

Viking CCS Pipeline

**9.28 Technical Note in  
Response to Natural  
England's Written  
Representation Regarding the  
Lincolnshire Wolds National  
Landscape – Revision A  
(Tracked)**

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# 1 Introduction

1.1.1 This technical note supplements the Landscape and Visual Impact Assessment (LVIA) in the Environmental Statement (ES) Chapter 07: Landscape and Visual [APP-049], prepared for the Viking CCS Pipeline (hereafter referred to as the Proposed Development).

1.1.2 In their written representation [REP1-079], Natural England requested the following additional information in relation to potential effects on the Lincolnshire Wolds National Landscape (LWNL):

*“1. Natural England’s advice remains that a full justification as to why the project cannot avoid direct impacts to the Lincolnshire Wolds National Landscape is outstanding.*

*2. Natural England advise that a full assessment of the impacts on special qualities has not been provided, and therefore we cannot agree with the conclusion that potential landscape effects on the Lincolnshire Wolds National Landscape are not significant for the purposes of EIA.*

*3. Natural England advises that there is the potential for significant residual landscape and visual effects on the statutory purposes of the Lincolnshire Wolds National Landscape during construction and operation.*

*Further information is sought principally on the need to directly impact the Lincolnshire Wolds National Landscape; the impacts on special qualities; mitigation, including the use of trenchless methods; and whether the route can be successfully reinstated.”*

1.1.3 The full response to all points raised in Natural England’s Written Representation, is provided in the Applicant’s response to Written Representations [EN070008/EXAM/9.18] submitted at Deadline 2.

1.1.4 In accordance with this request, further information regarding routeing and the potential landscape and visual impacts of the Proposed Development on the LWNL is provided within this document.

1.1.5 The structure of this assessment is based upon the response to these considerations, drawing upon the baseline studies undertaken for the LVIA including information gathered from:

- the Lincolnshire Wolds Management Plan 2018 – 2023, which includes a statement of the Special Qualities of the AONB in Table 1 in that document; and
- relevant key indicators from the State of the Area of Outstanding Natural Beauty (AONB) Report prepared by the Lincolnshire Wolds Countryside Service in 2017.

1.1.6 The special qualities referred to in the management plan are as follows:

- Landscape Character
  - Scenic beauty & rural charm
  - Expansive, sweeping views
  - Peace and Tranquillity
  - Farmed Land
- Earth Heritage
  - Chalk upland plateau & valley landscape
  - Glacial/periglacial features including remnant lakes/spillways

- Geological qualities
- Biodiversity
  - Calcareous meadow, pasture & wet grasslands
  - Beech clumps
  - Woodlands (largely 18<sup>th</sup> – 19<sup>th</sup> century plantings)
  - Ancient woodlands
  - River, streams and ponds
  - Hedgerows
  - Roadside verges and green lanes
- Archaeology
  - Ancient route-ways
  - Scheduled Monuments
  - Burial mounds & monuments
  - Deserted medieval villages & shrunken medieval villages
  - Roman villas and settlements
- Cultural associations (community value)
  - Literary/artistic
- Historic Landscape and Buildings
  - Village character including churches
  - Conservation areas
  - Traditional farm buildings
  - Industrial heritage, airfields, railways, mine workings
  - Moated sites
  - Watermills and windmills
  - Dry stone walls

1.1.7 This response should be read alongside ES Chapter 07: Landscape and Visual [APP-049].

## 2 Why direct impacts on the LWNL cannot be avoided

2.1.1 Many potential constraints were considered when developing the route of the Proposed Development, however there were six key considerations, which were:

- The safety of local communities
- Built up areas or sensitive buildings such as schools
- Areas protected for their habitats and species
- The Lincolnshire Wolds Area of Outstanding Natural Beauty (now the Lincolnshire Wolds National Landscape (LWNL))
- Areas that are vulnerable to flooding, and
- Historic monuments

2.1.2 Of these, routeing away from local communities and built-up areas were the primary considerations for both amenity and safety reasons.

2.1.3 Consideration was given to the potential to connect emitters north of Immingham to the LOGGS pipeline at Theddlethorpe via a marine pipeline. There were many challenges identified relating to this option, and it was considered highly unlikely to be feasible or to gain consent.

