIA) being undertaken.

3.16 PA2 was recommended for approval by officers and reported to NLC's Planning Committee on 3 July 2017 where it was refused once again by Members on the sole ground that:

"Insufficient information has been submitted in support of the planning application to allay the concerns of the local planning authority with regard to ground contamination from both water run-off and the infiltration of water used in the development into water courses. The proposal would therefore have an unacceptable impact on local residents, the community and the local economy. The proposed development is therefore considered to be contrary to saved policies M23, DS13 and DS15 of the North Lincolnshire Local Plan (2003) and policy CS18 of the North Lincolnshire Core Strategy (2011)."

3.17 The decision notice can be found at CDD4.

Temporary Extension Application 1 - Planning Application PA/2017/268

3.18 Egdon applied to NLC on 21 February 2017 to vary condition 12 of the Original Permission, in order to extend the period of time when restoration of the wellsite needed to be completed by a further 12 months from 29 April 2017. Planning permission was refused by NLC on 3 July 2017. The decision notice can be found at CDD5.

Appeals A, B and C – Appeal Refs APP/Y2003/W/17/3173530, 3180606 and 3182879

3.19 All three appeals were heard at the inquiry held from 7 to 15 November 2017. In his decision letter, dated 4 January 2018, the Inspector, Keri Williams, dismissed Appeals A and B for long term hydrocarbon production and allowed Appeal C which extended the period of time to restore the wellsite until 28 April 2018. The Inspector's letter can be found at CDD6.

Planning Application ref PA/2018/1316

3.20 Following the dismissal of Appeals A and B, Egdon and myself arranged a meeting with senior NLC officers on 2 February 2018 to discuss the outcome of the appeals. Egdon made clear that it intended to submit a fresh planning application which addressed the reasons set out in the appeal decision letter of 4 January 2018. Egdon also stated that it would be seeking a variation of condition 11 of Appeal C to allow a further extension period of 12 months from the date of any decision.

3.21 The revised application addressed the following concerns that the Inspector highlighted in the dismissal of Appeals A and B in January 2018. This is covered in chapter 4 of my Proof.

3.22 The application was submitted to NLC on 4 July 2018. The documents submitted are set out in the Covering Letter, dated 4 July 2018 (CDA1). The Landscape and Visual Assessment, Ecology Assessment and Transport Statement followed on 11 July 2019 and the Council duly validated the application that same day.

3.23 The planning application was reported to NLC's Planning Committee on 28th November 2018. I consider that the Committee Report, written by the Case Officer, was very thorough and analysed the

proposal against the policies in the Development Plan, the relevant parts of the NPPF and Planning Policy Guidance, non-development plan policies and other material considerations, such as third party comments. He also reported that JBA (independent environmental consultants) had been instructed by the Council to examine the Civil and Structural Design Statement (CSDS) (CDA11) and the Hydrogeological and Flood Risk Assessment (HFRA) (CDA3). JBA concluded that the proposal was acceptable, subject to conditions (CDA16).

3.24 As is the custom at NLC, the planning committee report was not introduced to the committee by the planning officer. The Head of Planning had informed the Appellant that there would be a short verbal presentation by officers to draw Members' attention to the differences between this application and the previous applications which had been refused. However, this did not happen. Members' understanding of the proposal and the substantive changes that the Appellant had made to the scheme that had been dismissed by the Inspector in January 2018 was therefore based upon their reading of the committee report. Although the report was thorough, my opinion is that some Members had either not read it or had not understood its contents.

3.25 There were five registered objectors to the proposal who spoke for five minutes each. The Appellant responded in support of the application, speaking for twenty minutes. Two Councillors who were not on the Planning Committee then spoke against the application.

3.26 I am of the opinion that the Councillors on Planning Committee did not give a proper and thorough consideration of the application. I base this on being present at the Committee meeting but also having read the minutes of the meeting which were approved by Members as a true and accurate record of the proceedings (CDB2).

3.27 I consider that the Committee members did not have a clear understanding of the proposal as described in the Committee Report. Councillor Briggs expressed concern about the number of times the application had been resubmitted which, in my view, is irrelevant. He went on to say that the risks associated with the application were high without providing any evidence to support his claim. He also said that the applicant had failed to maintain the site but, again, provided no evidence.

3.28 Councillor Evison addressed the Committee by complimenting the Planning Officer on a very technical report, which recommended approval. He then contradicted himself by stating that the applicant had not provided sufficient reassurances that the application was safe. He stated that the application was contrary to policies DS13, DS15 and CS18 without giving any justification.

3.29 Councillor Bainbridge stated that "the experts had all reached different conclusions on the suitability of this application". I find it difficult to understand how she came to this view without reading the committee report, as it was quite clear that the Council's planning officer, the Council's appointed specialist advisers and the Appellants' advisers all agreed that planning permission should be granted subject to conditions.

3.30 Councillor Grant expressed disappointment that the applicant had still not proved the application was not a form of fracking. This was despite the fact that the Council's planning officer had stated in his report that the Planning Inspector had confirmed in his decision letter that it was not a form of fracking.

3.31 As far as can be seen from the minutes, Members were heavily influenced by public opinion. No Councillor called for the Appellant to provide additional information or gave any indication as to the type of information that was felt to be missing and was needed to allay their concerns.

3.32 Planning permission was refused unanimously at Planning Committee on 28 November 2018 and the decision notice was issued on 29 November 2018.This states that:

> **"The additional information submitted by the applicant, in support of the proposal, fails to allay the concerns of the local planning authority with regard to ground contamination from both water run-off and the infiltration of water used in the development into water courses.**
>
> **"The proposal would therefore have an unacceptable impact on local residents, the community and the local economy. The proposed development is therefore considered to be contrary to saved policies M23, DS13 and DS15 of the North Lincolnshire Local Plan (2003) and policy CS18 of the North Lincolnshire Core Strategy (2011)."**

3.33 NLC has now withdrawn its evidence in respect of defending its decision to refuse planning permission. It has agreed a set of conditions with the Appellant and as a result, has no objection to the proposed development.

3.34 The evidence submitted in support of this appeal demonstrates that the Appellant has provided a comprehensive, up to date suite of information to the MPA when it applied for planning permission to enable the Planning Committee to be satisfied that there would be no unacceptable impact on local residents, the community, the local environment and the local economy as a result of the proposed development.

Statement of Common Ground

3.35 A Statement of Common Ground (SoCG) (CDC6) has been prepared in conjunction with Egdon and NLC (CDC6). This followed the decision by NLC on 17 July 2019 to withdraw its opposition to the appeal at the inquiry, and not to seek to support the reason for refusal, subject to agreeing a set of planning conditions with the Appellant. A revised draft SoCG was issued by the Appellant to NLC on 12 August 2019. This was formally agreed between the parties on 30 August 2019 (CDC5). Accordingly, the scope of my evidence reflects the areas of agreement that have been reached in respect of:

- Site description;
- The description of the proposed development;
- Planning history;
- Relevant national and local planning policy;
- Cultural heritage (Thornholme Priory);
- Air Quality;
- Noise;
- Ecology;
- Traffic;
- Lighting; and
- Landscape and Visual Impact.

3.36 Following the withdrawal of the Council's case, the following matters have been agreed by both parties which are set out in paragraph 2.3 of the SoCG (CDC6):

- That the proposed development is sustainable within the meaning of paragraph 8 of the NPPF (paragraph 2.3 (b);
- That the development of hydrocarbon resources is a national need (paragraph 2.3 (c);
- That the principle of hydrocarbon development on the Wressle-1 well site is accepted (paragraph 2.3 (d);
- That the proposed mitigation for protected or notable species or habitats is both appropriate and proportionate in relation to the potential impact from water contamination issues (paragraph 2.3 (i);
- That mitigation incorporated in to the site design and reconfiguration of the wellsite is acceptable and that such mitigation can be imposed by planning conditions (paragraph 2.3 (m);
- That the proposed development will pose no material risk to groundwater supplies, local watercourses, including Ella Beck, and the British Steel abstraction borehole at Clapp Gate (paragraph 2.3 (n); and
- That the impacts of vehicle movements associated with the proposed development will not give rise to unacceptable adverse effects (paragraph 2.3 (o).

3.37 The SoCG (CDC6) covers the planning conditions that have been agreed between Egdon and NLC.

4. THE INSPECTOR'S DECISION LETTER AND THE APPROACH AND STRATEGY FOR COMPILING THE TECHNICAL SUPPORTING DOCUMENTATION AND DESIGNING THE SCHEME

4.1 This chapter of my Proof of Evidence considers the Inspector's decision letter (CDD6) for Appeals A and B and examines the approach that has been taken by the Appellant in compiling the technical supporting documentation and designing the current scheme in order to overcome his concerns. The decision letter was used as the basis for determining the scope and type of the additional technical information which would be required to be addressed in any new application. The chapter also considers the response of NLC's independent Environmental Consultants, JBA, who analysed the HFRA (CDA3) and the CSDS (CDA11) and prepared a review (CDA16).

The Inspector's Decision Letter (CDD6)

4.2 The Inspector's decision letter is considered to be an important material consideration.

4.3 In his Decision Letter, dated 4 January 2018, the Inspector reached the following conclusions:

- The application was for conventional oil and gas production (paragraph 15);
- He agreed with the EA and considered that the near wellbore treatments would not result in material harm (e.g. proppant squeeze and acidisation) (paragraph 16);
- He noted that waste products would be stored onsite and disposed of at an authorised waste disposal site in accordance with the Environmental Permit (paragraph 22);
- He concluded that the details of the interceptor and its location could be controlled by a planning condition (paragraph 29);
- He confirmed that details of the system for monitoring boreholes could be controlled by a planning condition (paragraph 30);
- He concluded that the evidence does not demonstrate that there is an unacceptable risk of harm through seismic activity (paragraph 32);
- He was satisfied that the Environmental Permit ensures that the well will not cause any ongoing adverse impacts once the well has been decommissioned (paragraph 32);
- He concluded that both daytime and night time noise levels could be controlled by planning conditions (paragraph 33);
- He considered that the proposal was acceptable with regard to flood risk (paragraph 33);
- He concluded that the effect on local air quality is not considered to be unacceptable (paragraph 34);
- The Inspector confirmed that fossil fuels have a role to play in helping the UK transition to a low carbon economy and is consistent with national policy (paragraph 39);
- The development would contribute to the provision of secure energy supplies and would be consistent with providing for a mix of energy sources during the transition to a low carbon economy (paragraph 41);
- There would be a degree of national and local economic benefit to the rural economy.

4.4 The Inspector found that many of the impacts of the Proposed Development were acceptable in respect of the likelihood of the risk occurring or could be made acceptable by condition. However, he concluded that these matters did not outweigh other considerations, namely the absence of a ground conditions survey report and insufficient evidence about the adequacy of the geosynthetic clay liner (GCL). As a result, he found the development did not meet the requirement arising from policies M1 and M23 to show the proposed environmental protection measures would be adequate to mitigate impacts. He also found the proposals to not be consistent with criterion 10 of policy CS18 and paragraphs 109, 121 and 122 of the NPPF.

The Appellant's Response to the Reasons for Dismissal at Appeal

4.5 In preparing the new planning application for hydrocarbon production at the Wressle wellsite (PA3), the Appellant has prepared new and updated documents to overcome the concerns raised by the last Inspector. These documents comprise the following:

- Civil and Structural Design Statement (CSDS) (CDA11), including a Ground Conditions Investigation Report
- Hydrogeological and Flood Risk Assessment (HFRA) (CDA3)
- Complete set of revised plans and drawings

4.6 The primary changes to PA3 compared to PA1 and PA2 are summarised below.

Description of Development

4.7 The Appellant chose to apply for planning permission with a fuller description of the proposed development which specified the key components of the scheme. This specifically referred to those new elements of the application that were included in response to the Inspector's decision letter, namely:

- site reconfiguration to facilitate the installation of a new impermeable membrane;
- French drain; and
- installation of 2 additional groundwater monitoring boreholes and the deepening of 3 existing groundwater monitoring boreholes

Civil and Structural Design Statement (CSDS)

4.8 Egdon has addressed each of the issues raised by the Inspector as they relate to wellsite design in the CSDS. Jonathan Foster states in his evidence that he provided the strategic coordination of the wellsite design review and upgrade proposal, which culminated in the CSDS. Mark Barwood covers the preparation of the CSDS in greater detail in his evidence. In summary:

- A geotechnical investigation has been carried out to confirm the nature of the underlying strata.
- A ground investigation report has been prepared by Opus International Consultants (UK) Limited.
- The ground investigation report has been used by Alan Wood and Partners, an independent firm of consulting civil and structural engineers, to prepare a CSDS.
- The CSDS forms part of the Planning Application submission and the ground investigation report is an appendix to the CSDS.
- The CSDS summarises the redesign and reconfiguration of the wellsite.

4.9 The reconfiguration will result in the installation of a new high-density polyethylene (HDPE) impermeable membrane and additional associated protection layers across the entire wellsite. As part of this, the existing site surface aggregate will be stripped and regraded, before being re-laid on top of the new HDPE impermeable membrane system.

4.10 To confirm the suitability and thickness of the surface aggregate, a representative sample of the current site aggregate and proposed HDPE impermeable membrane system has been subject to independent testing to simulate the ground-bearing pressure of the proposed installation. This involved a cylinder test under laboratory conditions by BICS Laboratories Ltd, an independent United Kingdom Accreditation Service (UKAS) laboratory, using Environment Agency Methodology (LFE2, 2011).

4.11 A load bearing capacity test has been undertaken on the existing substrate (subgrade) ("Terzaghi's method" (1943)). As a result of these tests (both included with the CSDS), the design team at Alan Wood and Partners, in consultation with the impermeable membrane manufacturer, Naue, has confirmed that a 300mm thickness of screened and graded stone platform material (aggregate) provides effective protection to the proposed HDPE impermeable membrane system. This is confirmed

in Appendix 7 of the CSDS. In his proof of evidence, Mark Barwood refers to three cylinder tests that were carried out by Alan Wood and Partners based on the worst-case tyre pressure. No indentations were recorded on the HDPE membrane and he concludes at paragraph 3.35 of his proof that this indicates the multilayer remediation provides the necessary protection to the HDPE membrane.

4.12 The existing GCL at the Wressle wellsite is no longer being relied upon as the tertiary containment. It will be overlaid with a new HDPE impermeable membrane and associated protective geotextiles.

4.13 A Construction Quality Assurance (CQA) plan will be used and was agreed between the two parties as a condition, to ensure the installation of the lining system is robust and constructed to the highest engineering standards. This CQA will also have to be reviewed, approved and the installation verified, by the EA. Jonathan Foster's evidence contains more information about the role of the EA as a regulatory body in this regard.

Hydrogeological and Flood Risk Assessment (HFRA)

4.14 The Appellant commissioned an independent Hydrogeological and Flood Risk Assessment (HFRA) study of the wellsite to address uncertainties identified by the Inspector about the near surface geology and the presence of capping layers to the underlying aquifers. James Dodds covers this in considerable detail in his evidence.

4.15 Core samples recovered from 2 new (2018) boreholes on the wellsite have undergone laboratory testing to quantify the hydraulic conductivity of key claystone sequences. The data generated from these tests provide conclusive evidence that demonstrates the existence of two laterally continuous impermeable claystone capping layer above the Primary Aquifer in the Lincolnshire Limestone Formation beneath the wellsite.

4.16 Envireau Water's report defines a hydrogeological conceptual model (HCM) which has utilized regional, local and wellsite specific data, including the drilling of site investigation boreholes and laboratory testing of core samples.

4.17 The HFRA has assessed and quantified the risk to 'water receptors' e.g. water supplies (public, private and industrial) using the EA's Source-Pathway- Receptor methodology. The overall risk profile for the Proposed Development is a reflection of the high level of embedded mitigation within the design of the wellsite reconfiguration, the construction of the Wressle-1 well and the local hydrogeological conditions. The assessed risks relating to all identified hazards range from 'Low' to 'None'.

Traffic Numbers

4.18 The development proposed in PA3 would generate a higher number of HGV movements at each of the four phases of the wellsite compared to what was proposed in PA1 and PA2. These are set out in Table 6.1 in more detail in Chapter 6 of my Proof but are summarised below:

- Phase 1: Site reconfiguration - an increase of 38 HGV numbers from 50 to 88. This is to enable the site to be stripped to enable the new HDPE impermeable membrane and the construction of the internal roadway.
- Phase 1: Site production - an increase of 12 HGV numbers from 20 to 32. The increase derives from the increased complexity in the workover operation, given the length of time the well has been suspended.
- Phase 3: Grid connection - an increase of 7 HGV numbers from 0 to 7. These numbers were previously included in the production phase but have been separated out for clarity.
- Phase 4: Site decommissioning and restoration - an increase of 65 HGV numbers from 223 to 288. These additional numbers arise from the removal of grid connection equipment and infrastructure, security and internal roadway system.

4.19 There will be no change to HGV movements during the other aspects of the proposed development, that is:

- Phase 1: security set up and groundwater boreholes;
- Phase 2: acidisation, proppant squeeze and sidetrack drilling; and

- Phase 3: production.

4.20 These changes to HGV movements have been taken into account in the Transport Statement which concluded that vehicle trips generated by the proposed development will have a negligible to low impact on the local highway network.

Operational Hours and Time

4.21 There are no changes to operational working hours across the four phases compared to PA1 and PA2. The reconfiguration works, referred to below, will take four weeks to complete, an increase of one week compared to PA1 and PA2.

Site Security

4.22 There may be a requirement for enhanced security on site owing to increased risk of theft and protestor activity at onshore oilfield sites. The indicative location of temporary security facilities, if required, is shown on the submitted site plans. These will only be deployed if the security risk is sufficient and credible.

4.23 Both the Landscape and Visual Impact Assessment (LVIA) and Lighting Assessment have taken the worst-case scenario of security and welfare facilities on site during the site construction and reconfiguration, production set-up and production phases. Bearing in mind the temporary nature of the development and subject to the proposed light mitigation plan, the Proposed Development will be compliant with all guidance and will not have adverse landscape or lighting impacts on the surrounding area.

Site Reconfiguration

4.24 The Appellant proposes to reconfigure the wellsite to include new embedded environmental mitigation to safeguard groundwater resources and water courses during the life of the development. The principal reconfiguration works are described in the Planning and Sustainability Statement and in Mark Barwood's evidence, and can be summarised as follows:

- Removal of the existing temporary storage tank containment bund;
- Removal and regrading (to remove any oversized materials) of the existing surface aggregate;
- Installation of a new HDPE impermeable membrane and protection geotextiles across the site, to be located above the existing GCL, in order to provide the tertiary impermeable barrier between the surface of the wellsite and any pathways to groundwater resources. This will have clear design traceability and will be installed in accordance with a Construction Quality Assurance (CQA) plan;
- The existing GCL will be retained but will not be relied upon as part of the new membrane system;
- Relining of the perimeter containment ditches with new HDPE impermeable membrane (and protection layers), installation of twin-wall perforated drainage pipe within the containment ditch, and backfill with stone to surface to form a French Drain;
- Installation of regraded surface aggregate to a design depth of 300mm;
- Construction of a masonry containment bund using concrete, on a poured reinforced concrete base, sized approximately 27.6m x 15m x 0.45m high (internal size);
- Construction of an HGV internal roadway system within the site, for tanker loading, using poured reinforced concrete;
- Construction of a tanker loading area, using poured reinforced concrete, complete with containment kerb;
- Installation of a full retention interceptor, to enable the discharge of clean surface water run-off to the adjacent surface watercourse; and
- Installation of up to 2 additional water monitoring boreholes and deepening of 3 of the 4 existing water monitoring boreholes.

Site Investigation and Design

4.25 In order to inform the design of the reconfiguration works, and address the concerns raised in the Inspector's decision letter, Egdon commissioned Opus International Consultants (UK) Limited (Opus) to prepare a ground investigation report, with the objective of confirming the ground conditions and geotechnical properties underlying the existing wellsite.

4.26 Site works associated with the ground investigation report were undertaken in February 2018. Six sample boreholes were drilled to a depth of between 4m and 5.5m below the existing ground level. Each borehole was subject to a Transport Research Laboratory (TRL) Dynamic Cone Penetrometer (DCP) test, to a depth between 860mm and 950mm below the existing ground level. The findings of the ground investigation report are included within the CSDS. All works were undertaken under the supervision of an Opus Field Engineer, who logged the geological formations in accordance with BS EN ISO 14688. Samples were taken at selected intervals and placed in laboratory supplied containers for subsequent offsite chemical testing.

4.27 The Opus ground investigation report formed the basis of the work undertaken by Alan Wood & Partners, the Appellant's consulting civil and structural engineers, to develop the detailed site design plans. These form an appendix to the CSDS.

Wellsite Platform and Perimeter Containment Ditches; Crude Oil Storage Bund; Access Way and Tanker Loading Bay; Extension to Existing Wellhead Concrete Platform; Wellsite Platform Drainage; and Construction Quality Assurance

4.28 The first of these technical matters is covered in Mark Barwood's evidence. I have summarised them below.

- Wellsite Platform and Perimeter Containment Ditches
    - The existing 300mm aggregate cover will be removed, screened to remove large stones and stockpiled in the non-active area. The two layers of protective geotextile will be removed, exposing the GCL.
    - A Secutex protection geotextile will be placed on top of the existing GCL, extending across the active area of the wellsite and the perimeter containment ditch. A 2mm thick high-density polyethylene (HDPE) fully welded impermeable membrane will be placed on top. A second Secutex protection geotextile will then be placed on top of the HDPE, creating a multi-layer remediation system.
    - Two areas - the wellsite and the entrance – will have a concrete structure anchoring the multi-layer remediation.
    - A minimum of 300mm aggregate cover will be placed on top of the multi-layer remediation.
- Crude Oil Storage Bund
    - Produced oil and produced formation water will be stored on site in five storage tanks, each capable of holding 52 cubic metres of fluid. The tanks will be placed in a bund comprising reinforced concrete. This will form part of the secondary containment system.
- Access Way and Tanker Loading Bay
    - A reinforced concrete accessway incorporating a tanker loading bay will be constructed to provide additional protection to the HDPE impermeable membrane in areas which will be subject to more frequent HGV movements.
    - The tanker loading bay will form part of the secondary containment. It is designed to contain fluids and transfer them to the crude oil storage bund using a pump and transfer system.
- Extension to Existing Wellhead Concrete Platform
- Wellsite Platform Drainage
    - Fully contained active area with a discharge of clean surface rainwater run-off of 5 l/s.

        - Surface water within the active area of the wellsite will either percolate downward through the aggregate or flow to the perimeter drainage containment system (French drain).
        - An inspection chamber will be installed in the north east corner of the active area of the wellsite.
        - An outlet pipe will be installed from the inspection chamber to an interceptor.
        - A second outlet pipe will be installed from the interceptor to a discharge point at Ella Beck.
    - Construction Quality Assurance Plan
        - A rigorous independent verification scheme known as Construction Quality Assurance (CQA) is required for aspects of construction for which failure could cause a significant increase in environmental risk. The CQA will ensure that the lining system is robust and will be constructed to the highest engineering standards in order to provide short, medium and long-term environmental protection.

Groundwater Monitoring Boreholes

4.29 As part of the proposal in PA3, the Appellant proposes to deepen 3 shallow existing boreholes to ensure full penetration of the Sutton Sand formation with the borehole terminating 0.5m into the underlying clay. The Appellant proposes to install up to 2 additional groundwater monitoring boreholes in addition to the four already installed on the wellsite. James Dodds states in his proof at Table 2 that this will cover a gap in the monitoring coverage.

4.30 The installation and modification of the boreholes will require a small drilling rig to be brought to the wellsite, which is likely to take 2 weeks. This will be undertaken during the production set-up period.

Conclusions

4.31 It is helpful here to refer to the conclusions drawn by Mark Barwood in his proof of evidence in drawing together the Appellant's approach to the reasons for dismissal by the last Inspector, the technical work that has been undertaken to address those concerns and how the findings of the technical assessments have fed into the redesign of the wellsite.

4.32 Mr Barwood concludes that the site design has been undertaken fully in accordance with the findings of the geotechnical report and in conjunction with the membrane specialist Naue. Consultation with a specialist installer has also been undertaken to establish the practicalities of implementing the design. It is his opinion that the proposed design and reconfiguration work is based on a detailed geotechnical investigation which has confirmed the nature of the underlying strata.

- Specific cylinder testing using the proposed stone thickness/type and membrane system has been undertaken in collaboration with the manufacturer to confirm its suitability.
- A new tanker access road and loading bay will be provided, offering robust construction for heavily trafficked areas and removing the need for wheel washing.
- Bunds and site volumes have been confirmed to provide necessary storage volumes to meet all statutory requirements, including 1:100-year storm including climate change allowance.
- The installation of a French Drain and full retention interceptor will manage clean surface water run-off into Ella Beck.
- A full CQA system will be employed to ensure the competency of the finished platform.

