

Appendix 14.4

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## Seascape, Landscape, Townscape and Visual Amenity – Potential Effects





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# 1 POTENTIAL EFFECTS

- 1.1.1 This appendix identifies the potential effects of the Project on the seascape, landscape and townscape character areas and on the various visual receptors in them. The potential effects identified are summarised in Section 14.4 of Chapter 14: Seascape, Landscape, Townscape and Visual Amenity of Volume 1A of the Environmental Statement (ES). The effects assessed are in the absence of mitigation or enhancement measures. However, measures that have been incorporated in to the design of the Project to minimise any potentially significant effects are outlined in Chapter 5: Environmental Impact Assessment Methodology of Volume 1A of the ES and have been considered.
- 1.1.2 It should be noted that where measurements are given in the following text they are provided as an indication of distance and are not to be taken as an exact measurement.

## 1.2 Construction

- 1.2.1 It is anticipated there would be potential impacts as a result of the Project on the character and / or visual amenity resulting from construction activity for character areas and or visual receptors within all character types within the study area. The potential construction effects of the Project are summarised in Table 14-17 of Chapter 14 of Volume 1A.

### SCT-1: Intertidal

#### **SCA-1a: Rossall Promenade and Beach**

- 1.2.2 It is anticipated the potential impacts on character and visual amenity would result from the site investigation and construction activity within the area. These impacts would occur over an eleven month period in Year 1 followed by operation activities in Year 2 onwards. The construction activities would be of a temporary duration and are summarised in Table 1-1 below.

**Table 1-1 SCA-1a: Schedule of Construction Activity**

<b>Activity</b>	<b>Description</b>
Site investigation – 1 month (Year 1)	Isolated and temporary drilling activity associated with the brine outfall at various locations within and adjacent to the area.
Brine Outfall– 8 months) (Year 1 )	Low lying, temporary series of sequential activities carried out at sea and on foreshore / beach within a narrow working corridor to install

Activity	Description
	underground / under water brine outfall pipe, diffuser and marine marker buoy.
Seawall Crossing– 5 months (Year 1)	Low lying, temporary series of sequential activities at the sea wall within a narrow working corridor and includes the channel across the sea wall, installation of compound and hoarding within adjacent TCA-8a) installation of underground brine outfall pipe and reinstatement of the sea wall / promenade and new build for an observation platform.
Reinstatement work completed by Year 2	
Reinstated sea defence and promenade	It is anticipated the reinstatement works would be of similar materials and appearance as the existing.
Reinstated beach	There would be some rock armour to protect the brine outfall where it would be relatively close to the surface as it crosses the upper section of the beach i.e. adjacent to the sea wall. Elsewhere it is anticipated the reinstatement works would result in a uniform finish of natural material typical to the location.
Observation platform	New well designed feature which would form a local landmark on the promenade (see Figure 1.15 of Volume 2A).
Diffuser Marker Buoy	This would be a typical maritime feature located 2 km out to sea.

***Potential Construction Impacts on Seascape Character***

1.2.3 With reference to Table 1-1, in Year 1 there would be a series of sequential and parallel running construction activities causing temporary disruption in terms of site hoarding and high visibility fencing, demolition of the sea defence, moving construction vehicles and pipe laying equipment, sea barge for installing the pipe out to sea, stockpiled materials, installation of the observation deck and reinstatement work to the promenade and sea defence, associated construction noise and dust within a relatively narrow, but linear working corridor at the sea defence, promenade and beach. It is not anticipated there would be any lighting associated with the construction activities other than security lighting at the compound and along the Lancashire Coast path diversion. It is anticipated this would have no incremental impact over and above the typical night time lighting levels typical to the area. It is envisaged construction activity within the adjacent LCA-2a would be effectively screened by the sea wall / promenade.

- 1.2.4 With reference to Table 1-1, by Year 2 the Project would result in several low key permanent unobtrusive maritime elements which would be considered appropriate and in keeping with the wider character area. The most noticeable permanent element of the project would be the proposed observation platform which would act as an attractive local landmark feature on the promenade. It is not anticipated that noise or air quality matters resulting from the operation of the outfall would be perceptible elements and lighting would be considered as being similar to the baseline situation.
- 1.2.5 This area is considered to have the capability to accommodate the construction activity and permanent development proposed, by virtue of its low lying topography, simple form, horizontal lines and vast scale in comparison with the narrow linear corridor over which the construction would be carried out.
- 1.2.6 With reference to Table 14-2 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **low** and with reference to Table 14-3 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is considered to be **minor** negative in Year 1 and **negligible** positive in Year 2/Year 3. With reference to Table 14-4 of Volume 1A this would result in an overall **neutral** impact.

**Potential Construction Impacts on Visual Amenity**

- 1.2.7 The potential impacts on views are summarised in Table 1-2 below.

**Table 1-2 SCA-1a: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-5 and 14-6 of Chapter 14 Volume 1A)	Significance of Effect (see Table 14-7 of Chapter 14 Volume 1A)	Comment
Visual Receptor VR1.1: Beach users	High Minor to Moderate negative (Year 1) Minor beneficial (Year 2/Year 3)	Moderate adverse to slight adverse (Year 1) Slight beneficial (Year 2/Year 3)	Users would have a series of sequential 180 degree westerly panoramic coast view within which there would be north and south views to the temporary brine outfall linear working area across the beach, foreshore and a sea barge for off shore work. The temporary working area on the promenade / sea wall would to some extent be partially obscured by the change in level. It is anticipated the activity on the beach would be partly obscured in more distant views by the groynes which dissect the beach at right angles. It is anticipated this activity would be visible

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-5 and 14-6 of Chapter 14 Volume 1A)	Significance of Effect (see Table 14-7 of Chapter 14 Volume 1A)	Comment
			up to 1 Km from it, although overall it would start to have an impact on the view up to 500 m distance from it. It is anticipated the observation platform would be a noticeable landmark feature from the promenade at a distance of up to 500 m.
Visual Receptor VR1.2: Lancashire Coastal Way (runs concurrently with Footpaths FP12 and FP10)	High Minor, Moderate to Major negative (Year 1) Minor beneficial (Year 2/Year 3)	Large adverse. Moderate adverse to Slight adverse (Year 1) Slight beneficial (Year 2/Year 3)	The Lancashire Coastal Way would be closed for the first three months of the construction phase. Users would have a series of sequential elevated 180 degree westerly panoramic coast views within which there would be north and south views to the temporary brine outfall linear working area across the beach, foreshore and sea barge off shore and to the temporary working area across the promenade / sea wall. It is anticipated these activities would be visible up to 1 Km from it, although overall it is anticipated it would start to have an impact on the view up to 500 m distance away. On completion of reinstatement work it is anticipated the observation platform would be a noticeable landmark feature from the promenade at a distance of up to 500 m.

### SCA-1b; Wyre Estuary

1.2.8 It is anticipated the potential impacts on the character and visual amenity of this area would result from construction activity within the adjacent LCT-4. These impacts would occur over a 36 month period between Year 1 and Year 3. The construction activities would be of a short term duration and are summarised in Table 1-3 below.

**Table 1-3 SCA-1b: Schedule of Construction Activity**

Activity	Description
Site investigation (LCA-4b, LCA-4c and LCA-4j)– 1 month (Year 1)	Isolated and temporary series of sequential activities within adjacent rural hinterland which include drilling at each of the river crossing compounds, the booster pump station and well head compounds within LCA-4c.
Internal Access Tracks (LCA-4b and LCA-4c)- 2 months (Year 1)	Low lying temporary activity to install 4 m wide loose stone access tracks within adjacent LCA-4b and LCA-4c. This work would utilise the existing track network as far as possible but would require some local improvements to it as well as some additional lengths of spur to link in the various well head compounds. The majority of these tracks would be used infrequently during the construction phase, although some specific tracks would experience concentrated peaks in use during specific activities such as the construction of the booster pump station in LCA-4b).
North River Crossing (LCA-4b)– 4.5 months (Year 1)	Low lying, temporary activity which includes construction of east shoreline compound, drilling and cable pulling, demobilisation and reinstatement work. It is assumed the west shore compound would be more or less imperceptible element set against a built backdrop.
South River Crossing (LCA-4j)- 4 months (Year 1)	Low lying, temporary activity which includes construction of east shoreline compound, drilling and cable pulling, demobilisation and reinstatement work – It is assumed the west shore compound would be hidden behind the sea defence.
Electric Infrastructure (LCA-4j)–2 months (Year 1)	Low lying temporary activity to route electrical cables along east shoreline within adjacent LCA4j. It is assumed the cable installation would be carried out in sections. It is anticipated activities in this section would be over a two month period.
Booster Pump Station (LCA-4b) – 10 months ( Year 1 / Year 2)	Short term new build activity which includes excavation and earth mounding, installation of construction compound, temporary offices and utilities, new build, installation of perimeter fencing. landscape works and commissioning.
Washing Manifolds (LCA-4c)– 6 months (Year 1)	Low lying, temporary series of sequential activities to install underground wash water pipes between booster pump station (LCA-4b) and well head compounds (LCA-4c). To well pad 5 – 2 months To well pad 7 and well pad 6 - 2 months To well pad 4 - 2 months

Activity	Description
Drilling and Well Head Connections (LCA-4c) – 22 months (Year 1 to Year 3)	Low lying temporary series of sequential isolated activities at well head compounds within LCA-4c, Drilling activity would be 24/7 and include 2 no x 4 m high flood lights. On completion of the drilling, the well head compounds will be reconfigured to the operational well head design. Well pad 5 – 8 months (Year 1/Year 2) Well pad 7 - 8 months (Year 2/Year 3) Well pad 6 - 3 months (Year 3) Well pad 4 – 3 months (Year 3)
Gas Compressor Compound (LCA-4c) – 14.5 months (Year 2/Year 3)	Short term new build activity which includes excavation and perimeter earth mounding, installation of construction compound, temporary offices and utilities, new build and installation of compound equipment, vent stack, installation of perimeter fencing, landscape works and commissioning. It is assumed the majority of the construction activity at this part of the site would be hidden by intervening vegetation and local landform and by its perimeter screen mounds, which would be constructed early on. However the installation of the taller equipment such as the gas heater and glycol dryers and the adjacent vent stack may be perceptible over the intervening features.
Well Washing (LCA-4c) (Year 2/Year 3)	Low lying series of sequential “invisible” activities within reconfigured operational well head design. Washing activity would be 24/7. Well pad 5 - 17 months Well pad 7 (wells 5 and 6) - 18 months
Gas Manifold Compressor (LCA-4c)– 7 months (Year 2/Year 3)	Low lying, temporary activity to install underground gas pipeline to well head compounds 5, 7, 6 and 4 within the adjacent LCA-4c.
Above ground permanent elements completed before end of construction phase	
Booster Pump Station (LCA-4b)	New build works operational Year 2.
Well head compound 5 (LCA-4c)	Well head compound fully operational end of Year 3.

### ***Potential Construction Impacts on Seascape Character***

- 1.2.9 With reference to Table 1-3 there would be some minor localised disruption in Year 1 as part of the temporary ground investigation work within the adjacent LCA-4b and LCA-4c. This would be followed by a series of sequential and parallel running temporary construction activities within the adjacent LCA-4c, which overtime would cause activities potentially resulting in short term disruption. Elsewhere during this period other low lying construction elements would include fenced compounds, high visibility fencing, moving construction vehicles (with associated flashing lights) cable and pipe laying equipment within the adjacent LCA-4b, LCA-4c and LCA-4j) and associated stock piles of materials. There would also be large scale activity associated with the installation of the booster pump station adjacent to the Preesall Wastewater Treatment Works within LCA-4b and further inland within LCA-4c earth mounding activities and the installation of some of the taller elements within the gas compressor compound and the 16 m high, 30 cm diameter vent stack would be potentially visible new elements within the areas rural hinterland.
- 1.2.10 The construction activity within the eastern rural hinterland (LCT-4), in relation to this area, can be divided into two distinct visible parts and defined as being either north or south of The Heads (LCA-4f). It is anticipated, taking in to account the construction program, it would not be possible to see activity within the two parts from the same viewpoint. This assumes a distance of 1.5 km as the cut of point at which the low lying elements would be absorbed in to the background, and where they would be so minor as to only be visible under close scrutiny or to have only a passing influence such as a flashing light.
- 1.2.11 With reference to there would be temporary activity, over a six month period in Year 1, within the adjacent LCA-4i at the south east edge of this area and would include the southern crossing (east) compound and the HV cabling routing. Both elements would be located above a shallow cliff / slope above the estuary shoreline, with the compound (completed in Year 1) forming a minor small-scale element and the cable routing (completed in Year 1) forming a low key linear element and both set against the backdrop of an arable farmed slope and within the context of a much broader estuary edge setting.
- 1.2.12 At the same time the northern crossing (east) compound (completed in Year 1) within LCA-4b would form a temporary minor small scale element, located 2.9 Km to the north of the southern crossing (east) compound. In addition there would be simultaneous low key temporary activity within the adjacent LCA-4c to the south, associated with the installation of access tracks (completed in Year 1) and washing manifolds (completed in Year 1). It is anticipated the removal of the northern crossing (east) compound would coincide more or less with the start of the adjacent booster pump station installation (completed in Year 2) within LCA-4b. Drilling would commence in Year 1 at well pad 5 within the adjacent LCA-4a and this activity would continue through until the completion of drilling at well pad 4 in Year 3. There would be localised low level activity at each well pad on completion of the drilling with each pad being re-configured to the final operational well head layout, prior to the cavern washing. Well head compound 5 would be reconfigured by in Year 2 and well head compounds 7 and 6 and 4 in Year 3. Activity associated with the gas compressor station, located further in land within LCA-4c, would

commence in Year 2, more or less at the same time as the booster pump station is completed. There would also be further low lying activity within LCA-4c associated with cavern washing at the re-configured well head compounds 5 and 7 (commencing Year 2 which would continue through until the end of the construction phase and the installation of the gas manifold over a six month period in Year 3.