2.1.4 To route south from Immingham, it is necessary to cross either east or west of Laceby.

2.1.5 Crossing to the east of Laceby would avoid the LWNL, however it would mean the pipeline would have to cross somewhere between the village of Laceby and the large conurbation of Grimsby and Cleethorpes. This area is highly constrained by existing and proposed development. In addition to the populated areas on the outskirts of Grimsby, North East Lincolnshire Council has allocated a large area west of Wybers Wood and Laceby Acres for future housing development (North East Lincolnshire Council Local Plan 2013 to 2032 (adopted in 2018)). This area (reference HOU342 Grimsby) is estimated to deliver 2,593 housing units by 2032. In addition, there are four smaller housing allocations around the edge of Laceby. The existing residential communities, in addition to this considerable extension to the western side of Grimsby means the pipeline route options are highly constrained in this area. The Hornsea 2 electrical cables pass through this same area. The cables themselves, together with the stand-off distances associated with their easement strip, take up a substantial proportion of the small gap between the A46 Grimsby Road and Laceby Beck.

2.1.6 It is not just the immediate gap between Laceby and Grimsby that presents a challenge in this location, it is also the routes from this point to the north and south. To the north there is an extant planning permission for a large solar development with a proposed second phase that has already resulted in the applicant implementing a reroute of the proposed development further to the west. There are also stands of mature trees including Priority Habitat deciduous woodland and 'open space and woodland' as defined on the North East Lincolnshire Local Plan policy maps. To the south there are several routeing challenges which include the need to cross Laceby Beck (possibly twice), and several existing and planned solar developments. A path through this area would be circuitous and the narrow route that avoids this existing and proposed infrastructure has already been taken by the Hornsea 2 cables, which is why its route takes two 90 degree turns. Given this, attempts to route the Proposed Development in this location would likely result in the pipeline having to

~~be routed further to the east, passing close to existing and proposed residential areas on the outskirts of Waltham and Barnoldby le Beck, directly contravening the primary routing criteria for the project Proposed Development. For these reasons, it was determined that a route east of Laceby was not possible whilst meeting key routing criteria. The Applicant then considered alternative route options to the west of Laceby.~~

~~2.1.1 —As built development extends up to the eastern edge of the A46/A18 roundabout and the LWNL extends up to the A18, crossing to the west of Laceby means it is inevitable that the route would be in the LWNL. To avoid the LWNL on a westerly route it would be necessary to route around the entire NL before routing back up north to Theddlethorpe. Such a route would be disproportionate from a cost perspective, would be likely to result in increased scale of environmental impact due to the larger amount of land affected, and would impact a greater number of landowners/occupiers. As a result, the Applicant concluded that the pipeline route would need to go through the LWNL to some extent, and thereafter focussed on minimising the length of the incursion.~~

### ~~2.1.7~~

~~2.1.8 In summary, following the key routing criteria, there is no viable route from Immingham to Barnoldby le Beck/Waltham area that can avoid the LWNL.~~

~~2.1.9 For this reason, coupled with the fact that the development is a buried pipeline above which land would be returned to its previous condition and use, the decision was taken to route a short section of the pipeline in the LWNL, but to exit the area as soon as reasonably practicable to do so.~~

~~2.1.10 From the point where the pipeline exits the LWNL the route is again dictated by the presence of larger centres of population including Waltham and Holton le Clay, which is why the route remains adjacent to the A18 for several kilometres.~~

~~2.1.2 Many potential constraints were considered when developing the route of the Proposed Development, however there were six key considerations, which were:~~

- ~~• The safety of local communities;~~
- ~~• Built up areas or sensitive buildings such as schools;~~
- ~~• Areas protected for their habitats and species;~~
- ~~• The Lincolnshire Wolds Area of Outstanding Natural Beauty (now the Lincolnshire Wolds National Landscape (LWNL));~~
- ~~• Areas that are vulnerable to flooding; and~~
- ~~• Historic monuments.~~

~~2.1.3 Of these, routing away from local communities and built up areas were the primary considerations.~~

~~2.1.4 Routing south from Immingham it is necessary to cross either east or west of Laceby. Crossing to the west of Laceby means it is inevitable that the route would be in the LWNL.~~

~~2.1.5 Crossing to the east of Laceby would avoid the LWNL, however it would mean the pipeline would have to cross somewhere between Laceby and the large urban area of Grimsby. These areas have a significantly higher population density than that of the areas to the west of Laceby, which was a primary routing consideration.~~

~~2.1.6 In addition to the existing extensive urban development on the outskirts of Grimsby, North East Lincolnshire Council has allocated a large area west of Wybors Wood and Laceby Acres for future housing development (North East Lincolnshire Council Local Plan 2013 to 2032 (adopted in 2018)). This area (reference HOU342 Grimsby) is estimated to deliver~~