4.33 I therefore conclude that a full ground investigation has been carried out which has informed the design of the wellsite. The appropriate technical assessments, including pressure testing and cylinder testing have been carried out to demonstrate the suitability of the design. Although the existing bentonite-based GCL will remain in place, the new HDPE impermeable layer will provide a complete seal of protection.

4.34 The EA confirmed that the proposed re-configuration of the well site will enhance the environmental protection measures agreed for the site**.** JBA, NCL's environmental and engineering experts, were satisfied with the measures proposed to ensure that groundwater supplies are protected (CDA16). There is no evidence to question the adequacy of the protective covering across the site. Based on Mr Dodds' and Mr Barwood's evidence, I conclude that there will be no unacceptable adverse impacts on groundwater resources and water courses during the lifetime of the development. Therefore, I conclude that the concerns of the previous Inspector have been fully addressed.

5. UPDATES TO THE SUPPORTING ASSESSMENTS ACCOMPANYING PLANNING APPLICATION 3

5.1 In addition to the technical work required to redesign the site and thereby overcome the previous Inspector's concerns, the Appellant reviewed and updated all the previous supporting environmental assessments that accompanied PA1 and PA2. These comprised the following:

- Transport Statement
- Air Quality Dispersion Modelling Assessment
- Archaeological Desk-Based Assessment and Heritage Impact Assessment
- Ecology Appraisal
- Noise Assessment

5.2 At the same time, the Appellant voluntarily prepared a Landscape and Visual Assessment and a Lighting Assessment to accompany PA3. This chapter summarises each of these assessments and their findings.

Transport Statement

5.3 The Transport Statement (CDA7) updates the previous Transport Assessment prepared in support of PA1 and PA2. It updates the personal injury collision data for the local highway network for the five-year study period from 1 January 2012 to 30 September 2017.

5.4 The Appellant has reviewed and updated the traffic numbers expected to be generated by each activity on site. This is set out in a schedule in Table 6 in the Transport Statement which shows the number of HGVs, the length of the activity, the number of days when HGV movements take place and the average daily two-way HGV trips. A maximum of 44 daily two-way car and LGV traffic movements and 10 daily two-way HGV traffic movements are estimated to be generated during the drilling phase, which would be the most intensive phase of traffic movements. A maximum of 20 temporary two-way daily HGV trips are expected to occur during acidisation and the well decommissioning and site restoration phase.

5.5 The Appellant has also updated and revised the likely number of traffic movements associated with cars and LVs for each activity which can be found in Table 7 in the Transport Statement.

5.6 The traffic generation is expected to have at worst a moderate traffic impact on the local highway network and then only for one day during the acidisation demobilisation stage and over a short timeframe during parts of the equipment removal, decommissioning and restoration activity. Most activities are expected to have a low or negligible impact on the local highway network. A number of proposed mitigation measures are proposed, with routeing of all wellsite-related traffic via the M180 motorway, A15 and A18 trunk roads and the B1208.

5.7 The proposed HGV route to the site is unchanged from the PA1 and PA2 applications.

Air Quality Dispersion Modelling Assessment

5.8 The previous Inspector concluded that "the effect on local air quality is not considered to be unacceptable" (paragraph 34, CDD6). The Air Quality Dispersion Modelling Assessment (CDA4) has reviewed the particulate matter emissions that would be expected during the site reconfiguration phase, and the restoration works at the end of the life of the site. It concluded that, with the effective implementation of the described mitigation measures, which are standard practice on construction sites across the UK, emissions will not cause an effect to be significant.

5.9 The Assessment also reviews the operational emissions from the installation of a gas engine generator and a permanent flare that would burn any excess gas not used by the onsite gas-fired generator. The Assessment of operational emissions has considered four scenarios which vary the gas engine load and the quantity of excess gas sent to the flare. The conclusion of the assessment is that the operation of the gas engine and flare will not have a significant impact or effect on local air quality.

Archaeology and Heritage

5.10 The original 2012 Archaeological Desk-Based Assessment has been revised and updated to reflect the current proposal.

5.11 The 2016 Heritage Impact Assessment was undertaken to assess the impact on scheduled remains of Thornholme Priory. The 2018 Archaeological Desk Based Assessment and Heritage Impact Assessment report (CDA9) has been revised to incorporate new data gathered by the North Lincolnshire Historic Environment Record and to combine both documents.

5.12 Thornholme Priory is a Scheduled Monument and lies 1.23km north of the proposed wellsite. It comprises a series of earthworks, although these were partially ploughed in 1973 and the remains are judged by the Appellant's archaeologist to be not so clear. Views towards Wressle-1 wellsite from Thornholme Priory include extensive tracts of woodland which largely block views from the central part of the Scheduled Area. There is an existing and long-term visual impact on views out from Thornholme Priory due to electricity pylons and an adjacent rail track.

5.13 The Appellant and NLC agree that there may be a visual and setting impact on Thornholme Priory from the proposed drilling rig, the impact will be of slight/moderate scale and will be for a short temporary period only (paragraph 2.3 (j), SoCG, CDC6). The parties agree that no mitigation measures are required.

Ecology

5.14 Table 1.2 of the Updated Ecological Appraisal (CDA8), dated July 2018, sets out a useful summary of all the ecology surveys and assessments undertaken to date at the Wressle wellsite.

5.15 An extended Phase 1 habitat survey and ecological appraisal was first carried out in May 2012, followed by a Biodiversity Management Plan in February 2014.The Ecological Appraisal was updated in November 2015 with an updated desk study. No significant ecological constraints were identified. The Ecological Appraisal was updated a second time in May 2017, again with no significant ecological constraints identified. The Ecological Appraisal has now been updated a third time, in 2018, in support of PA3. The scope of works comprises:

- An updated desk survey to identify any additional protected sites or protected species records within a 1km radius of the site since the previous reports were completed;
- An updated phase 1 habitat survey to determine any changes from the established 2012 baseline habitat conditions and those recorded in the 2015 updated Phase 1 Habitat survey;
- An updated ecological appraisal to identify whether the proposed development phase would result in any new impacts on habitats or protected species;
- Consideration of any additional ecological mitigation and compensation requirements; and
- Updated restoration proposals.

5.16 No significant changes in the baseline conditions were found as part of the updated survey in 2018. Therefore, the ecological assessment accompanying PA3 is largely identical to that submitted with PA1 and PA2. Comments by NLC's ecologist during the consultation of PA1 have been addressed. In addition, any potential changes in air quality arising from the flaring of gas at the site and use of the gas engine generator have been assessed, following the completion of the revised Air Quality Dispersion Modelling Assessment.

5.17 The updated impact assessment has identified the requirement for one additional mitigation measure in respect of water vole to address the low residual risk that this species is present on Ella Beck. No other mitigation measures for habitats or protected species are considered necessary, as no significant effects on ecological receptors have been identified.

Noise

5.18 The previous Inspector concluded that both daytime and night time noise levels could be controlled by planning conditions (paragraph 33, CDD6). In its response to PA1, the EH Department at NLC proposed nine specific planning conditions in order to regulate the emission of noise from the wellsite and its potential to impact on local noise-sensitive properties. These same conditions are included in the SoCG (CDC6) and would be acceptable to the Appellant. These conditions include specific limits on noise that can be emitted by operations on the site.

5.19 The Appellant complied with these noise conditions when the exploratory well was drilled in 2014 with no objections received by NLC from neighbouring residential properties.

5.20 Surveys of ambient sound levels were originally undertaken at night on 5 September 2012. Updated background sound level measurements were conducted on 15 May 2018 in order to validate the earlier survey results. The noise measurements in 2012 were undertaken at the entrance to the grounds of the Lodge Farm estate in order to be representative of the nearest residential properties. In 2018, a measurement location somewhat closer to the site was used to predict noise levels from the drilling operation, namely, a location to the east of North Cottage and South Cottage which form a pair of semi-detached properties to the east of the main residential area of Lodge Farm. The seven prediction locations used in the 2018 noise assessment remain the same as in 2012.

5.21 The results of the background noise measurements taken on 15 May 2018 were between 28 and 30 dB LA10.

5.22 The maximum construction noise levels would be 41dB LAeq at the nearest dwelling. This is judged by the noise assessment to be completely acceptable and have no impact on amenity. A condition (condition 9, SoCG, CDD6) limiting construction activities to agreed daytime working hours has been agreed with NLC to control potential noise sources.

5.23 The continuous use of the tracked rig on site for drilling the groundwater monitoring boreholes would produce a maximum construction noise level of 41dB LAeq at the four nearest dwellings. Again, the noise assessment states that such levels will be completely acceptable and have no impact on amenity.

5.24 The predicted noise at night will remain within a night-time noise limit of 42 dB LAeq. This will be enforced by a condition (condition 11, SoCG, CDD6). The proposed daytime noise limit of 55 dB LAeq will not be breached by on-site activities at any time. Given the short-term nature of the proposed drilling operations, noise levels will have a minimal impact.

5.25 In conclusion, the 2018 noise assessment concludes that there will be no impact on the nearest receptors, subject to the conditions agreed in the SoCG (CDD6).

Landscape and Visual Appraisal

5.26 The 2018 LVA that accompanied PA3 used a Study Area of up to 6km from the Application Site (CDA10). It was based on the previous LVA, prepared in 2012, which accompanied the original application for exploration in 2013. The 2012 LVA used ten representative viewpoints, located within the 6 km radius, which were agreed with the Environment Team at NLC. For the purposes of continuity and consistency, the same criteria were adopted in the 2018 LVA as in the 2012 LVA.

5.27 Any changes in landscape policy guidance and the landscape of the study area itself were taken into account in the 2018 LVA. The Local Landscape Assessments are from the NLC Landscape Character Assessment which was published in 1999. The Site and Study Area does not contain any areas designated in terms of specific international or national statutory landscape designation.

5.28 The LVA found that no significant change in visual impact would occur at the ten photo viewpoints agreed with NLC. The photoview photography was conducted in April 2018 when trees were generally not in leaf and mostly resembled a winter survey with trees without leaf cover.

5.29 The development proposals, when compared to the baseline condition and seen in the context of the significantly wooded landscape of the immediate study area, constitute few changes in the view as determined by the representative viewpoints 1-10. Based on the assessment of the ten representative viewpoints, the Proposed Development would form only a minor component or indistinct element within most of these views owing to the intervening vegetation.

Lighting Assessment

5.30 The Appellant has undertaken an exterior lighting assessment for temporary lighting associated with the proposed hydrocarbon production at the existing Wressle wellsite (CDA5). Specifically, the assessment seeks to address the proposed lighting condition agreed between the Appellant and the Council at the public inquiry in November 2017 and which can be found in the SoCG (condition 15, CDC6).

5.31 Phase 2 of the development (well operations) proposes three potential methods to enable production – acidisation, proppant squeeze and sidetrack drilling. The Lighting Assessment has been based on the sidetrack drilling operation as this represents a worst-case scenario from a lighting perspective. Provided that the mitigation measures as proposed are adopted across all phases of development on the wellsite, the Lighting Assessment states that compliance with national guidelines for the control of obtrusive light will be achieved.

5.32 Three key existing residential receptors have the potential to be impacted by obtrusive light from the Proposed Development - North and South Cottages (part of Lodge Farm) and Decoy Cottage (part of Decoy Farm). The baseline survey shows that the average illuminance is very low.

5.33 Light modelling was undertaken using an independent lighting modelling software tool. The levels of pre-mitigation light trespass (vertical illuminance) associated with the Proposed Development have been predicted at residential receptors. The predicted levels are all complaint with the Institute of Lighting Professionals (ILP) post-curfew criterion of 1 lux. Consequently, no other mitigation measures are necessary.

5.34 The maximum levels of pre-mitigation glare (viewed source intensity) associated with the Proposed Development have also been predicted. Specific mitigation measures are proposed in order to achieve the required glare and sky-glow criteria.

5.35 The Lighting Assessment sets out the specific mitigation measures which would be applied to all lighting tower floodlights and luminaires. These mitigation measures have been agreed by both parties in the form of condition 15 in the SoCG (CDC6).

Conclusions

5.36 Each of the environmental assessments which were submitted with PA1 and PA2 have been fully updated and revised. In each case, the baseline assessment has been updated to 2018 to reflect any changes. At the same time, the likely impacts arising from the proposed development have been assessed and any mitigation measures have been proposed.

5.37 The 2018 updated ecological impact assessment has identified the requirement for one additional mitigation measure in respect of water vole to address the low residual risk that this species is present on Ella Beck. No other mitigation measures for habitats or protected species are considered necessary, as no significant effects on ecological receptors have been identified.

5.38 Otherwise, no additional mitigation measures are proposed for over and above those previously identified and which can be applied by the use of pre-commencement planning conditions. I therefore conclude that the environmental assessments raise no significant issues which raise any concerns and do not give rise to matters which would result in anything other than approval of the proposed development.

6. PROPOSED DEVELOPMENT

6.1 The description of the Proposed Development is agreed between the parties and is set out in the SoCG (CDC6). However, given the importance of the changes that have been made to the design of the development, a summary of the Proposed Development is included below.

Introduction

6.2 Egdon is seeking to produce conventional hydrocarbons from the Application Site. For absolute clarity, Egdon will not use the process known as High Volume Hydraulic Fracturing (commonly referred to as "fracking"). The Proposed Development relates to conventional oil and gas production and no High-Volume Hydraulic Fracturing operations for shale gas or oil will take place. Once operational, the well will primarily produce oil. However, the 2015 flow test and the evaluation of reservoir and gas data, shows that there are significant gas volumes that can be harnessed. This will enable the generation of electricity on-site, providing enough power for the needs of the site, and surplus electricity that can be exported back to the electricity distribution network.

6.3 The proposals seek planning permission for the retention of the existing wellsite and access road and for long term production of hydrocarbons, together with a small extension for the installation of additional security facilities. There are four main phases associated with the Proposed Development:

- Site reconfiguration and set-up works;
- Well operations;
- Production of hydrocarbons; and
- Well decommissioning and site restoration.

6.4 The Proposed Development will comprise the following activities:

- The Installation of additional security facilities, and an increase in the overall existing site area by 0.12ha to manage site access and accommodate additional security facilities;
- The reconfiguration of the existing wellsite to install a new HDPE impermeable membrane, French drain system and an approved surface water interceptor;
- The reconfiguration of the existing wellsite to construct a purpose-built bund area to facilitate storage tanks, a tanker loading plinth and an internal roadway system;
- The installation of production facilities and equipment;
- The installation of up to 2 new water monitoring boreholes and the deepening of 3 of the 4 existing water monitoring boreholes;
- A workover to facilitate the removal of the existing tubing and associated subsurface wellbore equipment) and the replacement with a new completion to enable the production of hydrocarbons;
- One or more of the following well operations to enable the production of oil and gas at the site:
    - Acidisation;
    - Proppant squeeze;
    - A sidetrack drilling operation with a drill rig up to 40m in height.
- The production of oil and gas for a period of 15 years:
    - Fluids will be recovered from the well either by free-flowing naturally, or with the aid of a surface pump that artificially lifts fluids to the surface;
    - Grid connection and installation of a gas engine generator in order to generate electricity for site use and export of surplus back to the distribution network; and
- Well decommissioning and site restoration.

Summary of Total Vehicle Movements

6.5 The table below shows the number of HGV vehicle numbers and movements associated with each of the different elements of the four phases. It also provides an estimated timescale for each activity.

Table 6.1: Summary of Vehicle Movements

Phase	Aspect	HGV Numbers	HGV Movements	Movement Timeframe
1	Security set up	8	16	2 days
	Site reconfiguration	88	176	4 weeks
	Site production set-up	32	64	2 weeks
	Groundwater monitoring boreholes	7	14	2 days
2	**Acidisation**			
	mobilisation	8	16	1 day
	operation	3	6	3 days
	demobilisation	10	20	2 days
	Proppant Squeeze			
	mobilisation	19	38	3 days
	operation	5	10	5 days
	demobilisation	12	24	3 days
	Sidetrack Drilling			
	mobilisation	40	80	1 week
	operation	5 per day	10 per day	2 weeks
	demobilisation	40	80	1 week
3	Production	1 to 3	2 to 6	Per day
	Grid connection	7	14	6 days
4	Well decommissioning and site restoration	288	576	6 weeks

6.6 Table 6.2 provides a summary of the differences in HGV numbers for each of the four phases between PA2 and PA3. A short explanation of the reasons for the increase in HGV numbers are included.

Table 6.2: Comparison of HGV Numbers

Aspect	2017 HGV numbers	2018 HGV numbers	Reason for increase
Site reconfiguration	50	88	Stripping of site surface, installation of new membrane and internal roadway etc.
Site production set-up	20	32	Increased complexity workover operation given length of time well has been suspended.
Grid Connection		7	Vehicles needed for grid connection would visit site over the course of 1 week so were previously included in the Production phase numbers. For clarity the vehicles associated with these works have been separated out
Site decommissioning	223	288	Additional movements due to removal of grid connection equipment and infrastructure, security, and internal roadway system

Personnel and Operational Hours

6.7 Operational working hours across all of the development phases are set out below in Table 6.3, together with the numbers of personnel employed or contracted on site (Table 6.4). There are no significant changes to any of these aspects when compared to PA1 and PA2

Table 6.3: Operational Working Hours

Phase	Operational Phases	Monday to Friday	Saturday	Sunday/ Bank Holidays	Comments
1	Security	24 Hours			
	Site Reconfiguration	07:00 – 19:00hrs	07:00 – 19:00hrs	None	
	Site Production Set-Up	07:00 – 19:00hrs	07:00 – 19:00hrs	07:00 – 19:00hrs	Maybe a need to continue setup through weekends if an operational need.
	Ground Water Monitoring Boreholes	07:00 – 19:00hrs	07:00 – 19:00hrs	None	
2	Acidisation	07:00 – 19:00hrs	07:00 – 19:00hrs	None	Applies to mobilisation, operation and demobilisation.
	Proppant Squeeze	07:00 – 19:00hrs	07:00 – 19:00hrs	None	Applies to mobilisation, operation and demobilisation.
	Drilling Mob and Demob	07:00 – 19:00hrs	07:00 – 19:00hrs	07:00 – 19:00hrs	Mobilisation and demobilisation.
	Drilling Operation	24 Hours			
3	Production	24 Hours			Personnel on site 24 hours in initial weeks then reverting to daytime attendance once production rates are established.
	Grid Connection	07:00 – 19:00hrs	07:00 – 19:00hrs	None	
4	Removal of equipment and well decommissioning	07:00 – 19:00hrs	07:00 – 19:00hrs	None	
	Site Restoration	07:00 – 19:00hrs	07:00 – 19:00hrs	None	

Table 6.4: Comparison of Numbers of Personnel

Phase	Operational Phases	Days	Nights	Days	Nights
		2017		2018	
1	Security	7	7	7	7
	Site Reconfiguration	4	0	4	0
	Site Production Set-Up	6	0	6	0
	Ground Water Monitoring Boreholes			4	0
2	Acidisation	12	0	12	0
	Proppant Squeeze	6	0	6	0
	Drilling Mob and Demob	20	0	20	0
	Drilling Operation	20	16	20	16
3	Production	3	2	3	2
	Grid Connection			2	0
4	Removal of equipment and well decommissioning	4	0	4	0
	Site Restoration	4	0	4	0

Site Reconfiguration and Set-up Works (Phase 1)

Installation of Additional Security Facilities

6.8 There may be a requirement for enhanced security on site owing to the increased risk of theft and protestor activity seen at onshore oilfield sites in recent years. Although the Wressle drilling and testing operations during 2014-2015 were completed without any security issues, Egdon is mindful of the potential for protestor activity and, as such, there needs to be provision for additional security facilities to ensure the safety of site employees, contractors and as a duty of care to the general public.

6.9 If there is protestor activity at the wellsite, security teams and facilities will be mobilised to site, although these would be temporary in nature and not expected to be on site long-term.

6.10 The indicative location of temporary security facilities (if needed) throughout all phases is shown within the accompanying site plans. These temporary security facilities will include a site office, a canteen, welfare units, accommodation blocks and, a generator.

6.11 Operationally, not all of the equipment may be required. However, the worst case has been considered for the purposes of this application. The additional security facilities will only be deployed if the security risk is sufficient and credible. An alarm system will be installed at the wellsite and may involve the installation of security cameras. These will be linked to an off-site monitoring station and a site response contact with a security provider.

Site Reconfiguration

6.12 The existing wellsite is largely rectangular in shape measuring approximately 138.5m x 80.5m. It was constructed in 2014 by stripping topsoil and creating a stable compacted stone surface over an impermeable membrane (a GCL). The membrane extends into a perimeter containment ditch which managed and contained surface water run-off during exploratory operations. The collected topsoil has been used to create screening bunds around the north and western boundaries of the wellsite and the entire site is securely fenced with 2m high palisade fencing. The construction of the existing wellsite will be covered in the evidence of Mark Barwood.

6.13 To address the concerns raised by the previous Inspector and to which I refer to in chapter 4 of my Proof, Egdon proposes to reconfigure the wellsite to include new embedded environmental mitigation in the form of a new high-density polyethylene (HDPE) impermeable membrane, installed on top of the existing GCL. In summary, these reconfiguration works will comprise:

- The removal of the existing temporary storage tank containment bund;
- The removal and regrading (to remove any oversized materials) of the existing surface aggregate;
- The installation of a new HDPE impermeable membrane and protection geotextiles across the site, to be located above the existing GCL, in order to provide the primary impermeable barrier between the surface of the wellsite and any pathways to groundwater resources;
- The relining of the perimeter containment ditches with new HDPE impermeable membrane (and protection layers), installation of twin-wall perforated drainage pipe within the containment ditch, and backfill with stone to surface to form a French Drain;
- The installation of regraded surface aggregate to a design depth of 300mm;
- The construction of a masonry containment bund using concrete, on a poured reinforced concrete base, sized approximately 27.6m x 15m x 0.45m high (internal size);
- The construction of an HGV internal roadway system within the site, for tanker loading, using poured reinforced concrete;
- The construction of a tanker loading area, using poured reinforced concrete, complete with containment kerb;
- Installation of a full retention interceptor, to enable the discharge of clean surface water run-off to the adjacent surface watercourse; and
- Installation of up to 2 additional water monitoring boreholes and deepening of 3 of the 4 existing water monitoring boreholes.

6.14 It is expected that the reconfiguration works will take four weeks to complete, an increase of one week compared with the previous applications, in order to accommodate the installation of the new HDPE impermeable membrane.

Site Investigation and Design

6.15 To inform the design of the reconfiguration works, and to address the concerns raised in the Inspector's decision letter, Egdon commissioned Opus International Consultants (UK) Limited (Opus) to prepare a ground investigation report, with the objective of confirming the ground conditions and geotechnical properties underlying the existing wellsite. The findings of the ground investigation report are included within the CSDS. This is covered in the evidence of Mark Barwood.

6.16 The existing GCL is an impermeable membrane which prevented a pathway for surface water discharge to migrate to the underlying subsoils during the exploratory drilling and testing phase. It will not be relied upon as part of the reconfigured wellsite barrier system. The primary barrier will be the new HDPE impermeable membrane.

6.17 Egdon proposes to reconfigure the wellsite containment area as follows:

- The existing 300mm of surface aggregate will be removed, exposing the 2 existing layers of geotextile which sit above the existing GCL. The surface aggregate will be temporarily relocated on site for subsequent reuse as part of the wellsite reconfiguration. The aggregate will be subject to screening and regrading to remove any oversized material prior to it being re-laid.

- The existing upper protective geotextile layer will be removed for offsite disposal at an EA approved waste facility together with any debris and/or vegetation within the existing perimeter containment ditch.

- Once the existing lower protective geotextile layer directly above the GCL is fully exposed and the perimeter containment ditches are cleared of any vegetation, a new HDPE impermeable membrane, and associated protective geotextiles, will be installed above the existing lower protective geotextile and GCL, across the active wellsite area and perimeter containment ditches. This will be installed in accordance with a Construction Quality Assurance Plan (CQA) that will be reviewed, approved and the installation verified by the EA. Following installation, the tertiary containment system will consist of (from top to bottom):

    - Protection geotextile (Secutex R801) - the new upper layer;

    - 2mm fully welded new HDPE impermeable membrane (Carbofol):

    - Protection geotextile (Secutex R301) -new lower layer;

6.18 A 300mm diameter twin-wall perforated pipe will be installed within the perimeter containment ditch and backfilled with clean (new) aggregate to form a French drain. This will enable collection of surface water runoff, which percolates down through the aggregate and into the pipe, to enable discharge via an installed full retention separator. Access points will be installed at each of the four corners of the French drain to provide for rodding, inspection and cleaning purposes throughout the life of the wellsite.

6.19 The surface aggregate removed from the site will be re-laid across the active area of the wellsite, having been subject to screening and regrading to remove any oversized stone.

6.20 The grading and depth of the surface aggregate has been tested and assessed by the consulting civil and structural engineers in consultation with the manufacturer of the HDPE impermeable membrane (Naue). A surface aggregate depth of 300mm, together with the HDPE impermeable membrane and proposed protective geotextiles have been subject to cylinder testing under laboratory conditions, which replicates the maximum loading pressure exerted on the HDPE impermeable membrane. Mark Barwood's evidence covers this is more detail.