- 1.2.13 It is anticipated because of the predominantly low lying nature of this area in relation to its rural hinterland many of the low lying sequential activities i.e. access tracks, the water and gas manifolds, the well head compounds and reconfigured well head compounds would be blocked out by the sea defence or be imperceptible over it. Other activities such as the drilling rig at the well pad would be a very minor isolated single element, the cavern washing would be contained within the re-configured well head compound and sporadic flashing lights from moving construction vehicles would be individual points which would be considered insignificant in the context of the much broader estuary setting.
- 1.2.14 The booster pump station location within LCA-4b would be set back from the main estuary edge and screened from the main channel by the intervening nature of the Preesall Wastewater Treatment Works and by Arm Hill to the south, although this activity would form part of the local setting to the salt marsh at the east edge of the area, to the north of The Heads (LCA-4f). The main activity associated with the installation of the gas compressor compound, located further in land within LCA-4c and which would potentially be visible from this area would be the earth mounding along the south side of the compound and would help to screen the temporary construction compound and most of the installation work. However, activity associated with some of the individual taller elements such as the gas heater (9.81 m high and 1.6 m diameter), the glycol dryers (13 m high and 3 m in diameter) and the 16 m high, 30 cm diameter vent stack would potentially be visible up to 1.5 km away, but only under close scrutiny and in perfect weather conditions.
- 1.2.15 The series of sequential construction activities associated with the new build of the booster pump station and the gas compressor compound, although larger in scale in comparison to other adjacent activities, taking in to account their location in relation to this area would form minor intrusive elements in the context of the broader estuary setting.
- 1.2.16 In addition to the physical presence of construction elements there would potentially be associated variable levels of construction noise. With reference to Section 12.7 of Chapter 12: Noise and Vibration of Volume 1A of the ES, it is anticipated construction noise resulting from a series of temporary activities, such as the construction of the coffer dams and piling at well head compounds 5 and 7 (Year 1) within LCA-4c, the drilling at the northern crossing (Year 1), and the building of the Booster Pump Station (Year 1/Year 2). These judgements have based on the worst case scenario and assume for example at the well head compounds that no mitigation such as earth mounding would be in place. If mounding were to be provided the predicted noise levels could be reduced by up to 10 dB.



- 1.2.17 Some construction activities i.e. drilling at the well head compounds, the northern crossing compound and cavern washing within the re-configured well head compounds would operate continuously for their duration requiring night time lighting. The former two would require two 4 m high flood lighting towers, and the latter would be low level and contained by the immediate bund around the well head compound.
- 1.2.18 The construction would occur in predominantly a sequential series of activities although there would be some parallel activities associated with the estuary edge i.e. the river crossing compounds (Year 1) and the construction of the booster pump station (Year 1/Year 2) and, to a lesser extent some of the elements at the gas compressor compound (Year 2/Year 3), would form minor elements within the wider setting. It is also anticipated night time lighting associated with the drilling at the well head compounds would form points of additional light in the relatively dark night time eastern backdrop to this area.
- 1.2.19 This seascape area has the capability to absorb a certain amount of the construction activity proposed because of its low lying position in relation to the intervening sea defence, its large scale and the low level nature of many of the construction activities such as work associated with the well head compounds, pipe and cable installation immediately adjacent to the estuary's west shoreline and the fact there would be no direct physical impact on its important elements. It is anticipated variable construction noise levels would potentially be audible across much of the saltmarsh in the east part of the area. Overall the combination of construction noise and visual intrusion, including some isolated points of light on the night time seascape could potentially result in a noticeable short term impact on the tranquil characteristic in the east part of this area.
- 1.2.20 With reference to Table 14-2 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **high** and with reference to Table 14-3 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction activities is considered to be **moderate** negative in Year 1/Year 2 and **minor** negative in Year 3. With reference to Table 14-4 of Chapter 14 of Volume 1A this would result in a **moderate** adverse impact in Year 1/Year 2 and a **slight** adverse impact in Year 3.

***Potential Construction Impacts on Visual Amenity***

- 1.2.21 The potential impacts on views are summarised in Table 1-4 below

**Table 1-4 SCA-1b: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-5 and 14-6 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-7 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR1.3: Boat users	Moderate Minor, negative	Slight adverse	Users would have a series of sequential 360 degree panoramic views from the main channel of which there would be a 180 degree easterly view to the rural hinterland of LCT-4 set against the back drop of the Bowland Fells. It is anticipated the isolated elements such as the drilling and flashing lights from moving construction vehicles would at 1 km be insignificant points. Construction associated with the booster pump station (1 km at its nearest visible point) and the gas compressor compound / vent stack (1.6 km at the nearest visible point) would be perceptible, but only under close scrutiny and considered in combination as a minor intrusive addition to the broader panoramic view.

Landscape Character Type LCT-2: Coastal Lowland

**LCA-2a: South Fleetwood Farmed Urban Fringe**

- 1.2.22 It is anticipated the potential impacts on the character and visual amenity of this area of Green Belt would result from the site investigation and construction activity within it and within the adjacent TCA-8a. These impacts would occur over a six month period in Year 1 followed by operational activities from Year 2 onwards. The construction activities would be of a temporary nature and are summarised in Table 1-5 below.

**Table 1-5 LCA-2a: Schedule of Construction Activity**

<b>Activity</b>	<b>Description</b>
Site investigation – 1 month (Year 1)	Isolated, temporary drilling activity associated with the brine outfall at various locations within and adjacent to the area.
Seawall Crossing (TCA-9a) – 5 months (Year 1)	Low lying, temporary series of sequential activities at the sea wall within a narrow working corridor and includes the demolition of a section of the sea wall, installation of underground brine outfall pipe and reinstating sea wall and access.
Fleetwood brine pipeline – 2 Months (Year 1)	Low lying, temporary series of sequential activities within a 37 m wide working area including temporary fencing, ground excavation, trenching, stock piling of soil and materials, access road, the installation of a small direct drilling compound adjacent to the A587, installation of underground pipeline and the reinstatement of ground.  It is assumed the brine outfall pipe would be installed in one section within this area and the work would be carried out over a two month period.

***Potential Construction Impacts on Landscape Character***

- 1.2.23 With reference to Table 1-5 the construction phase would be over a five month period in Year 1 resulting in localised temporary activity within a relatively narrow working corridor at the north edge of this area and within a suburban setting. The installation over a two month period would result in the temporary loss of some low value replaceable elements within the working area such as pasture farmland although there would be sections of open drainage ditch affected which are designated as part of a local Biological Heritage Site would be affected. However, these local valuable elements would be replaceable and reinstated in a better condition than they are at present.
- 1.2.24 There would be two temporary compounds within or immediately adjacent to this area. The larger west compound at the sea wall would be located within the adjacent TCA-8a and be in place for five months and the smaller east compound adjacent to the A587 would be in place for two months. It is anticipated that these elements would have night time lighting and some associated construction noise.
- 1.2.25 By the end of Year 1 it is anticipated the land within the working area would have been reinstated to its former use resulting in no on-going impact thereafter.

- 1.2.26 This area is considered to have the capability to accommodate the type of temporary linear low level development proposed by virtue of its low lying topography, simple form, horizontal lines, urban setting and the low key, relatively narrow linear corridor over which the construction would be carried out. Night time working activity would most likely be absorbed in to the background suburban setting.
- 1.2.27 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **low** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is considered to be **minor** negative in Year 1 and **no change** by Year 2. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a temporary **slight** adverse impact in Year 1 and a **neutral** impact in Year 2/Year 3.

**Potential Construction Impacts on Visual Amenity**

- 1.2.28 The potential impacts on views are summarised in Table 1-6 below.

**Table 1-6 LCA-2a: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change <small>(see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)</small>	Significance of Effect <small>(see Table 14-13 of Chapter 14 of Volume 1A)</small>	Comment
Visual Receptor VR2.1: Wyre Way (Sandy Lane to Lancashire Coastal Way)	High Minor, negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	Receptor located approximately 250 m from temporary construction activity. Users would have, over a 300 m length, an open view to it on opposite side of area and set against suburban edge backdrop.

**LCA-2b: Rossall School**

- 1.2.29 It is anticipated the potential impacts on the character and visual amenity of this area of Green Belt would result from the site investigation and construction activity within the adjacent LCA-2a. These impacts would occur over a three month period in Year 1 with no potential impact thereafter. The construction activities would be of a temporary duration are summarised in Table 1-7 below.

**Table 1-7 LCA-2b: Schedule of Construction Activity**

<b>Activity</b>	<b>Description</b>
Site investigation – 1 month (Year 1)	Isolated, temporary drilling activity associated with the brine outfall at various locations within and adjacent to the area.
Seawall Crossing (TCA-8a) – 5 months (Year 1)	Low lying, temporary series of sequential activities at the sea wall within a narrow working corridor and includes the demolition of a section of the sea wall, installation of underground brine outfall pipe and reinstating sea wall and access.
Fleetwood brine pipeline – 2 Months (Year 1)	Low lying, temporary series of sequential activities within a 37 m wide working area including temporary fencing, ground excavation, trenching, stock piling of soil and materials, access road, the installation of a small direct drilling compound adjacent to the A587, the installation of underground pipeline and the reinstatement of ground.  It is assumed the brine outfall pipe would be installed in one section within this area and the work would be carried out over a two month period.

***Potential Construction Impacts on Visual Amenity***

1.2.30 The potential impacts on views in this area are summarised in Table 1-8 below.

**Table 1-8 LCA-2b: Construction Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> <small>(see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)</small>	<b>Significance of Effect</b> <small>(see Table 14-13 of Chapter 14 of Volume 1A)</small>	<b>Comment</b>
Visual Receptor VR2.2: Residential properties, Sandy Lane	High Minor, negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	Receptor located approximately 260 m from construction activity and would have an open view to the brine pipe working area and sea wall compound on opposite side of LCA-2a and set against suburban edge backdrop.

## LCA-2c: A585 Corridor Farmed Urban Fringe

- 1.2.31 It is anticipated the potential impacts on character and visual amenity of this area of Green Belt would result from the site investigation and construction activity within it. These impacts would occur over a three month period in Year 1 with no potential impact thereafter. The construction activities would be of a temporary nature and are summarised in Table 1-9 below.

**Table 1-9 LCA-2c: Schedule of Construction Activity**

Activity	Description
Site investigation – 1 month ( Year 1)	Isolated, temporary drilling activity associated with the brine outfall at various locations within and adjacent to the area.
Fleetwood brine pipeline – 2 Months (Year 1)	<p>Low lying, temporary series of sequential activities within a 37 m wide working area including temporary fencing, ground excavation, trenching, stock piling of soil and materials, access road, the installation of a number of small direct drilling compounds adjacent to the A587, the tramway, A585 and the B5768, the installation of underground pipes and the reinstatement of ground.</p> <p>It is assumed the brine outfall pipe would be installed in one section within this area and the work would be carried out over a two month period.</p>

### ***Potential Construction Impacts on Landscape Character***

- 1.2.32 With reference to Table 1-9 the construction phase would be over a two month period in Year 1 resulting in a localised disturbance within a relatively narrow working corridor at the north edge of this area and within a predominantly suburban setting. The installation over a two month period would result mainly in the temporary loss of low value replaceable elements including short sections of open drainage ditch, field boundary hedgerows scrub and pasture farmland. However a small copse in the south west corner of this area between the A587 and tramway would be lost and take a longer period of time to re-establish. However all the elements lost would be reinstated on completion of the construction work. The various compounds would be minor elements sited in close proximity to existing infrastructure and are likely to have flood lighting during night time work.
- 1.2.33 This area is considered to have the capability to accommodate the type of temporary linear low level development proposed by virtue of its low lying topography, the array of existing intrusive elements such as the overhead power lines and the A585,

and the relatively narrow linear corridor over which the construction would be carried out. Although the loss of the copse would require a longer period of time to re-establish, overall it is considered to be a minor element with this area. Night time working activity would most likely be absorbed in to the background suburban setting.

- 1.2.34 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **low** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is considered to be **minor** negative in Year 1 and thereafter **negligible** negative. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in an overall **slight** adverse temporary impact in Year 1 and **neutral** impact in Year 2/Year 3.

**Potential Construction Impacts on Visual Amenity**

- 1.2.35 The potential impacts on views are summarised in Table 1-10 below.

**Table 1-10 LCA-2c: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR2.3: Fleetwood to Blackpool Tramway	High Minor, negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	Users would have a series of sequential filtered oblique southerly views, over a 350 m length to temporary construction activity set within a suburban backdrop.
Visual Receptor VR2.4: Cardinal Allen and St Edmunds Schools	Moderate Minor, negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	There would be a series of open southerly views to temporary construction activity set within a suburban backdrop.
Visual Receptor VR2.5: Fleetwood Farm	High Negligible negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	Farmhouse on the south side of B5409 with oblique filtered northerly view through road side hedge to temporary construction activity.
Visual Receptor VR2.6a: Wyre	High Minor negative (Year 1)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	Users would have a series of sequential filtered northerly views over a 200 m

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Way (B5409, Rossall Lane)	No Change (Year 2/Year 3)		length, though road side hedge to adjacent temporary construction activity and set in the context of other elements such as over head power lines, traffic on A585 and large scale farm buildings.
Visual Receptor VR2.6b: Wyre Way, Rossall Lane)	High Negligible, negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	Users would have a series of sequential filtered northerly views, over a 200 m length, though road side hedge to adjacent temporary construction activity and set in the context of other intrusive elements such as over head power lines and traffic on A585.
Visual Receptor VR2.7: Farmer Parrs Animal World, Wyrefield Farm	High Moderate negative (Year 1) No Change (Year 2/Year 3)	Moderate adverse (Year 1) Neutral (Year 2/Year 3)	Users would have a series of sequential short range open views to temporary construction activity as it crosses through the farm.
Visual Receptor VR2.8: Blackpool & The Fylde College, Fleetwood Road	Moderate Minor, negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	Users would have a series of open southerly views to temporary construction activity set in the context of a suburban backdrop and other intrusive elements such as overhead power lines and traffic on the A585.



## Landscape Character Type LCT-3: Recreational Estuary Edge

### LCA-3a: Fleetwood Marsh Nature Reserve

- 1.2.36 It is anticipated the potential impacts on character and visual amenity would result from the site investigation and construction activity within the adjacent townscape areas TCA-9b and TCA-9c. These impacts would occur over a 12 month period in Year 1 followed by operational activities in Year 2 and thereafter. The construction activities would be of short term duration and are summarised in Table 1-11 below.