~~2,593 housing units by 2032. In addition, there are four smaller housing allocations around the edge of Laceby.~~

~~2.1.7—Consequently, the existing residential communities, in addition to the considerable allocated plans for further extension to the western side of Grimsby means it would not be possible to route the pipeline in this area, whilst remaining compliant with our key routeing criteria relating to local communities and built-up areas.~~

~~2.1.8—In addition to the substantial constraints relating to existing centres of population and extensive allocations for new residential development, there were also several large solar developments for which applications had been submitted, which presented an additional constraint to routeing.~~

~~2.1.9—There are no other viable options available to route south from Immingham to Theddlethorpe that avoid the LWNL. For this reason, coupled with the fact that the development is a buried pipeline above which land would be returned to its previous condition and use, the decision was taken to route a short section of the pipeline in the LWNL, but to exit the area as soon as reasonably practicable to do so.~~

~~2.1.10—From the point where the pipeline exits the LWNL the route is again dictated primarily by the presence of larger centres of population including Waltham, Holton le Clay, Barnoldby le Beck, Brigsley and Ashby cum Fenby, which is why the route remains close to the A18 for several kilometres.~~



# 3 Landscape and Visual Effects on the Special Qualities of the Lincolnshire Wolds National Landscape

## 3.1 Introduction

3.1.1 The study area within the LVIA is encompassed within the Lincolnshire Wolds National Character Area and the Chalk Wolds landscape character area (LCA), as defined by the Lincolnshire Wolds Management Plan 2018 – 2023. The Chalk Wolds LCA has been used for the purposes of considering the special qualities of the LWNL. The Ridges and Valleys of the South-West LCA, North-west Scarp LCA, and South-eastern Claylands LCA lie beyond the extent of any likely significant influence of the Proposed Development.

3.1.2 The written description of the Chalk Wolds LCA states that:

*“The Chalk Wolds is a large open plateau of rolling hills and secluded valleys. The topography of this part of the Wolds is striking and is testimony to the last glaciation when ice sheets and meltwater dramatically altered the landscape. Large arable fields and characteristic changing crop patterns dominate the plateau top and contrasts markedly with the numerous valleys with their lush pastures and wooded slopes. The area has the highest concentration of deserted and shrunken medieval villages within the AONB”.*

*Key local National Landscape features identified include:*

- *Open rolling arable farmland on gently dipping plateau;*
- *Wooded and lush inward-facing valleys and dry valleys;*
- *Attractive nucleated villages, often of Saxon or medieval origin (e.g. Rothwell, Hatcliffe, Thoresway);*
- *Enclosure roads (drovers roads) with wide verges and characteristic hedgerows;*
- *Small plantation woodlands and beech clumps of the 18th and 19th centuries;*
- *Isolated chalk grassland;*
- *Deserted medieval villages (e.g. Beesby, East Wykeham);*
- *Archaeological sites on the plateau (e.g. tumuli, barrows);*
- *Manors and parkland (e.g. East Ravendale);*
- *Geomorphological and geological sites (e.g. Hubbard’s Hills, Welton le Wold); and*
- *Localised old enclosed landscape (e.g. north-eastern corner of the AONB)”.*

3.1.3 The special qualities of the LWNL that relate to landscape and visual effects are summarised in Table 1 in the Lincolnshire Wolds Management Plan 2018 – 2023 under four headings and a listing of elements that comprise the special qualities. Each of these is considered in turn in relation to the effect of the Proposed Development on them within [Table 3-1](#) [Table 3-1](#) of this document.

## 3.2 Landscape Character

3.2.1 Elements that comprise the special qualities relating to landscape character are listed as:

- scenic beauty and rural charm;

- expansive, sweeping views;
- peace and tranquillity; and
- farmed land (scenic quality, biodiversity, socio-economic).

3.2.2 It is noted that these apply to most of the LWNL (Table 1 of the Lincolnshire Wolds Management Plan 2018 – 2023). An assessment of effects on these special qualities as they relate to the Chalk Wolds and the Proposed Development is set out below.

### Scenic beauty and rural charm

3.2.3 During construction, as set out in the ES chapter [APP-049], there is potential for multiple impacts from the introduction of machinery, soil movements, and construction activity as well as removal or modification of characteristic landscape elements such as agricultural land, hedgerows and trees.