6.21 The design process concluded that 300mm of regraded surface aggregate installed over a protective geotextile is effective to protect the HDPE impermeable membrane, taking into account the maximum wellsite loading and HGVs trafficking over the wellsite over the lifetime of the Proposed Development.

6.22 Additional protection to the tertiary containment system is to be provided in the most frequently trafficked areas of the wellsite through the installation of a poured reinforced concrete internal roadway system which provides even greater weight distribution and protection over the HDPE impermeable membrane.

Surface Water Interceptor and Discharge to Surface Water

6.23 A full retention surface water interceptor will be installed along the northern perimeter of the wellsite to enable clean surface water discharge from the site into Ella Beck. The interceptor will conform to BS EN 858-1:2002 and BS EN 858-2:2003 for the design, use, selection, installation and maintenance of prefabricated oil separators. An isolation valve will be installed up stream of the interceptor (between the perimeter containment ditch and the interceptor) to provide for full containment of the wellsite during periods of increased operational activity. For example, this would be during well operations and during any workovers and well interventions. A sampling point and isolation valve will also be installed downstream of the interceptor. This is covered in more detail in Mark Barwood's evidence.

6.24 The interceptor discharge point will be located on the southern bank of Ella Beck. To maintain the integrity of the bank, a pre-cast concrete headwall will be installed to mitigate erosion. There will be no discharge of any process fluids from the wellsite via the surface water containment and discharge system; the containment system and interceptor will only discharge clean and uncontaminated surface water run-off.

6.25 In advance of any operations on the wellsite, the stream water will again be sampled and analysed by an accredited independent laboratory to establish the baseline water quality.

6.26 Water from Ella Beck will be sampled:

- At three separate locations:
- For three months before any well operations begin on site;
- Weekly during well operations; and
- Monthly during production.

6.27 The Environmental Permit issued for the Wressle wellsite includes details of a comprehensive list of surface water monitoring parameters that will be subject to analysis by an independent accredited laboratory. The list of surface water monitoring parameters and frequency is reproduced from the Environmental Permit and is set out below.

Table 6.6: Surface Water Monitoring Parameters and Frequency

Schedule 3 – Emissions and monitoring

Table S3.1 Surface water monitoring requirements

Location or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Surface water monitoring on Ella Beck on at least three locations as follows: • 1 location within 200 metres upstream of the site • 1 location around the area adjacent to the midpoint of the site boundary riparian to the watercourse • 1 location within 200 metres downstream of the site	Ammoniacal Nitrogen Arsenic Barium Boron Cadmium Calcium Chloride Total Chromium Copper Lead Magnesium Mercury Nickel Potassium Selenium Sodium Zinc pH PAH TPH BTEX Total suspended solids Electrical conductivity Calcium carbonate No visible oil or grease	Once before commencement of permitted activities, weekly during drilling, near wellbore treatment and hydraulic fracturing operation and monthly thereafter, unless otherwise agreed with the Environment Agency.	As approved in writing by the Environment Agency	

Primary and Secondary Containment - Produced Fluids

6.28 Five cylindrical horizontal tanks, each with a volume capacity of 52m^3 will be installed for the primary containment of produced fluids (oil and any formation waters). The total fluid storage volume is 260m^3.

6.29 In accordance with CIRIA C736, secondary containment will be provided by way of a bund for the storage of produced fluids.

6.30 The proposed fluid storage bund is to be constructed using a reinforced concrete poured base and reinforced concrete poured walls. It has been sized to accommodate at least 110% of the capacity of the largest primary storage tank. An allowance has been provided for accumulated rainfall and equipment displacement.

6.31 Two sumps will be constructed within the reinforced concrete base to allow for the collection and transfer of surface water to onsite storage, for subsequent offsite treatment and disposal at an EA approved waste water treatment facility.

Local Secondary Containment – Tanker Loading Bay

6.32 A tanker loading bay will be built for loading of oil into tankers for subsequent offsite transfer by road to the refinery at Immingham. The tanker loading bay will be constructed using a reinforced concrete poured base and treif kerbing. A sump will be constructed within the base to allow for the collection and transfer of surface water by pump to onsite storage, for subsequent offsite treatment and disposal at an EA approved waste water treatment facility. In the highly unlikely event of a significant spill during tanker loading, the secondary containment will be designed to capture the spill and pump fluids to the storage tank system, which itself is to be contained within the storage tank bund.

6.33 For clarity, secondary containment provided on the wellsite is not connected to, nor dependent upon, the tertiary containment which will underlay the entire wellsite.

HGV Internal Roadway

6.34 To avoid any mud or debris being transferred from the access track on to the wellsite aggregate and to improve load bearing in this most heavily trafficked area, a reinforced concrete internal roadway will be constructed within the wellsite. The roadway provides for HGVs driving on to the wellsite and manoeuvring to and from the tanker loading bay. The roadway and tanker loading facilities are detailed within the supporting documentation.

6.35 Any mud or debris deposited on the reinforced concrete internal roadway will be immediately visible and easily removed by brush and shovel without it migrating to the surface aggregate, removing the need for wheel washing.

6.36 The access roadway will be designed and installed to ensure that surface water drains to the perimeter bunding system.

Laydown Area

6.37 To avoid the potential for any well fluids being transferred from the well tubing or pump rods on to the surface aggregate during well maintenance or workover operations, a reinforced concrete laydown area will be constructed adjacent to the existing concrete well pad, which surrounds the drilling cellar.

Other Concrete Bases

6.38 Reinforced concrete hardstanding bases will be constructed outside the main well pad area, upon which the electricity generation equipment will be sited, namely the gas engine, transformer and substation.

Extension Area

6.39 The existing wellsite area will be extended (extension area) by 0.12 ha for the purpose of providing an additional security control and associated parking area during the well operations stage, when vehicle movements and personnel will be at its highest.

6.40 The boundary enclosure for the extension area will either be temporary Heras fencing, or Paladin security fencing.

Site Fluid Containment

6.41 The wellsite reconfiguration has been designed to provide sufficient capacity to retain rainfall volumes without discharging from the wellsite, from a 1 in 100 year plus 5% climate change storm event. This is covered in more detail within Mark Barwood's evidence.

Construction Quality Assurance

6.42 Construction works associated with the reconfiguration of the wellsite will be carried out in accordance with a Construction Quality Assurance plan (CQA). Mark Barwood covers this in his evidence.

6.43 On completion of the wellsite reconfiguration works, an as-built construction pack will be collated documenting a true and accurate record of the construction. The pack will include all material specifications, quantities used, their placement location, installation guides, inspection and testing records and daily construction reports.

Production set-up

6.44 The production facilities will be installed after the wellsite reconfiguration works are complete and before any well operations take place.

Groundwater Monitoring Boreholes

6.45 Planning permission was granted by NLC on 11 January 2017 for the installation of 4 groundwater monitoring boreholes to monitor groundwater quality (ref: PA/2016/808). The permission was implemented in early February 2017. One deep borehole has been installed at an approximate depth of 50m whilst three shallow boreholes have been installed at a depth of c.5 metres.

6.46 These four boreholes have been installed to enable monitoring of near-surface groundwater that has a resource value, that is, groundwaters used for drinking water supplies or agriculture.

6.47 It is proposed to deepen the 3 shallow existing boreholes to ensure full penetration of the Sutton Sand Formation, with the borehole terminating 0.5m into the underlying clay.

6.48 Taking account of the hydrogeology and geology below the surface of the wellsite and the surrounding area. Egdon proposes to install up to 2 additional groundwater monitoring boreholes in addition to the 4 already constructed on the wellsite. The rationale, indicative location and depth of the currently proposed additional borehole is detailed within the HFRA and in James Dodds' evidence.

6.49 The installation and modification of the boreholes will require a small drilling rig to be brought to the wellsite, with the operation expected to take 2 weeks. This will be undertaken during the production set-up period (phase 1).

6.50 Sampling and analysis of groundwater resources will take place for a minimum of 3 months before site operations start, to establish baseline water quality data. Sampling and analysis will continue during wellsite operations and also through the production phase, in accordance with the requirements of the Environmental Permit, to ensure that there is no change to the water quality when compared to the baseline data. All water samples will be independently analysed by third-party laboratories and reported to the EA.

Well Operations (Phase 2)

The Need for the Proposed Well Operations to enable Production

6.51 During the Wressle-1 flow tests in 2015, analysis of the pressure and flow data indicated that the natural flow from the Ashover Grit sandstone oil reservoir had been impaired by the drilling and testing operations. All deep wells and boreholes are drilled with drilling fluids ("mud") to lubricate and cool the drill-bit and bring rock cuttings to the surface. The fine particles within the mud and the drilled rock cuttings can "stick" around the perforations (holes) in the casing, and within the pores of the rock itself or react with the clay particles to reduce the natural flow, a situation referred to as "skin". This is the situation with the Wressle-1 well, where the natural flow of hydrocarbons from the sandstone rock is significantly impaired. In order to remediate this situation and enable oil production from the well, one or more of a number of standard oilfield operations are necessary and summarised below:

- Acidisation;
- Proppant squeeze;
- A sidetrack drilling operation with a drill rig.

6.52 The individual operations proposed to improve the permeability of the sandstone reservoir, and overcome the “skin” issues, are summarised below.

6.53 In relation to the proposed operations:

- It is likely that the acidisation treatment will be undertaken first to unblock the pores within the rock and perforations in the steel wellbore casing. This should enable oil to flow more freely through the sandstone;
- If the acidisation does not resolve the permeability (“skin”) issue, a proppant squeeze operation would then be applied as a completely separate operation and would be undertaken once, and once only;
- If either of these operations are not successful, they will not be repeated. In the context of overcoming the “skin” issue, they will either work or not work;
- In the event that neither of the above methods work in the context of overcoming the “skin” issue, a sidetrack drilling operation would be undertaken.

Acidisation

6.54 Acids are routinely used following drilling of boreholes for public water supplies, commercial water wells, geothermal wells and oil and gas wells to remove any “skin” effect and reinstate and enhance natural permeability (flow). This type of process is proposed at the Wressle-1 well in order to overcome the impaired flow of hydrocarbons.

6.55 At Wressle, the sandstone rock is made up of different grain types and so a combination of acids is needed to target quartz, clays and carbonates material within the sandstone. The acid mix reacts with the formation, dissolving fine particles in the natural pores of the rock. Once these solids are removed, hydrocarbons and/or water are able to flow more freely through the sandstone and into the well.

6.56 The acid mix is intended to treat the near-wellbore area only, extending to a radius of approximately 4-6 metres from the wellbore.

6.57 The chemicals used in the acidisation process will comprise diluted hydrochloric acid, ammonium bifluoride and ammonium chloride, together with corrosion inhibitors and surface tension reducing additives. These additives are at less than 1% concentration to protect the steel casing and to improve the flow-back of fluids from the well. All of the proposed chemicals are widely used in the UK and will be transported and managed in accordance with the appropriate regulations to ensure no harm to personnel and the environment.

6.58 The acid mix creates hydrofluoric acid and this reaction then dissolves the fine particles and solids that are blocking the natural pores of the rock and the perforations (holes). There will not be any transportation of hydrofluoric acid to or from the wellsite.

6.59 Hydrofluoric Acid (HF) has many uses and applications that range from the generation of compounds such as Teflon (PTFE plastic), Freon (refrigerants), through to pharmaceuticals and industrial applications (glass etching, metal cleaning). One of the most common uses of HF is as an effective cleaner for brickwork in the restoration of period buildings where concentration of 8% or more are used.

6.60 As soon as the acid treatment enters the sandstone reservoir, the chemical reaction starts and very quickly the acids are neutralised (“spent”) through the dissolution of the particles and solids blocking the rock pores and casing perforations. The fluids are then flowed back to surface and any residual acidic properties are treated with soda ash, a neutralising agent, similar to that used in hot tubs and swimming pools.

6.61 The acid treatment will take place deep underground (more than 1.6km), and the groundwaters within the Carboniferous Millstone Grit Group (which includes the Ashover Grit) are highly saline and not considered by the EA to be key receptors.

6.62 Given this, together with the low volumes of acid and the chemical reaction, it has been proposed by Egdon and accepted by the EA that this activity is de minimus.

6.63 The presence of a number of cemented steel casings, together with the impermeable rocks provide an effective barrier to shallower groundwater or aquifers.

Proppant Squeeze

6.64 If the acidisation treatment does not resolve the “skin” issue sufficiently, a proppant squeeze may be undertaken as a separate operation. The process involves pumping gelled fluids and very small solid

particles (ceramic beads) called “proppant” down the wellbore and out through the existing perforations in the steel wellbore casing. The fluid and proppant is pumped at a pressure which creates a small fracture in the rock that extends a short distance (up to a few tens of metres) either side of the wellbore. When the pressure is reduced, the injected particles then “prop open” the fine fracture and allow oil to flow.

6.65 This treatment is an established, tested and proven technique that has been safely undertaken at many conventional UK onshore oil production sites throughout the UK and, in particular, the East Midlands – for example, at the nearby Crosby Warren oilfield.

6.66 The proppant squeeze has been referred to by others as a “mini-frac” and there is a common misconception that this is the same as High Volume Hydraulic Fracturing of shale rocks for gas or oil, otherwise commonly known as “fracking”.

6.67 Although there are similarities in the technique when compared to a High-Volume Hydraulic Fracture (“fracking”) for shale gas, this operation is significantly smaller in scale.

6.68 Below are some key facts about proppant squeeze and comparisons with ‘fracking’:

6.69 The proppant squeeze involves pumping for approximately one hour to measure rock properties and then again for approximately one to two hours the following day to create a fracture and inject the proppant;

- It will be undertaken once only;
- It will use 150m^3 of fluids in total (“fracking” uses more than 1,000m^3 per fracture stage);
- Typically, fresh water, some salt and solid proppant make 97% or more of the treatment, along with a number of minor chemical additives, all of which are widely used in the UK and will be transported and managed in accordance with the appropriate regulations;
- Water will not be tankered to the wellsite;
- It will use 20-30 tonnes of proppant, involving 1-2 lorry loads: - “fracking” would typically use c.300 to 1,000 tonnes per well;
- The extent of the fracture will be less than 40 metres laterally and 40 metres vertically at 1,570m below the surface. “Fracking” involves multiple fractures per well extending c.100-300 metres laterally and c.50-100 metres vertically; and
- All fluids have to be assessed for suitability and use by the EA. If any chemicals are considered to pose a risk to groundwater, a permit will not be issued and the EA will not allow the operation to take place.

6.70 A Permit has been issued by the EA, authorising these acidisation and proppant squeeze activities.

6.71 The Ashover Grit sandstone is part of a much thicker sequence defined as the Carboniferous Millstone Grit Group. The top of the Millstone Grit extends from 1,525m to 1,587m below ground level. The maximum extent of the vertical fracture will therefore be contained within the Millstone Grit, as detailed within the proppant squeeze model and fracture simulation included within the HRA.

Water usage

6.72 The proposed proppant squeeze would use approximately 150m3 of fluid treatment, of which over 95% will be water. The acidisation operation would use less than 40m3 of water as part of the operation. There is no requirement to tanker in or abstract potable water as all water at the wellsite will be supplied via the existing mains connection. Other than the proposed proppant squeeze and acidisation, the only water that will be used will be for drinking water and toilets – comprising less than 0.2m3 or 200 litres per day for “domestic” type use.

6.73 To provide context in relation to the quantity of water that Egdon propose to use at Wressle, the British Steel abstraction boreholes extract 180m3 – 180,000 litres – per hour, 24 hours a day, from the local groundwater/aquifer supply.

Volumes of Waste Fluids

6.74 Volumes of neutralised (“spent”) acid mix returned from the acidisation will total 50m3 (2 tanker loads). The fluids returned to surface from the proppant squeeze will be approximately 150m3 which equates to 5-6 tanker loads in total. Both waste fluids will be transferred off site to a licenced waste treatment or disposal facility. All fluids will be sampled and analysed to determine the appropriate receiving facility – until the analysis is complete it is not possible to pre-empt where the fluids will be sent.

Sidetrack Drilling

6.75 If the near wellbore treatments do not resolve the permeability (“skin”) issue, a sidetrack drilling operation will be undertaken to enable oil production from the Ashover Grit formation. This includes the

mobilisation and assembly of a drilling rig, with a maximum height of 40m, and associated equipment, leading to the drilling of a short sidetrack borehole of c25m in length from the existing casing. This phase is expected to last 3 to 4 weeks, with a short operational drilling period of 2 weeks. The aim of the sidetrack drilling operation is to intersect the hydrocarbon bearing reservoir away from the area where "skin" is present. Following the completion of the sidetrack drilling, the rig and associated equipment will be demobilised and removed from the wellsite. The indicative layout of drilling and associated equipment on the wellsite during the sidetrack drilling is detailed within the supplied site plans.

Production (Phase 3)

6.76 The expectation is that the Ashover Grit formation will produce oil, with the potential for associated volumes of natural gas. Depending on the volumes of gas, this will be utilised/managed as detailed under the 'Gas Management' section below.

6.77 During the production operations phase, fluids will be recovered from the well either by free-flowing naturally, or with the aid of a surface pump facility that will artificially lift fluids to the surface. At this point in time the choice and type of pump mechanism has not been confirmed but would comprise either a beam pump ("nodding donkey"), or similar surface pumping system, with a maximum height of c.10m.

6.78 Produced fluids will be diverted at surface to a 3 phase separator (oil, water and gas). Separated fluids would be stored within storage tanks located within the produced fluid bund. Oil would then be collected by road tanker and sent offsite for refining, and water would be collected by a licenced waste contractor and managed via a licensed facility. During the first years of oil production, associated volumes of formation water is expected to be minimal. As with all oil fields, over time, the produced oil volumes start to naturally decline and formation water production gradually increases. The formation water, which is saline, will either be disposed of at a licensed waste facility or reinjected as pressure support at another oil field site. Reinjection can only happen if the appropriate environmental permits are in place at both sites and the receiving formation must be deemed appropriate by the EA.

6.79 In terms of wellsite energy requirements, electricity supply will be provided from the main electricity distribution network, running either underground or via overhead cables to the site from a local connection point. In the event that the grid-connection will not be completed before the start of oil production, Egdon plans to install a temporary diesel generator to provide electrical power to site.

6.80 The indicative location of equipment needed to facilitate connection to the electricity network (subject to agreement with the electricity supplier) is indicated within the accompanying site plans.

6.81 The flow testing and gas evaluation data indicates significant gas volumes that, when the site is in production, can be used to generate electricity on site via a gas engine. This will provide for site power requirements and enable the export of surplus electricity to the electricity distribution network. The gas engine will be housed in an acoustic container and any noise impact would be minimal.

6.82 Given the timescales for grid connection, and given the potential for produced gas, an enclosed ground flare will be installed in order to manage initial gas volumes, and then manage any residual gas not used to generate electricity or where the gas engine is unavailable.

6.83 The flare unit is of a type approved under the Environmental Permit and would be subject to intrinsic automatic controls to ensure that there would be no visible flame from any flare system.

Well Decommissioning and Site Restoration (phase 4)

6.84 At the point of well decommissioning (sealing and capping), a fully detailed programme will be developed by Egdon, in accordance with current decommissioning guidelines, which will be subject to examination by an independent well examiner. This programme will also be subject to review by the Health and Safety Executive (HSE), the EA and the OGA.

6.85 The wellbore casing would be sealed to surface using cement plugs, in accordance with the approved programme, with each stage being subject to pressure tests to ensure its integrity. The casing will be cut at least 2m below surface level and a metal plate stich-welded across the top of the casing.

6.86 The wellsite itself will then be restored to agricultural use in accordance with best practice, which includes post-site restoration aftercare.

7. COMPLIANCE WITH THE RELEVANT DEVELOPMENT PLAN POLICIES

7.1 The relevant local planning policies in the adopted North Lincolnshire Local Plan 2003 and the North Lincolnshire Core Strategy 2011 are identified in the SoCG (CDC6). The relevant extracts are set out in Core Documents CDF1 and CDF2.

7.2 This section of my proof of evidence assesses the degree of compliance between the Proposed Development and the relevant Development Plan policies, including the considered by the Inspector to be relevant in his dismissal of Appeals A and B in January 2018, namely policies M1, M23 and D15 of the North Lincolnshire Local Plan 2003 and criterion 10 of policy CS18 of the North Lincolnshire Core Strategy.

7.3 Planning law requires that applications for planning permission be determined in accordance with the development plan, unless material considerations indicate otherwise.

North Lincolnshire Local Plan 2003

7.4 The Proposed Development lies within the unitary authority of North Lincolnshire. Applications will be determined against NLC's development plan for North Lincolnshire. Following the commencement of the Planning and Compulsory Purchase Act 2004 in September 2004, the policies of the North Lincolnshire Local Plan 2003 were 'saved' for an initial period of three years. As part of this process, NLC was required to draw up a list of those policies to be saved beyond 2007.

7.5 This list was submitted to the Secretary of State for consideration in April 2007. Following this the Secretary of State has issued a direction setting out which policies will be 'saved' from September 2007. These Local Plan policies will continue to form the basis on which planning decisions are made until such time as they are replaced by new policies in the Local Development Framework. The Secretary of State's direction and decision letter provides a list of those policies saved and deleted from the Local Plan, which took effect on 27 September 2007.

7.6 I set out below how the proposed development complies with the relevant policies in the North Lincolnshire Local Plan 2003.

Compliance with the North Lincolnshire Local Plan 2003

Policy M1 (Applications for Mineral Working)

7.7 The main saved policy relating to applications for mineral working is Policy M1, which seeks to draw a balance between the environmental impacts which may result and the need for the mineral in question. The policy states the following:

> "**Proposals for mineral extraction will be permitted provided that:**
>
> **i) Adequate proposals are made to minimise visual and other amenity impacts to an acceptable level; and**
>
> **ii) The proposed order and method of working, and overall programme for extraction are satisfactory; and**
>
> **iii) The proposals and programme for progressive restoration are satisfactory, and are accompanied by proposals for beneficial after-use and management of the land; and**
>
> **iv) The local road network or other proposed transport facilities are adequate."**

7.8 Under Policy M1 in paragraph 15.28 of the Local Plan it states that:

> **"In considering applications for mineral extraction it is necessary to draw a balance between the environmental impacts which may result and the need for the mineral in question."**

7.9 I will address each of the criterion in turn to conclude that I consider the Proposed Development is in accordance with Policy M1.

7.10 The Proposed Development was accompanied by a Landscape and Visual Appraisal, which assessed the impact of the development on the landscape and the visual impact from the development. The Site is not located within a national or local designated area of importance. The Site is well screened due to woodland. The Appraisal concludes that there would be a 'negligible' impact on the landscape character, including when the drilling rig is in place for a temporary period. With regard to the effect on amenity, the application was accompanied by transport, flood risk, noise and lighting assessments, which carefully considered the impact of the development on residential amenity. All of these reports concluded that there would be no adverse impact on the amenity. NLC's Environmental Health Officer (EHO) made no objections to the application. I therefore consider that the Proposed Development is in accordance with criterion (i) of Policy M1.

7.11 In respect of criterion (ii), the application is for the production of hydrocarbons for a temporary period of 15 years. The extraction will take place below the surface. The Appeal Site will not be altered during this production phase and a 'beam pump' (or equivalent) will bring oil to the surface. There will be a limited number of HGV movements per day (up to 6). Technical reports have assessed the impact of the development on potential environmental impacts and have concluded that there will be no adverse impacts. I am therefore of the opinion that the proposal is in compliance with criterion (ii).

7.12 In terms of criterion (iii), Appendix 5 of the Planning and Sustainability Statement (CDA2) that accompanied the application comprises a Site Restoration Plan. This has been updated since the original permission for exploratory drilling was granted by NLC in June 2013. The restoration will be subject to the approval of the relevant regulatory regimes (see Jonathan Foster's evidence for more information). The Site will be restored to agricultural land and includes measures to contribute to net biodiversity, with the inclusion of a Biodiversity Management Plan (agreed with NLC in Condition 20 in the SoCG (CDC6)). Both the Council and the Appellant have also agreed to the wording of a condition referencing the Site Restoration Plan. I therefore consider that the proposal in in compliance with criterion (iii).

7.13 Criterion (iv) refers to the impact of the development on the local road network. A Transport Statement was submitted to accompany the application. It concluded that the development would not have a detrimental impact in terms of road safety. In addition, the proposal is also not considered to cause adverse impacts on the local highway network. NLC's Highways officer did not raise any objections to the application. I therefore conclude that the road network is sufficient to accommodate the development.

7.14 The supplementary paragraph of the Policy states a balance must be struck between the environmental impacts and the need for the mineral. The production of indigenous hydrocarbons is considered a national need by the Government in the UK's transition to a low carbon economy. The technical reports have concluded that there are no material adverse environmental impacts. This was supported by NLC's independent environmental consultants, JBA, who concluded that the proposals were acceptable subject to conditions that were agreed by NLC and the Appellant (CDA16).