**Table 1-11 LCA-3a: Schedule of Construction Activity**

<b>Activity</b>	<b>Description</b>
Site investigation within TCA-9b and TCA-9c – 1 month (Year 1)	Isolated, temporary drilling activity associated with the brine outfall and at the Seawater Pumping Station within adjacent TCA-9b and TCA-9c
North River Crossing (TCA-9c)– 4.5 months (Year 1)	Low lying, temporary activity which includes construction of west shoreline compound, hoarding, drilling and cable pulling, demobilisation and reinstatement work. It is assumed the compound would require night time floodlighting. It is also assumed the east shore compound would be a more or less imperceptible element on the opposite side of the estuary.
Fleetwood brine pipeline and Sea Water Pipeline (TCA-9c) – 2 Months (Year 1)	Low lying, temporary series of sequential activities including temporary fencing, ground excavation, trenching, stock piling of soil and materials, access road, installation of underground pipelines and the reinstatement of ground. It is assumed the brine outfall pipe would be installed in one section within this area and the work would be carried out over a two month period.
Sea Water Pump Station (TCA-9b) – 12 months (Year 1/Year 2)	New build activity within area of adjacent derelict vacant land (TCA-9b). Activities would include site compound, perimeter hoarding, installation of building and fitting out, permanent security fencing and landscape works.
Booster pump station (LCA-4b) – 12 months (Year 1/Year 2)	This aspect of the Project would be located approx. 1.1 km from the east edge of this area within the low lying hinterland on the opposite side of the estuary and behind the Preesall Wastewater Treatment Works. It is anticipated this element of the project would not be perceptible.

Activity	Description
Gas Compressor Compound (LCA-4c) – 14.5 months (Year 2/Year 3)	This aspect of the Project would be located approx. 1.8 Km from the east edge of this area within the low lying hinterland on the opposite side of the estuary. It is anticipated this element of the project would not be perceptible.

**Potential Construction Impacts on Landscape Character**

- 1.2.37 With reference to Table 1-11 the construction phase would be over a 12 month period in Year 1 resulting in a disturbance along its north and west edge. It is anticipated the work would not result in any direct loss in its physical elements, the five month temporary period of activity associated with the installation of the brine and water pipe and the northern crossing (west) compound (TCA-9c) would have a temporary effect on the northern residential urban setting. For the purposes of the assessment it is assumed that by Year 1 the adjacent Fleetwood Harbour Village development would have been completed. The short term period of activities associated with the Seawater Pumping Station new build (TCA-9b) during Year 1 would be considered less intrusive on its west setting because of the industrial derelict nature of the setting. With reference to Figure 14-9a Sheet 1 of Volume 2B this area is considered to be too remote from the construction activity within the rural hinterland on the opposite shore of the estuary (1 km at the nearest point) to the east for there to be a potential significant impact.
- 1.2.38 On completion of the pipeline and northern crossing activity the land within the working area adjacent to the residential properties within TCA-9c would be made good and it is assumed the landscape proposals which form part of the Fleetwood Harbour Village development planning application would be implemented during winter Year 1/Year 2. These proposals are therefore considered as part of the baseline landscape and not as part of the Project design. With reference to Figures 1.17 and 1.19 of Volume 2A it is considered the built form of the Seawater Pumping Station and its associated landscape proposals (planted winter Year 1/Year 2) would help to locally provide some enhancement to the western setting of this area.
- 1.2.39 This area is considered to have the capability to accommodate the type of short term development proposed, by virtue of its surrounding industrial and urban context. Night time working activity would most likely be absorbed in to the background suburban setting.
- 1.2.40 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **low**, and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is considered to be **minor** negative in Year 1 and **minor positive** in Year 2/Year 3. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **slight** adverse impact in Year 1 and a **slight** beneficial impact in Year 2/Year 3.

**Potential Construction Impacts on Visual Amenity**

1.2.41 The potential impacts on views are summarised in Table 1-12 below.

**Table 1-12 LCA-3a: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change <small>(see Tables 14-11 and 14-12 of Chapter 14 Volume 1A)</small>	Significance of Effect <small>(see Table 14-13 of Chapter 14 Volume 1A)</small>	Comment
Visual Receptor VR3.1: Fleetwood Marsh Nature Park users	High Minor negative (Year 1) Minor beneficial (Year 2/Year 3)	Slight adverse (Year 1) Slight beneficial (Year 2/Year 3)	<p>The construction activity associated with the Seawater Pumping Station new build would be a prominent local feature at the north west edge of the park but set within the context of a discordant industrial backdrop. The construction activity associated with the brine and water pipelines and the northern crossing (west compound) would form a low lying series of activities set within an urban residential backdrop.</p> <p>With reference to Figure 1.19 of Volume 2A, the form and appearance of the completed building (Year 3) would fit its location providing a positive element in the view.</p> <p>It is anticipated some elements of the temporary construction activity associated with the northern crossing (east) compound (1 Km) would be a perceptible but unobtrusive new elements in the panoramic views across the estuary. With reference to Figure 14-9a, Sheet 1 of Volume 2B the short term construction activity associated with both the booster pump station (1.1 km) and the gas compressor compound would only be perceptible under close scrutiny, and is considered to be so remote as to not affect the easterly view.</p>

### LCA-3b: Jameson Road Land Reclamation Site

1.2.42 It is anticipated the potential impacts on visual amenity would result from localised construction activity within the area. These impacts would occur a two month period in Year 1. The construction activities would be of short term duration and are summarised in Table 1-13 below.

**Table 1-13 LCA-3b: Schedule of Construction Activity**

Activity	Description
Fleetwood brine pipeline and Sea Water Pipeline (TCA-9c) – 2 Months (Year 1)	Low lying, temporary series of sequential activities including temporary fencing, ground excavation, trenching, stock piling of soil and materials, access road, installation of underground pipelines and the reinstatement of ground.  It is assumed the brine outfall pipe would be installed in one section within this area and the work would be carried out over a two month period.
Construction activities within the rural hinterland on the east side of the estuary	
Booster pump station (LCA-4b) – 12 months (Year 1/Year 2)	This aspect of the project would be located (1.35 km) from the east edge of this area within the low lying hinterland on the opposite side of the estuary and behind the Preesall Wastewater Treatment Works. It is anticipated this element of the Project would not be perceptible.
Gas Compressor Compound (LCA-4c) – 14.5 months (Year 2/Year 3)	This aspect of the Project would be located (2 km) from the east edge of this area within the low lying hinterland on the opposite side of the estuary. It is anticipated this element of the project would not be perceptible.

### ***Potential Construction Impacts on Visual Amenity***

1.2.43 The potential impacts on views are summarised in Table 1-14 below.

**Table 1-14 LCA-3b: Construction Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Visual Receptor VR3.2: Future open space	Not assessed	Not assessed	Potential open space within the present SITA landfill Site.
Visual Receptor VR3.3: REMADE Wyre Way, Jameson Road:	Minor negative (Year 1) No change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	Path in planning. Future uses in the vicinity of Jameson Road would have a potential view to temporary construction activity associated with the brine outfall pipe line in the vicinity of the bridge over the disused railway. (30 m distance at its nearest point).
Visual Receptor VR3.4: REMADE Wyre Way (adjacent to estuary)	No change	Neutral	Path in planning. Future users would have a series of sequential 180 degree panoramic views across the estuary. It is anticipated some elements of the temporary construction activity associated with the northern crossing (east) compound (1.7 km at its nearest point) would not be discernable and activity at the booster pump station would be mostly hidden by Arm Hill. Activity at the gas compressor compound may be perceptible but only under close scrutiny, but is considered to be so remote as to not affect the overall view.

**LCA-3c: ICI Hillhouse Industrial Edge**

1.2.44 It is anticipated there would be no potential impact on the character of this estuary edge landscape because of its relative remoteness to the construction work. However, it is anticipated that construction activity within LCA-4i on the opposite shoreline and within the adjacent TCA-8c would potentially be visible. These impacts would occur over a seven month period

in Year 1 with no potential impact thereafter. The construction activities would be of a temporary duration and are summarised in Table 1-15 below.

**Table 1-15 LCA-3c: Schedule of Construction Activity**

<b>Activity</b>	<b>Description</b>
Site investigation (LCA-4i and TCA-8c – 1 month (Year 1)	Isolated, temporary drilling activity associated with the southern river crossing within the LCA-4i and TCA-8c.
South River Crossing (LCA-4i)- 4 months (Year 1)	Low lying, temporary activity which includes construction of east shoreline compound, drilling and cable pulling, demobilisation and reinstatement work – It is assumed the west shore compound would be hidden behind the sea defence.
Electric Infrastructure (LCA-4i)–2 months (Year 1)	Low lying temporary activity to route electrical cables along east shoreline within adjacent LCA4i. It is assumed the cable installation would be carried out in sections. It is anticipated activities in this section would be over a two month period.
Booster Pump Station (LCA-4b) – 10 months (Year 1/Year 2)	This aspect of the Project would be located approx. 2.2 km from the east edge of this area within the low lying hinterland on the opposite side of the estuary and potentially only visible within a narrow view between Arm Hill (SCA-1b) and The Heads (LCA-4f). It is anticipated this element of the project would have no impact on this area.
Gas Compressor Compound (LCA-4c) – 14.5 months (Year 2/Year 3)	This aspect of the Project would be located approx. 2.3 km from the east edge of this area within the low lying hinterland on the opposite side of the estuary. It is anticipated this element of the Project would have no impact on this area.

***Potential Construction Impacts on Visual Amenity***

1.2.45 The potential impacts on views are summarised in Table 1-16 below.

**Table 1-16 LCA-3c: Construction Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> <small>(see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)</small>	<b>Significance of Effect</b> <small>(see Table 14-13 of Chapter 14 of Volume 1A)</small>	<b>Comment</b>
Visual Receptor VR3.5a: Wyre Way (runs concurrently with Footpath FP13)	High Negligible negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	<p>Users have a series of sequential 180 degree panoramic easterly views across the estuary to the rural hinterland of LCT-4 on the opposite shoreline. It is anticipated some temporary activity associated with the southern crossing (east) compound (1 Km at its nearest point) and HV cable routing (750 m at its nearest point) would be perceptible but low key elements in the context of the wider panoramic view.</p> <p>With reference to Figure 14-9b Sheet 1 of Volume 2B the short term construction activity associated with the booster pump station (2.1 Km at its nearest point) and the gas compressor compound (2.2 Km at its nearest point) would be barely perceptible and only under close scrutiny. Overall these elements are considered to be so remote as to overall have no significant impact on the view.</p>
Visual Receptor VR3.5b: Wyre Way (runs concurrently with Bridleway BW14)	High Moderate, negative (Year 1) No Change (Year 2/Year 3)	Moderate adverse (Year 1) Neutral (Year 2/Year 3)	<p>Users would have a close range, elevated westerly view from the top of the sea defence in to the temporary southern crossing (west) compound within the adjacent TCA-9c.</p> <p>Users would also have a series of sequential filtered 180 degree panoramic easterly views across the estuary to the rural hinterland on the opposite of LCT-4. It is anticipated temporary activity associated with the southern crossing (east) compound (750 m at its nearest point) and HV cable routing (750 m at its nearest point) would be perceptible but low key elements in the context of the wider view.</p> <p>It is anticipated other activity on the opposite shoreline to the north within LCA-4b (2.8 Km) and LCA-4c (2.9 Km) would not be perceptible as these elements are considered to be so remote as to overall not affect the view.</p>

### **LCA-3d: Wyre Estuary Country Park**

- 1.2.46 It is anticipated there would be no potential impact on the intimate and enclosed character of this area because of its relative remoteness to the construction activities. However, it is anticipated that construction activity within LCA-4i on the opposite shoreline would potentially be visible and would occur over a seven month period in Year 1 with no potential impact thereafter. The construction activities would be of a temporary duration and are summarised in Table 1-17 below.

**Table 1-17 LCA-3d: Schedule of Construction Activity**

<b>Activity</b>	<b>Description</b>
Site investigation (LCA-4i and TCA-9 – 1 month (Year 1)	Isolated, temporary drilling activity associated with the southern river crossing within LCA-4i and TCA-8c.
South River Crossing (LCA-4i)- 4 months (Year 1)	Low lying, temporary activity which includes construction of the east shoreline compound, drilling and cable pulling, demobilisation and reinstatement work. It is assumed the west shore compound would be hidden behind the sea defence.
Electric Infrastructure (LCA-4i)–2 months (Year 1)	Low lying temporary activity to route electrical cables along east shoreline within adjacent LCA4i. It is assumed the cable installation would be carried out in sections. It is anticipated activities in this section would be carried out over a two month period.

### ***Potential Construction Impacts on Visual Amenity***

- 1.2.47 The potential impacts on views are summarised in Table 1-18 below.



**Table 1-18 LCA-3d: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change <small>(see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)</small>	Significance of Effect <small>(see Table 14-13 of Chapter 14 of Volume 1A)</small>	Comment
Visual Receptor VR3.6: Wyre Way (runs concurrently with Bridleway BW14 and Country Park car park)	High Minor, negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	With reference to Figure 14-3 Sheet 4 of Volume 2B, users would have a series of sequential 180 degree panoramic northerly views along the estuary and across the rural hinterland of LCT-4 on the opposite shore. It is anticipated the temporary activity associated with the southern crossing (east) compound (750 m at its nearest point) and HV cable routing (700 m at its nearest point) would be perceptible but low key elements in the context of the wider view.

Landscape Character Type LCT-4: Lowland Estuary Edge

**LCA-4a: Knott End Golf Course**

1.2.48 It is anticipated the potential impacts on the character and visual amenity of this area would result from construction activity within the adjacent LCA-4b. These impacts would result from a 15 month period during Year 1/Year 2 followed by a further four month period in Year 3. The construction activities would overall be of short term duration and are summarised in Table 1-19 below.