3.2.4 Within the LWNL these will be derived from the excavation for, and installation of, the underground pipeline along with views of other elements, such as the central compound, out with the National Landscape but within its setting (that is within land visible from within the National Landscape but external to it). Direct effects within the LWNL will include potential localised loss of characteristic elements such as sections of hedgerows, individual trees, and a temporary change in land use from farming to construction. These have the potential to impact scenic beauty and rural charm in the LWNL.

3.2.5 There are several factors to consider including:

- Impacts would be very localised, located on the edge of the LWNL and directly cutting through it for approximately 2.5km with a further 2.2km adjacent to the LWNL, outside of the boundary, in the vicinity of Barnoldby le Beck and 1.8km adjacent to East Ravendale. The sections adjacent to the LWNL are located along the A18;
- Impacts would be temporary and of short duration, with a total anticipated duration of 7 months at each kilometre, from initial fencing through to reinstatement;
- Effects arising from earthworks and machinery are reversible on reinstatement of soils (following the application of the measures set out in the outline Soil Management Plan [REP2-018]) and removal of machinery in accordance with the statement at paragraph 4.4.4 of the ES Non-Technical Summary [APP-041];
- West of the A18, in the LWNL, the land use is predominantly arable, and the seasonal exposure of soils and machinery used to plough or ditch is similar to that of the pipeline excavation. ~~noting that~~ The Lincolnshire Wolds State of the AONB Report: 2017 assesses that greater more than 75% of the National Landscape is cropped (Refer to INDICATOR 14: The length of river in moderate or good ecological condition) and section 4.2.7 of the Lincolnshire Wolds Area of Outstanding Natural Beauty Management Plan 2018-2023 states that “Today, modern and commercial farming dominates much of the Wolds, invariably with a focus on a small handful of crops”;
- Direct loss of hedgerows will be limited to a maximum of 10m at each location unless exceptional circumstances dictate otherwise. ...
- Micro-routeing within the LWNL and elsewhere will be used to limit the potential for tree loss. Within the LWNL the only trees present within the Order limits are within hedgerows and it is anticipated that most, if not all, will be able to be retained. There are no veteran trees within the Order limits within the LWNL.
- Should there be any potential effects on individual mature trees within the LWNL, should they lie on the pipeline route or have a root protection area within it, will that cannot be avoided through micro-routeing, via trenchless construction methods will be

considered, where possible, as set out at para 3.5.4 of the Outline Landscape and Ecology Management Plan (OLEMP) [REP2-026]. This includes trees along the southern edge of Old Main Road and the northern edge of the A46 (setting only), where trenchless techniques are proposed.

- All hedgerow and arable or grassland will be reinstated to their original condition post construction; and
- There would be no infrastructure above ground in the LWNL other than a maximum of five marker posts located at field boundaries. ~~and~~ The impacts and resulting effects of the pipeline would be temporary in nature, with no long-term operational phase effects.

3.2.6 The Lincolnshire Wolds Management Plan 2018-2023 states in Table 1 Special Qualities of the Lincolnshire Wolds AONB that the special qualities which relate to landscape are all in “good” condition, noting that farmland is varied. This is further reinforced by the relevant indicators of condition in the Lincolnshire Wolds State of the AONB Report: 2017 (Appendix 4).

3.2.7 This indicates that susceptibility of the LWNL to the Proposed Development is reduced (compared to a NL in lesser condition) and that that the special qualities are more likely to be able to withstand some pressure from development without undermining the purposes of the National Landscape designation, particularly if the development impacts are temporary, reversible, and localised.

3.2.8 Similarly, the Scheme does not result in the sort of impacts which are identified as pressures on the special qualities. In operation there would be no above ground infrastructure other than five pipeline marker posts, and no impact on scenic beauty and rural charm. The pipeline would be buried and, hence, expansive, sweeping views, stated to be under pressure from hilltop or skyline developments including overhead powerlines, would not apply. The Proposed Development would not increase road traffic, other than temporarily during construction, and occurs in the context of the A18, which is noted as currently impacting the special quality of peace and tranquillity (Table 1).

3.2.9 Given the short duration, reversibility, and proposed reinstatement of key landscape features post construction, ~~and the very small geographical extent of the LWNL impacted,~~ the LVIA [APP-049] assessed that the Proposed Development would have a very low adverse magnitude effect on the character of the high sensitivity LWNL (para 7.8.49), which would be minor adverse significance. It is assessed that this remains applicable in relation to the significance of effects on the scenic beauty and rural charm of the LWNL as a key component of that character.