7.15 Policy M1 generally has a positive emphasis which permits mineral extraction provided that four criteria are satisfied. I therefore consider that the Proposed Development is in accordance with all four criteria in Policy M1.

Policy M3 (Residential Amenity and Protection Zones)

7.16 This policy states that mineral working will not be allowed directly adjacent to proposed housing or other land uses where unacceptable impacts may arise. The separation required will depend on the nature and scale of the proposed working and the potential to use mitigatory measures.

7.17 The site is more than 500m from the nearest residential property. There is agreement between the parties that the proposed development will not give rise to adverse noise impacts (paragraph 2.3 (l) CDC6). In addition, the noise monitoring that was applied during the drilling and testing phases of the exploratory wellsite demonstrated that noise thresholds defined within planning conditions were not

breached. The SoCG (CDC6) includes a condition requiring a noise management plan to be submitted and approved before the commencement of works (condition 6).

7.18 The Council's Highways Officer has not raised concerns about highway safety or other traffic impacts arising from the development upon residential amenity. The Council has accepted in the SoCG (CDC6) that the likely traffic movements will be limited. Consequently, there will be no impacts arising from noise or traffic movements upon residential properties in the vicinity of the appeal site.

7.19 There is no objection from the Council's EHO to the application. Egdon can confirm that it received no complaints from residents during the drilling of the site in 2014 which is the phase with the greatest potential for noise and highway impacts owing to relatively high levels of traffic movements and activity on site.

7.20 I conclude that the proposed development complies with Policy M3.

Policy M4 (Ancient Monuments and Archaeological Sites)

7.21 Proposals for minerals development affecting sites of known or potential archaeological importance must be accompanied by an archaeological assessment and where necessary, a field evaluation. Minerals applications affecting scheduled ancient monuments will not be allowed unless the reasons for development clearly outweigh the archaeological value of the site.

7.22 The closest designated heritage asset is a scheduled monument approximately 1.5 km to the north, known as Thornholme Priory. Egdon submitted an Archaeological Desk Based Assessment and Heritage Impact Assessment, prepared by Archaeological Project Services, with the application (CDA9). The Assessment was originally prepared in October 2012 to accompany the Original Permission and were updated in July 2018 to accompany PA3.

7.23 The Assessment concluded that the only potential visual impact upon the setting of Thornholme Priory from the proposed development would be during the site set-up and well operations, when workover and drilling rigs with heights of up to 40 metres would be operational for short periods. Overall, the assessment found that visual and setting impacts would be short-term and reversible.

7.24 Thornholme Priory is of significance and there will be a minor change and impact to the setting of this asset. However, the duration of this minor change will be short and temporary (six weeks of which two would be actual drilling works) and will be entirely reversible.

7.25 Natural screening by blocks of woodland to the east, west and partly to the south of the wellsite minimises any impact on the setting of any other heritage assets that lie further away. The temporary nature of the wellsite means that any visual or setting impacts on heritage assets will be transient.

7.26 In her consultation response, the Council's Historic Environment officer has stated that her comments are identical to those made in relation to previous applications on the site. She acknowledges the updated Heritage Impact Assessment is in accordance with para 128 of the (2012) NPPF (now para 189 of the 2019 NPPF). She goes on to say that the report provides sufficient information with which to assess the impact on Thornholme Priority and its setting in accordance with 129 of the (2012) NPPF (now para 190 of the 2019 NPPF). She is satisfied that any harm to the scheduled monument will be less than substantial. She raises no objection and advises that no mitigation is considered necessary.

7.27 The SoCG (paragraph 2.3 (j), CDC6) confirms that there is agreement between the Appellant and NLC on this matter. Both parties agree that, whilst there may be a visual and setting impact on Thornholme Priory arising from the proposed drilling rig, the impact will be of slight/moderate scale and for a short temporary period only with no mitigation measures required. I therefore conclude that the proposed development complies with Policy M4.

Policy M7 (Transportation of Minerals)

7.28 Planning permission for new mineral workings will only be granted where the Council is satisfied that the level of traffic movements can be accommodated on the local road network, and where impacts on local communities can be reduced to an acceptable level.

7.29 As is the case with assessing the proposed development against policy M5 above, this Proposed Development concerns production (a new phase of hydrocarbon extraction), and therefore, I consider that this policy is relevant. The planning application was accompanied by a Transport Statement (CDA7). Access to the wellsite from the B1208 will use an existing farm access which serves Lodge Farm. The wellsite is well located to the classified highway network and strategic road network with the A18 connecting to the M180 motorway to the south-west of the wellsite.

7.30 A road casualty study has not revealed any identifiable existing collision issues associated with the expected movements generated by the proposed development. The expected vehicle trips to be generated by the proposed development will mostly have a negligible to low impact on the local highway network with only a moderate traffic impact for a short timeframe for specific activities.

7.31 The Transport Statement concludes that the projected trip generation does not represent a significant amount of movement and should therefore only have a negligible impact on the operation of the local highway network.

7.32 The Council's Highways Officer has not objected to application. He has advised that a condition requiring that traffic be managed at all stages of the development in accordance with the submitted details be attached to the planning permission.

7.33 Egdon is not aware of any complaints from residents or from the Council's Highways officer arising from traffic impacts during this period. Both the Appellant and NLC agree that the transport impacts upon local communities can be reduced to an acceptable level (SoCG (CDC6), paragraph 2.3 (o)). Consequently, I consider that the proposed development complies with Policy M7.

Policy M23 (Oil and Gas Production)

7.34 This policy states that proposals for oil and gas production facilities will be permitted, provided that the proposal incorporates environmental protection measures that are adequate to mitigate the impacts arising from a long-term permanent site. The policy is one of the most relevant development plan policies in the determination of this appeal as it sets out the Council's approach to proposals for oil and gas production in North Lincolnshire.

7.35 NLC referred to this specific policy in the reason for refusal, stating that the proposed development is contrary to Policy M23 as the proposal would have an unacceptable impact on local residents, the community and the local economy. NLC now accepts that the proposal accords with Policy M23 (paragraph 2.4) in the SoCG (CDC6).

7.36 The proposed development incorporates a range of environmental protection measures which serve to mitigate the impacts of the scheme. I have set these out later in paragraph 7.97 of my Proof in demonstrating how the proposal complies with policy CS1 of the North Lincolnshire Core Strategy.

7.37 In addition, chapter 4 of my proof sets out the specific changes that have been incorporated into the scheme to address the concerns raised by the Inspector in his decision letter (CDD6). The additional changes to the scheme that have been made voluntarily and not in direct response to the Inspector's letter are summarised in chapter 5.

7.38 The detailed measures in the design of the wellsite, the embedded mitigation measures in the HFRA and the monitoring existing groundwater quality are described in the proofs of evidence of Mark Barwood and James Dodds respectively. The scheme of monitoring will help ensure that the effectiveness of the proposed mitigation measures is maintained. These have been reviewed by JBA, an independent consultant, on behalf of NLC and I have summarised this review (CDA16) and the Appellant's response (CDA17) in chapter 9 of my proof. I conclude that the proposed development complies with Policy M23 in that it incorporates adequate environment protection measures.

Policy RD2 (Development in the Open Countryside)

7.39 This policy seeks to strictly control development in the open countryside to certain uses. Amongst other uses, policy RD2 identifies employment-related development appropriate to the open countryside as an acceptable type of development. New development in the open countryside will only be permitted provided that the open countryside is the only appropriate location; it accords with the specific requirements set out in the relevant policies of the Local Plan; it would not be detrimental to the character or appearance of the area; it would not be detrimental to residential amenity or highway safety; and the development is sited to make best use of existing and new landscaping.

7.40 I consider that this Policy is inconsistent with the latest version of the National Planning Policy Framework (NPPF) (February 2019). Paragraph 83 states that planning decisions should support the sustainable growth and expansion of all types of business in rural areas. It does not restrict the type of development that is permitted in the countryside. Nevertheless, I believe the proposal complies with the policy because, in practice, it requires a countryside location. Minerals can only be worked where they are found; in many cases, this is likely to be in the countryside. Consequently, the open countryside can often be an acceptable location for the production of hydrocarbons.

7.41 The planning application was accompanied by a landscape and visual appraisal (LVA) (CDA10). The LVA considers the likely effects on landscape and visual amenity arising from the four stages of

operation – site reconfiguration and set-up works; well operations; production of oil and gas; and well decommissioning and site restoration.

7.42 The Heathy Woodland - Risby Warren and Broughton local character type (LCT) comprise contrasting patterns of open heath and woodland enclosure. The general characteristics of the LCT do not highlight any prominent visual detractors with visual containment provided by significant woodland tracts.

7.43 The LVA concludes that the effects of the wellsite on landscape character within the study area would be negligible. The effects upon adjacent local character areas and types would be neutral owing to the short duration and temporary nature of the drilling and workover rig on site – the only element of the development which is likely to be visible and influence character. Although the development would form an additional vertical detractor in some views, the lower reaches of the rig would be screened by the woodland around Broughton and the B1207.

7.44 In some locations, the rig would protrude above the vegetation; however, the proposed Development would form only a minor component within most of the 10 representative viewpoints due to the effect of intervening vegetation. The very short duration when the drilling and workover rigs would be visible is a key criterion in reducing the magnitude of effect and importance.

7.45 In summary, during phases 1 and 2, when the rig is present, the effects on the five closest viewpoint receptors would be of negligible importance. Phases 3 and 4 would have a neutral effect on visual amenity other than immediately adjacent to the Site.

7.46 The Appellant and NLC have agreed that there is an absence of any significant impacts upon the local landscape, and that there will be no adverse impacts upon the local highway network and residential amenity. The LVIA demonstrates that the site makes appropriate use of the existing landscaping and tree coverage in helping to screen the development. Minerals can only be worked where they are found. Accordingly, I conclude that the development accords with Policy RD2.

Policy DS1 (General Requirements)

7.47 This policy seeks a high standard of design in all new developments and states *"proposals for poorly designed development will be refused".* Policy DS1 sets out criteria against which all new proposals will be considered as set out below:

- Quality of design
  - i) The design and external appearance should reflect or enhance the character, appearance and setting of the immediate area; and
  - ii) The design and layout should respect, and where possible retain and/or enhance, the existing landform.

- Amenity
  - iii) No unacceptable loss of amenity to neighbouring land uses should result in terms of noise, smell, fumes, dust or other nuisance, or through the effects of overlooking or overshadowing; and
  - iv) Amenity open space in the area should be retained, wherever possible; and
  - v) No pollution of water, air or land should result.

- Conservation
  - vi) There should be no adverse effect on features of acknowledge importance on, or surrounding, the site, including species of plants and animals or nature conservation value; and
  - vii) The development must retain existing features that make an important contribution to the character or amenity of the site or the surrounding area; and
  - viii) Development proposals should include results or archaeological assessment, where appropriate, and adequate measures to ensure that there would be no unacceptable impacts on archaeological remains.

- Resources
  - ix) There should be no conflict with an allocated or approved land-use, nor should there be reasonable potential for development of a neighbouring site be prejudiced; and
  - x) The location and design of developments on urban fringes should take into account the need to minimise the impact of the development on adjoining agricultural land; and
  - xi) Measures to conserve energy will be expected in:
    - a) The design, orientation and layout of buildings; and

b) The location of development; and
c) Improvements to the transport network and in the management of traffic.

- Utilities and Services

xii) There should be no reliance on public finances being available to provide infrastructure and services; and
xiii) Suitable on-site drainage should be provided and where there are off-site drainage problems the developer will be expected to overcome them.

7.48 New development should take into account personal safety and the security of people and property by making sure that paths, play areas and open spaces are overlooked by inhabited buildings; avoiding the creation of spaces with ill-defined ownership; ensuring the development is well integrated into the existing pattern of pedestrian and vehicular movement; ensuring that dark or secluded areas are not created by landscaping or buildings; and ensuring that streets and paths are adequately lit.

7.49 I take each of the criteria in turn.

7.50 **Quality of Design** – the design of the development is largely determined by the technical and operational requirements of the plant, machinery and other facilities required to undertake hydrocarbon production. Whilst these will be utilitarian in nature, they will be temporary structures which will be in place for a limited period of time. For example, the equipment required to be brought to site to undertake site works which will take approximately four weeks to complete. No removal of vegetation will be necessary during this phase as the site is already built.

7.51 The landscape and visual impacts of the development over the four stages have been assessed. The effects of the development upon the landscape character in the study area will be negligible. A lighting assessment has been undertaken by the Appellant. Although the site will be in an essentially dark area, the use of lighting throughout the night will be a short-term measure. The proposed development will therefore accord with the terms of the policy.

7.52 **Amenity** – the Appellant submitted a noise assessment with the planning application which has concluded that appropriate mitigation of the effects of noise arising from the development will adequately protect the amenity of neighbouring residential properties. The assessment of the effects of the proposed development in respect of air quality submitted with the application has predicted the short-term and long-term impacts on pollutant concentrations at nearby residential properties. The Air Quality Assessment has concluded that the operation of the proposed gas engine and flare will not have a significant impact or effect on local air quality.

7.53 The Council's EHO has confirmed that the long-term production operations will be managed under the Environmental Permitting system. They have also agreed that the air quality impacts associated with the construction phase can be adequately controlled via mitigation measures. The EA has raised no objection to the proposed development with regard to its impact on air quality.

7.54 I consider that the proposed development accords with Policy DS1 in respect of amenity.

7.55 **Conservation** – The Appellant has submitted an updated ecological appraisal report which assesses the impacts of the development upon flora and fauna and identifies appropriate mitigation measures. Any potential for significant adverse effects upon protected species and or designated habitats by virtue of dust, contamination, noise emissions (including traffic movements) and lighting is predicted to be negligible. As a result, no residual adverse effects on ecology are predicted. The Council agrees in the SoCG (CDC6) that there will be no adverse impacts as a result of noise, air quality, cultural heritage and lighting.

7.56 The assessment of the effects of the proposed development upon heritage assets is already covered in policy M4. There will be no loss of amenity to neighbouring uses or adverse impact upon neighbouring uses. The risks of an adverse impact to assets of historic importance or heritage value is judged to be very low.

7.57 **Resources** – the development would not result in any conflict with an allocated or approved land-use proposal. Neighbouring land uses are predominantly rural and associated with farming. There are no allocations for development or planning permissions in the vicinity of the appeal site which would result in any conflict with the proposed development.

7.58 **Utilities and Services** - The evidence of Mark Barwood refers to the CSDS which sets out the drainage measures proposed to be carried out on site. The proposed design of the working platform provides for the upgrading of the existing surface water drainage infrastructure on the site. The new drainage system will be constructed such that it discharges clean rainwater run-off via the interceptor to Ella Beck, at a maximum volume of 5l/s. The EA has been consulted on the application and has raised no

objection. Likewise, the Council's drainage and environmental health officers raise no objections subject to conditions.

7.59 I therefore consider the proposed development is in accordance with Policy DS1.

Policy DS3 (Planning Out Crime)

7.60 This policy states that new development should take into account personal safety and the security of people and property. The five criteria that developers are expected to apply are more directly appropriate for residential and commercial properties in urban areas rather than a wellsite in a rural area. Nevertheless, the Appellant is aware of the potential for protestor activity taking place on wellsites and has accordingly taken appropriate measures to help prevent the risk of trespass occurring. The fencing and extension of the Site to accommodate the security cabins from the original planning permission for exploratory drilling are required for the health and safety of both the Appellant's contractors and the general public. Opposition to onshore oil and gas production has grown in recent years. The Appellant will continue its discussions with Humberside Police regarding the Wressle-1 wellsite to make sure the appropriate security measures are in place. The wellsite is currently patrolled by contracted security personnel. Accordingly, I consider that the proposals accord with Policy DS3.

Policy DS11 (Polluting Activities)

7.61 Planning permission for development will only be permitted where it can be demonstrated that the levels of potentially polluting emissions do not pose a danger by way of toxic release; result in land contamination; pose a threat to current and future surface or underground water resources; or create adverse environmental conditions likely to affect nearby developments and adjacent areas.

7.62 The Appellant submitted a number of technical reports in support of the application, which assessed the potential environmental impacts of the development. An Air Quality Assessment (CDA4) prepared by AECOM concluded that the development "will not have a significant impact or effect on local air quality." The Report also included a number of mitigation measures to protect the air quality. Both parties have agreed to 'dust mitigation measures' set out in Appendix C of the Air Quality Assessment which forms condition 16 of the SoCG (CDC6). In addition, James Dodds evidence provides further evidence on the impact of the development on groundwater. The evidence of Mark Barwood demonstrates that the existing wellsite has been thoroughly assessed to enable the site to be reconfigured for production purposes. The evidence of Mark Barwood demonstrates that the site has been designed to ensure that there will be minimal risk to groundwater supplies from potential sources of contamination during site operations. Neither the EA nor the Council's EHO raised an objection to the application. I therefore conclude that the proposal is in compliance with Policy DS11.

Policy DS12 (Light Pollution)

7.63 Planning applications which involve light generating development, including floodlighting, will only be permitted where it can be demonstrated that there would be no adverse impact on local amenities.

7.64 There will be low level lighting during the initial few weeks of production but during normal production, lighting would only be required during the winter months or if there is an unforeseen operational requirement or emergency. Should a sidetrack drilling operation be necessary, the site and rig would be lit given the need for 24-hour operations.

7.65 Normal industry low-level lighting will be used with hoods and shrouds to help reduce light pollution and spillage. Any sidetrack drilling operation that involves 24-hour lighting is anticipated to last no more than two weeks. It will therefore have a very short-term impact.

7.66 The Council has confirmed in the SoCG (CDC6) that the risks of an adverse impact arising from external lighting of the development is very low and that any impacts can be controlled by planning conditions. As a result, I consider that the proposed development conforms with this policy.

Policy DS14 (Foul Sewage and Surface Water Drainage)

7.67 This policy requires satisfactory provision to be made for the disposal of foul and surface water from new development.

7.68 Surface water drainage is covered in both the HFRA (CDA3) and in the CSDS (CDA11). Waste water and foul waste on restoration of the Site is covered in Egdon's Site Closure and Restoration procedure which forms Appendix 5 of the Planning and Sustainability Statement. Waste water and foul waste is generated on site in the accommodation units. The waste is collected in storage tanks below the units for subsequent offsite disposal to a licensed waste facility. Levels of waste within the

tanks are monitored daily. Transportation from the site is carried out by a licenced waste carrier in road bulk haulage vehicles.

7.69 The Council agrees with the Appellant that the proposed development does not give rise to concerns about the arrangements for foul and surface water drainage proposed by Egdon. I consider that the proposed development is in accordance with Policy DS14.

Policy DS15 (Water Resources)

7.70 Development will not be permitted which would adversely affect the quality and quantity of water resources or adversely affect nature conservation, fisheries and amenity by means of pollution from the development or water abstraction unless the impact is mitigated to an acceptable level. I consider this policy is relevant to the application.

7.71 The evidence of Mark Barwood describes the civil and structural design of the wellsite. The reconfigured wellsite design incorporates various embedded mitigation features to reduce the potential for polluting effects. These include designed containment systems at primary, secondary and tertiary levels. James Dodds' evidence also serves to demonstrate that the proposed containment systems will provide the necessary storage volumes for all expected rainfall volumes, including allowance for climate change. A full Construction Quality Assurance (CQA) system will be employed to ensure the competency and integrity of the site reconfiguration works.

7.72 James Dodds' evidence draws upon the findings of the HFRA which considers both the potential risks of pollution arising from the development to the water environment and the mitigation measures necessary to reduce the risks to "an acceptable level" which is the benchmark set by the policy. The HFRA presents conclusive evidence to demonstrate a laterally continuous impermeable capping layer above the Lincolnshire Limestone Formation. As a result, it addresses a concern raised by the Inspector in his decision letter (CDD6).

7.73 The policy specifically refers to potential adverse impacts arising from water abstraction. Based on a search of the EA abstraction licence database, there are three licenced groundwater abstraction and five licensed surface water abstractions within a 2km radius. The British Steel boreholes at Clapp Gate are the only licensed groundwater abstraction wells within 1.5k of the wellsite.

7.74 The EA has raised no concerns about potential impact on abstraction boreholes. British Steel has previously confirmed that it considers there will be no impact on the volume or quality of the water that they abstract. The Wressle wellsite is located outside the Source Protection Zones for all of the identified abstractions.

7.75 I therefore conclude that the proposed development is in compliance with Policy DS15.

Policy DS16 (Flood Risk)

7.76 Development will not be permitted in floodplains if it would increase the number of people or buildings at risk; impede the flow of flood water; impede access for maintenance of watercourses; reduce the storage capacity of the floodplain; increase the risk of flooding elsewhere; or undermine the integrity of flood defences unless adequate mitigation is undertaken.

7.77 The wellsite is wholly located within the EA flood zone 1 (very low probability of flooding from tidal and fluvial sources). The HFRA demonstrates that the risk of surface water flooding at the wellsite is 'very low'. The overall existing risk of flooding from groundwater, public sewers, artificial waterbodies and roads to the wellsite is 'very low'. The risk of flooding from wellsite activity is mitigated by the controlled discharge rate at 5 l/s using the storage available on the wellsite. The proposed development will not result in an increase in the risk of flooding off site. The proposed development therefore complies with this policy.

7.78 Egdon and NLC agree that surface flooding from rainfall, from Ella Beck and with respect to downstream effects are not an issue (detailed in the SoCG (CDC6)). I therefore conclude that the proposed development complies with Policy DS16.

Policy T1 (Location of Development)

7.79 This policy states that development proposals that generate significant volumes of traffic will be permitted, provided they are located in urban areas and where there is good access to transport networks and foot, cycle and public transport provision. Paragraph 9.16 explains how the policy will apply; it acknowledges that the type and location of proposed developments will vary and, consequently, an assessment of traffic volumes will be made on individual development proposals.

7.80 I consider the policy is not relevant in the determination of the proposed development in that the proposed development will not generate a significant volume of traffic movement. Further, the policy does not state that proposals which do not meet the policy will necessarily be refused. Minerals can only be worked where they are found, and as in the case of the Wressle wellsite, the site lies outside the urban areas. The Council's highways officer has not raised an objection, subject to conditions to secure the management of traffic in accordance with the Transport Statement which accompanied the planning application.

Policy T2 (Access to Development)

7.81 This policy requires all new developments to be provided with a satisfactory access and that larger developments should be served by a range of transport modes.

7.82 This is covered in my Proof Evidence when considering the proposed development against policies M1 and M7. Accordingly, I consider that the proposed development accords with policy T2.

Policy LC4 (Development Affecting Sites of Local Nature Conservation Importance)

7.83 This policy seeks to protect areas of local nature conservation importance and only permits developments that are likely to have an adverse impact on these areas if it can be clearly demonstrated that there are reasons for the proposal which outweigh the need to safeguard the intrinsic nature conservation value of the site. It also requires any damage to be kept to a minimum.

7.84 The planning application is accompanied by an updated Ecological Appraisal Report. Any potential for significant adverse effects upon protected species and/or designated habitats by virtue of dust deposition, possible sources of contamination of surface or ground water, emissions of dust, noise (including traffic movements) and lighting from the site is predicted to be negligible. The residual effects assessment concludes that "no residual adverse effects on ecology are predicted during the development".

7.85 The Council received comments from both Natural England and the Council's owns ecologist. No objections were made with regard to the impact of the development upon protected or priority species or habitats. The Council's ecologist has recommended conditions to secure biodiversity enhancements which the Appellant has agreed with the Council.

7.86 I consider the proposed development accords with Policy LC4.

Policy LC5 (Species Protection)

7.87 Planning permission will not be granted for development which would have an adverse impact on protected species. Where development is granted that may impact on protected species, the use of conditions or planning agreements will be considered to mitigate this impact.

7.88 The same evidence I refer to under Policy LC4 applies to policy LC5. I therefore consider that the proposed development accords with Policy LC5.

Policy LC7 (Landscape Protection)

7.89 Where development is permitted within the open countryside, special attention will be given to the protection of the scenic quality and distinctive local character of the landscape. Development which does not respect the character of the local landscape will not be permitted.

7.90 The Council accepts in the SoCG (CDC6) that there will be no significant impacts upon the local landscape and that visual impacts will be temporary and of negligible significance. I consider that the proposed development complies with Policy LC7.

North Lincolnshire Core Strategy 2011

7.91 In June 2011 NLC adopted the Core Strategy Development Plan Document (DPD). The Core Strategy sets out the long-term spatial planning framework for the development of North Lincolnshire up to 2026 by providing strategic policies covering housing provision, employment, the natural environment and minerals and waste. The Core Strategy in conjunction with the Saved Policies contained within the Local Plan (2003) form the statutory development plan for North Lincolnshire.

Compliance with the North Lincolnshire Core Strategy

Policy CS1 (Spatial Strategy for North Lincolnshire)

7.92 This policy sets out the spatial strategy for future development in North Lincolnshire. It goes on to state that "All future growth regardless of location should contribute to sustainable development" and that where development has an environmental impact "mitigation measures should be used for the development to be acceptable".