**Table 1-19 LCA-4a: Schedule of Construction Activity**

<b>Activity</b>	<b>Description</b>
Site investigation (LCA-4b) – 1 month (Year 1)	Isolated, temporary series of activities which include drilling at the booster pump station and well head compound 1. Likely to have little impact on this area.
Internal Access Tracks (LCA-4b) – 2 weeks (Year 1)	It is envisaged the existing access tracks within the adjacent LCA-4b would be used and only minor construction activity would be required to upgrade them. Likely to have little impact on this area.
North River Crossing (LCA-4b) – 4.5 months (Year 1)	Low lying activity with the compound hidden behind the existing wastewater treatment works. Other activity would be filtered or screened by an intervening local ridge and scrub and the copse at the south edge of the area and as such unlikely to result in any impact.
Booster Pump Station (LCA-4b)– 10 months (LCA-4b) (Year 1/Year 2)	Short term new build activity which includes excavation and earth mounding, installation of construction compound, temporary offices and utilities, new build, installation of perimeter fencing, landscape works and commissioning.
Washing Manifolds (LCA-4b) – 2 months (Year 1)	Low lying, temporary series of sequential activities to install underground wash water and brine outfall pipelines between booster pump station and well head compound 1.
Drilling and Well Pad Connections –6 months) (Year 3)	Isolated temporary drilling activity at well head compound 1 within the adjacent LCA-4b. Drilling activity would be 24/7 and include 2 no 4 m high flood lights. On completion of the drilling, the well head compound would be reconfigured to the operational well head layout. This activity would continue in to the construction and operation combined phase.
Gas Manifold Compressor (LCA-4b)– 1 month (Year 3)	Low lying temporary activity to install underground gas pipeline link to well head compound 1 and would include access track, trenching, stock piling of soil and materials, backfilling and reinstatement.  It is assumed that this activity within LCA-4b would be carried out over a one month period.

Activity	Description
Gas Compressor Compound (LCA-4c) – 14.5 months (Year 2/Year 3)	This aspect of the Project would be located approx. 1.1 Km from the south edge of this area within the low lying hinterland beyond the mature copse and semi mature vegetation within LCA-4b. It is anticipated this element of the Project would not be discernable from this area.

***Potential Construction Impacts on Landscape Character***

- 1.2.49 With reference to Table 1-19 the construction phase would be over a 10 month period in Year 1/Year 2 followed by further activity over a four month period in Year 3 resulting in disruption within the adjacent LCA-4b. Overall there would be no direct loss of elements within this area as a result of this activity. In the first period there would be potential localised impacts as a result of more distant temporary activity associated with the booster pump station new build in Year 1/Year 2. It is anticipated that much of the low lying activity associated with the compound would be hidden behind a local ridgeline and scrub associated with an existing marl pit pond. However there would be some closer temporary activity within a relatively narrow working corridor to install the water pipe connection to well head compound 1.
- 1.2.50 Activity during the following shorter period in Year 3 would be associated with site clearance and the layout of well head compound 1, its drilling operations and the laying out of the gas pipe line connection to it. This work would be carried out in close proximity (100 m) to the south edge of this area, although it is anticipated much of the well pad and the activities associated with it would be filtered or hidden behind the mature copse and semi mature vegetation at the south edge of this area.
- 1.2.51 With reference to Section 12.7 of Chapter 12: Noise and Vibration of Volume 1 A of the ES, it is anticipated variable construction noise would be audible from activities associated with the Booster Pump Station (Year 1) and the adjacent well head compound 1(Year 3). These judgements have been based on a worst case scenario and assume for example at the well head that no mitigation such as earth mounding is in place. If mounding were to be provided the predicted noise levels could be reduced by up to 10 dB. It is also anticipated that night time lighting associated with the construction activity would not impact on the overall baseline night time levels of this area, which is considered to be ELZ 2.
- 1.2.52 This landscape has the capability to absorb some construction activity of the type proposed because of the mature copse and other vegetation at the south edge of the area, the nature of the topography, the local scrub and massing of the wastewater treatment works within LCA-4b. Overall the combination of construction noise and visual intrusion could potentially result in a noticeable intermittent temporary impact on the relatively tranquil characteristic in the south part of this area.

1.2.53 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **moderate** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is considered to be **minor** negative in Year 1/Year 2 and **moderate** negative in Year 3. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **slight** adverse impact in Year 1/Year 2 and a **moderate** adverse impact in Year 3.

**Potential construction impacts on visual amenity**

1.2.54 The potential impacts on views are summarised in Table 1-20 below.

**Table 1-20 LCA-4a: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor: VR4.1: Golf Course users	Moderate Minor, negative (Year 1/Year 2) Moderate negative (Year 3)	Slight adverse (Year 1/Year 2) Moderate adverse (Year 3)	Users would have a filtered southerly view from the south part of area to temporary activity associated with the booster pump station (400 m) in Year 1/Year 2, followed by activity associated with well head compound 1. Although this activity would be mostly screened or filtered by adjacent mature copse and other vegetation at south edge of area, it is anticipated there would be a filtered view to well head compound1 from the south part of the golf course Some activity at well pad 5 (750 m) within LCA-4c may potentially be perceptible but only under close scrutiny. Overall, because of remoteness and low lying nature of this activity it is unlikely to have an overall impact on the view.
Visual Receptor: VR4.2c: Wyre Way (runs concurrently with Footpath FP42)	High Negligible negative	Slight adverse	Three year footpath diversion. The diverted Wyre Way / footpath would cut through the south east corner of the golf course. Users would have a potentially filtered view to occasional construction traffic on adjacent access road to well head compound 1.

### LCA-4b: Hackensall Farmed Lowland

- 1.2.55 It is anticipated the potential impacts on the character and visual amenity of this area would result from construction activity within the area and the adjacent LCA-4c and LCA-4d. These impacts would result from a 36 month period from Year 1 to Year 3. The construction activities would be of a short term duration and are summarised in Table 1-21 below.

**Table 1-21 LCA-4b: Schedule of Construction Activity**

<b>Activity</b>	<b>Description</b>
Site investigation – 1 month (Year 1)	Isolated and temporary series of activities which include drilling at the northern crossing (east) compound, the booster pump station and well head compounds 1 and 3.
Internal Access Tracks – 2 weeks (Year 1)	Low lying, temporary activity to install 4 m wide loose stone access tracks within the area. This work would utilise the existing track network as far as possible but would require some local improvements to it as well as some additional lengths of spur to link in the well head compounds. The majority of these tracks would be used infrequently during the construction phase, although some specific tracks would experience concentrated peaks in use during specific activities such as the pipelines to be pulled under the estuary at the northern crossing and the construction of the booster pump station in LCA-4b) immediately following.
North River Crossing– 4.5 months (Year 1)	Low lying, temporary activity which includes installation of east shoreline compound, drilling and pipeline pulling, demobilisation and reinstatement work. It is assumed the pipelines to be pulled through would be stored and welded along the line of the existing track which is presently delineated by Footpath FP61 (the former mineral railway).
Booster Pump Station– 10 months (Year 1/Year 2)	Short term new build activity which includes excavation and earth mounding, installation of construction compound, temporary offices and utilities, new build, installation of perimeter fencing, landscape works and commissioning.
Washing Manifolds– 4 months (Year 1)	Low lying, temporary series of sequential activities to install underground wash water and brine outfall pipelines between booster pump station and well head compounds 1 and well head compounds 2 and 3 (LCA-4d).
Drilling and well pad connections – 6 months (Year 3)	Isolated, temporary drilling activity at well head compound 1. Drilling activity would be 24/7 and include 2 no 4 m high flood lights. On completion of the drilling, the well head compounds will be reconfigured to the operational well head layout. This activity would

Activity	Description
	continue in to the construction and operation combined phase.
Gas Manifold Compressor – 1 month (Year 3)	Low lying, temporary activity to install underground gas pipeline link to well head compound 1 and would include access track, trenching, stock piling of soil and materials, backfilling and reinstatement.  It is assumed that this activity would be carried out over a one month period.
Gas Compressor Compound (LCA-4c) – 14.5 months (Year 2/Year 3)	It is assumed the activity associated with the gas compressor compound (600 m) would be hidden by intervening vegetation and local landform. Overall it is considered this aspect of the Project would have no impact on this area.
Relocated 33 KV over head power line	It is assumed the overhead power line would be realigned to accommodate the gas compressor compound would be of similar appearance to the baseline.

***Potential Construction Impacts on Landscape Character***

- 1.2.56 With reference to Table 1-21 there would be disruption to this area with the main activity associated with the booster pump station (Year 1) resulting in the permanent loss of arable farmland. Other activity would be associated with well pad 1 (Year 3) with again the permanent loss of arable farmland within its footprint. In addition activity associated with the north crossing (east) compound (Year 1) and the various underground pipelines (sea water and brine outfall in Year 1 and the gas pipeline in Year 3) would result in a temporary loss of arable farmland, which would be reinstated on completion of each activity. Overall the loss of elements would be limited to arable farmland and visual intrusion resulting from a sequential series of intrusive elements.
- 1.2.57 With reference to Section 12.7 of Chapter 12: Noise and Vibration of Volume 1A of the ES it is anticipated variable levels of construction noise would be audible across the area as a result of construction activity at the northern crossing (Year 1), the Booster Pump station (Year 1/Year 2) and well head compound 1 (Year 3). These judgements have been based on a worst case scenario and assume for example at the well head that no mitigation such as earth mounding is in place. If mounding were to be provided the predicted noise levels could be reduced by up to 10 dB.
- 1.2.58 Some construction activities i.e. drilling at the well head compounds and at the northern crossing compound and cavern washing within the re-configured well head compounds would operate continuously for their duration requiring night time lighting. The former two activities would require two 4 m high flood lighting towers, and the latter would be low level and contained by the immediate bund around the well head compound.

- 1.2.59 It is anticipated the variable levels of construction noise levels would potentially be audible across the area. Overall the combination of construction noise and visual intrusion, including some isolated points of light on the night time landscape would potentially result in a noticeable short term impact on the tranquil characteristic of this area.
- 1.2.60 This landscape area has little capability to absorb the type of construction activity because of its relatively small size and enclosed nature particularly during Year 1 in the south part of the area.
- 1.2.61 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **high** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is considered to be **major** negative (Year 1/Year 2) and **moderate** negative (Year 3). With reference to Table 14-10 of Chapter 14 of Volume 1A this would result overall in a **large** adverse impact during this phase.

**Potential Construction Impacts on Visual Amenity**

- 1.2.62 The potential impacts on views are summarised in Table 1-22 below.

**Table 1-22 LCA-4b: Construction Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Visual Receptor: VR4.2a: Wyre Way (runs concurrently with Footpath FP42)	Not assessed	Not assessed	Three year footpath closure. Users would be diverted along a realigned route through adjacent golf course within the adjacent LCA-4a (see receptor VR4.2c in Table 1-20 above).
Visual Receptor: VR4.2b: Wyre Way (runs concurrently with Footpath FP42)	Not assessed	Not assessed	Three year footpath closure. Users would be diverted along a realigned route through adjacent golf course within the adjacent LCA-4d (see receptor VR4.2d in Table 1-26 below).
Visual Receptor VR4.3: Footpath FP61	Not Assessed	Not Assessed	Three year footpath closure.

### LCA-4c: Agglebys Farmed Lowland

1.2.63 It is anticipated the potential impacts on the character and visual amenity of this area would result from construction activity within the area and the adjacent LCA-4b. These impacts would over a 36 month period during Year 1 to Year 3. The construction activities would be of a short term duration and are summarised in Table 1-23 below.

**Table 1-23 LCA-4c: Schedule of Construction Activity**

Activity	Description
Site investigation – 3 months (Year 1)	Isolated and temporary series of activities which include drilling at the northern crossing (east) compound and the booster pump station (LCA-4b) and at well head compounds 5, 7, 6 and 4 and the gas compressor compound within the area.  It is assumed these activities would continue on an ad hoc basis over a three month period.
Installation of haul road / future access road – 4 months (Year 1)	Low lying, temporary activity to install a metalled haul road (6 m wide) from A588 to Back Lane and gated. Localised removal of road side hedgerow at tie-ins. The following forecast single vehicle movements for the haul road would be; Year 1: Average 10 daily HGVs with between 25 and 31 peak daily HGVs and 50 car movements. Year 2: Average 5 daily HGVs with between 25 and 31 peak daily HGVs and 32 car movements Year 3: Average 5 daily HGVs with between 15 and 19 peak daily HGVs and 36 car movements.
Internal Access Tracks– 2 months (Year 1)	Low lying, temporary activity to install 4 m wide loose stone access tracks within adjacent LCA-4b and LCA-4c. This work would utilise the existing track network as far as possible but would require some local improvements to it as well as some additional lengths of spur to link in the various well head compounds 5, 7, 6 and 4. The tracks in this area would be used infrequently during the construction phase.
Electric Infrastructure 1 month	Low lying, temporary activity to route section of electrical cable along the west side of Back Lane, between Corcas Lane and Agglebys Road. It is assumed the



Activity	Description
(Year 2)	cable installation would be carried out in one section through this area and would be carried out over a one month period.
Higher Lickow Control buildings (LCA-5a) – 12 months (Year 1/Year 2)	Short term activity to renovate existing farmhouse and new build on footprint of existing farm out buildings. It is anticipated aspects of this activity would be visible but heavily filtered by the existing vegetation surrounding the farm. It is the intention that this surrounding vegetation is retained as part of the Project.
North River Crossing (LCA-4b) – 4.5 months (Year 1)	Low lying, temporary activity which includes construction of east shoreline compound, drilling and cable pulling, demobilisation and reinstatement work. It is anticipated that construction activity here would be perceptible from the west edge of this area up to a distance of 500 m.
Booster Pump Station (LCA-4b)– 10 months (Year 1/Year 2)	Short term new build activity which includes excavation and earth mounding, installation of construction compound, temporary offices and utilities, new build, installation of perimeter fencing. landscape works and commissioning It is anticipated that construction activity here would be visible from the west edge of this area and be perceptible for up to a distance of 1.5 km. It is also anticipated that the compound equipment would be painted a grey brown colour (Kharki RAL7008) to blend in with the yellow, brown and grey hues of the surrounding landscape.
Washing Manifolds– 6 months (Year 1)	Low lying, temporary series of sequential activities to install underground wash water and brine outfall pipelines between booster pump station and well head compounds. To well head compound 5 – 2 months) To well head compound 7 & well head compound 6 - 2 months) To well head compound 4 - 2 months)
Drilling and Well Head Connections – 22 months (Year 1 to Year 3)	Isolated, temporary drilling activity at well head compounds 5, 7, 6 and 4, Drilling operations will be 24/7 and include 2 no x 4 m high flood lights. On completion of drilling well head compound will be reconfigured to the operational well head design.