3.2.10 For these reasons, the effect on the LWNL was assessed as minor adverse in construction, it was considered to remain non-significant in relation to the special characteristics of scenic beauty and rural charm.

3.2.11 It is accepted that for a small number of viewpoints there will be significant effects on visual amenity during construction and these are dealt with under consideration of effects on views as an element of the special qualities.

3.2.12 As such it is concluded that this special quality would not be harmed and the statutory purposes of the LWNL would be maintained.

### **Expansive, sweeping views**

3.2.13 As explained in relation to scenic beauty and rural charm, effects as a result of the Proposed Development on the LWNL will be the greatest during construction with a reduction in operation due to the buried nature of the pipeline.

- 3.2.14 During construction there will be localised effects on views as a result of the pipeline works as indicated on Figure 7 8: Zone of Theoretical Visibility Preferred Pipeline Route at 3.5m height within [APP-049]. These views from the eastern edge of the LWNL are partially impacted by man-made elements both by the proximity and visibility of the A18 and longer views to Grimsby and the developed area of Immingham port.
- 3.2.15 In construction and operation there is potential visibility of the Immingham Facility, in particular the 25m stack as indicated on Figure 7 5: Zone of Theoretical Visibility Immingham Facility at 25 m Height, from the northern and middle section of the eastern part of the LWNL at a distance in excess of 11km. Similarly, there is potential visibility of the Theddlethorpe Facility from the eastern part of the middle and southern section of the LWNL as indicated on Figure 7 7: Zone of Theoretical Visibility Theddlethorpe Facility (Option 2) at 25 m Height at a distance of approximately 14km from the LWNL at its closest.
- 3.2.16 Views of the operational block valve stations from the LWNL are likely to be very limited, and confined to areas on the LWNL eastern edge, as indicated on Figure 7 9: Zone of Theoretical Visibility Block Valve Stations at 4 m Height (refer to ES Chapter 07: Landscape and Visual [APP-049]).
- 3.2.17 There will be localised effects at, and in proximity to, locations represented by Viewpoints 6/7/8/11/12/13 which will have a temporary effect in diminishing the value of the view, albeit given the low height of the elements of the pipeline works and to an extent their quasi-agricultural nature, the expansive and sweeping nature of the views will be retained. As a result of proximity, effects at Viewpoints 6/7/8 are assessed as moderate adverse and significant in the LVIA [APP-049]. At Viewpoints 11/12/13 effects would be further away and are assessed as minor adverse and not significant. Similarly, the extent to which either the Immingham Facility, Theddlethorpe Facility or Block Valve Stations would adversely impact views from the LWNL at any of the representative viewpoints is assessed as very low magnitude and negligible significance.
- 3.2.18 It is therefore assessed that although at a localised part of the LWNL there would be significant effects on visual amenity of a small geographical extent of the LWNL, these are temporary and do not impact the special qualities of expansive sweeping views of the LWNL as a whole. Overall, there would be no significant construction or operational effects on the expansive, sweeping views of the LWNL.
- 3.2.19 As such it is concluded that this special quality would not be harmed and the statutory purposes of the LWNL would be maintained.

### Peace and Tranquillity

- 3.2.20 Effects on the noise environment were considered in the noise assessment within ES Chapter 13: Noise and Vibration [APP-055]. In relation to both residential and non-residential receptors the assessment concluded that using best practicable means, communication strategy and use of noise barriers secured in the CEMP the resulting residual noise levels in construction and operation would not lead to significant effects at any location. After dark, there would be minimal operational lighting to ensure the safety of any personnel on site.
- 3.2.21 Peace and tranquillity is assessed as a high value component of the special qualities of the LWNL, and there is high susceptibility to effects on people which reduce that special quality, giving overall high sensitivity of the LWNL. However, Table 1 Special Qualities of the Lincolnshire Wolds AONB in The Lincolnshire Wolds Management Plan 2018-2023 acknowledges the current impact on this special quality from the A18, which is the area of the LWNL that the pipeline would pass through, reducing susceptibility.
- 3.2.22 Overall, considering these factors and acknowledging that tranquillity is potentially impacted by both noise and lighting, and taking the duration of the construction within the LWNL into

account, coupled with the limited geographical extent, as adopted for the other special qualities, effects on peace and tranquillity as related to the special qualities of the LWNL are assessed as low magnitude. Consequently, there would be an effect of minor significance on peace and tranquillity within the LWNL.