7.93 The proposals will contribute to sustainable development. The specific elements of the development which demonstrate that it will be sustainable are identified below, addressing each of the overriding objectives identified in paragraph 8 of the NPPF.

How the Proposed Development will contribute to Sustainable Development

The economic objective

7.94 The Appellant estimates that there is potential to recover 2 million barrels of oil from the Wressle oil field over a period of 15 years. In view of the increasing reliance on oil imports, the Proposed Development will help to reduce imports of oil into the UK by using indigenous reserves, thereby improving security of supply.

a) The oil produced at Wressle will generate both national and local taxation, business rate and the use of local supplies and services.

b) The Proposed Development will require specialist engineers and skilled operatives throughout all phases of the Proposed Development. It will also support local businesses such as road hauliers, suppliers of security and welfare facilities, restaurants, cafes, pubs, food stores and petrol stations, thereby supporting indirect employment and the local economy.

c) It will use a number of skilled national, regional and local suppliers and services, ranging from crane and equipment hire, steel fabricators, construction services and contractors, electricians, aggregate suppliers, water quality engineers and laboratory services and specialist well service companies.

d) A gas engine will be installed on site to generate electricity from produced gas. It is an economic benefit that the gas will generate enough electricity to provide for the site, whilst exporting surplus electricity back into the distribution network.

e) The Proposed Development will contribute to and complement the growth of the 'Energy Corridor' in the South Humber part of North Lincolnshire.

The social objective

f) The Appellant will create both direct and indirect jobs for the region, which are important for maintaining strong, vibrant and healthy communities.

g) The inclusion of security and welfare facilities will serve to protect the wellsite from protestors and help ensure the safety of contractors, regulators, visitors and protestors themselves.

The environmental objective

h) The Proposed Development will have no significant adverse environmental impacts upon the landscape, hydrology and groundwater, flood risk, drainage, ecology, heritage, air quality, noise background or the local transport network, based on the environmental assessments undertaken by the Appellant.

i) The proposed development has been designed to minimise the use of natural resources and minimise environmental impacts. Where impacts cannot be avoided, the relevant technical assessments have provided suitable direct and indirect mitigation measures.

j) With the exception of the small extension area, the Proposed Development is located on the existing Wressle1 wellsite.

k) The Proposed Development will reduce the need for imports, thereby reducing associated transport greenhouse gas emissions.

l) The proposed restoration measures include a Biodiversity Management Plan, which contributes to a net gain in biodiversity of the Site.

7.95 A range of environmental mitigation measures are proposed in support of the planning application. These are summarised below. Provided the conditions as agreed in CDC6 are attached to any decision, I consider the environmental impact of the development will be acceptable.

Summary of Mitigation Measures

a) Landscape and Visual Impacts – the LVA states that the soil storage bunds within the wellsite and the woodland outside the site boundary provide a high degree of screening. Topsoil and sub-soil screening bunds along both the northern and western boundaries of the Site restrict some views into the Site and will reduce the apparent scale and mass of the proposed built structures. As a result, no further mitigation of landscape and visual effects beyond the existing baseline is proposed.

b) Hydrogeology and Hydrology – the mitigation measures considered necessary to reduce risks of pollution to the water environment are covered in the CSDS and the HFRA. These are covered in the evidence of Mark Barwood and James Dodds respectively.

c) Ecology – pre-works checks of water vole will be undertaken to ensure there is no impact in respect of the installation of the drainage outfall into Ella Beck. Although unlikely, if water voles are found to be present prior to the commencement of construction works, a precautionary working method statement or Natural England licence may be required to ensure legislative compliance with the Wildlife and Countryside Act 1981 (as amended). A planning condition has been agreed between the Appellant and NLC to secure this requirement.

A Biodiversity Management Plan is proposed by the Appellant to secure biodiversity enhancement. This comprises:

1. Habitat restoration upon completion of the wellsite operation as part of the decommissioning and restoration stage.

2. The installation of 5 bat boxes, 5 bird nest boxes and 2 barn owl next boxes within three months of commencement of production works.

No other mitigation measures specific to habitats or protected species are considered necessary, as no significant effects on ecological receptors have been identified.

d) Heritage – the Heritage Impact Assessment (CDA9) states that views of the proposed drilling rig are not constant as woodland belts mask or partially hide it. The setting of the Thornholme Priory will be slightly impaired by the proposed development. However, any perceived impact will be of temporary duration lasting approximately 3-4 weeks, after which the site will have no significant impact on the heritage asset. Mitigation is not considered necessary and no archaeological conditions are recommended.

e) Air Quality – the Air Quality Assessment (AQA) states that a number of mitigation measures can be adopted to reduce the production and/or dispersal of dust to lessen the potential for harm to amenity and limit the human health impacts. Construction dust mitigation control measures are proposed in Appendix C of the AQA. No additional mitigation measures are considered necessary to reduce the impact of operational gas engine and flare emissions beyond those incorporated into the design of the site. The flare stack and its emissions are regulated under the Environmental Permit (CDG1), issued by the EA (see Jonathan Foster's evidence for more information). These include the location of the stack and the height of emissions release. Accordingly, a condition (condition 16) has been agreed with the Council which will ensure the mitigation measures set out in Appendix C are implemented.

f) Noise – the Assessment of Environmental Noise Emissions submitted with the planning application. In order to control noise levels, a planning condition limits construction, and assembly of the drill rig to the hours of 7.00 am to 7.00 pm, Monday to Saturday. Planning conditions for the production phase will be set according to the typical minimum background sounds levels determined by a survey conducted in accordance with BS: 4142:2014, which have been agreed with NLC. A proposed condition requires the submission and approval of a noise management plan which will set out all potential sources of noise and techniques to be used to prevent and mitigate adverse noise impacts. The Council's EHO has reviewed the noise impact assessment submitted by the Appellant and has recommended conditions to mitigate the noise impact of the development which have been agreed with the Appellant.

g) Highways – the Transport Assessment which accompanied the planning application sets out proposed traffic mitigation measures which can be implemented to reduce the impact of the proposed development. These comprise:

   a. a temporary vehicle signage strategy to ensure all large delivery vehicles use only designated routes;

   b. vehicle arrival and departure scheduling to ensure that all deliveries are pre-arranged with site management;

   c. timing restrictions for construction delivery traffic; and

   d. approved HGV traffic route.

h) The Appellant and NLC have agreed a condition to ensure the development is carried in accordance with the Traffic Management Plan and mitigation measures set out in the Transport Statement (condition 3, SoCG, CDC6).

i) Lighting – The Lighting Assessment which accompanies the planning application proposes specific mitigation measures to the external lighting on site in order to have no adverse effect on surrounding areas. These are set out in the light mitigation plan and include all vertically-orientated derrick luminaires re-oriented such that they are aimed downwards, and all 400W SON-R luminaires to be fitted with a reflector and aimed directly downwards. The Council's EHO has considered the submitted assessment and agrees with its conclusions. A condition is recommended to secure the mitigation measures set out in the Lighting Assessment.

j) Waste – Waste fluids will be recovered from the well and transferred off site to a licensed waste treatment or disposal facility. Waste water would be collected by a licensed waste contractor and managed via a licensed facility. All equipment that has the potential to contaminate the surface of the wellsite will be contained within the constructed bunded areas which will be underlain with a new impermeable membrane system as described within Mark Barwood's evidence.

Policy CS2 (Delivering More Sustainable Development)

7.96 This policy states that any development in the open countryside will be restricted and only development essential to the functioning of the countryside will be allowed to take place. This includes, amongst other uses, those "which require a countryside location".

7.97 It goes on to state that all future development will be required to contribute towards achieving sustainable development and sets out sustainable development principles which development should comply with. These sustainable development principles include, amongst others, a requirement to:

- contribute to achieving sustainable economic development to support a competitive business and industrial sector; and
- take account of local environmental capacity and to improve air, water and soil quality and minimise the risk and hazards associated with flooding.

7.98 This policy also requires environmental impacts of developments to be adequately mitigated.

7.99 I consider that this Policy is inconsistent with the latest version of the National Planning Policy Framework (NPPF) (February 2019). Paragraph 83 states that planning decisions should support the sustainable growth and expansion of all types of business in rural areas. It does not restrict the type of development that is permitted in the countryside. Nevertheless, I believe the proposal complies with the policy because, in practice, it requires a countryside location. I have demonstrated above (paragraph 5.100) that the proposals will contribute to sustainable development. A range of environmental mitigation measures are proposed in support of the planning application. Provided that the conditions agreed in the SoCG (CDC6) are attached to any permission, the environmental impact of the development will be acceptable.

Policy CS3 (Development Limits)

7.100 This policy outlines how development limits will be created and applied. It states that development outside defined boundaries will be restricted to that which is essential to the functioning of the countryside. The policy goes on to state that development outside defined development boundary limits will be restricted to uses such as those that require a countryside location.

7.101 I consider that this Policy is inconsistent with the latest version of the National Planning Policy Framework (NPPF) (February 2019). Paragraph 83 states that planning decisions should support the

sustainable growth and expansion of all types of business in rural areas. It does not restrict the type of development that is permitted in the countryside. Nevertheless, I believe the proposal complies with the policy because, in practice, it requires a countryside location.

7.102 Paragraph 203 of the NPPF states that minerals can only be worked where they are found. In many cases, this will often be a countryside location. Minerals are essential to support sustainable economic growth and our quality of life. The Government has confirmed the continuing need for fossil fuels for many years and the need to secure security of supply. Further, that part of the policy which states that development outside the development boundary limits will be restricted to uses which require a countryside location is now contrary to paragraph 83 of the NPPF, for the same reason given above when considering policy CS2. I consider that the proposed development therefore accords with this policy.

Policy CS11 (Provision and Distribution of Employment Land)

7.103 This policy sets out support for the expansion and improvement of North Lincolnshire's economy and outlines strategic employment sites. It also supports development elsewhere in North Lincolnshire that meets local employment needs and maximises other special locations.

7.104 The policy goes on to say that in considering all development proposals for employment uses, regard should be given to making all locations accessible by a range of transport modes. The policy supports development or activities that assist in rural regeneration and that strengthen or diversify rural businesses.

7.105 Some parts of this policy are not engaged or applicable. The location of the well site is relatively remote and there is no realistic opportunity for employees or visitors to use alternative means of transport other than the car. Other parts of the policy have relevance. The wellsite will help to generate direct employment and sustain indirect employment in a rural area of North Lincolnshire. Therefore, I consider the proposal is compliant with Policy CS11.

Policy CS17 (Biodiversity)

7.106 This policy sets out a number of ways in which the Council will seek to promote the effective stewardship of North Lincolnshire's wildlife. Amongst others these include:

- ensuring development retains, protects and enhances features of biological and geological interest and provides for the appropriate management of these features; and
- ensuring development seeks to produce a net gain in biodiversity by designing in wildlife, and ensuring any unavoidable impacts are appropriately mitigated for.

7.107 I consider the proposed development accords with policy CS17 for the reasons set out earlier in this chapter in respect of Policy LC4 of the NLLP 2003.

Policy CS18 (Sustainable Resource Use and Climate Change)

7.108 This policy promotes development that utilises natural resources as efficiently and sustainably as possible.

7.109 This policy was specifically referred to in the Council's decision notice as justification for refusing the proposed development. The policy comprises thirteen elements. The decision notice does not identify which parts of this policy were alleged to have been breached by the proposed development. The Appellant and NLC have since agreed that only criterion 10 is relevant to this appeal (paragraph 7.4 of the SoCG (CDC6)). Nevertheless, as some of the Third Parties have specifically referred to climate change in their representations, for completeness, I assess the proposed development against each element below.

1. **Meeting high water efficiency standards and incorporating new technologies to recycle and conserve water resources.**

CDA2 includes a short section dealing with water usage. Each operational phase of the proposed development would use only 150 cubic metres of fluid treatment, of which 95% will be water supplied from the mains. Other than the proposed proppant squeeze and acidisation, the only water that will be used will be for drinking water and toilets (equating to 200 litres per day). There is no requirement to abstract potable water. By contrast, the British Steel abstraction boreholes extract 180 cubic metres

per hour, 24 hours a day, from the local groundwater supply. Neither the Council's EHO nor the EA has raised an objection to the volume of water to be used.

2. **Requiring the use of Sustainable Urban Drainage Systems (SuDS) where practicable**.

Notwithstanding the temporary nature of the development, the wellsite effectively incorporates SuDS as it contains incident rainfall and releases it at the Greenfield Runoff Rate. The site acts as an attenuation basin. The HFRA (CDA3) states that the flow of surface water discharged into Ella Beck would be restricted by valves in the pipework to achieve a nominal flow rate of 5 litres per second. An oil interceptor will be installed to enable the discharge of surface water from the site where there are no drilling or associated activities taking place. Neither the Council's EHO nor the EA has raised an objection to the proposed drainage system.

3. **Supporting the improvement of flood defences and surface water infrastructure required against climate change and preventing development in high risk areas.**

The site lies in Flood Zone 1 and the HFRA (CDA3) has demonstrated that the Site carries 'no risk' to 'very low risk' from all sources of flood and will not increase the risk of flooding off site (see James Dodds' evidence for more information). Neither the Council's EHO nor the EA has raised an objection to the risk of flooding.

4. **Meeting required national reductions of predicted CO2 emissions by at least 34% in 2020 and 80% in 2050 by requiring all industrial and commercial premises greater than 1,000 square metres to provide 20% of their expected energy demand from on site renewable energy.**

The developed element of the wellsite, excluding the earth bunds, occupies an area of 6,450 square metres. Gas will be used to generate electricity on site via a gas engine for site use and export surplus electricity to the grid. The nature of the proposed development means that it is not practically suitable to provide a proportion of its energy from renewable energy. In practice, the expected off-site energy demand is expected to be nil as the electricity required to operate the site during production will come from gas sourced from the Wressle-1 wellsite using the electricity generated from the generator. In my opinion, this element of the policy is not engaged.

5. **Ensuring building design reduces energy consumption by appropriate methods such as high standards of insulation, avoiding development in areas subject to significant effects from shadow, wind and frost, using natural lighting and ventilation, capturing the sun's heat, where appropriate.**

The temporary buildings used on site will be portakabins which are industry standard in design. The number of buildings on site will be minimal and are temporary in nature and construction.

6. **Supporting development that minimises the consumption and extraction of minerals by making the greatest possible reuse or recycling of materials in new construction, and by making the best use of existing buildings and infrastructure.**

The wellsite has already been constructed; therefore, hydrocarbon production will reuse the existing well pad facility at Wressle. Surface materials will be re-used as part of the site reconfiguration works to reduce the quantity of new aggregates that will be required.

7. **Supporting development that seeks to minimise waste and facilities recycling and using waste for energy where appropriate.**

The HFRA (CDA3) states that waste water during the proppant squeeze stage is expected to total 150 cubic metres which equates to 5-6 tanker loads which would be transferred off site to a licenced waste treatment facility. Using the existing site aggregate will reduce the volumes of new aggregate that would otherwise be needed for the site reconfiguration. During a sidetrack drilling operation, semi-dry drilling mud and rock cuttings would be cleaned and recycled via blending into compost at a permitted composting facility. During production, any gas that is produced would be used to generate electricity back into the network, thus generating energy. Where appropriate, materials will be recycled and disposed of at an appropriate location.

8. **Ensuring that development and land use in areas close to the Humber Estuary and rivers responds appropriately to the character of the area, in the interests of preserving and making best use of limited resources.**

The Wressle wellsite lies adjacent to the Ella Beck which has been identified as a 'Main River' by the EA. The HFRA (CDA3) sets out the existing and proposed additional mitigation measures in place to ensure there will not be an adverse impact in terms of the water quality of Ella Beck. Ella Beck is the nearest surface water feature to the wellsite and will be the receptor of clean rainfall runoff water discharged from the site. There will be no discharge of production or process/treatments fluids from the wellsite. All surface water runoff from the wellsite will be via an interceptor. In addition to groundwater monitoring boreholes at the wellsite, Ella Beck has been included in the scheme of monitoring. Monitoring will take place at three locations – upstream of the wellsite, at the midpoint and downstream of the wellsite. There was no objection to the development from the EA. The scheme of monitoring has been agreed with NLC in principle in the SoCG (CDC6) and the detail will be agreed in advance through a pre-commencement condition. I therefore consider that the proposal is in accordance with part 8 of the Policy.

9. **Supporting development that will help to reduce the need to travel for people using that development.**

Since paragraph 203 of the NPPF states that minerals can only be worked where they are found, I consider that this part of the policy is not relevant when taking account of the nature of the proposed use and the rural location of the wellsite.

10. **Ensuring development and land use helps to protect people and the environment from unsafe, unhealthy and polluted environments, by protecting and improving the quality of the air, land and water.**

Mark Abbott, Mark Barwood, Jonathan Foster and James Dodds set out in their proofs of evidence the measures that Egdon has proposed to ensure that the proposed development will be safe and have no material adverse impact upon the ground and groundwater. Neither the EA nor Natural England objected to the application. I therefore conclude that the development is in compliance with part 10 of the Policy.

11. **Supporting renewable sources of energy in appropriate locations, where possible, and ensuring that development maximises the use of combined heat and power, particularly at the South Humber Bank employment site and where energy demands for more than 2MW are required for development.**

This part of the policy is not relevant as the proposal does not involve combined heat and power.

12. **Supporting new technology and development for carbon capture and the best available clean and efficient energy technology, particularly in relation to the heavy industrial users in North Lincolnshire, to help reduce CO2 emissions.**

The Proposed Development is not appropriate for carbon capture. Initially, electricity will be provided from a diesel generator on site but then would be provided from the main electricity distribution network via a local connection point, pending the installation of a gas engine and connection infrastructure on site. Produced gas would then be used to generate electricity for site use, and the export of surplus electricity back to the distribution network. As part of operational evaluation in 2017, grid connection feasibility for electricity import and export was evaluated and a connection point confirmed by Northern Powergrid, the network operator. The use of a diesel generator would be short-term, pending the timescales needed to complete the network agreement and works required to connect to the electricity grid. The grid connection for mains electricity supply will progress, so the use of a diesel generator would only be short-term. Mark Abbott's evidence describes the independent evidence that has been produced about the potential gas reserves in the PEDL area for the Wressle-1 wellsite.

13. **Promote the use of a greenspace strategy and a green infrastructure plan, where appropriate, which could help reduce the effects of climate change.**

A greenspace strategy or infrastructure plan is not appropriate for the proposed development.

7.110 In conclusion, I consider that the proposed development therefore accords with CS18.

Policy CS19 (Flood Risk)

7.111 This policy states that the Council will support development proposals that avoid areas of current or future flood risk, and which do not increase the risk of flooding elsewhere. This includes a risk-based sequential approach that uses the principle of locating development, where possible, on land that has a lower flood risk. Development in high flood risk areas will only be allowed where there is a wider sustainable benefit to the area that outweighs flood risk; it is on previously developed land unless there are no reasonable alternative sites on previously developed land; and a Flood Risk Assessment has demonstrated that it will be safe from flooding, without increasing flood risk elsewhere. The policy continues to say that the Council will also seek to reduce the increase in flood risk due to climate change through measures to reduce carbon dioxide emissions.

7.112 NLC has not referred to this policy in the decision notice as a policy which the proposed development does not comply with. Neither the EA nor the Council's EHO has raised an objection to either the application with regard to flood risk. I have already covered the issue of flood risk above in considering Policy DS16 of the NLLP. I consider that the proposed development accords with Policy CS19.

Policy CS20 (Sustainable Waste Management)

7.113 This policy sets out a sequential approach towards the location of waste management facilities and outlines how the Council will promote sustainable waste management. The proposed development is not a waste management facility and, therefore, the sequential search is not applicable. The proposed development will generate relatively little waste during each phase; this is described above in my consideration of Policy CS18. During oil production, separated fluids (oil and water) will be stored within storage tanks on site. The oil would be collected by road tanker and sent offsite, probably to Immingham, for processing and refining. It is not considered a waste product. Any produced water would be collected by a licensed waste contractor and disposed of at a licenced facility or reinjected as pressure support at another oilfield site, and any gas produced will be used to generate electricity as previously detailed. I consider therefore that the proposed development accords with the policy due to the limited amount of waste that will be produced during the phases of development.

Policy CS21 (Minerals)

7.114 Policy CS21 of the Core Strategy generally relates to the designation of new Mineral Safeguarding Areas and extraction of aggregates.

7.115 The Wressle wellsite is not located within a Mineral Safeguarded Area (MSA). Paragraph 108 of the Minerals PPG (CDE2) advises that there is normally no need for mineral planning authorities to create mineral safeguarding areas for the extraction of hydrocarbons, given the depth of the resource, the ability to use directional drilling and the small surface area requirements of well pads. Both the Appellant and NLC consider the policy is relevant (SoCG CDC6 paragraph 7.4). I consider that the proposal complies with this policy as the wellsite does not lie within an MSA and consequently, there is risk of sterilisation of aggregates as a result of the proposed development.

Policy CS25 (Promoting Sustainable Transport)

7.116 This policy promotes a sustainable transport system in North Lincolnshire that offers a choice of transport modes and reduces the need to travel. It sets out measures to manage transport demand as well as the management of the transport network. In view of the nature of the proposed development and the remote location of the wellsite, I consider that it is impractical for employees to travel to the site this policy other than by car. Whilst the proposal is therefore at variance with this policy, I do not consider that significant weight should be attached as the specific nature of the development simply makes it inappropriate for a choice of transport modes to be available.

Emerging North Lincolnshire Local Plan

7.117 NLC published an Initial Consultation (Regulation 18) document in February 2017, which marked the start of the process of preparing a new single local plan for North Lincolnshire. When adopted, it will replace the current North Lincolnshire Local Plan 2003, Core Strategy 2011, as well as the Housing and Employment Land Allocations Development Plan documents and the Lincolnshire Lakes Area Action Plan. The new plan will run until 2036. The consultation document invited responses on 24 questions.

7.118 In January 2018, NLC published an Issues and Options (Regulation 18) document which outlines the overall vision, issues and range of options for the new Local Plan. The Issues and Options document identifies a number of transformational projects that are either completed or are under construction.

These include the Able Marine Energy Park on the South Humber Gateway which is a strategic site that can develop as an energy cluster. The document states that the site offers the largest undeveloped area of land next to a deep-water estuary in the UK and lies at the centre of the developing off-shore renewables industry. It is also home to over a quarter of the UK's petrochemical refining capacity provided by Lindsey Oil Refinery and Humber Refinery, operated by Total and Phillips 66 respectively. Much of this area includes the Able Marine Energy Park and Able Logistics Park which forms part of the Humber Enterprise Zone.

7.119 The draft spatial vision for North Lincolnshire sets out how the area will look by 2036. It includes the following statement: "North Lincolnshire will continue to play its part in producing the steady and adequate supply of minerals to meet national and local needs whilst seeking to ensure efficient and sustainable use."

7.120 This is embodied in number 13 of 14 Spatial Objectives entitled Ensuring Minerals Supply - "to ensure a steady and adequate supply of minerals, including aggregates, industrial minerals and energy minerals to meet national, regional and local needs in the most appropriate and sensitive way whilst taking account of impacts on the environment and local communities."

7.121 The importance of the South Humber Bank to the local economy in its role as North Lincolnshire's main strategic employment site is highlighted further in the document in considering options for allocating employment sites. "The South Humber Bank employment area is currently occupied by a range of estuary-related industrial operators such as large oil, gas and electricity companies involved in storage, processing and distribution. The area is already home to a number of chemical companies which provide 27% of the UK's oil refinery capacity." The area is safeguarded and the current vision of the Council is to ensure that opportunities are maximised around the ports for chemical industries and power generation.

7.122 The Issues and Options document makes clear that "North Lincolnshire is a major energy capital in terms of energy generation… In essence, an "Energy Corridor" within the South Humber Bank has been formed which is expected to play a formative role in driving North Lincolnshire's economic growth and prosperity. The "Energy Corridor" also extends into North East Lincolnshire and is pivotal in the economic success and prosperity of both authorities.

7.123 Table 2 in the Issues and Options document sets out the number of employees by industrial sector. The local economy is currently highly dependent upon manufacturing. 19.4% of employees in North Lincolnshire work in this sector, compared to 11.3% regionally and 9.4% nationally. Metal manufacturing accounts for 33.3% of manufacturing jobs which shows the reliance upon the British Steel Scunthorpe for jobs.

7.124 Whilst the number of employees working in the energy and water employment sectors is 1,700, this represents 2.3%, above the regional and national figure of 1.5%.

7.125 The document also highlights the vital role that minerals play in society. Energy minerals like oil and gas provide the country with power and heating. The Proposed Development would contribute to the vital supply of minerals for the region as well as nationally.

7.126 The Council is intending to publish its Preferred Options and site allocations, based on the findings of the Issues and Options stage, in autumn 2019. The emerging Local Plan is at a very early stage and therefore carries very little weight.