Activity	Description
	<p>Well head compound 5 – 8 months (Year 1/Year 2)</p> <p>Well head compound 7 – 8 months (Year 2/Year 3)</p> <p>Well head compound 6 – 3 months (Year 3)</p> <p>Well head compound 4 – 3 months (Year 3)</p>
<p>Cavern Washing – 20 months (Year 2/Year 3)</p>	<p>These would comprise a short term series of sequential “invisible” activities within the reconfigured operational well head layout. It is anticipated the actual activity would not be a perceptible visual element within this area.</p> <p>This activity would continue through to the construction and operation combined phase.</p>
<p>Gas Manifold Compressor– 3 months (Year 3)</p>	<p>Low lying, temporary activity to install underground gas pipeline link to well head compounds 5, 7, 6 and 4 and would include access track, trenching, stock piling of soil and materials, backfilling and reinstatement.</p> <p>It is assumed that this activity would be carried out over a three month period.</p>
<p>Site Compound for Gas Compressor – 15 months (Year 2/Year 3)</p>	<p>The site compound would be located within part of the arable field on the west side of the gas compressor compound. The area would be excavated down to approximately 7 m AOD, with the surplus material used to create temporary 2 m high screen mounds along the south and west side of the compound. The existing vegetation along the north and west side of the compound would be retained and protected from the construction activities. On completion of the adjacent gas compressor compound the site compound would be dismantled and the area returned top agriculture. The temporary south screen mound would be removed and the surplus material used to create the permanent west screen mound to the gas compressor compound.</p>
<p>Gas Compressor Compound– 14.5 months (Year 2/Year 3)</p>	<p>Short term new build activity which includes excavation and installation of perimeter screen mounding, installation of construction compound, temporary offices and utilities, new build and installation of compound equipment, vent stack, installation of perimeter fencing, landscape works and commissioning.</p> <p>It is assumed the north and south perimeter screen mounds would be constructed at the outset of this activity and planted during the following winter, so that the</p>

Activity	Description
	<p>majority of the construction activity within the site compound would be hidden. The screen mounds would be planted in winter Year 2/Year 3. It is anticipated the installation of the tall equipment, such as the 16 m high vent stack and the 13 m high glycol dryers, would be visible over the top of the screen mound.</p> <p>It is also anticipated that the compound equipment would be painted a grey brown colour (Khaki RAL7008) to blend in with the yellow, brown and grey hues of the surrounding landscape.</p>
<p>NTS Interconnector – 2 months (Year 2)</p>	<p>Low lying temporary series of sequential of activities to install underground gas pipeline between A588 and gas compressor compound, including section with adjacent LCA-5a. It is understood that the NTS would be installed in sections, with each section being completed prior to work commencing on the next section.</p> <p>It is assumed the activity within this area would be installed as one section and would be undertaken over a two month period at the outset of the activity program.</p>

***Potential Construction Impacts on Landscape Character***

- 1.2.64 With reference to Table 1-23 the main activity within this area would be associated with the installation of the gas compressor compound (over a fourteen month period in Year 1/Year 2) at the north edge of this area. This would include excavation and earth mounding to accommodate the site working area for the compound, the installation of the equipment and the adjacent vent stack (Year 2/Year 3). It is assumed the permanent north and south perimeter earth mounds would be planted during the winter Year 2/Year 3.
- 1.2.65 In addition to the main activities in this part of the area, there would also be a sequential series of local disturbances resulting in the permanent loss of arable farmland as a result of the sequential temporary activities associated with the access tracks (Year 1) four well head compounds (Year 1 to Year 3) and temporary disturbance as a result of activities associated with the various underground pipelines which would be on-going at various times of the construction phase e.g. the installation of the water manifolds (Year 1) and the gas manifold (Year 3). It is anticipated there would, overall, be low levels of vehicle activity on the access tracks through this part of the area.
- 1.2.66 With reference to Section 12.7 of Chapter 12: Noise and Vibration of Volume 1A of the ES it is anticipated variable levels of construction noise would be audible across the low lying area adjacent to the estuary as a result of construction activity at the

northern crossing (Year 1) and the Booster Pump Station (Year 1/Year 2) within the adjacent LCA-4b, at the four well head compounds (Year 1/Year 2), the Gas Compressor Compound (Year 2/Year 3) and other general activity within the area, as well as at Higher Lickow (Year 1) within LCA-5a to the east. These judgements have been based on a worst case scenario and assume for example at the well head that no mitigation such as earth mounding is in place. If mounding were to be provided the predicted noise levels could be reduced by up to 10 Db.

- 1.2.67 It is anticipated most night time lighting associated with the construction activities would be unobtrusive although there would be directional flood lighting at the well head compounds towers during night time drilling which would potentially result in a localised impact on the overall baseline night time levels of this area, which are considered to be ELZ 2.
- 1.2.68 There would also be a series of low lying sporadic activities in the east part of the area in the vicinity of Back Lane and east to the A588, associated with the construction of the haul road and access (Year 1), the underground HV electric cable (Year 2) and the NTS Interconnector (over two months in Year 2). Vehicle activity on the haul road between the A588 and Back Lane would be relatively low although HGVs would be an intermittent minor element.
- 1.2.69 The construction activities would result in the permanent loss of mainly arable farmland with some pasture at the north edge of the area as a result of the permanent well head compounds and the gas compressor compound. There would also be the permanent loss of road side vegetation at the tie in of the haul road with the A588 Hall Gate Lane and Back Lane as well as other vegetation required for sight lines at the junctions. However the latter would be replaced with new a hedgerows and individual trees which would be planted behind the sight lines.
- 1.2.70 The well head compounds would be re-configured to their final layout throughout the course of this phase and the low screen mounds planted with scrub during the following winter after completion.
- 1.2.71 It is anticipated the variable levels of construction noise levels would potentially be audible across the area. Overall the combination of construction noise and visual intrusion, including some isolated points of light on the night time landscape would potentially result in a noticeable short term impact on the tranquil characteristic of this area. Although this landscape would have the capability to absorb, in isolation, some of the low lying aspects of the construction activity, overall, this capacity is exceeded as a result of the generally widespread nature of the activities in Year 1/Year 2, within an open relatively tranquil area. During Year 3 construction activity would be less obtrusive, although it would be carried in the context of some operational elements such as the booster pump station and the final well head compound layout.
- 1.2.72 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **high** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is

considered to be **major** negative in Year 1/Year 2, reducing to **moderate** negative in Year 3. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **large** adverse impact in Year 1 to Year 3.

**Potential Construction Impacts on Visual Amenity**

1.2.73 The potential impacts on views are summarised in Table 1-24 below.

**Table 1-24 LCA-4c: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR4.4a: Wyre Way (runs concurrently with Footpaths FP42 and FP41)	High Major, negative to Moderate negative (Year 1/Year 2) Moderate negative (Year 3)	Large adverse	Users on this 720 m section of the Wyre Way would have a series of sequential 360 degree panoramic views within which there would be some short range open views to construction activity at well head compounds 5 and 7 (approx. 15 m and 20 m at their nearest respective points) and well head compounds 6 and 4 slightly further away. It is anticipated floodlighting at the well head compounds would be a noticeable night time element. There would also be a view of construction activity at the northern crossing and the booster pump station (140 m at its nearest visible point) within the adjacent LCA-4b, a filtered view to activity at Higher Lickow (650 m at its nearest visible point) and a filtered view to activity associated with the gas compressor compound screen mound (370 m at its nearest point), the gas heater and glycol dryers (430 m) and the adjacent vent stack (500 m) at its nearest visible point). The westerly 180 degree panoramic views across the saltmarsh and estuary (SCA-1b) would be

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
			unaffected.
Visual Receptor VR4.4b: Wyre Way (runs concurrently with Footpath FP16)	High Moderate negative to Minor negative (Year 1/Year 2) Minor negative (Year 3)	Moderate adverse to Slight adverse (Year 1/Year 2) Moderate adverse to slight adverse (Year 3)	Users on this 540 m long section of the Wyre Way would have a series of sequential 180 degree panoramic views with an open northerly view across the salt marsh (SCA-1b) to construction activity at the northern crossing and the booster pump station (870 m at its nearest visible point) within the adjacent LCA-4b). There would also be a northerly view to drilling activity at the four well head compounds within LCA-4c and floodlighting would be noticeable at night time. Other activity within LCA-4c would be heavily filtered by the intervening linear scrub immediately adjacent to the Wyre Way. The typical westerly panoramic views across the salt marsh and estuary (SCA-1b) would be unaffected. Floodlighting at well head compounds.
Visual Receptor VR4.5a: Footpath FP43	High Major negative (Year 1) Moderate negative (Year 2) Major negative (Year 3)	Large adverse	Users would have an open short range view to construction activity at well head compound 5 (Year 1/Year 2) and well head compound 4 (Year 3). There would also be more distant but open views across open arable fields to activity at well head compound 7 (Year 2) and well head compound 6 (Year 3). In addition the activity associated with the various underground pipe laying connections i.e. the water manifolds (Year 1) and the gas manifold (Year 3) would also be clearly visible. It is anticipated the majority of the activity associated

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
			with the gas compressor station and the booster pump station would be hidden or heavily filtered by intervening semi mature and mature vegetation.
Visual Receptor VR4.6: Bridleway BW2a (Corcas Lane)	High Moderate negative (Year 1/Year 2) Minor negative (Year 3)	Moderate adverse	<p>Users on this 640 m long section of the bridleway would have a series of sequential panoramic northerly views across flat arable and pasture fields within which there would be a filtered north easterly view to construction activity at Higher Lickow (760 m at its nearest visible point), a distant view to construction activity at the booster pump station (1.2 km at its nearest visible point within the adjacent LCA-4b) to sporadic low lying activity at well head compounds 5, 7, 6 and 4 (570 m to the nearest well head compound) and to activity at the compressor compound / vent stack (670 m) and in particular the earth mounding around the perimeter of the compound.</p> <p>In addition there would be further localised disruption during the early part of Year 2 at the east end of this lane near to the junction with Back Lane as a result of construction activities associated with the HV cable routing.</p>
Visual Receptor VR4.7: Corcas Farm, Corcas Lane	High Negligible negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	There is not likely to be any noticeable disruption on this receptor as a result of local enclosure by surrounding vegetation and by the existing condition of the immediate environs.
Visual Receptor VR4.8: Ivy Cottages,	High Moderate negative (Year	Moderate adverse (Year 1/Year 2)	There would be occasional disruption in the view during specific periods in Year 1/Year 2. Users at

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Back Lane	1/Year 2) Minor negative (Year 3)	Slight adverse (Year 3)	this receptor would have an open upper storey short range view and a filtered ground storey short range view to low lying activity associated with the HV cable routing on the opposite side of Back Lane, beyond the hedge over one month in Year 2. There would also be open ground and upper storey easterly views to the construction (late Year1) and operation (early Year 1) of the haul road (140 m at its nearest point) and the NTS Interconnector beyond it over a two month period in mid Year 2.

#### LCA-4d; Clods Carr Farmed Lowland

1.2.74 It is anticipated the potential impacts on the character and visual amenity of this area would result from some sporadic temporary construction activity within the west part of the area and short term activity within the south part of LCA-4b and the north part of the adjacent LCA-4c. These impacts would occur over an initial one to two month period in Year 1 followed by a 22 month period in Year 2/Year 3. The construction activities would be of a short term nature and are summarised in Table 1-25 below.

**Table 1-25 LCA-4d: Schedule of Construction Activity**

Activity	Description
Site investigation – 2 months (Year 1)	Temporary low key activity, which would include drilling at the northern crossing (east) compound and, the booster pump station (LCA-4b), the gas compressor compound (LCA-4c) and well head compounds 2 and 3 within the area.
Internal Access Tracks– 1 month (Year 1)	Low lying, temporary activity to install 4 m wide loose stone access tracks from this area to well head compound 4 and from LCA-4b (Wyre Way) to well head compounds 2 and 3. Elsewhere it is anticipated that existing access tracks would be utilised.



Activity	Description
	<p>It is anticipated the well head compound tracks would be infrequently used. However the access track, delineated by Footpath FP61, which provides the link from the haul road (LCA-4c) to the booster pump station is likely to have higher levels of use at peak times during the latter's construction, requiring improvements to this track and the loss of adjacent vegetation.</p>
<p>North River Crossing (LCA-4b) – 4.5 months (Year 1)</p>	<p>Temporary low lying activity which includes construction of east shoreline compound, drilling and cable pulling, demobilisation and reinstatement work.</p> <p>It is anticipated that the working area for laying out the pipes and welding would extend along the present line of Footpath FP61 (the line of the former mineral railway) at the south west edge of this area.</p>
<p>Booster Pump Station (LCA-4b)– 10 months (Year 1/Year 2)</p>	<p>Short term new build activity which includes excavation and earth mounding, installation of construction compound, temporary offices and utilities, new build, installation of 2.4 m high wire mesh and post perimeter security fencing, landscape works and commissioning. It is anticipated the earth mounds would be planted in winter Year 1/Year 2.</p>
<p>Washing Manifolds– 2 months (Year 1)</p>	<p>Low lying, temporary series of sequential activities to install underground wash water and brine outfall pipelines between the booster pump station and well head compounds 3 and 2 as well as pipe line connections to the well head compounds in LCA-4c which would pass directly through a section of recently planted hedge / woodland either side of Footpath FP61.</p> <p>To well head compounds 3 and 2 – September to November Year 1.</p>
<p>Gas Manifold Compressor– 4 months (Year 3)</p>	<p>Low lying, temporary activity to install underground gas pipeline link to well head compounds 3 and 2 and would include access track, trenching, stock piling of soil and materials, backfilling and reinstatement. This activity would also affect the south west corner of this area in the vicinity of footpath FP61.</p> <p>It is assumed that this activity would be carried out in two phases (three months for link to well head compounds 5, 7, 6 and 4 in LCA-4c and one month for links to well head compounds 3 and 2.</p>
<p>Gas Compressor</p>	<p>Short term new build activity which includes excavation and installation of perimeter screen mounding, installation of construction compound, temporary offices and</p>

Activity	Description
Compound– 14.5 months (Year 2/Year 3)	<p>utilities, new build and installation of compound equipment, vent stack, installation of perimeter fencing, landscape works and commissioning.</p> <p>It is assumed the perimeter screen mounds would be constructed at the outset of this activity so that the majority of the construction activity within the site compound would be hidden. The screen mounds would be planted in winter Year 2/Year 3. It is anticipated the installation of the tall equipment, such as the 16 m high vent stack and the 13 m high glycol dryers, would be visible over the top of the screen mound.</p> <p>It is also anticipated that the compound equipment would be painted a grey brown colour (Kharki RAL7008) to blend in with the yellow, brown and grey hues of the surrounding landscape.</p>
Relocated 33 KV over head power line	It is assumed the overhead power line would be realigned to accommodate the gas compressor compound would be of similar appearance to the baseline.