3.2.23 As such it is concluded that this special quality would not be harmed and the statutory purposes of the LWNL would be maintained.

### **Farmed land (scenic quality, biodiversity, socio-economic)**

3.2.24 The working width will be restored to agricultural use post construction, using soils stored within the pipeline corridor. Although there would be a temporary change in land use during the excavation for the pipeline in the LWNL, there would be no loss of agricultural land as a result of the Proposed Development given the retention of soils and reinstatement of the pre-existing land use over the pipeline (please see the draft Construction Environmental Management Plan [APP-068] submitted with the application).

3.2.25 Due to the reinstatement of soils and vegetation there will be no loss of elements of biodiversity value as a result of the Proposed Development. Table 6-12: Summary of Potential Impacts – Construction Phase in Environmental Statement Chapter 6: Ecology and Biodiversity [APP-048] indicates that in relation to hedgerows, scattered trees, veteran trees, semi-improved grassland and semi natural woodland, the effects for the pipeline route would be as follows:

- Hedgerows: Not Significant (minor adverse – temporary reversible damage to hedgerows in the long term);
- Scattered trees: Not Significant (minor adverse - temporary reversible damage to scattered trees in the long term);
- Veteran trees: Not Significant (minor adverse – veteran trees retained, embedded mitigation to prevent damage to tree roots);
- Semi-improved grassland: Not significant (minor adverse - temporary reversible damage to semi-improved grassland in the medium term); and
- Semi-natural Broad-leaved woodland / Broadleaved plantation woodland: Not Significant (minor adverse – potential for long-term minor habitat loss).

3.2.26 Socio-economic effects are reported in Environmental Statement Chapter 16: Socio-economics [APP-058] which concluded that there will be no potential significant adverse socio-economic effects during the construction, operation or decommissioning of the Proposed Development.

3.2.27 Overall, taking these factors into account, and taking the duration of the construction within the LWNL into account, coupled with the limited geographical effects on these special qualities of the LWNL are assessed as having a very low magnitude and negligible significance.

3.2.28 As such it is concluded that these special qualities are not harmed and the statutory purposes of the LWNL would be maintained

## **3.3 Non-landscape related special qualities**

### **Earth Heritage/ Archaeology/Cultural Associations (Community value)/Historic Landscapes & Buildings**

3.3.1 There are other special qualities of the LWNL which are not directly related to landscape and visual effects, although they may contribute to the value of the designation as set out in

the LVIA. These qualities include Earth Heritage, Biodiversity, Archaeology, Cultural Associations (Community value), and Historic Landscapes & Buildings.

**3.3.2** **Table 3-1**~~**Table 3-1**~~ below sets out each of the special qualities of the LWNL and identifies if any of the special qualities are impacted by the Proposed Development.

3.3.23.3.3

**Table 3-1 Review of Impacts upon Other Special Qualities of the LWNL**

Special Quality	Present within the area affected? <u>within the National Landscape?</u>	Potential effects <u>in National Landscape</u>	Present within the area affected <u>within the setting of the National Landscape?</u>	Potential effects <u>in Setting</u>
<b>Earth Heritage</b>				
Chalk upland plateau & valley landscape	No	N/A	<u>No</u>	<u>N/A</u>
Glacial/periglacial features including remnant lakes/spillways	None identified through baseline studies or consultation	N/A	<u>None identified through baseline studies or consultation</u>	<u>N/A</u>
Geological qualities	None identified through baseline studies or consultation	N/A	<u>None identified through baseline studies or consultation</u>	<u>N/A</u>
<b>Biodiversity</b>				
Calcareous meadow, pasture & wet grasslands	No	N/A	<u>No</u>	<u>N/A</u>
Beech clumps	No	N/A	<u>No</u>	<u>N/A</u>
Woodlands (largely 18th – 19th century plantings)	No	N/A	<u>No</u>	<u>N/A</u>
Ancient woodlands	No	N/A	<u>No</u>	<u>N/A</u>
River, streams and ponds	No rivers, streams, or ponds affected within the LWNL.	N/A	<u>Yes</u>	<u>Two chalk streams are crossed within the setting of the National Landscape.</u>