Appleby Parish Neighbourhood Plan 2015-2030

7.127 The final version of the Appleby Parish Neighbourhood Plan was published in February 2019. It was formally adopted following a referendum on 21 March 2019 - the first neighbourhood plan to be adopted in North Lincolnshire. It therefore forms part of the statutory development plan for planning applications which fall within Appleby parish.

7.128 The Neighbourhood Plan covers the whole of the parish of Appleby including Clapp Gate. The inset map for Clapp Gate covers Lodge Farm, the access onto the B1208 and part of the farm track. The Plan therefore includes the site entrance, the farm track leading to the wellsite and Ella Beck, the watercourse which runs immediately to the north of the track. Part of the proposed development therefore falls within the Neighbourhood Plan.

7.129 Policy AP1 (Sustainable Development) states that a presumption in favour of sustainable development will form the basis for decisions on all development proposals.

7.130 The Wressle development will use an existing access on to the B1208 for Lodge Farm as well as the existing farm track. The Transport Statement which accompanies the planning application has concluded that the projected trip generation associated with the wellsite does not represent a

significant amount of movement and the development should have a negligible impact on the operation of the local highway network. Paragraph 5.97 of my Proof details how the entire Site contributes to sustainable development with regard to Policy CS1.

7.131 Policy AP2 (Design Principles) states that proposals for all new development within the parish should demonstrate that it meets the requirements of the Parish Design Statement. It covers the whole of the parish and should be considered when preparing designs for new developments.

7.132 The policy lists ten criteria against which proposals just be considered against where appropriate. Bearing in mind that only the access track falls within the parish and that no new works are proposed, the scope for incorporating design elements is very limited. The three criteria which are relevant are:

- the design can be accessed safely from the highway incorporating sufficient off-street parking;
- the design uses sustainable surface water management solutions in new developments to reduce all water disposal into public sewers and manage the release of surface water effectively; and
- the design ensures that safety and security have been taken into account.

7.133 In my opinion, the proposal satisfies these criteria, as set out below. The Council's Highways officer has raised no objection to the access arrangements from the wellsite onto B1208.

7.134 The evidence of James Dodds and the HFRA (CDA3), submitted with the planning application, demonstrate that surface water will be managed effectively. Ella Beck, which lies in Appleby parish, is classified as a main river by the EA. It joins the West Drain and flows northerly for about 10 km before joining the River Ancholme close to the mouth of the River Humber. There will be no discharge of production or treatment fluids from the wellsite, and only clean surface water will be discharged into the Ella Beck. The proposal includes the installation of an additional shallow borehole on the northern side of the wellsite to ensure that any potential pollution moving northwards towards Ella Beck is identified. In addition to the groundwater monitoring boreholes, Ella Beck is included in the scheme of monitoring. Monitoring will take place at 3 locations on the Beck. The Environmental Permit, issued by the EA, requires monitoring 3 months prior to any well operations being undertaken. Monitoring will then occur each month with the frequency of monitoring increasing to weekly during well operations.

7.135 In his evidence, Mark Barwood refer to the CSDS (CDA11) which incorporates a French drain and full retention interceptor to manage clean surface water run-off into the Ella Beck.

7.136 Provision for the security of the well site and minimising the risk of potential illegal trespass has been incorporated into the design. All HGV and LGV traffic entering the wellsite will be required to pass through Lodge Farm which has a controlled barrier at the entrance as well as CCTV and exterior security lighting. The wellsite itself will have an alarm system and varying degrees of physical security as and when required and depending on the potential for security issues. The Appellant has been working closely with Humberside Police over a number of years to ensure that the wellsite is able to manage potential protestors and disruption to operational activities.

7.137 Appendix 9 (Appleby Parish Neighbourhood Plan Parish Design Statement) states that the design process should consider:

a. the relationship between the site and its surroundings, working with and respecting what is already there

b. identify design opportunities presented by existing views, landscaping, built form, materials and details; and

c. demonstrate that an analysis of the site and wider contextual setting has been carried out.

7.138 Para 1.18 of Appendix 9 describes Appleby parish as a large and rural community with open fields as well as substantial wooded areas. Clapp Gate, the most southerly point of the parish, forms a small rural community standing apart from the rest of the parish.

7.139 The Landscape and Visual Impact Assessment demonstrates how the proposed development will have a very limited impact within the local landscape area.

7.140 In conclusion, in my opinion, I consider that the proposed development accords with the relevant criteria of Policy AP2.

7.141 Policy AP5 (Development of the Rural Economy) encourages the promotion of the sustainable diversification of the rural economy. This includes the retention or expansion of existing agricultural

and other businesses. All proposals should accord with the relevant policies in the Neighbourhood Plan, particularly with regard to design and impact on the countryside and neighbouring residents or businesses and to soil protection and the quality of agricultural land.

7.142 The impact of the development on the local landscape is referred above in my assessment of compliance with policy M1, RD2, DS1 and LC7 of the NLLP.

7.143 Policy AP11 (Natural Environment) states that the Neighbourhood Plan will seek to protect, maintain and enhance the Parish's natural environment taking account of the intrinsic character and beauty of the countryside. Proposals for new development should not harm the existing network of local ecological features and habitats. New development will be expected to maintain and enhance existing ecological corridors and landscape features for biodiversity. All proposals for new development within the open countryside will be expected to protect and enhance the special nature of the local landscape and its surroundings.

7.144 I have covered issues of ecological impact in assessing the compliance of policies LC4, LC5, M23, DS1 of the NLLP and CS17 of the Core Strategy.

7.145 In conclusion, I consider that the proposed development complies with the relevant policies in the recently adopted Appleby Parish Neighbourhood Plan 2019.

Conclusion

7.146 It is the case that both the North Lincolnshire Local Plan 2003 and the North Lincolnshire Core Strategy 2011 were prepared some time ago and it is apparent that a small number of policies relating to what constitutes acceptable development outside the urban areas and in the countryside are more restrictive than the 2019 NPPF (policy RD2 in the 2003 Plan and policies CS2 and CS3 in the 2011 Core Strategy). However, it is important to look at the suite of relevant policies as a whole and judge whether they are still up to date, taking account of the degree to which they are consistent with the NPPF. When looking at the relevant policies in the Plan as a whole, I judge that they are up-to-date.

7.147 I consider that the proposed development accords with all the relevant development plan policies. That is common ground with the Council and is reflected in the SoCG (CDC6). In those circumstances, and where those policies, looked at as a whole, are up to date, the presumption in favour of development in Paragraph 11c of the NPPF applies and the proposal should be approved without delay. I consider this matter in more detail in chapter 8 below, by reference to the NPPF.

8. COMPLIANCE WITH NON-DEVELOPMENT PLAN POLICIES

8.1 This section of my proof of evidence assess the degree of compliance of the Proposed Development against non-development plan policies.

8.2 Planning law requires that applications should be determined in accordance with the Development Plan unless material considerations indicate otherwise. This section will consider the degree of compliance between the proposal and the following non-development plan policies:

- The National Planning Policy Framework (revised in February 2019);
- Planning Practice Guidance;
- Energy Supply and Climate Change: National Policy Context;
- North Lincolnshire's Economic Growth Plan (November 2018); and
- Written Ministerial Statements

National Planning Policy Framework

8.3 The National Planning Policy Framework (NPPF) was revised in February 2019 and sets out the Government's requirements for the planning system. The NPPF is a material consideration in the determination of this planning appeal.

Sustainable Development

8.4 Paragraph 7 states that the purpose of the planning system is to contribute to the achievement of sustainable development. Paragraph 8 identifies three objectives to sustainable development: an economic objective - contributing to building a strong, responsive and competitive economy; a social objective - supporting strong, vibrant and healthy communities; and an environmental role - contributing to protecting and enhancing the natural, built and historic environment, using natural resources prudently, minimising waste and pollution and mitigating climate change including transitioning to a low carbon economy.

8.5 Paragraph 7 adds that these objectives should not be undertaken in isolation because they are interdependent and need to be pursued in mutually supportive ways to secure net gains across the three different objectives.

8.6 Paragraph 11 provides for a presumption in favour of sustainable development. For decision-taking this means approving development proposals that accord with an up-to-date development plan without delay (paragraph 11(c)). That presumption is engaged in this case, for the reasons given in chapter 7 of my proof of evidence.

8.7 Paragraph 11(d) states that where there are no relevant development plan policies or where the policies which are most important for determining the planning application are out-of-date, decision-makers should grant planning permission unless the application of policies in the Framework that protect areas or assets or assets of particular importance provides a clear reason for refusing the development proposed; or any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in the Framework taken as a whole.

8.8 For the purposes of determining this appeal, I consider that the policies which are most importance are those referred to in the Inspector's decision letter of 4 January 2018 (CDD6), namely policies M1, M23 and DS15 of the North Lincolnshire Local Plan 2003 and policy CS18 (criterion 10) of the North Lincolnshire Core Strategy 2011. In my view these policies are not in conflict with the NPPF and are up to date.

8.9 In this case, therefore, it is paragraph 11(c) that applies, rather than 11(d).

8.10 That position is also supported by the recent judgment of Sir Duncan Ouseley sitting as a High Court judge in **Paul Newman New Homes Limited v SoS for HCLG, Aylesbury Vale DC [2019] EWHC 2367 (Admin)**. In his judgement, J Ouseley concluded that if there was just a single relevant policy for decision-making purposes, then paragraph 11(d) did not apply (see paragraph 32 of the

Judgment). The judgment also confirmed that a policy is not out-of-date simply because it is a time-expired plan.

Building a Strong, Competitive Economy

8.11 Paragraph 80 states that significant weight should be placed on the need to support economic growth and productivity, which includes taking into account local business needs and wider opportunities for development. Paragraph 82 adds that planning decisions should address the specific locational requirements of different sectors.

8.12 With regard to supporting a prosperous rural economy, paragraph 83 states that planning decisions should enable sustainable growth and expansion of all types of business.

8.13 The Proposed Development is located within the countryside and enables sustainable growth and expansion. Exploiting indigenous hydrocarbons will help contribute to creating jobs and prosperity. It will also assist with the twin challenges of global competition by reducing the growing level of oil imports from abroad and assisting in meeting the continuing need for oil as the UK transitions to a low carbon economy.

Promoting Healthy and Safe Communities

8.14 Paragraph 91 concerns promoting healthy and safe communities and states that planning decisions should aim to achieve healthy, safe and inclusive places.

8.15 Jonathan Foster's evidence provides further information on the role of regulatory regimes in ensuring healthy and safe workings at the wellsite. He considers risk of well failure, general health risks and unproven technology within this Proof of Evidence. With the exception of environmental noise, which is regulated by NLC, he concludes that the issues fall to be considered under other regulatory regimes. In the context of Paragraph 012 of the Minerals PPG, he concludes that minerals planning authorities should assume that these regularly regimes will operate effectively. Mark Abbott concludes in his evidence that Egdon has an excellent track record in relation to Health and Safety and Environmental matters. However, notwithstanding this, the public interest is protected irrespective of who the operator is by the wide ranging and robust regulatory controls which exist in relation to the Proposed Development and the oil and gas industry in general. These can be relied on to operate effectively.

8.16 I conclude from their proofs that the Proposed Development is in accordance with paragraph 91.

Promoting Sustainable Transport

8.17 Paragraph 102 states that transport issues should be considered at the earliest stages of development proposals. Paragraph 108 states that developments should ensure that appropriate opportunities to promote sustainable transport modes have been taken up, there is safe and suitable access to the site and that any significant impacts from the development on the transport network or highway safety can be effectively mitigated to an acceptable degree. Paragraph 109 states that development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety or the cumulative impacts on the road network would be severe.

8.18 As mentioned in chapter 5 of my proof (paragraphs 5.3-5.7) a Transport Statement (CDA7) accompanied the planning application, which concluded there would be no adverse impacts on the highway. Paragraph 203 of the NPPF states that minerals can only be worked where they are found, which, in the case of Wressle, is a rural location some distance from the nearest settlement of any size. The rural location and the type of development mean that alternative modes of transport to the car are not appropriate. The Transport Statement has concluded that the amount of traffic generated by the development will be relatively light and will not adversely affect waiting times on the existing highway network. NLC's Highways Officer raised no objections to the proposal. The Proposed Development therefore complies with the NPPF's chapter on sustainable transport.

Effective Use of Land

8.19 Paragraph 117 states that planning decisions should promote an effective use of land.

8.20 As the Proposed Development is situated at the Wressle-1 wellsite, where the exploratory well has already been drilled, it is considered an effective use of land and is therefore in compliance with

Paragraph 117 of the NPPF. NLC has agreed that the principle of hydrocarbon development is acceptable at this location.

Meeting the Challenge of Climate Change, Flooding and Coastal Change

8.21 Paragraph 148 states that the planning system should support the transition to a low carbon future.

8.22 The Proposed Development is contributing to the UK's transition to a low carbon economy by providing indigenous fossil fuels and helping to ensure security of supply. The Committee on Climate Change (CCC) has acknowledged that the UK will still be relying on fossil fuels even with the Net Zero UK carbon emissions by 2050 (CDH6).

8.23 With regard to flood risk, paragraph 163 states that local authorities should ensure that flood risk is not increased elsewhere.

8.24 The HFRA (CDA3) demonstrates that the Proposed Development will not increase the risk of flooding elsewhere. The EA made no objections to the application. Therefore, I consider that the Proposed Development is in compliance with paragraph 163 of the NPPF.

Conserving and Enhancing the Natural Environment

8.25 Paragraph 170 states that planning decisions should contribute to enhancing the natural and local environment. This includes recognising the intrinsic character and beauty of the countryside and providing net gains for biodiversity. It adds that development should prevent new and existing development from contributing to, being put at unacceptable risk from and/or being adversely affected by, unacceptable levels of soil, air, water or noise pollution.

8.26 Paragraph 175 states that proposals should be refused if there is harm to biodiversity, which cannot be suitably mitigated.

8.27 I consider the impact of the development on biodiversity with reference to NLC's Core Strategy Policies LC4 and LC5 in paragraphs 7.83-7.88 of this Proof. Once production ceases, the land will be restored to agricultural land and include biodiversity measures detailed in the Ecological Appraisal (CDA8). Neither Natural England nor NLC's Ecologist raised any objection to the proposals. I therefore consider that the Proposed Development is in compliance with paragraphs 170 and 175 of the NPPF.

8.28 Paragraph 180 states:

"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution and health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development."

8.29 I consider the likely effects of pollution and health with reference to Policies M23 and DS11 of the North Lincolnshire Local Plan (2003) at paragraphs 5.38-42 and 5.62-63 respectively of this Proof. As I have referred to elsewhere in my Proof, James Dodds' evidence clearly demonstrates that the risk of adverse impact of the development on the quality of groundwater will be negligible and can be effectively and robustly monitored by use of the groundwater monitoring boreholes. The EHO for North Lincolnshire had no objections to the application and no objections were raised by the EA. In my view, it is therefore in compliance with Paragraph 180.

8.30 Paragraph 183 states:

"The focus of planning policies and decisions should be on whether proposed development is an acceptable use of land, rather than the control of processes or emissions (where these are subject to separate pollution control regimes). Planning decisions should assume that these regimes will operate effectively."

8.31 The Proposed Development is considered acceptable by the EA, who are the regulatory authority in respect of flood risk and impact on groundwater. NLC has confirmed that it accepts the principle of hydrocarbon development at the Wressle wellsite. I consider that the proposed development accords with the development plan and would not result in any material adverse impacts which would make

the proposal unacceptable. Therefore, I consider that the development is in compliance with paragraph 183.

Conserving and Enhancing the Historic Environment

8.32 Paragraph 189 states that when determining planning applications, local authorities should require applicants to describe the significance of any heritage assets affected. Paragraph 196 states that where a proposal will lead to less than substantial harm to the significance of a designated heritage asset, the harm should be weighed against the public benefits of the proposal

8.33 Paragraphs 5.20-5.26 of my Evidence detail the impact of the development on Thornholme Priory with regard to Policy M4 of NLC's 2003 Local Plan. The Conservation Officer confirms that the impact of the development on the setting of the Scheduled Monument is temporary and there are no adverse impacts on the scheduled monument. In addition, the public benefits of the proposal (the need for indigenous fossil fuels) very clearly outweigh the minor temporary impact on the Scheduled Monument.

Facilitating the Sustainable Use of Minerals

8.34 Paragraph 203 states:

> "It is essential that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods that the country needs. Since minerals are a finite resource, and can only be worked where they are found, best use needs to be made of them to secure their long-term conservation."

8.35 Paragraph 205 adds that when determining planning applications, great weight should be given to the benefits of mineral extraction, including to the economy. When considering proposals for mineral extraction, mineral planning authorities should:

- Ensure that there is no unacceptable adverse impact on the natural or historic environment and human health;
- Ensure that any unavoidable noise, dust and particle emissions are controlled, mitigated or removed at source and to establish appropriate noise limits for extraction in proximity to noise sensitive properties;
- Provide for restoration and aftercare at the earliest opportunity, to be carried out to high environmental standards.

8.36 Both conventional and unconventional hydrocarbons are considered to be minerals of local and national importance by Government (Annex 2: Glossary of the NPPF). As stated above, minerals can only be worked where they are found. The drilling for hydrocarbons is permitted subject to the Oil and Gas Authority issuing a licence under the Petroleum Act 1998. This is covered further in Mark Abbott's evidence but Egdon has obtained the relevant licences. Following the exploratory drilling of the site in 2014 and production testing in 2015, it was confirmed that 2.15 million barrels of oil could be recoverable. Hydrocarbons are essential not only in contributing to the UK's energy supply but also critical in relation to the supply of materials and products we use every day, such as chemicals, computers and medical products. It has been proved through exploratory drilling and testing that minerals that are recoverable have been found. This appeal seeks to make best use of them by recovering reserves of 2.15 million barrels. Therefore, the proposals are in compliance with paragraph 203.

8.37 Secondly, the principle of hydrocarbon exploration at Wressle-1 is accepted as the Council granted planning permission for the exploratory drill in June 2013. During and following site construction, and the subsequent exploration and testing phases, the Appellant is not aware of any complaints or concerns raised by residents or statutory consultees arising from traffic movements, noise and vibration, dust, seismicity, visual impact, hydrology, pollution control, ecology, flooding, drainage or waste management. This was confirmed by the Inspector who granted the appeal to extend the lifetime of the wellsite until January 2020 (Appeal D). In her decision letter, the Inspector confirmed that "the existing site facilities do not have a significant adverse visual impact on the surroundings. Nor is it harmful to the living conditions of local residents."

8.38 I summarise at paragraph 5.102 of my proof how the proposals contribute to the local, regional and national economy. NLC has a policy on the benefits of onshore oil and gas production (Policy M23 detailed in paragraphs 5.38-5.42 of my Proof). This supports the NPPF by stating that mineral

extraction is permitted provided that there are suitable environmental protection measures. The technical reports that were submitted to support the application were considered acceptable by the consultees including NLC's EHO and the EA. In addition, there were no objections for NLC's Conservation Officer with regard to the Proposed Development's impact on Thornholme Priory.

8.39 With regard to restoration, the Appellant submitted an updated Site Closure and Restoration procedure (see Appendix 5 of the Planning and Sustainability Statement (CDA2) for more information). The Appellant is committed to restoring the site in accordance with current decommissioning guidelines, which will be subject to examination by an independent well examiner and other regulatory regimes. For more information on the other regulatory regimes, please see Jonathan Foster's Proof of Evidence. The Site Closure and Restoration procedure has been revised and updated since 2013 when planning permission was granted for the exploratory wellsite. Restoration will commence at the earliest opportunity in line with national planning policy. The Proposed Development is therefore in compliance with paragraph 205 of the NPPF.

Planning Practice Guidance

8.40 On 6 March 2014, the formerly named Department for Communities and Local Government launched the Planning Practice Guidance (PPG) Resource. The PPG seeks to make new planning guidance easier and simpler for practitioners and the public and should be read in conjunction with the national policy contained within the NPPF. The suite of PPGs does not have the status of policy but they are an important material consideration in the determination of planning applications.

Climate Change PPG

8.41 The Climate Change PPG advises how planning can identify suitable mitigation and adaptation measures in plan-making and the planning application process to address the potential impacts of climate change.

8.42 Paragraph 001 requires local authorities to "ensure that protecting the local environment is properly considered alongside the broader issues of protecting the global environment." Addressing climate change is one of the core land use planning principles underpinning both plan-making and decision-taking.

8.43 Paragraph 003 cites the consideration of the "availability of water and water infrastructure for the lifetime of the development and design responses to promote water efficiency and protect water quality" as an example of the planning system's means of adapting to a changing climate.

8.44 Paragraph 005 states that the impact of climate change "needs to be taken into account in a realistic way" such as looking at "the potential vulnerability of a development to climate change risk over its whole lifetime."

8.45 This proposal takes account of climate change in the context of water infrastructure for the lifetime of the development. The wellsite reconfiguration has been designed to provide sufficient capacity to retain rainfall volumes without discharging from the wellsite, from a 1 in 100 year plus 5% climate change storm event. I therefore consider that the proposal accords with the relevant guidance in the Climate Change PPG.

Minerals PPG

8.46 This guidance focuses on the planning for mineral extraction in plan-making and the application process.

8.47 Paragraph 012 sets out the relationship between planning and other regulatory regimes noting that "the planning system controls development and the use of the land in the public interest" including ensuring that development is appropriate for its location and an acceptable use of land. The guidance reiterates the NPPF's stated approach that:

> **"The focus of the planning system should be on whether the development itself is an acceptable use of land and the impacts of those uses, rather than any control processes, health and safety issues or emissions themselves where these are subject to approval under other regimes. Mineral planning authorities should assume that these non-planning regimes will operate effectively."**

8.48 Paragraph 13 sets out the environmental issues that authorities should address when dealing with applications for mineral-related development including noise, air quality, lighting, visual impact, traffic, risk of contamination to land, geological structure, flood risk, impacts on protected landscapes, surface and, in some cases, groundwater issues and water abstraction.

8.49 Paragraph 14 sets out issues which are for other regulatory regimes to address, including, for example, ground and surface water, for which the EA is responsible. With specific respect to hydrocarbon extraction, paragraph 014 links to later paragraphs within the online guidance which sets out the key regulators in addition to the Mineral Planning Authority.

8.50 Paragraph 15 states that "minerals operators should look to agree a programme of work with the mineral planning authority which takes into account, as far as practicable, the potential impacts on the local community and local environment (including wildlife), the proximity to occupied properties, and legitimate operational considerations over the expected duration of operations."

8.51 Paragraph 17 notes that the cumulative impact of mineral development can be a material consideration in determining planning applications.

8.52 Paragraph 39 identifies that proposals for restoration and aftercare of the site should be submitted as part of the planning permission. Paragraph 040 states that "the level of detail required on restoration and aftercare will depend on the circumstances of each specific site" and that "it must be sufficient to clearly demonstrate that the overall objectives of the scheme are practically achievable."

8.53 Paragraph 92 sets out the three phases of onshore hydrocarbon extraction. These being exploration, testing (appraisal) and production. Both exploration and testing (appraisal) have been undertaken at the Wressle-1 wellsite.

8.54 Paragraph 103 advises that the production life of an oil and gas field can be up to 20 years. In the case of the Wressle-1 wellsite, production is programmed to last between 10-15 years. Paragraph 103 further states that following production, the facilities should be dismantled, and the sites restored to their former or an appropriate use.

8.55 Paragraph 104 is a reminder that hydrocarbon extraction can only take place in areas where the Department of Energy and Climate Change (now the Oil and Gas Authority) has issued a licence under the Petroleum Act 1998. Some hydrocarbon issues may be covered by other regulatory regimes but may still be relevant to Mineral Planning Authorities.

8.56 Paragraph 110 states:

"Key regulators for hydrocarbon extraction are:

A. Department of Energy and Climate Change - Issues Petroleum Licences, gives consent to drill under the Licence once other permissions and approvals are in place and have responsibility for assessing risk of and monitoring seismic activity, as well as granting consent for flaring or venting;

B. Mineral Planning Authorities - Grant permission for the location of any wells and wellpads, and impose conditions to ensure that the impact on the use of the land is acceptable;

C. Environment Agency - Protect water resources (including groundwater aquifers), ensure appropriate treatment and disposal of mining waste, emissions to air and suitable treatment and manage any naturally occurring radioactive materials; and

D. Health and Safety Executive - Regulates the safety aspects of all phases of extraction, in particular responsibility for ensuring the appropriate design and construction of a well casing for any borehole."

8.57 Paragraph 112 provides further detail on the roles and responsibilities of these regulatory bodies stating that "there exists a number of issues which are covered by other regulatory regimes and mineral planning authorities should assume that these regimes will operate effectively". Jonathan Foster's evidence contains information about how these regulatory regimes operate. Whilst these issues may be put before mineral planning authorities, they should not need to carry out their own

assessment as they can rely on the assessment of other regulatory bodies. However, before granting planning permission they will need to be satisfied that these issues can or will be adequately addressed by taking the advice from the relevant regulatory body.