***Potential Construction Impacts on Landscape Character***

- 1.2.75 With reference to Table 1-25 the main activity affecting this area would be the installation of the gas compressor compound over a fourteen month period in Year 1/Year 2, which would be located close to its south edge within the adjacent LCA-4c. This aspect of the Project would include excavation and perimeter earth mounding to accommodate the site working area for the compound, the re-routing of the 33 KV overhead power lines, the installation of some tall equipment such as the glycol dryers and the 16 m high vent stack. These taller elements and the associated construction activity would potentially be visible above the perimeter earthworks. The earthworks would be designed to have a gently rolling longitudinal profile and a rolled top, although the angle of the side slopes, in some views would have an unnatural appearance within the wider landscape context. However, the combination of perimeter hedge planting and scrub would overtime reduce the harshness of this profile allowing it to fit better with the wider landscape.
- 1.2.76 There would also be some localised sporadic activity in the south west part of this area in relation to well head compounds 3 and 2 and their associated access tracks and pipe work connections resulting in a direct impact on the arable farmland. There would also be localised sporadic activity in the vicinity of the existing track delineated by Footpath FP61 at the south west edge of this area. The combined impacts resulting from the laying out and welding together the sections of pipe for the northern crossing along this track, its continued use as construction access to the booster pump station, the construction of a spur to well head compound 4 as well other activity associated with the water and gas manifolds is likely to result in the loss of some existing vegetation, although this would be a relatively minor loss compared to the overall extent of the planted plot. It is

anticipated the loss of this vegetation would to some extent be replaceable although tree planting over the manifolds would be prohibitive.

- 1.2.77 With reference to Section 12.7 of Chapter 12: Noise and Vibration of Volume 1A of the ES, it is anticipated variable levels of construction noise would be audible across the south part of this area as a result of construction activity at the Gas Compressor Compound (Year 2/Year 3) and other general activity associated with well head compound 4 (Year 2) within LCA-4c to the south and well head compounds 2 and 3 in the west part of the area. These judgements have been based on a worst case scenario and assume for example at the well head that no mitigation such as earth mounding is in place. If mounding were to be provided the predicted noise levels could be reduced by up to 10 Db.
- 1.2.78 It is anticipated that night time lighting associated with the construction activity would overall be unobtrusive and would not impact on the overall baseline night time levels of this area, which is considered to be ELZ 2.
- 1.2.79 This landscape area has the capability to absorb some of the proposed construction activity because of its undulating nature and pattern of local ridgelines and vegetation in relation to the generally low level and sporadic nature of many of the construction activities such as those associated with the well head compounds and pipe line installation. However there would be a permanent loss of arable farmland and some existing semi mature planting, although these elements are considered to be replaceable. It is also anticipated the variable levels of construction noise levels would potentially be audible across the south part of the area. Overall the combination of construction noise and visual intrusion would potentially result in a noticeable short term impact on the tranquil characteristic of this area. Overall it is anticipated the capability of this landscape would be exceeded because of the proximity of the activities associated with the gas compressor compound within LCA-4c and the associated screening earth works in the short term, which would result in locally visually intrusive elements in the south part of this area.
- 1.2.80 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **high** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is considered to be **minor** negative in Year 1 but increasing to **moderate** negative in Year 2/Year 3. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **slight** adverse impact in Year 1, a **large** adverse impact in Year 2 and a **moderate** adverse impact in Year 3.

#### ***Potential Construction Impacts on Visual Amenity***

- 1.2.81 The potential impacts on views are summarised in Table 1-26 below.

**Table 1-26 LCA-4d: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor: VR4.2d: Realigned Wyre Way (runs concurrently with Footpath FP42)	High Major negative (Year 1/Year 2) Moderate negative (Year 3)	Large adverse	Three year footpath diversion – The diverted footpath would run along the east and south sides of the existing copse to the east of the booster pump station and then cross through the west edge of the open arable field to the south of the woodland copse within LCA-4d.  Users would, in Year 1 have a series of sequential open views to construction activities associated with the northern crossing (east) compound followed in Year 1/Year 2, by a series of sequential short range westerly views to activities associated with the booster pump station new build and to the various pipe laying activities nearby.
Visual Receptor VR4.5b: Footpath FP43	High No change (Year 1) Moderate negative (Year 2) Minor negative (Year 3)	Neutral (Year 1) Moderate negative (Year 2/Year 3)	Users would have predominantly contained views, although in the north section, south of Cote Walls Farm, there would be (Year 2) an oblique view to activity associated with the screen mounds (130 m) at the gas compressor compound and to construction associated with the taller elements such as the gas heater and glycol dryers and adjacent vent stack visible over the top of it (Year 2/Year 3).
Visual Receptor VR4.9: Footpath FP61	Not Assessed	Not Assessed	Footpath closed for the duration of this phase. Users would be diverted along Footpaths FP43 (visual receptor VR4.5a/VR4.5b) and FP41 (visual receptor VR4.4a).
Visual Receptor VR4.10a: Footpath FP45 (Clods Carr Lane)	High Negligible negative (Year 1) Major, negative (Year 2)	Slight adverse (Year 1) Large adverse (Year 2)	The south end of FP45 would be closed for the duration of this phase. Users would use the alternative Footpath FP43 (visual receptor VR4.5b).  Users would have a series of sequential southerly low lying

Visual Receptor	Sensitivity and Magnitude of Change <small>(see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)</small>	Significance of Effect <small>(see Table 14-13 of Chapter 14 of Volume 1A)</small>	Comment
	Moderate negative (Year 3)	Moderate adverse (Year 3)	views to activity associated with the gas compressor compound north mound (150 m at its closest point) with activity associated with the gas heater and glycol dryers visible over it.
Visual Receptor VR4.10b: Footpath FP45 (Clods Carr Lane)	Minor negative (Year 1) Moderate negative (Year 2) Minor negative (Year 3)	Slight adverse (Year 1) Moderate adverse (Year 2/Year 3)	Users would have a series of sequential slightly elevated westerly panoramic views across area with a filtered view to booster pump station (920 m at its nearest visible point) and an open easterly view to activity associated with the gas compressor compound north mound (500 m), with activity associated with the gas heater and glycol dryers (610 m) and adjacent vent stack (650 m) visible over it.
Visual Receptor VR4.11: Cote Walls Farmhouse	High Negligible negative	Slight adverse	Isolated, secluded property with a west and north aspect to adjacent semi immature vegetation and a mature copse in the west and to field boundary hedgerows to the north. Existing southerly and southerly easterly views south are blocked by adjacent farm outbuildings. There would be a potential filtered view, from the grounds, to activity associated with booster pump station ( 650 m at its nearest point) in adjacent LCA-4b.
Visual Receptor VR4.12: Footpath FP46 (Acres Lane)	High Negligible, negative (Year 1) Minor negative (Year 2/Year 3)	Slight adverse (Year 1) Moderate adverse (Year 2/Year 3)	Users would have a series of sequential slightly elevated southerly panoramic views with filtered view to booster pump station (1.2 Km at its nearest visible point) and a southerly open view to the gas compressor compound (800 m at its nearest visible point).
Visual Receptor VR4.13: Curwens Hill Farmhouse, Acres	High No Change (Year 1)	Neutral (Year 1) Moderate adverse	Isolated property with elevated filtered southerly panoramic view out past adjacent large shed across the low lying rolling farmland of LCA-4d and LCA-4c, to the Heads (LCA-4f), and

Visual Receptor	Sensitivity and Magnitude of Change <small>(see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)</small>	Significance of Effect <small>(see Table 14-13 of Chapter 14 of Volume 1A)</small>	Comment
Lane	Minor negative (Year 2/Year 3)	(Year 2) Slight adverse (Year 3)	Staynall (LCA-4i) to the estuary (SCA-1 beyond within which there would be an open view to construction activity associated with the gas compressor compound north screen mound (990 m, the taller equipment such as the gas heater and glycol dryers with the compound and the vent stack.
Visual Receptor VR4.14: New Heys Farm, off Whinney Lane	High No Change (Year 1) Negligible negative (Year 2/Year 3).	Neutral (Year 1) Slight adverse (Year 2/Year 3)	Isolated low lying property with filtered southerly view across LCA-4d to vegetation at Cote Walls Farm and well head compound 2 at the south edge with LCA-4c and the gas compressor compound north mound (920 m), with activity associated with the gas heater, glycol dryers (1 km) and the adjacent vent stack (1.15 km) visible over it.

### LCA-4f: The Heads

- 1.2.82 Although this area is relatively close to the Project site, the combination of its lowing flat topography and pattern of vegetation limit views out to the adjacent LCA-4b to the north and LCA-4c to the north east. It is anticipated there would be a potential impact on its visual amenity within the north part of the area resulting from the new build construction activity within LCA-4b (1.2 Km) to the north and the adjacent LCA-4c (1.1 km) to the north west and would be over a 24 month period. The construction activities would be of a short term duration and are summarised in Table 1-27 below.

**Table 1-27 LCA-4f: Schedule of Construction Activity**

<b>Activity</b>	<b>Description</b>
Booster Pump Station (LCA-4b)– 10 months (Year 1/Year 2)	Short term new build activity which includes excavation and earth mounding, installation of construction compound, temporary offices and utilities, new build, installation of perimeter fencing, landscape works and commissioning.
Gas Compressor Compound (LCA-4c) – 14.5 months (Year 2/Year 3)	Short term new build activity which includes excavation and installation of perimeter screen mounding, installation of construction compound, temporary offices and utilities, new build and installation of compound equipment, vent stack, installation of perimeter fencing, landscape works and commissioning.

***Potential Construction Impacts on Visual Amenity***

1.2.83 The potential impacts on views are summarised in Table 1-28 below.

**Table 1-28 LCA-4f: Construction Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Receptor VR4:15: Riverside Cottage, off Browns Lane	High No Change (Year 1) Negligible negative (Year 2) No Change (Year 3)	Neutral (Year 1) Slight adverse (Year 2) Neutral (Year 3)	This is a low lying receptor located within the north part of the area. The property has a close boarded fence on its east side and the only view out is from a small window on the properties east facing gable end. It is envisaged construction activity associated with the gas compressor compound (1.1 km) e.g. excavation and screen mounding earthworks would be visible as well as the installation of the taller equipment within the compound and the adjacent vent stack over the south mound.

## LCA-4g: The Grange Farmed Lowland

- 1.2.84 It is anticipated the potential impacts on the character and visual amenity of this area would result from construction activity within the area and the adjacent LCA-4c and LCA-4h to the north. These impacts would occur over a four month period in Year 1 and a further two month period in Year 2 and thereafter no potential impact. The construction activities because of their sporadic nature would be of a temporary duration and are summarised in Table 1-29 below.

**Table 1-29 LCA-4g: Schedule of Construction Activity**

Activity	Description
Haul road / future access road (LCA-4c) – 4 months (Year 1)	Low lying temporary activity to install metalled 6 m wide haul road and access road from A588 to Back Lane and its use by construction vehicles.
Electric Infrastructure – 2 months (Year 1)	Low lying temporary activity to route electrical cables within the west edge of the area and to the north within the adjacent LCA-4c and LCA-4h. It is assumed the cable installation would be carried out in sections. It is anticipated activities in this section would be over a two month period.
Gas Compressor Compound (LCA-4c)– 14.5 months (Year 2/Year 3)	Short term new build activity which includes excavation and installation of perimeter screen mounding, installation of construction compound, temporary offices and utilities, new build and installation of compound equipment, vent stack, installation of 2.4 m high perimeter wire mesh and post fencing, landscape works and commissioning.
NTS Interconnector (LCA-4c) – 2 months (Year 2)	Low lying temporary series of sequential activities to install underground gas pipeline between A588 and Back lane within the adjacent LCA-4c. It is understood that the NTS would be installed in sections, with each section being completed prior to work commencing on the next section.  It is assumed the activity within this area would be installed as one section and would be undertaken over a two month period at the outset of the activity program.



**Potential Construction Impacts on Landscape Character**

- 1.2.85 With reference to Table 1-29 there would be sporadic low key activity over a three year period. Activity in Year 1/Year 2 would be associated with the installation of the haul road / access road and the NTS interconnector respectively, both of which would be within LCA-4c to the north of the area, as well as in Year 1 the installation of the HV electric cable within this area. The latter would have a temporary impact on an area of pasture and arable farmland within a narrow corridor along the north side of High Gate Lane and the west side of Back Lane. It is anticipated any existing vegetation lost as a result of this work would be replaced. It is also anticipated some construction activity associated with the gas compressor compound would also be potentially visible in some filtered views out of the area (see Figure 14-9i Sheet 1 of Volume 2B).
- 1.2.86 This landscape area has the capability to absorb the level of construction activity proposed because of its sporadic and low key nature and the elements temporarily lost would be replaceable.
- 1.2.87 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **low** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is considered to be **minor** negative in Year 1 and **negligible** negative in Year 2/Year 3). With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **slight** adverse impact in Year 1 and a **neutral** impact in Year 2/Year 3 and thereafter.

**Potential Construction Impacts on Visual Amenity**

- 1.2.88 The potential impacts on views are summarised in Table 1-30 below.

**Table 1-30 LCA-4g: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR4.16: Bridleway BW2	High Negligible negative (Year 1) Minor negative (Year 2) Negligible negative (Year 3)	Slight adverse	Users would have a series of sequential filtered northerly views over a 350 m length to temporary activities associated with the installation of the haul road (250 m at its nearest visible point) in Year 1 and its use by construction vehicles thereafter. There would also be a view to

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
			the temporary activities associated with the installation of the NTS interconnector beyond the haul road in Year 2).
Visual Receptor VR4.17: East Property, Grange Farm, Grange Lane	High Negligible negative (Year 1) Minor negative (Year 2) Negligible negative (Year 3)	Slight adverse	Easterly filtered view to temporary activities associated with the installation of the haul road (400 m at its nearest visible point) in Year 1, the construction traffic on it until Year 3 as well as temporary activities associated with the installation of the NTS interconnector beyond in Year 2).
Visual Receptor VR4.18: West Property, Grange Farm, Grange Lane	High Negligible negative (Year 1) Minor negative (Year 2/Year 3)	Slight adverse	Northerly open view to temporary activities associated with the installation of the haul road (350 m at its nearest visible point) in Year 1, the construction traffic on it until Year 3 as well as the temporary activities associated with the installation of the NTS interconnector beyond in Year 2), There would also be a potential filtered view to some activities associated with the gas compressor compound north screen mound, within the compound itself and the vent stack (1.1 km).
Visual Receptor VR4.19: The Grange, Grange Lane.	High Minor negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	Westerly filtered view to temporary activities associated with the HV cable routing (150 m at its nearest point) in the vicinity of the junction of High Gate Lane and Back Lane.