Special Quality	Present within the area affected? <u>within the National Landscape?</u>	Potential effects in <u>National Landscape</u>	Present within the area affected <u>within the setting of the National Landscape?</u>	Potential effects in <u>Setting</u>
Hedgerows	Yes	Five hedgerows are crossed within the LWNL.	<u>Yes</u>	<u>Approximately 15 hedgerows are crossed within the setting of the LWNL</u>
Roadside verges and green lanes	Yes – Roadside verges only	One <u>roadside</u> verge will be affected within the LWNL.	<u>No</u>	<u>N/A</u>
<b>Archaeology</b>				
Ancient route-ways	None identified through baseline studies or consultation	N/A	<u>None identified through baseline studies or consultation</u>	<u>N/A</u>
Scheduled Monuments	Yes	The Proposed development <u>runs is located within the setting of close to</u> one scheduled monument which is a Civil War earthwork fort 350m north-east of Walk Farm.	<u>No</u>	<u>N/A</u>
Burial mounds & monuments	No	N/A	<u>No</u>	<u>N/A</u>
Deserted medieval villages & shrunken medieval villages	No	N/A	<u>No</u>	<u>N/A</u>
Roman villas and settlements	No	N/A	<u>No</u>	<u>N/A</u>
<b>Cultural associations (community value)</b>				



Special Quality	Present within the area affected? <u>within the National Landscape?</u>	Potential effects in <u>National Landscape</u>	Present within the area affected <u>within the setting of the National Landscape?</u>	Potential effects in <u>Setting</u>
Literary/artistic	None identified through baseline studies or consultation	N/A	<u>None identified through baseline studies or consultation</u>	<u>N/A</u>
<b>Historic Landscape and Buildings</b>				
Village character including churches	No	N/A	<u>No</u>	<u>N/A</u>
Conservation areas	No	N/A	<u>No</u>	<u>N/A</u>
Traditional farm buildings	No	N/A	<u>No</u>	<u>N/A</u>
Industrial heritage, airfields, railways, mine workings	No	N/A	<u>No</u>	<u>N/A</u>
Moated sites	No	N/A	<u>No</u>	<u>N/A</u>
Watermills and windmills	No	N/A	<u>No</u>	<u>N/A</u>
Dry stone walls	No	N/A	<u>No</u>	<u>N/A</u>

~~3.3.3~~3.3.4 Where potential effects are identified in ~~Table 3-1~~Table 3-4 above, further information on the nature of these effects is provided below.

### Rivers, Streams and Ponds

3.3.5 As identified above there are no chalk streams proposed to be crossed within the National Landscape. There are two chalk streams proposed to be crossed within the setting of the National Landscape.

3.3.6 There is considered to be no risk to these chalk streams as a result of the trenchless techniques proposed to cross under them.

3.3.7 Laceby Beck would be crossed under using an auger bore trenchless technique. The chalk stream emerges at the foot of the Wolds, immediately east of the A18, outside of the National landscape. The crossing would be approximately 200m east of the boundary of the National Landscape. There is no risk of frac out related to an auger bore crossing technique.

3.3.8 Waithe Beck would be crossed using either auger bore or HDD. Again, an auger bore crossing would be set back between 2 and 10 m back from the banks of the beck and a minimum of 2 m below the bed of the beck. If HDD were to be used the pipeline would be between 5 and 20 m beneath the beck. The HDD works would be undertaken in strict compliance with best practice and following the requirements of a bentonite breakout plan which would include measures to both avoid the risk of breakout, and to limit the effects of breakout, in the unlikely event of breakout occurring.

### Hedgerows

~~3.3.4~~3.3.9 Five hedgerows are crossed within the AONB. Three were recorded as being species poor hedgerows and two were recorded as species rich hedgerows. There are approximately 15 hedgerows that will be crossed in what is considered to be the setting of the LWNL; these include a mixture of species rich and species poor hedgerows.

~~3.3.5~~3.3.10 A section of each hedgerow would be removed during construction. The working width for pipeline construction would be reduced to the minimum necessary to enable plant to cross the boundary and for the pipeline to be laid safely, whilst only removing the minimum length of hedgerow required (see ES Volume II, Chapter 3: Description of the Proposed Development [APP-045]). The Applicant is committed to removing a maximum of 10m at each location unless exceptional circumstances dictate otherwise. The hedgerows would be reinstated on completion of the crossing. The pre-Enclosure hedgerows [H20 – H30] are historic landscape features considered to be of very low value; there would be no long-term severance of the historic landscape features due to construction of the pipeline following completion of the crossings and reinstatement of the hedgerows. There would be no change and a neutral effect.