8.58 Notwithstanding the above, paragraph 112 highlights where mineral planning authorities are able to have regard to matters which would ordinarily be assumed to fall to others stating "some issues may be covered by other regulatory regimes but may be relevant to mineral planning authorities in specific circumstances. For example, the EA has responsibility for ensuring that the risk to groundwater is appropriately identified and mitigated… mineral planning authorities can and do play a role in preventing pollution of the water environment from hydrocarbon extraction, principally through controlling the methods of site construction and operation, robustness of storage facilities and in tackling surface drainage issues."

8.59 The EA commented twice on the application and confirmed that the proposals would only enhance the environmental protection measures for the Site. Chapter 9 of my Proof concern the response from the independent environmental consultants, JBA, who undertook a review of the HFRA and the CSDS (CDA16). Jonathan Foster's evidence provides more detail on the role of the EA as a regulator.

8.60 Paragraph 120 states:

"When determining applications for subsequent phases, the fact that exploratory drilling has taken place on a particular site is likely to be material in determining the suitability of continuing to use the site only insofar as it establishes the presence of hydrocarbon resources."

8.61 The testing phase at the Wressle wellsite in 2015 has confirmed the presence of hydrocarbons and is a material consideration in the determination of this planning application. There is no evidence that the proposed development will have an adverse impact upon residential amenity or environmental assets and habitats.

8.62 Paragraph 124 states that account should be taken of national energy policy, making clear that "energy supplies come from a variety of sources" including onshore oil and gas, as set out the Annual Energy Statement (dated October 2013).

8.63 This is expanded further in section 8.4 regarding national energy policy.

8.64 In summary, I therefore consider that the proposed development fully accords with the Minerals PPG.

Health and Wellbeing PPG

8.65 Paragraph 001 states that local authorities:

"Should ensure that health and wellbeing and health infrastructure are considered in planning decision-making."

8.66 Paragraph 002 declares built and natural environments to be "major determinants of health and wellbeing" and goes on to list, amongst others, that planning authorities should, in considering new development proposals, ensure that "potential pollution and other environmental hazards, which might lead to an adverse impact on human health, are accounted for."

8.67 Information on how the Proposed Development responds to the criteria of the Health and Wellbeing PPG is detailed in response to Policies DS1 and DS11 of the North Lincolnshire Local Plan 2003 (paragraphs 7.34-7.38 and 7.61-7.62 of my Proof respectively). A number of technical reports accompanied the planning application which considered the proposed development against potential environmental impacts, such as noise, air quality, groundwater contamination etc. These reports concluded that there would be no significant adverse impacts on the health and wellbeing of the nearby residents. Statutory consultees, including the Council's EHO and the EA also raised no objection to the Proposed Development. In addition, Jonathan Foster's evidence provides further detail on the Regulatory Framework and includes applicable regulations issued by the Health and Safety Executive that the Appellant and its contractors must abide by. I therefore believe it is compliant with the Health and Wellbeing PPG.

Natural Environment PPG

8.68 Paragraph 001 states that "planning should recognise the intrinsic character and beauty of the countryside."

8.69 Paragraph 007 explains the statutory responsibilities of planning authorities in determining applications and, at its core, a duty to "contribute to conserving the natural environment and reducing pollution."

8.70 Paragraph 008 requires local planning authorities to "consider the opportunities that individual development proposals may provide to enhance biodiversity and contribute to wildlife and habitat connectivity in the wider area."

8.71 Paragraph 024 states that the "planning system should protect and enhance valued soils and prevent the adverse effects of unacceptable levels of pollution".

8.72 My assessment of the issues of landscape and species protection is set out above by reference to Policies RD2, LC4 and LC7 (paragraphs 7.39-46, 7.83-86 and 7.89-90). The updated Ecological Appraisal (CDA8) concluded that there would be no significant adverse impact on statutory and non-statutory environmental designations. In addition, there would be no adverse impact on internationally and nationally protected species. The Report also included biodiversity measures, such as bat and barn owl boxes and a 6m margin along the northern boundary of the site, which will be left to regenerate naturally, providing foraging habitats for a number of species and enhancing the biodiversity of the Site, which were agreed between NLC and the Appellant under condition prior to Planning Committee in November. There have been no objections from Natural England nor the Council's Ecologist and there was no response from Lincolnshire's Wildlife Trust.

8.73 In my opinion, the Proposed Development is compliant with the Natural Environment PPG.

Water Supply, Wastewater and Water Quality PPG

8.74 Paragraph 016 advises that whether water is likely to be a material consideration "will depend on the proposed development, its location and whether there could be concerns about water supply, water quality or both."

8.75 With regard to water supply, it advises that this would normally be addressed through the local plan and is therefore unlikely to be a material consideration for most planning applications.

8.76 With respect to water quality, paragraph 016 states:

"It is only likely to be a significant planning concern when a proposal would:

- **Involve physical modifications to a water body such as flood storage areas, channel diversions and dredging, removing natural barriers, constructions of new locks, new culverts, major bridges, new barrages/dams, new weirs (including for hydropower) and removal of existing weirs; and/or**

- **Indirectly affect water bodies, for example:**
  - **As a result of new development such as the redevelopment of land that may be affected by contamination, mineral workings, water or wastewater treatment, waste management facilities and transport schemes including culverts and bridges;**
  - **Through a lack of adequate information to deal with wastewater."**

8.77 When assessing the impacts upon water quality, they could include:

- **"The likely impacts of the proposed development (including physical modifications) on water quantity and flow, river continuity and groundwater connectivity, and biological elements (flora and fauna);**
- **How the proposed development will affect measures in the river basin management plan to achieve good status in water bodies;**

- **How it is intended the development will comply with other relevant statutory requirements relating to the water environment (such as those relating to bathing waters, shellfish waters, freshwater fish and drinking water) bearing in mind compliance will be secured through the Environment Agency's permitting responsibilities."**

8.78 James Dodds' evidence includes information that the proposed development will not have an adverse impact on local water supplies.

8.79 Jonathan Foster's evidence includes information on the Environmental Permit of the Site.

8.80 The HFRA (referred to in James Dodds' evidence) (CDA3) has concluded that the risk to groundwater is 'low to very low', which has been accepted by both the EA and the Council's EHO.

8.81 Therefore, I conclude that the Proposed Development is in compliance with the Water PPG.

Economic Growth Plan for North Lincolnshire

8.82 An 'Economic Growth Plan for North Lincolnshire' was launched by NLC in November 2018 and can be considered a material consideration in the determination of this appeal. It includes support for the growth and diversification of the Humber chemical and energy cluster. The Plan states that the sector contributes around £6 billion to the economy and employs around 15,000 people in 120 companies. Industries include petrochemicals, commodity and specialty chemicals, composite materials, pigments and paints, wind turbines and pharmaceuticals.

8.83 Hydrocarbons are fundamental to these locally important industries, including wind turbines, which require composite materials. The hydrocarbons from the Wressle-1 wellsite will contribute to the region's industry. The oil from Wressle will be refined in Immingham, 32km away via the M180/A180 Motorway, 7km to the east of the wellsite, which could then be used in the Humberside Industry, reducing the UK's reliance on imports and, therefore, carbon emissions.

8.84 I consider that in its determination of the application, NLC failed to give proper weight to national policy, which states that authorities should consider the benefits of mineral extraction, especially to the economy. I am of the opinion that the extraction of onshore oil can only be beneficial to regional growth and industry, while also reducing carbon emissions. I therefore consider that the Proposed Development can contribute to the objectives of this document, which should be given great weight as a material consideration in the determination of this appeal.

Energy Supply and Climate Change - National Policy Context

Energy Act 2008

8.85 Oil and gas form an integral part of the UK's energy and generation mix and play an important role in maintaining security, affordability and decreasing carbon emissions in the UK. It is important, therefore, to take into account the context of the UK's energy and climate change policy.

8.86 The Energy Act 2008 implemented the key aspects of the 2007 Energy White Paper and reflects the changing requirements the changing needs for security of supply infrastructure and adequate protection for the environment and the UK's population.

Climate Change Act 2008

8.87 The Climate Change Act established a legally binding target to reduce the UK's greenhouse gas emissions by at least 80% below base year levels by 2050, to be achieved through action both at home and abroad. In order to drive progress and set the UK on a path towards achieving the target, the Act introduced a system of carbon budgets which provide legally binding limits on the amount of emissions that can be produced in successive five-year periods, beginning in 2008.

Overarching National Policy Statement for Energy (EN-1)

8.88 EN-1 was published by the formerly named Department of Energy and Climate Change in July 2011 to provide national policy for consideration of proposals for energy infrastructure dealt with by what was formerly the Infrastructure Planning Commission (now PINS), under the provisions of the Planning Act 2008. The Statement can be considered to be a material consideration in the determination of planning applications. Paragraph 5 of the NPPF confirms this and states:

"National policy statements form part of the overall framework of national planning policy and may be a material consideration in preparing plans and making decisions on planning applications."

8.89 Paragraph 2.2.20 states that it is critical that the UK continues to have secure and reliable supplies of energy as the UK makes the transition to a low carbon economy. It goes on to say that the country needs a diverse mix of technologies and fuels so the UK does not rely on one sole technology. Paragraph 2.2.23 acknowledges that the UK should reduce its dependence on fossil fuels but that they are essential during the transition. Paragraph 2.2.25 highlights the security supply challenges, which states that the oil and gas production and supply are being increasingly politicised.

8.90 I consider that the Proposed Development is in accordance with EN-1 as it is contributing towards the UK's transition to a low carbon economy by providing indigenous fossil fuels. In addition, the Proposed Development helps to contribute towards the security of supply by providing indigenous resources, thereby not relying on other countries for the UK's energy needs.

Energy Security Strategy 2012

8.91 In November 2012, the Department of Energy and Climate Change published the Government's future strategy for energy security. It acknowledges that North Sea oil and gas has brought significant energy security as well as commercial benefits to the UK. UK production still provides the equivalent of 72% of our oil use and 55% of our net gas use but by 2020, it forecast that the UK will be a net importer of 43% of the UK oil demand and 53% of gas demand.

Annual Energy Statement (AES) 2014

8.92 Published by the DECC on 6 November 2014, the AES sets out the Government's progress against its energy policy priorities, namely:

ii. "Supporting consumers and keeping energy bills down;

iii. Supporting investment in the UK's energy infrastructure; and

iv. Promoting action in the EU and internationally to maintain energy security and mitigate dangerous climate change as we chart towards a global deal on climate change in 2015."

8.93 I consider that the Proposed Development will support the AES's three main aims by exploiting indigenous oil reserves, helping to maintain a security of supply and contributing towards the UK's transition to a low carbon economy. Providing indigenous oil and gas reserves, which can be connected into the electricity grid, helps keep energy bills down for the consumer. The oil will be refined at the local refinery in Immingham, approximately 30km to the east of the Site, supporting investment in the UK's energy infrastructure.

Committee on Climate Change – Net Zero Report 2019

8.94 This report by the Committee on Climate Change (CCC) published in May 2019 reassesses the UK's long-term emissions target at the request of the Governments of the UK, Scotland and Wales. It recommended a new emissions target for the UK of net-zero greenhouse gases by 2050 which will deliver on the commitment made by the UK Government in signing the Paris Agreement. This is only possible if clear, stable and well-designed policies to reduce emissions further are introduced without delay.

8.95 Even with Net Zero 2050, the Committee on Climate Change has forecast that the UK will still require 600 TeraWatt hours (TWH) of natural gas – equivalent to 55 billion cubic metres - in 2050 (a 32% reduction from current demand). To meet this demand, the UK will have to import around 86% of its gas consumption, a significant increase from 2019 when 50% of our natural gas is imported (UKOOG press release, 2 May 2019).

8.96 Oil demand is forecast to be 140 TeraWatt hours (TWH) in 2050 with a 10% import dependency, assuming no increases in onshore oil production. There is therefore a continued recognition of the need for oil.

8.97 In the report, the CCC states clearly that offshoring of greenhouse gas emissions is not acceptable. The policy framework to reduce UK industry emissions must ensure that it does not drive industry overseas, which would not help to reduce global emissions. Accordingly, in my opinion, the CCC's

report continues to endorse current Government policy that the UK needs a secure long-term supply of natural gas and oil to meet our net zero targets. Therefore, the Wressle development will make a small but important contribution to helping maintain the UK's security of supply and reducing the country's needs for imports.

8.98 The CCC state in their technical report that net zero emissions would constitute the UK's 'highest possible ambition' as called for by Article 4 of the Paris Agreement. The CCC does not currently consider it credible to aim to reach net-zero emissions earlier than 2050.

Climate Change Act 2008 (2050 Target Amendment) Order 2019

8.99 In July 2019, the Government passed an amendment Order which set a target of a 100% reduction in net UK emissions of targeted greenhouse gasses by 2050.

Written Ministerial Statements (WMSs)

8.100 Paragraph 6 of the NPPF states:

8.101 "Other statements of government policy may be material when preparing plans or deciding applications, such as relevant Written Ministerial Statements and endorsed recommendations of the National Infrastructure Commission."

September 2015 WMS

8.102 The 2015 WMS was a joint statement made by the Secretary of State for Energy and Climate Change (DECC) and Secretary of State for Communities and Local Government concerning shale gas and oil.

8.103 Although the WMS focuses on shale oil and gas production and the Wressle-1 wellsite is intended to produce 'conventional' hydrocarbon, it includes important statements in support of indigenous gas supplies. "Having access to clean, safe and secure supplies of natural gas for years to come is a key requirement if the UK is to successfully transition in the longer term to a low-carbon economy." It goes on to say that "natural gas is absolutely vital to the economy." In 2014, 40% of oil consumption was from net imports. The DECC calculated that would rise to 73% by 2030. The WMS highlights the need for indigenous fossil fuels to support the UK's transition to a low carbon economy.

May 2018 WMS

8.104 The 2018 WMS was again a joint statement between the Secretary of State for Business, Energy and Industrial Strategy (BEIS) and the Secretary of State for Housing, Communities and Local Government. Its principal objective concerned the need for shale gas to contribute to the UK's energy needs. It also set out the planning approach to shale gas. It reiterated the policy from the NPPF by stating that great weight should be given by local authorities to the benefits of mineral extraction. It added that the Government had set out definitions for 'fracking'. I consider that the Government's definition of 'fracking' is appropriate and that the proposed development can be considered 'conventional'. This was agreed by the Inspector in the dismissed Appeals A and B (CDD6).

May 2019 WMS

8.105 The 2019 WMS was published in May 2019 following the judgment of Mr Justice Dove in the case of Stephenson vs SoS MHCLG [2019] EHWC 519 (Admin). That judgment quashed paragraph 209(a) of the NPPF.

8.106 Despite this, the Government reiterated its commitment to the development of onshore oil and gas. The WMS confirmed that hydrocarbons were considered a mineral and so 'Chapter 17: Facilitating the Use Of Minerals' still applies. It added that the WMS of 2018 and the PPG remain in place. The Government highlighted again its commitment to the sustainable development of onshore shale gas resources and its commitment to indigenous fossil fuels.

Conclusion

8.107 I consider the Proposed Development to be in accordance with the relevant paragraphs of the NPPF, Planning Policy Guidance, the Annual Energy Statement 2014 and the three Written Ministerial Statements in respect of energy. In addition, I consider that the proposal accords with the UK's national energy and climate change policy, namely the Energy Act 2008, the Climate Change Act

2008 (as amended), the Energy Security Strategy, the Overarching National Policy Statement for Energy 2011 and the Committee on Climate Change's report Net Zero: The UK's contribution to stopping global warming. It is my opinion that the Government's commitment to indigenous fossil fuels, supporting the UK's transition to a low carbon economy, should be given great weight in the determination of this appeal. This was highlighted by the Inspector for Appeals A and B who agreed that the provision of indigenous fossil fuels is consistent with national energy policy (paragraph 11, CDD6).

8.108 I therefore consider that the Proposed Development is in line with national energy policy.

8.109 In my opinion, it is clear that indigenous fossil fuels will play an important role in the UK's energy provision and its transition to a low carbon economy. Government policy seeks to ensure that the UK's energy needs are provided by a number of sources and this Proposed Development will help achieve this.

9. RESPONSES FROM THE ENVIRONMENT AGENCY AND JBA CONSULTING

9.1 This chapter of my proof covers the responses to the proposal by the EA and JBA.

Environment Agency

9.2 NLC consulted the EA about the planning application on 16 July 2018. The EA's position was set out in their response of 3 August 2018. It stated:

> **"The site has a current Environmental Permit for the proposed operations. The revised scheme set out in the application documents will only enhance the environmental protection measures agreed for the site. The Environment Agency therefore has no objections to the proposals."**

9.3 NLC re-consulted the EA on 24 August 2018 following the submission by the Appellant of additional information. This included further information on clarifying gas engine and flaring emissions, which had been requested by Natural England in their consultation response.

9.4 The EA's response, dated 13 September 2019, was as follows:

> **"Thank you for re-consulting us on the above application on 24 August 2018 following submission of additional information. We have viewed the memo of 17 August 2018 and do not wish to add any comments to those in our previous response of 3 August 2018."**

9.5 In his proof of evidence, Jonathan Foster concludes that, in his professional judgement, significant weight should be attached to the EA's expert opinion as to the acceptability of the likely emissions to air, land and water. I conclude therefore that, as the EA raised no concerns about the planning application, significant weight can be attached to their comments.

JBA Consulting Limited

9.6 NLC employed the services of JBA to undertake a review of the HFRA and CSDS. JBA are specialists in environmental consultancy and gave evidence on behalf of NLC at the public inquiry in November 2017 (Appeals A and B).

9.7 In their response (CDA16), JBA noted that the documentation submitted with the planning application contained additional information to the previous 2016 and 2017 planning applications about the following subjects:

- New ground investigation data, including some geotechnical data;
- Additional mitigation measures;
- Assessment of on-site conditions; and
- Additional design regarding the site bearing capacity.

9.8 JBA concluded that the Proposed Development poses no risks that are categorised as either medium or high. The new documentation either addressed the weaknesses of the previous applications or could be addressed via planning conditions to secure the proposed mitigation. In its response, JBA suggested seven planning conditions.

9.9 Following JBA's letter, the Appellant issued a response to NLC on 7 November 2018 (CDA17). The letter responds to issues raised within the JBA report. These were grouped under the following headings:

- Hydrogeological conceptualisation;
- Site design; and
- Risk to British Steel Boreholes.

9.10 James Dodds' evidence provides further information on the hydrogeological conceptualisation and the risk to British Steel Boreholes and Mark Barwood's evidence provides evidence on site design.

Conditions 1 and 2 (ground monitoring boreholes)

9.11 With regard to the groundwater monitoring boreholes, JBA advised two conditions should be added to any planning permission.

1. *"Monitoring boreholes: it is proposed to reinstall the existing monitoring boreholes so as to monitor the whole of the saturated thickness of the superficial sands (down to 50cm within the first clay horizon.*

2. *Provision of an additional monitoring borehole between the site and Ella Beck."*

9.12 In response, the Appellant proposed a similar condition to that agreed by both the Appellant and NLC at the previous Inquiry, for Appeals A and B, in November 2017 in order to deal with these two matters. This condition has now been accepted by NLC and appears as Condition 17 in the SoCG (CDC6). This condition states:

> *"Prior to the commencement of development, a borehole installation plan for the deepening of three existing groundwater monitoring boreholes and the installation of up to two additional groundwater monitoring boreholes within the Unconsolidated Sands Aquifer shall be submitted to and approved in writing by the local planning authority, through consultations with the appropriate regulator. The borehole installation plan shall include details of the design, logging and construction of the boreholes. No development relating to the production phase and the preparatory works associated with that phase shall take place until the additional monitoring boreholes are in place. Both the existing and the additional groundwater monitoring boreholes shall be constructed and monitored in accordance with the approved borehole installation plan."*

Conditions 3 and 4 (load bearing capacity)

9.13 JBA advised two conditions should be attached to any planning permission:

3. *"Additional on-site plate CBR (California Bearing Ratio) testing should be undertaken to confirm the bearing capacity on site to confirm the design of the containment system;*

4. *If the cylinder test results are to be used, these tests should be repeated with the final screened aggregate and repeat loading cycles."*

9.14 The Appellant proposed one condition with regard to the load bearing capacity. NLC has agreed the wording of this condition and it is presented as Condition 18 in the SoCG.

> *"Prior to the commencement of development, a scheme for undertaking on-site load bearing testing shall be submitted to and approved by the local planning authority, through consultations with the appropriate regulator. The scheme shall include plate testing across the site where additional protection is not proposed (that is, those locations not referred to at paragraph 3.6, page 13 of the Civil and Structural Design Statement prepared by Alan Wood and Partners, dated 25 May 2018); and additional cylinder testing with final screened aggregate and repeated loading cycles. The results of the plate bearing tests and cylinder tests shall be submitted to the local planning authority and the depth of aggregate cover over the areas of the site where additional protection is not proposed shall be agreed with the local planning authority, through consultations with the appropriate regulator prior to any production operations taking place."*

Condition 5 (Quality Assurance)

9.15 JBA advised a condition with regard to quality assurance:

5. *"The quality assurance of the proposed mitigation should be provided for approval by the Council. In particular, the installation of the HDPE liner and interceptor are both critical to the functioning of the mitigation system. Full CQA documentation for this should be provided. Testing should be provided to demonstrate that the aggregate used on site is free of contamination. This should include a maintenance plan and a camera survey to confirm as-build specification."*

9.16 The Appellant proposed a pre-commencement condition committing the Appellant to submit a Construction Quality Assurance (CQA) document in response to JBA's recommendation. This has been agreed with NLC and can be found at Condition 19 in the SoCG (CDC6).

> *"No development shall commence until a Construction Quality Assurance (CQA) report has been submitted to and approved by the local planning authority, through consultations with the appropriate regulator. The CQA shall include the documentation listed in paragraph 3.11, page 16 of the Civil and Structural Design Statement prepared by Alan Wood and Partners, dated 25 May 2018."*

9.17 JBA also suggested two other conditions to NLC. One concerned site containment and the other site access. JBA requested that the Appellant provide further information on the angularity and quality of the final stone layer and its compatibility with the HDPE liner.

9.18 The Appellant questioned the need for such a condition. JBA did not provide any evidence to question the suitability of the proposed civil and structural design of the site. NLC agreed with the Appellant that such a condition was not required.

9.19 With regard to site access, JBA stated that no trafficking should be allowed outside the concrete area in case of spillage.

9.20 Again, the Appellant questioned whether such a condition was either necessary or justified. NLC agreed with the Appellant that such a condition was not required.

9.21 Mark Barwood's evidence will cover the Appellant's response to the JBA report in greater detail.

9.22 JBA's overall conclusion supports the adequacy of and the key conclusions within the technical documentation that accompanied the planning application.

Conclusion

9.23 The EA's primary role in the planning process is as the regulator in the protection of water resources. It raised no objection to PA1 or PA2. PA3 was accompanied by an updated HFRA and the CSDS which sought to overcome the concerns raised by the previous Inspector with regard to potential unacceptable adverse impacts to groundwater resources. In its response, the EA acknowledged that the revised design will enhance the scheme. The EA has issued an environmental permit. I conclude therefore that, as the EA raised no concerns about the planning application, significant weight can be attached to their comments.

9.24 NLC appointed JBA to review the CSDS (CDA11) and the HFRA (CDA3) to determine if they were satisfactory to address the Inspector's concerns or whether they could be addressed by conditions. JBA has concluded that, whilst there are a number of limitations to the HFRA, these are not sufficient to change the overall conclusions of the HFRA. They have recommended seven planning conditions. Conditions 1 and 2 covering groundwater monitoring boreholes) have been combined into a single condition and this has been agreed with NLC (Condition 17 of the SoCG (CDC6)). Conditions 3 and 4 (load bearing testing) have similarly been combined into a single condition and agreed with NLC (Condition 18 of the SoCG). Condition 5 (Construction Quality Assurance) is agreed with NLC at Condition 19 of the SoCG. The Appellant and NLC have agreed that conditions 6 and 7 (site containment and site access) are not necessary or justified.

9.25 I therefore conclude that the risks of an adverse impact upon groundwater is very low and there are appropriate mitigation measures in place to ensure the protection of ground and surface water. The Inspector's concerns have been fully addressed to the satisfaction of JBA, NLC and the EA.

10. RESPONSE TO THIRD PARTIES' COMMENTS

10.1 In this section I consider:

- The responses of Third Parties to the Planning Application;
- The responses of Third Parties to the Appeal;

The responses of Third Parties to the Planning Application

10.2 A total of 113 representations were received by NLC in response to the application. These were summarised in the Planning Committee report (CDB1). Many of the issues raised refer to non-compliance with policies in the Development Plan and the NPPF. I have addressed these in Chapters 7 and 8 of my Proof.

10.3 Many representations have incorrectly stated that the proposed development involves hydraulic fracturing or fracking. Others refer to concerns operational issues. Mark Abbott has already covered these issues in his Proof of Evidence. The description of development includes the technique of 'proppant squeeze' but Mark Abbott's evidence explains the differences between that and hydraulic fracturing.