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR4.20: Height O' Th' Hill, High Gate Lane,	High Minor negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	Easterly open view on to High Gate Lane with oblique view to temporary activities associated with the HV cable routing in the vicinity of the junction of High Gate Lane and Back Lane.
Visual Receptor VR4.21: Little Height O' Th' Hill, High Gate Lane,	High Minor negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	Southerly open view across High Gate Lane with oblique view to temporary activities associated with the HV cable routing in arable fields to the east of Burrows Lane.  Filtered short range northerly view to temporary activities associated with the HV cable routing in field immediately adjacent to the property.
Visual Receptor VR4.22: High Gate Farm, High Gate Lane	High Negligible, negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	Westerly open view across LCA-4h with hedgerow vegetation along High Gate Lane and along Burrows Lane a perceptible element with the open expanse of the estuary beyond. It is anticipated activity associated with the HV cable routing at its crossing of High Gate Lane (700 m) and in the arable field to the south would be perceptible.
Visual Receptor VR4.23: Caravan Park, off High Gate Lane	High No Change	Neutral	Enclosed mixed woodland location with westerly views out from its north and west edge across the adjacent LCA-4h.

### LCA-4i: Staynall Farmed Lowland

1.2.89 It is anticipated the potential impacts on the character and visual amenity of this area would result from low key construction activity within the area. These impacts would occur over two periods of four months and two months in Year 1. The construction activities would be of a temporary duration and are summarised in Table 1-31 below.

**Table 1-31 LCA-4i: Schedule of Construction Activity**

<b>Activity</b>	<b>Description</b>
Site investigation – 1 month (Year 1)	Isolated and temporary series of activities which include drilling at the southern crossing (east) compound over a 1 month period.
South River Crossing (LCA-4h)- 4 months (Year 1)	Low lying, temporary activity which includes construction of east shoreline compound, access track to Burrows Lane, drilling and cable pulling, demobilisation and reinstatement work – It is assumed the west shore compound would not be visible.
Electric Infrastructure – 2 months (Year 1)	Low lying, temporary activity to route electrical cables along east shoreline within a narrow corridor. The cable would be routed to avoid important vegetation such as mature trees although it is anticipated there would be the temporary loss of short sections of hedgerow either side of Burrows Lane in the north part of the area. It is assumed the cable installation would be carried out in sections. It is anticipated activity in this section would be over a two month period.
Booster Pump Station (LCA- 4b)– 10 months (Year 1/Year 2)	Short term new build activity which includes excavation and earth mounding, installation of construction compound, temporary offices and utilities, new build, installation of perimeter fencing, landscape works and commissioning.
Gas Compressor Compound (LCA-4c)– 14.5 months (Year 2/Year 3)	Short term new build activity which includes excavation and installation of perimeter screen mounding, installation of construction compound, temporary offices and utilities, new build and installation of compound equipment, vent stack, installation of perimeter fencing, landscape works and commissioning.

**Potential Construction Impacts on Landscape Character**

- 1.2.90 With reference to Table 1-31 there would be three low key activities within this area which would result in the temporary loss of arable farmland, which would be reinstated on completion of each. It is also anticipated that there would be some road side vegetation removed as a result of the temporary access to the east shore compound and the HV cable routing along two sections of Burrows Lane and are considered to be replaceable in the short term.
- 1.2.91 It is also anticipated that construction activity associated with the booster pump station (2.3 Km) within LCA-4b and some taller elements at the Gas Compressor Compound / vent stack (2.0 km at it's potentially nearest visible location) within LCA-4c would be perceptible but only under close scrutiny in some elevated views out of the area.
- 1.2.92 This landscape area has the capacity to absorb the level of construction activity proposed because of the low lying nature of the Project in relation to its topography and the relatively minor loss of replaceable and common elements. Although some construction activity outside the area may also be perceptible their overall remoteness to it would have an overall negligible influence on the character of the area.
- 1.2.93 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **low** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is considered to be **minor** negative in Year 1 and **no change** thereafter. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **slight** adverse impact in Year 1 and a **neutral** impact in Year 2/Year 3 and thereafter.

**Potential Construction Impacts on Visual Amenity**

- 1.2.94 The potential impacts on views are summarised in Table 1-32 below.

**Table 1-32 LCA-4i: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change <small>(see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)</small>	Significance of Effect <small>(see Table 14-13 of Chapter 14 of Volume 1A)</small>	Comment
Visual Receptor VR4.26: Properties on Staynall Lane, Staynall	High No change (Year 1) Negligible negative (Year 2)	Neutral (Year 1) Slight adverse (Year 2) Neutral (Year 3)	Users would have an elevated northerly panoramic view within which would be a potential distant view of construction activity associated with the booster pump station (3.1 km) within LCA-4b and to some

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
	No Change (Year 3)		aspects of the construction activity associated with the gas compressor (2.6 km) but only under close scrutiny.
Visual Receptor VR4.27: Bridleway BW1	High Minor negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	Users would have a sequential series of filtered westerly views across the estuary to the industrial hinterland along the west shore within which there would be an oblique, filtered northerly view to activity at the southern crossing (east) compound.
Visual Receptor VR4.28: Wyre Way, Burrows Lane	High Minor negative (Year 1) Negligible negative (Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Users would have a short range view to construction activity associated with the HV cable routing in the vicinity of Burrows Lane. There would also be a potential filtered northerly distant view out across LCA-4c to some aspects of the construction activity associated with the gas compressor site compound (2 km).

### Landscape Character Type LCT-5: Rural Settlement Fringe

#### LCA-5a: Preesall Farmed Lowland

- 1.2.95 It is anticipated the potential impacts on the character and visual amenity of this area would result from construction activity within the area and the adjacent LCA-4c. These impacts would occur over a 16 month period in Year 1/Year 2. The construction activities would be of short term duration and are summarised in Table 1-33 below.

**Table 1-33 LCA-5a: Schedule of Construction Activity**

Activity	Description
Haul Road / Access Road (LCA-4c) – 4 months (Year 1)	Low lying temporary activity to install 6 m wide metalled haul road and access road from A588 to Back Lane and then from Back Lane to Higher Lickow. The haul road / access road would predominantly follow the existing field pattern through pasture fields, although it will cross one watercourse and dissect the field boundary hedgerows on either side of Back Lane, which have been recently damaged by a recent incident, and a gappy overgrown field boundary hedge to the south east of Higher Lickow. It is anticipated the haul road / access road would be fenced on either side and gated at its junctions with Back Lane.
Higher Lickow Control Buildings – 12 months (Year 1/Year 2)	Short term activity to renovate existing farmhouse and new build on footprint of existing farm out buildings. It is anticipated the adjacent mature trees and field boundary hedgerows would be retained.
Electric Infrastructure – 1 month (Year 2)	Low lying, temporary activity to route electrical cables more or less adjacent to the proposed haul route / access road and Higher Lickow through pasture fields. It is anticipated the cable would be routed through hedgerows which have previously been affected by the haul road construction. It is assumed the cable installation would be carried out in sections. It is anticipated activities in this section would be over a two month period.
NTS Interconnector (LCA-4c) – 2 months (Year 2)	Low lying temporary series of sequential activities to install underground gas pipeline between A588 and Back lane with the adjacent LCA-4c and then would wind through the area in the vicinity of Monks Lane requiring the removal of short sections of hedgerow on either side of it. It is understood that the NTS would be installed in sections, with each section being completed prior to work commencing on the next section.

***Potential Construction Impacts on Landscape Character***

1.2.96 With reference to Table 1-33 there would be some localised activity within the south west corner of this area at Higher Lickow. This is a predominantly intimate and enclosed location surrounded by mature trees and hedgerows. Much of the activity within this area would be low lying including the haul road / access road, over an initial 4 month period in Year 1, the HV cable routing, over a one month period in Year 2 and the NTS interconnector, over a two month period in Year 2. However this work would result in the loss of pasture land within a relatively narrow corridor on either side of Monks Lane, as well as several sections of hedgerow along both sides of it and a short section of field boundary to the south, but avoiding mature trees. Overall the loss of these elements would be localised resulting in only a limited impact on the enclosure of the area.

- 1.2.97 The activity associated with the renovation of the existing Higher Lickow farmhouse, entrance gate and the installation of a new building on the footprint of the existing out buildings would in the main be contained by the surrounding mature vegetation and which would be retained.
- 1.2.98 This landscape has the capacity to absorb a certain amount of construction activity of the type proposed because of its predominantly enclosed nature and the general low lying nature of the activities.
- 1.2.99 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **moderate** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is considered to be **moderate** negative in Year 1/Year 2 and **negligible** negative in Year 3. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **moderate** adverse impact in Year 1/Year 2 and a **slight** adverse impact in Year 3.

**Potential Construction Impacts on Visual Amenity**

1.2.100 The potential impacts on views are summarised in Table 1-34 below.

**Table 1-34 LCA-5a: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR5.1: Park Cottage, Cemetery Lane	High Minor negative (Year 1) Moderate negative (Year 2) Negligible negative (Year 3)	Slight adverse (Year 1) Moderate adverse (Year 2) Slight adverse (Year 3)	Short range filtered southerly view to temporary activities associated with the haul road and its crossing with Back Lane (Year 1) and its operation thereafter and temporary activities associated with the NTS interconnector (Year 2).
Visual Receptor VR5.2: Properties on, Cemetery Lane	High Minor negative (Year 1) Moderate negative (Year 2) Negligible negative (Year 3)	Slight adverse (Year 1) Moderate adverse (Year 2) Slight adverse (Year 3)	Short range filtered southerly view to temporary activities associated with the haul road (Year 1) and its operation thereafter and temporary activities associated with the NTS interconnector (Year 2).



## LCA-5b: Preesall Park Farmed Mosses

- 1.2.101 It is anticipated the potential impacts on the character of this area would result from construction activity associated with the NTS Interconnector. The potential impacts would occur over a one to two month period in Year 2 and would be of a temporary duration. The main construction activities within and potentially visible from the area are summarised in Table 1-35 below.

**Table 1-35 LCA-5b: Schedule of construction activity**

Activity	Description
NTS Interconnector (LCA-4c) – 1/2months (Year 2)	Low lying temporary series of sequential activities to install underground gas pipeline between A588 and Footpath FP31. It is understood that the NTS would be installed in sections, with each section being completed prior to work commencing on the next section.

### ***Potential Construction Impacts on Landscape Character***

- 1.2.102 With reference to Table 1-35 there would be some localised activity at the south edge of this area, to the south east of Preesall Park. This is a low lying flat area of mixed pasture and arable farmland but enclosed by a line of trees along Moss Lane (LCA-5c) to the south, the A588 to the west and a hedgerow along the A588 to the north. The activity within this area would be low lying and would continue for one to two months Year 2. This work would result in the temporary loss of arable farmland but within a relatively narrow corridor. Overall the loss of these elements would be localised resulting in only a limited impact on the enclosure of the area.
- 1.2.103 This landscape has the capability to absorb the level of construction activity of the type proposed because of its predominantly enclosed low lying flat nature and the general low key nature of the activities.
- 1.2.104 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **low** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is considered to be **no change** in Year 1, **minor** negative in Year 2 and **no change** in Year 3. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **neutral** impact in Year 1, a **slight** adverse impact in Year 2 and a **neutral** impact in Year 3 and thereafter.

### LCA-5c: Stalmine Farmed Lowland

1.2.105 It is anticipated the potential impacts on visual amenity of this area would result from construction activity within the adjacent LCA-5b. These impacts would occur over one to two month period and would be of a temporary nature. The main construction activities within and potentially visible from the area are summarised in Table 1-36 below.

**Table 1-36 LCA-5c: Schedule of Construction Activity**

Activity	Description
NTS Interconnector (LCA-4c) – 1 to 2 months (Year 2)	Low lying temporary series of sequential activities to install underground gas pipeline between A588 and Footpath FP31 within the adjacent LCA-5b. It is understood that the NTS would be installed in sections, with each section being completed prior to work commencing on the next section.

### *Potential Construction Impacts on Visual Amenity*

1.2.106 The potential impacts on views are summarised in Table 1-37 below.

**Table 1-37 LCA-5c: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR5.3: Woodside Park Caravan Park	High No Change (Year 1) Minor negative (Year 2) No Change (Year 3)	Neutral (Year 1) Moderate adverse (Year 2) Neutral (Year 3)	Mix of open and filtered close range northerly views to temporary activities associated with the NTS interconnector in Year 2 (75 m).
Visual Receptor VR5.4: Beech House & Moss House	High No Change (Year 1) Minor negative (Year 2) No Change (Year 3)	Neutral (Year 1) Moderate adverse (Year 2) Neutral (Year 3)	Close range open northerly view to temporary activities associated with the NTS interconnector in Year 2 (100 m).

**LCA-5d: Garstang Farmed Lowland**

1.2.107 It is anticipated the potential impacts on the character and visual amenity of this area would result from construction activity within the area. These impacts would occur over two month period and would be of a temporary duration. The main construction activities within the area are summarised in Table 1-38 below.

**Table 1-38 LCA-5d: Schedule of Construction Activity**

Activity	Description
NTS Interconnector (LCA-4c) – 2 months (Year 2)	<p>Low lying temporary series of sequential activities to install underground gas pipeline between A588 and Back lane with the adjacent LCA-4c and then would wind through the area in the vicinity of Monks Lane requiring the removal of short sections of hedgerow on either side of it.</p> <p>It is understood that the NTS would be installed in sections, with each section being completed prior to work commencing on the next section.</p>

***Potential Construction Impacts on Landscape Character***

1.2.108 With reference to Table 1-38 there would be some localised activity within the pasture landscape to the west of the Lancaster Canal. This is a predominantly low lying gently undulating location surrounded by copses and linear tree and scrub lines. All the activity within this area is related to the installation of the NTS Interconnector and would be carried out over a very short space of time in Year 2. However this work would result in the temporary loss of pasture land but within a relatively narrow corridor and just to the south and running parallel with the course of a dismantled railway, and which is delineated now by lengths of field boundary tree / scrub lines through this area. Overall the loss of the pasture is considered to be a replaceable and of localised nature resulting in only a limited impact character of the area.