3.3.11 In addition, the Applicant will work with landowners to identify other existing gaps in affected hedgerows that could be filled whilst hedgerow reinstatement works are being undertaken. Opportunities to plant additional hedgerow trees will also be pursued. This approach will be taken not only within the LWNL, but also within the setting of the LWNL. It is considered that this may help to further the purposes of the designation in a way that is appropriate and proportionate to the type and scale of development.

~~3.3.6~~3.3.12 Finally, all hedgerow reinstatement and maintenance works will be undertaken in compliance with a Hedgerow Reinstatement Specification and Management Plan, a draft of which will be included in the final CEMP.

### Roadside verges

~~3.3.7~~3.3.13 One verge, on Old Main Road, will be impacted by the creation of access point 11-AC. The impact on this narrow verge will be temporary, with the verge being fully restored on completion of the works.

## Scheduled Monuments

~~3.3.8~~3.3.14 There is one scheduled monument that lies close to the Proposed Development, which is the Civil War earthwork fort 350m north-east of Walk Farm. ES Chapter 8 Historic Environment [AS-023] concludes that temporary construction activities would affect part of the landscape setting in close proximity to the asset; however, these are unlikely to affect the ability to interpret its heritage value. This impact would be transient for the duration of construction activities in the vicinity of the monument, estimated to be up to 7 months. This would be considered a very low magnitude of impact on the high value asset, resulting in a minor adverse effect of temporary duration during construction. This temporary effect is not considered to be significant.

## Conclusions regarding other special qualities

~~3.3.9~~3.3.15 It is therefore concluded that there are no significant effects on these aspects of the special qualities of the LWNL.

~~3.3.10~~3.3.16 As such it is concluded that these special qualities are not harmed and the statutory purposes of the LWNL as a whole would be maintained.

## 4 Conclusions

- 4.1.1 This technical note provides supplementary information in response to points raised in the written representation submitted by Natural England.
- 4.1.2 It provides additional context around the decision to route a short section of buried pipeline within the LWNL, highlighting the key constraints considered and the lack of a viable option to route outside of the National Landscape.
- 4.1.3 The LVIA **[APP-049]** concluded that during construction the Proposed Development would exert change on the LWNL through the introduction of vehicles/ machinery/ soil-stripping/ construction compounds.
- 4.1.4 The information submitted in this response adds to and provides further evidence to support the conclusions of the LVIA, in terms of consideration of effects on the special qualities of the LWNL, including those that relate to landscape and visual matters, and those that do not.
- 4.1.5 The construction of the Proposed Development would represent a very low magnitude change to the character of the designated landscape and a minor adverse effect on landscape character, which will be temporary, reversible, and localised and therefore not significant.. This conclusion remains the case for the special qualities related to landscape character as set out in this document.
- 4.1.6 During construction it is assessed that there would be significant effects on visual amenity of a small geographical extent of the LWNL, these would be temporary and would not impact the special qualities of expansive sweeping views of the LWNL as a whole. Overall, there would be no significant effects on the expansive, sweeping views of the LWNL.
- 4.1.7 In operation, no significant effects on landscape character or visual amenity are predicted to occur as a result of the Proposed Development. This is due to the distant nature of visible elements such as the Immingham and Theddlethorpe Facilities and the Block Valve Stations along the pipeline route and the fact that the pipeline is below ground, with full reinstatement of land use and field boundaries.
- 4.1.8 The conclusions of this response in relation to the special qualities of the LWNL remain that for the reasons listed above, there are no significant effects during construction or operation as a result of the Proposed Development. As such it is concluded that the special qualities are not harmed and the statutory purposes of the LWNL would be maintained.
- 4.1.9 The recently designated Overarching National Policy Statement for Energy (EN-1) (2023) is an important and relevant consideration in the determination of the DCO application, including whether policy tests relating to the impacts on a National Landscape have been satisfied. The Proposed Development falls within the definition of critical national priority infrastructure within EN-1. As set out in paragraphs 4.2.16 and 4.2.17, the starting point for decision making is that such infrastructure is to be treated as if it has met any tests which are set out within the NPSs, or any other planning policy, which requires a clear outweighing of harm, exceptionality, or very special circumstance. This includes a presumption that critical national priority infrastructure meets the test where development in nationally designated landscapes requires exceptional circumstances to be demonstrated.
- 4.1.10 The Applicant has demonstrated that there is a need to route a very small section of the Proposed Development through the national landscape, with any impacts being temporary and limited to the construction phase. The limited impacts of the Proposed Development would not outweigh the presumption in EN-1 that the exceptional circumstances test has been met.