10.4 In summary, the primary differences between a proppant squeeze and hydraulic fracturing are:

- The proppant squeeze will be undertaken only once;
- It will use 150m^3 of fluids compared with 1,000m^3 for fracking;
- Water for the proppant squeeze will not be tinkered to the wellsite;
- It will use 20-30 tonnes of proppant compared with c.300 to 1,000 tonnes per well for fracking;
- The fracture will comprise 40m laterally and 40m vertically at 1,570m below the surface. Fracking extends c.100-300m laterally and c.50-100m vertically.

10.5 An Environmental Permit has been issued by the EA, which authorises the acidisation and proppant squeeze activities (see Jonathan Foster's evidence for more information).

10.6 I therefore conclude that the proposal does not constitute fracking and these third party comments are not relevant to the proposal.

Climate Change

10.7 A number of representations have stated that the proposed development will increase the UK's dependence on fossil fuels and delays the switch to renewables and will add to climate change. In summary, some objectors have expressed concern that the production and burning of fossil fuels will contribute to global warming and climate change. They consider that the proposed development does not accord with the Paris Agreement on climate change or with the UK's legal commitments to reducing carbon emissions.

10.8 I have referred in chapter 8 of my Proof to the UK's Energy policy and the importance that the Government attaches to securing supplies of energy. The Government continues to acknowledge the importance of securing home-grown supplies of energy in order to reduce imports and help to meet the widening gap between UK oil production and demand. The Government's target for net zero carbon emissions by 2050 still assumes and allows for the consumption of fossil fuels, with offsetting any carbon emissions. In addition, the Inspector in his Decision Letter of January 2018, (CDD6), confirmed that the provision of onshore oil and gas facilities are a part of national energy policy in order for the UK to transition to a low carbon economy.

10.9 It is important to draw a distinction between on the one hand the potential impacts on climate change directly arising from the proposed development from the emission of greenhouse gases; and the consequential impacts arising from the ultimate use of the oil that is proposed to be extracted. Decision making of applications for extraction should only be concerned with the former. If a development were to be proposed that would result in a significant increase in the use of vehicles (for example, a distribution warehouse) with a resultant increase in the consumption of oil and the production of emissions, then the impact of those emissions and the implications for the overall sustainability of that proposed development could be a material consideration for the decision-maker. If, however, a development such as that proposed at Wressle will help to reduce imports of oil and

gas and will not result in a material increase in the consumption of oil and gas or any associated emissions, then the impact arising from the ultimate use of the product is not a material consideration.

10.10 The impact of the proposed development upon climate change should be considered in respect of both the local setting and the wider national impact. At the same time, the development needs to consider climate change in its design.

10.11 Firstly, in terms of the local setting, the HFRA addresses the impact of the development on flood risk and demonstrates that the wellsite drainage system is designed to accommodate rainfall volumes generated by a 1:100 year (+5% climate change) event which incorporates a discharge rate at 5l/s. This climate change factor has been defined using the EA guidance on climate change allowance for Flood Risk Assessments. A value of 5% is considered by the EA to best reflect the potential increase in critical storm events anticipated over the lifetime of the Proposed Development.

10.12 Secondly, the proposed development will include an enclosed ground gas flare to manage the initial gas volumes. Jonathan Foster has stated in his proof that the EA considers enclosed flares will generally provide best environmental performance for incinerating waste gases which will harness the gas produced in exploiting the oil reserves. The proposed flare meets the EA's recommended best available techniques.

10.13 Thirdly, the primary management of associated natural gas during production will be by harnessing the gas for onsite electricity generation, using a gas engine. The gas engine will be of the correct specification to match the gas flows.

10.14 Turning to the national context, there is no evidence that increasing indigenous oil and gas production will lead to higher levels of oil and gas consumption. Natural gas imports represented around 50% of UK gas consumption in 2017. The CCC Net Zero report (CDH6) states that this is forecast to increase to 75% by 2035 and to 90% by 2050. UK economy-wide gas consumption is projected to decrease by less than 20% by 2035 from 2017 levels of demand under the requirements of the Climate Change Act 2008. Natural gas produced in the UK will both reduce the UK's increasing import dependency and reduce the carbon footprint of the gas consumed when compared to contemporary and projected natural gas imports. Oil and gas produced at Wressle will not increase overall consumption but will displace imports.

10.15 Secondly, Government policy makes it clear that oil and gas remains an important part of the UK's energy mix. Energy policies recognise the continuing importance of fossil fuels but aim to manage the UK's reliance on them, their potential environmental impacts and the risks associated with security of supply. While the Government manages the transition to a low carbon energy mix, it is the case that oil and gas will remain key elements of the energy system for many years to come, especially for transport and heating.

10.16 The CCC Net Zero Report (CDH6) forecasts that the UK will require 600 TWh of natural gas in 2050 – a reduction of 32% compared to gas demand today - and that the UK will be reliant upon imported gas to meet 86% of demand by 2050, according to United Kingdom Onshore Oil and Gas, the onshore oil and gas trade body (UKOOG) (CDH7). Likewise, oil demand is forecast to be 140TWh by 2050 with a 10% import dependency. The proposed development at Wressle therefore is consistent with current government policy on climate change and the adoption of a net zero target.

10.17 Government policy is set out within the NPPF, the Mineral Planning Practice Guidance, the Annual Energy Statement, Written Ministerial Statements and in the 2012 Energy Security Strategy White Paper. The policy recognises that there is a need to maximise indigenous oil and gas resources both onshore and offshore. There is no policy support for refusing planning permission for development of this sort on the basis of climate change impacts arising from the eventual consumption of the oil and gas produced.

10.18 I therefore consider that there are no reasons with regard to climate change for the appeal to be dismissed.

Hydrology

10.19 Hydrology has been fully covered in my earlier sections of my proof. James Dodds fully addresses this in great detail in his proof. Accordingly, I have not repeated the points again here.

Ecology

10.20 Some objections have referred to impacts arising from lighting, noise and vibration and increases in HGV traffic upon wildlife in Far Wood SSSI and the adjacent woodland. This is covered extensively

in earlier sections of my proof. I have demonstrated the compliance of the proposed development to relevant national and local ecological policies in earlier sections of my proof. There have been no objections from the Council's ecologist or Natural England and the Lincolnshire Wildlife Trust did not make any comments. Therefore, I conclude that there will be no adverse ecological impacts.

Highways

10.21 There have been objections which relate to highways and transportation. Comments include an adverse impact on highway safety for all users and the unsuitability of the rural roads for HGVs. This is covered extensively in earlier sections of my proof. I have demonstrated the compliance of the development with policies in the development plan and other material considerations, including national planning policy, indicate that the highways impacts are acceptable. As part of the application, an updated Transport Assessment (CDA7) was submitted which analysed the impact of the development on the roads. The document was assessed by NLC's highways officer who raised no objection to the Proposed Development. In his Decision Letter (CDD6), the Inspector stated that the effect of the proposal would not cause a 'materially harmful' impact on the highway. I therefore conclude that there will be no material adverse impacts on highways.

Landscape

10.22 There have been comments which are concerned about the proposed development leading to the industrialisation of the countryside and ruining the landscape, and that the land should returned to agricultural purposes. This is covered extensively in earlier sections of my proof. As I have demonstrated in Chapter 8 of my Proof, national planning policy states that minerals can only be worked where they are found (paragraph 203 of the NPPF). The proposed use is temporary in nature and, once production has been completed, the Site will be restored to agricultural land, in line with local and national planning policy. The Site is also well screened by woodland. In his Decision Letter (CDD6), the Inspector concluded that the Site has "little visual impact" (paragraph 33). Consequently, I do not believe there would be any adverse impact upon the local landscape.

10.23 There were comments regarding the adverse impacts on neighbouring residents. For clarity, I have separated the potential impacts into the following categories.

Noise

10.24 There have been some comments regarding noise. Some third parties were concerned about the noise from the drilling 24/7 and the impact on local residents' sleep affecting their health and wellbeing. In addition, there were also comments regarding traffic noise. As I have previously discussed in my Proof, a Noise Assessment (CDA6) accompanied the application. It concluded that the Proposed Development could operate within the noise limits that were agreed as part of the original permission for exploratory drilling. Noise monitoring would be carried out during the development. Noise limits would be controlled within conditions, which were agreed between the Appellant and NLC prior to the Committee Meeting and are listed as conditions 10-14 of the SoCG (CDC6). NLC's EHO made no objections to the application and in his Letter (CDD6), the Inspector agreed that conditions would be acceptable to mitigate the impact from noise (paragraph 33). I am therefore of the opinion that the mitigation measures proposed by the conditions in the Committee Report mean that there will be no adverse impact in terms of noise. Noise monitoring was undertaken during the drilling of the exploratory borehole in 2014. There were no breaches of the noise thresholds set out in the approved noise management plan and no complaints were received by NLC or the EA.

Air Quality

10.25 There were some comments from third parties about the impact of the development on air quality due to pollutants being released into the atmosphere. As well as potential air pollution from the development itself, comments were also raised about air pollution from HGVs access and egressing the Site. The application was accompanied by an Air Quality Dispersion Modelling Assessment (CDA4), which concluded there would be no significant adverse impacts of the development on air quality. The Report also included dust mitigation measures, which was conditioned by the Council in its Committee Report (CDB1). AECOM clarified its position, following a request for more information from Natural England (CDA15). NLC's EHO made no objections and the Inspector in his Decision Letter (CDD6) concluded that the impact of the development on air quality would not be 'unacceptable' (paragraph 34). I therefore conclude that there are no reasons to dismiss the appeal on air quality.

Lighting

10.26 There were some comments about the potential light pollution in a rural setting. To accompany the application, a Lighting Assessment was submitted to NLC (CDA5). This document included specific mitigation measures to reduce the impact. These mitigation measures were accepted as a condition in NLC's Committee Report (CDB1). The EHO did not object to the application. I therefore consider that there are no adverse impacts with regard to lighting.

Seismicity and Vibration

10.27 There were comments about the proposals causing earthquakes in the area. The issue of seismicity is addressed in Mark Abbott's evidence. He concludes that the potential for seismic activity or ground vibration associated with the Proposed Development at Wressle is very small given the scale, depth and type of the proposed activities. The Appellant and NLC agreed in the SoCG (CDC6) that "there is no evidence to suggest that the development will give rise to induced seismicity" (2.3 (s)). The Inspector in his decision letter of 4 January 2018 (CDD6) concluded that "the balance of evidence does not suggest an unacceptable risk of harm through seismic activity in this case" (paragraph 32). Nevertheless, Egdon will undertake a programme to monitor surface vibration (local seismicity) in accordance with OGA guidance. This programme would be agreed with the OGA in consultation with the EA and would ensure that no unacceptable ground vibration impacts on any local properties.

Health and Wellbeing

10.28 This is covered extensively in earlier sections of my proof of evidence.

Socio-Economics

10.29 This is covered extensively in earlier sections of my proof of evidence.

Restoration

10.30 There were several comments regarding the restoration process. There were concerns about how the site will be restored and how it will be monitored to ensure that it has not been contaminated. As part of the planning application, the Appellant submitted a Site Restoration Plan (Appendix 5 of the Planning and Sustainability Statement (CDH1)). This Site Restoration Plan has been updated since the original permission was granted for the exploratory wellsite in 2014. The Plan includes details about how the site restoration will take place and how it will be subject to review by regulatory bodies. The role of the regulatory bodies is covered in Jonathan Foster's evidence. In the SoCG (CDC6), NLC and the Appellant agreed to the Site Restoration Plan (condition 21). I therefore conclude that there are suitable site restoration measures, which have been agreed with the Council.

The Appellant's Track Record

10.31 Some comments have mentioned the Appellant's track record at other sites that have been drilled, stating that they have not been in accordance with environmental standards. The Appellant's track record is discussed in Mark Abbott's Proof. He concludes that Egdon has an excellent track record in relation to Health and Safety and Environmental matters. However, notwithstanding this, the public interest is protected irrespective of who the operator is by the wide ranging and robust regulatory controls, including planning permission, which exist in relation to the Proposed Development and the oil and gas industry in general. These can be relied on to operate effectively. Conditions are imposed to ensure that the development is satisfactorily regulated and controlled and enforcement action is available to the Council if they are breached, irrespective of who is operating the site.

10.32 Therefore, I conclude that there are no reasons as to why the appeal should be dismissed with regard to Egdon's track record.

The responses of Third Parties to the Appeal

10.33 I have reviewed the responses from third parties to the appeal. I consider that they do not raise any additional matters of significance or relevance to the appeal which have not already been considered in my Proof of Evidence or in the evidence of Mark Abbott, Mark Barwood, Jonathan Foster and James Dodds.

Conclusion

10.34 None of the Third Party responses to the planning application and appeal raise any issues or concerns which have not already been fully addressed by NLC. I therefore conclude that the conditions agreed with NLC in the SoCG (CDC6) will ensure that the site can be constructed and operated to strict environmental management controls without risk to local residents or community.

11. CONDITIONS

11.1 Egdon and NLC have agreed a set of conditions to be attached to the deemed planning permission should the Planning Inspector allow the appeal. These conditions appear in the SoCG (CDC6).

12. CONCLUSIONS

12.1 In my proof, I have described the background to the planning application and the relevant policy framework against which the development should be considered.

12.2 This chapter of my proof seeks to draw together the outcome of the analysis of issues in the following structure:

1. Compliance with Development Plan policies;
2. Compliance with other non-Development Plan policies;
3. Addressing Previous Inspector's Concerns;
4. Benefits;
5. Any residual adverse effects;
6. Any other relevant issues raised by Third Parties; and
7. Overall Planning Balance.

Compliance with Development Plan policies

12.3 I consider the proposal accords with the relevant policies of the Development Plan, namely the North Lincolnshire Local Plan 2003 (CDF1), the North Lincolnshire Core Strategy 2011 (CDF2) and the Appleby Parish Neighbourhood Plan (CDF3). The SoCG (CDC6) confirms that the Appellant and NLC agree the proposal accords with all the relevant policies in the Development Plan.

12.4 The evidence that has been submitted in support of the application provides sufficient information about environmental protection measures to demonstrate that there will be no likely material adverse impacts arising from the proposed development. The careful design of the scheme and the technical assessments provided in support of the application give confidence and assurance that the proposal complies with all relevant policies including those which seek to protect groundwater and the quality and quantity of water resources. That is reflected in the conclusions reached by the Council's independent environmental consultants, JBA, who stated that the Proposed Development was acceptable subject to the imposition of suitable conditions (CDA16). These have been agreed by the Appellant and NLC and are set out in the SoCG (CDC6). There is no evidence to demonstrate that the proposal would not comply with any relevant policies in the Development Plan.

12.5 NLC has withdrawn its opposition to the appeal and has stated that it will not be presenting evidence at the inquiry subject to the agreement of acceptable planning conditions. These conditions have been approved by the parties in the SoCG (CDC6).

12.6 I conclude that the proposed development accords with the relevant policies in the Development Plan, and that those policies, when looked at as a whole, are up to date. It follows that the statutory presumption in section 38(6) is engaged, and planning permission should be granted unless material considerations indicate otherwise. It also follows that the presumption in favour of sustainable development in paragraph 11(c) of the NPPF is triggered. I regard this as a very important material consideration, and one to which significant weight should attach in the planning balance.

Compliance with non-Development Plan Policies

12.7 The Proposed Development complies with national planning policy. The NPPF states that minerals are essential to support economic growth and our quality of life. They can only be worked where they are found, which in the case of the Wressle wellsite, is in a rural part of North Lincolnshire. The proposed mitigation measures ensure that the impacts upon the natural environment, will be minimised and biodiversity enhanced. The development will not increase the risk of flooding elsewhere. There will be no adverse impacts upon the local highway network with HGV traffic using a designated route from the M180 motorway. There will be no long-term adverse impacts upon the historic setting of Thornholme Priority scheduled monument. In summary, the proposal seeks permission for the sustainable use of onshore hydrocarbons which is necessary to meet society's needs, in accordance with the NPPF.

12.8 Paragraph 8 of the NPPF states that achieving sustainable development means the planning system has three overarching objectives – economic, social and environmental. In my opinion, the proposal will deliver economic, social and environmental benefits. In terms of the economy, it will generate business rates to the local economy and generate some local employment (both direct and indirect) whilst helping to sustain and grow local and regional suppliers and service providers. It will help meet society's needs by reducing the need to import energy from abroad by displacing imported oil and assist in the UK's security of energy supply. Finally, it will both protect and enhance the environment through targeted biodiversity measures for both birds and bats on restoration of the Site. It uses natural resources prudently by re-using the existing wellsite at Wressle, ensures adequate protection against potential pollution to the ground and groundwater and will assist in the UK's transition to a low carbon economy. The Site is situated close to the local highway network on an HGV-designated route. The planning conditions agreed by both parties will ensure that the Site will be monitored throughout the lifetime of the development (above and beyond the already strict systems of ongoing regulation, monitoring and control that are imposed by other regulatory regimes, as explained by Jonathan Foster), and that the Site will be fully restored to an approved plan.

12.9 I consider that that the Proposed Development is sustainable within the meaning of paragraph 8 of the NPPF, and that the presumption in favour of sustainable development in paragraph 11(c) of the NPPF is engaged. As I have said, I consider that this is a material consideration to which substantial weight should be attached.

12.10 I consider that the overwhelming majority of the relevant policies in the Development Plan are up to date having regard to the NPPF.

12.11 The SoCG (CDC6) confirms that there are no areas of disagreement between the Appellant and NLC (paragraph 2.4) and both parties consider that planning permission should be granted, subject to the conditions set out in chapter 8 of the SoCG (CDC6).

12.12 The Proposed Development fully complies with national energy policy which seeks to ensure that the UK maintains security of energy supply. The Government is committed to ensuring that all energy consumers have access to reliable and secure energy supplies. As the UK transitions to a low carbon economy to meet its carbon net zero 2050 objective, there will be a continuing need for energy generation from fossil fuels, even when the UK is at net zero carbon emissions in 2050.

Addressing Previous Inspector's Concerns

12.13 I will now summarise what has been submitted as part of this application to address the concerns of the previous Inspector.

a) The adequacy of the technical information submitted regarding ground and groundwater contamination

12.14 The application was accompanied by a HFRA (CDA3) which demonstrated that the Proposed Development would have a negligible impact upon flood risk, groundwater and the adjoining watercourse known as Ella Beck. Neither the Council's own EHO nor the EA, the key regulator for flood risk, human health and the environment, raised an objection. The independent environmental consultants, JBA, appointed by NLC, confirmed that the application would be acceptable subject to the conditions, which have been agreed by both parties (CDA16).

12.15 James Dodds concludes in his evidence that the conclusions drawn by JBA are clear. JBA concluded that the risk of contamination from the proposed development to private water supplies, the British Steel boreholes and all other receptors, does not materially change from that found in the HFRA. He agrees with JBA in that if and in so far as there are any limitations in the HFRA, they are not sufficient to change the overall conclusions that it reaches. That is reflected in his evidence, which demonstrates that the risk assessment would not produce a materially different conclusion in the event that all of the minor issues raised by JBA were assumed to be well-founded and the assessment re-run accordingly. Mr Dodds' conclusion is that the proposed development does not constitute an unacceptable risk to groundwater or surface water by virtue of infiltration or runoff.

12.16 On the basis of this evidence, I consider that the information submitted regarding ground and groundwater contamination has demonstrably addressed the previous Inspector's concerns.

b) The reconfiguration and design of the well site and the adequacy of the GCL

12.17 Mark Barwood has confirmed in his evidence that the geotechnical investigation carried out by Opus International Consultants has confirmed the nature of the underlying strata. It has fundamentally informed the redesign of the reconfiguration of the Wressle wellsite. He concludes that the upgraded well platform will provide robust protection to the existing environment during the Proposed Development operations. The design has been undertaken in conjunction with the HDPE membrane specialist NAUE. Specific cylinder testing using the proposed stone thickness and membrane system has been undertaken to confirm its suitability.

12.18 Mr Barwood goes onto conclude that the new tanker access road and loading bay will offer robust construction for heavily trafficked areas. facilities.

12.19 Mr Dodds refers in his proof to the fundamental design principle ensuring a 'triple barrier' applies, comprising the containment of liquids (oil and water) in pipes and tanks, which are contained in sealed bunded areas, with the entire operational site underlain by a new HDPE impermeable liner.

12.20 The CSDS (CDA11) states that a new reinforced concrete storage bund is to be constructed on site for the purpose of containing five storage tanks, each with a capacity of 52,000 litres. The CSDS states that the required volume of the bund, based on CIRIA Guidance, is 163 cubic metres whilst the actual volume provided is 185.6 cubic metres. Mr Barwood concludes in his evidence that the bunds and site volumes have been confirmed to provide the necessary storage volumes to meet all statutory requirements including 1:100 year storm including climate change.

12.21 On this basis, I conclude that concerns raised previously about the adequacy of the existing GCL covering have been fully addressed.

Benefits

12.22 Granting planning permission for a hydrocarbon production at the existing wellsite would enable the achievement of substantial economic and environmental benefits associated with indigenous extraction and security of supply. The Government supports the production of indigenous hydrocarbons as a resource in the UK's transition to a low carbon economy and achieving net zero carbon 2050. The oil produced at Wressle will generate both national and local taxation, business rate and the use of local supplies and services. It will also help to reduce the need for the additional carbon emissions associated with the import of oil from oversees.

12.23 The Proposed Development will require specialist engineers and skilled operatives throughout all phases of the Proposed Development. It will also support local businesses such as road hauliers, suppliers of security and welfare facilities, restaurants, cafes, pubs, food stores and petrol stations, thereby supporting indirect employment and the local economy.

12.24 The development will make a small but important contribution to helping maintain the UK's security of supply and reducing the country's needs for imports.

12.25 Paragraph 205 of the NPPF advises that great weight should be given to such benefits.

Residual Adverse Impacts

12.26 The likely residual adverse environmental effects of the Proposed Development would be negligible and the residual risks very low, as confirmed in the evidence of Mark Abbott, Jonathan Foster, James Dodds and Mark Barwood.

12.27 The EA had no objections to the proposal, and the matrix of regulatory regimes which will operate to control the process and protect the natural and human environment from harm provide further assurance that the residual effects will be acceptable.

Issues Raised by Third Parties

12.28 I consider that the issues raised by Third Parties about potential impacts arising from the development are either irrelevant or do not come close to justifying the refusal of planning permission. The vast majority are general responses that object to fracking and the production of fossil fuels. The Proposed Development does not propose fracking (see Mark Abbott's evidence) and therefore objections relating to this matter are irrelevant. The production of fossil fuels in the UK is national policy and has been for many years, as the UK transitions to a low carbon economy and net zero carbon 2050. I consider that they are objecting to the merits of

current government policy rather than the Proposed Development itself. Consequently, I consider these objections should attract no weight in the determination of this appeal. Issues arising from the operation of the development have been dealt with by Mark Abbott in his evidence. Technical matters relating to hydrology and hydrogeology have been covered by James Dodds in his evidence. The role of the EA and other regulatory regimes has been examined by Jonathan Foster in his evidence. Finally, the design and site construction have been considered by Mark Barwood in his evidence. None of the other objections raised are well-founded.

Planning Balance

12.29 It is common ground between the Appellant and the Council that the Proposed Development complies with all relevant policies in the Development Plan, including the policies that were cited in the refusal notice (CDB3).

12.30 The statutory presumption in section 38(6) therefore means that planning permission should be granted unless material considerations indicate otherwise.

12.31 Furthermore, in circumstances such as these where the relevant development plan policies, considered as a whole, are up to date, paragraph 11(c) of NPPF applies. Consequently, the presumption in favour of sustainable development is engaged and the Proposed Development should be approved without delay. I consider that is a very important material consideration, to which substantial weight should be attached.

12.32 The Proposed Development is in compliance with relevant non-development plan policies, including the NPPF, Minerals PPG, national energy and climate change policy and written ministerial statements, and North Lincolnshire's Economic Growth Plan. The Government supports the production of indigenous hydrocarbons as a resource in the UK's transition to a low carbon economy and achieving net zero carbon 2050. Compliance with those non-development plan policies should also be given substantial weight.

12.33 Granting planning permission would deliver significant economic and environmental benefits associated with indigenous extraction and security of supply. The production of oil and gas at Wressle will help meet society's needs by helping to reduce the need to import energy from abroad by displacing imported oil and assist in the UK's security of energy supply. Great weight should be given to those benefits, consistent with paragraph 205 of the NPPF.

12.34 The benefits to which the proposed Development would give rise will outweigh any minor residual potential adverse impacts and the concerns raised by third parties (so far as these are material).

12.35 After the extraction operations are complete, the Site will be restored to agricultural use and include improved biodiversity measures to provide net gains for biodiversity.

12.36 In those circumstances I consider that NLC was plainly right to decide to withdraw its opposition to the proposed development subject to the imposition of appropriate planning conditions, which have been agreed by both parties in the SoCG (CDC6).

12.37 I conclude that the planning balance is strongly in favour of granting planning permission and the appeal should be allowed.