1.2.109 This landscape has the capability to absorb the type of construction activity proposed because of the low lying gently rolling nature of the landscape, the intervening nature of the adjacent copses and liner belts of vegetation and the low key and short term nature of the work.

1.2.110 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **low** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is considered to be

**no change** in Year 1, **negligible** negative in Year 2 and **no change** in Year 3. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result overall in a **neutral** impact.

**Potential Construction Impacts on Visual Amenity**

1.2.111 The potential impacts on views are summarised in Table 1-39 below.

**Table 1-39 LCA-5d: Construction Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Visual Receptor VR5.5: Lancaster Canal	High No Change	Neutral	The canal crosses this area more or less at grade or in cutting but has an associated hedgerow which limits westerly views out to the Project.
Visual Receptor VR5.6: Residential Properties, Longmoor Lane	High No Change (Year 1) Negligible negative (Year 2) No Change (Year 3)	Neutral (Year 1) Slight adverse (Year 2) Neutral (Year 3)	Upper storey northerly filtered view to construction activity at the east end of the Project.

**Landscape Character Type LCT-6: Farmed Mosslands**

**LCA-6a: Pilling Farmed Mosses**

1.2.112 It is anticipated the potential impacts on the character and visual amenity of this area would result from construction activity associated with the NTS Interconnector. These impacts would occur over a six month period in Year 1/Year 2 and would be of temporary duration. The main construction activities within the area are summarised in Table 1-40 below.

**Table 1-40 LCA-6a: Schedule of Construction Activity**

Activity	Description
NTS Interconnector – 6 months (Year 1/Year 2)	<p>Predominantly a low lying series of sequential temporary activities to install an underground gas pipeline between Footpath FP31 in the west to Station Lane, north of Nateby in the east. The Interconnector would pass through low lying flat land within a 37 m wide working area which would run parallel and approximately 1 km to the south of the A588 and Garstang Road.</p> <p>It is understood that the NTS interconnector pipeline would be installed in phased sections, with each section being completed prior to work commencing on the next section, going from east to west. There are anticipated to be three sections within this area with each section taking two months to complete.</p>

***Potential construction impacts on landscape character***

- 1.2.113 With reference to Table 1-40 the construction phase would be over a six month period in Year 1/Year 2 resulting in localised disturbance within a relatively narrow working corridor across a large scale low lying flat area. The majority of the activity within this area is related to the installation of the NTS Interconnector pipeline which would be carried out in a phased program of sectional working, with each section taking two months to complete. This work would result in the temporary loss of both arable and pasture farmland and the associated disruption to open field drains and the removal of short sections of hedgerow within the working area. The latter would be predominantly associated with the lanes and tracks which cross the area. However, the loss of the arable and pasture farmland, the sections of hedgerow and open field drains are considered to be replaceable in the short term resulting in only a limited impact on the character of the area.
- 1.2.114 It is anticipated by Year 3 the land within the interconnector working area would have been fully reinstated and returned to agricultural resulting in no further impact on the character of the area.
- 1.2.115 This landscape has the capacity to absorb the type of construction and post construction activity proposed because of the low lying, flat, large scale landscape, the ad hoc nature of the field, road and track side hedgerows and isolated copses to filter or hide the activities, the landscape elements affected would be replaceable in the short term and the relatively low key and temporary / short term nature of the work.
- 1.2.116 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **low** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the temporary construction work would be

*minor* negative in Year 1/Year 2 and *negligible* negative in Year 3. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a *slight* adverse impact in Year 1/Year 2 and a *neutral* impact in Year 3 and thereafter.

**Potential construction impacts on visual amenity**

1.2.117 The potential impacts on views are summarised in Table 1-41 below.

**Table 1-41 LCA-6a: Construction Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Visual Receptor VR6.1: Footpath FP31 (A588 to Moss Lane)	High Minor to Moderate negative (Year 1/Year 2) No Change (Year 3)	Slight to Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Footpath directly affected by construction activity. Users would have a series of sequential open views over a 300 m length to temporary activity associated with the NTS Interconnector.
Visual Receptor VR6.2: Springfield House Farm and adjacent properties, A588 Burned House Lane	High Minor, negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Filtered southerly view to temporary activity associated with the NTS Interconnector (350 m).
Visual Receptor VR6.3: Bridleway BW29	High Negligible, Minor to Moderate, negative (Year 1/Year 2) No change (Year 3)	Slight to Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Bridleway directly affected by construction activity. Users would have a series of sequential open and filtered views over a 1 km length to temporary activity associated with the NTS Interconnector.
Visual Receptor VR6.4a: Carter's	High	Slight adverse (Year 1/Year 2)	Open northerly view to temporary activity associated with the NTS

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Farm, Wellhouse Farm, West View & Stackfield, Old Toms Lane	Minor, negative (Year 1/Year 2) No Change (Year 3)	Neutral (Year 3)	Interconnector (350 m).
Visual Receptor VR6.4b: Bridleway BW15 & Footpath FP6a (Old Tom's Lane)	High Minor, negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Users would have a series of sequential open northerly views over a 400 m length to temporary activity associated with the NTS Interconnector (350 m).
Visual Receptor VR6.5: Ashleigh Farm, Squires Gate Farm & Southlands Farm, A588 Head Dyke Lane	High No Change	Neutral	Filtered southerly views to temporary activity associated with the NTS Interconnector (900 m).
Visual Receptor VR6.6: Footpath FP34	High Negligible, Minor to Moderate, negative (Year 1/Year 2) No change (Year 3)	Slight to Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Footpath directly affected by construction activity. Users would have a series of sequential filtered and open views over a 850 m length to temporary activity associated with the NTS Interconnector.
Visual Receptor VR6.7: Head Dyke Farm, Head Dyke House & Moss Cottage Farm off A588 Head Dyke	High Minor, negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Filtered southerly views to temporary activity associated with the NTS Interconnector (250 m).

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Lane			
Visual Receptor VR6.8: West Boundary Farm, Pear Tree Grove & Head Dyke Farm	High Minor, negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Filtered southerly views to temporary activity associated with the NTS Interconnector (350 m).
Visual Receptor VR6.9a: Moss Nook, Greenacres & Barn Hill Farm off Lancaster Road,	High Minor, negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Open north westerly view to temporary activity associated with the NTS Interconnector (350 m).
Visual Receptor VR6.9b: Footpath 35	High Minor, negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Users would have a series of sequential northerly open views over a 600 m length to temporary activity associated with the NTS Interconnector (100 m at its nearest point).
Visual Receptor VR6.10: Bankfield, Lancaster Road	High Minor, negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Filtered northerly view to temporary activity associated with the NTS Interconnector (100 m).
Visual Receptor VR6.11: Willow Dene, Lancaster Road	High Minor, negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Filtered northerly view to temporary activity associated with the NTS Interconnector (200 m).
Visual Receptor VR6.12: New Hall Farm, Lancaster	High Minor, negative (Year 1/Year 2)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Filtered southerly views to temporary activity associated with the NTS Interconnector (350 m).



<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Road, Scronkey	No Change (Year 3)		
Visual Receptor VR6.13: Willow Farm, Bradshaw Lane	High Negligible. Negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Filtered southerly views to temporary activity associated with the NTS Interconnector (500 m).
Visual Receptor VR6.14: Bradshaw Lane Farm & Bradshaw Lane Cottages, Bradshaw Lane	High Minor, negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Open north easterly views to temporary activity associated with the NTS Interconnector (300 m).
Visual Receptor VR6.15: Stafford's Farm, Rosa Villa & Glen Carr, off Garstang Road	High Negligible. Negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Filtered southerly views to temporary activity associated with the NTS Interconnector (500 m).
Visual Receptor VR6.16: North View, Bone Hill Lane	High Negligible, Negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Filtered southerly view to temporary activity associated with the NTS Interconnector (450 m).
Visual Receptor VR6.17: Footpath 39	High Negligible, Minor to Moderate, negative (Year 1/Year 2) No change (Year 3)	Slight to Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Footpath directly affected by construction activity. Users would have a series of sequential open views over a 1 km length to temporary activity associated with the NTS Interconnector.

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Visual Receptor VR 6.18: Bone Hill Farm, Bone Hill Lane	High Minor, negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Open easterly views to temporary activity associated with the NTS Interconnector (250 m).
Visual Receptor VR6.19: Footpath FP43	High Negligible, Negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Users would have a series of sequential filtered and open northerly views over a 750 m length to temporary activity associated with the NTS Interconnector (400 m at its nearest point).
Visual Receptor VR6.20: Properties at Rushy Slack Farm, Bone Hill Lane	High Minor, negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Filtered north and westerly views to temporary activity associated with the NTS Interconnector (250 m).
Visual Receptor VR6.21: Black Hill Farm	High Negligible, Negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Open northerly view to temporary activity associated with the NTS Interconnector (700 m).
Visual Receptor VR6.22: Footpath FP44	High Negligible to Minor, negative (Year 1/Year 2) No change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Users would have a series of sequential filtered and open northerly views over a 700 m length to temporary activity associated with the NTS Interconnector (500 m distance at its nearest point).
Visual Receptor VR6.23: Kentucky Farm off Bone Hill	High Minor, negative (Year 1/Year 2)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Open northerly short range view to temporary activity associated with the NTS Interconnector (150 m).

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Lane	No Change (Year 3)		
Visual Receptor VR6.24: Footpath FP15a	High Moderate, negative (Year 1/Year 2) No Change (Year 3)	Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Users would have a series of sequential open northerly short range views over a 450 m length to temporary activity associated with the NTS Interconnector (100 m distance at its nearest point).
Visual Receptor VR6.25: Cogie Hill Farm, Crookabreast Farm & Gibstick Cottages, Island Lane	High Minor, negative (Year 1 & Year 2) Negligible, negative (Year 3)	Slight adverse	Either filtered or open slightly elevated southerly view to temporary activity associated with the NTS Interconnector (250 m) and south westerly view of short term activities associated with NTS Interconnector metering station (700 m from closest property).

### Landscape Character Type LCT-7: Farmed Lowland

#### LCA-7a: Nateby Farmed Lowland

- 1.2.118 It is anticipated the potential impacts on the character and visual amenity of this area would result from construction activity associated with the NTS Interconnector. These impacts would occur over a twelve month period in Year 1/Year 2. The construction activities would be of short term duration and are summarised in Table 1-42 below.

**Table 1-42 LCA-7a: Schedule of Construction Activity**

Activity	Description
NTS Interconnector - 12 months (Year 1/Year 2)	Low lying temporary series of sequential activities to install underground gas pipeline within a 37 m wide working area. There would also localised activity of a short term nature associated with the installation of a small above ground metering station in the east part of the area where the Project connects into the existing national grid system (see Figure 1.50 of Volume 2A). It is understood that the NTS would be installed in sections, with each section being completed prior to work commencing on the next section. It is anticipated the pipeline would be installed in one section.

***Potential construction impacts on landscape character***

- 1.2.119 With reference to Table 1-42 the construction phase would be over a 12 month period in Year 1/Year 2 resulting in localised activity within a relatively narrow corridor across the area. This corridor would run more or less parallel and to the south of a dismantled railway, which is delineated by a discontinuous line of hedgerows on low embankment. This work would result in the temporary loss of some arable and pasture land although other elements such as field ponds, tree copses and hedgerows would be avoided. Overall the loss of elements would be localised and are replaceable within a relatively short time span resulting in only a limited impact on the character of the area.
- 1.2.120 In the west part of this area there would be some short term construction activity associated with the installation of the permanent above ground metering station compound between Black Lane and Station Lane to the north of Nateby requiring the permanent loss of some arable farmland. The compound would be sited in close proximity to an existing smaller scale compound and surrounded by some important local landscape elements, which would be retained. Immediately to the south would be a small pine copse (Black Wood) and to the south east a deciduous copse. There is also some linear adjacent vegetation associated with the alignment of the dismantled railway. These features would to some degree absorb some of the activity at this location.
- 1.2.121 It is anticipated, by Year 3, the land within the working area of the interconnector pipeline, other than at the metering station compound would have been fully reinstated and returned to agriculture. However, the permanent above ground metering station compound with its associated informal scrub and tree planting around its perimeter would be a relatively minor element with the context of the wider large scale landscape and the surrounding landscape elements.

- 1.2.122 This landscape has the capacity to absorb the amount of temporary construction activity proposed because of the local screening of adjacent elements in combination with a series of low key activities associated with the Project.
- 1.2.123 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **low** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the short term construction work in Year 1/Year 2 is considered to be **minor** negative and in Year 3 **negligible negative**. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **slight** adverse impact in Year 1/Year 2 and a **neutral** impact in Year 3 and thereafter.

**Potential construction impacts on visual amenity**

1.2.124 The potential impacts on views are summarised in Table 1-43 below.

**Table 1-43 LCA-7a: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR7.1a: Black Lane Head (north property), Black Lane.	High Negligible, negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Filtered northerly short range view to temporary activity associated with the NTS Interconnector (100 m).
Visual Receptor VR7.1b: Black Lane Head (south property) Black Lane	High Negligible, negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Filtered easterly view to short term activity associated with the NTS Interconnector and metering station (350 m).
Visual Receptor VR7.2: Footpath	High Moderate, negative (Year 1/Year 2) Minor, negative (Year 3)	Moderate adverse (Year 1/Year 2) Slight adverse (Year 3)	Users would have a series of sequential open southerly views over 950 m length of short term activities associated with the NTS Interconnector metering station. (350 m at its closest point).
Visual Receptor	High	Moderate adverse (Year	Slightly elevated open southerly view of short term

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
VR7.3a: Converted Barn	Moderate, negative (Year 1/Year 2) Negligible, negative (Year 3)	1/Year 2) Slight adverse (Year 3)	activities associated with the NTS Interconnector metering station (550 m).
Visual Receptor VR7.3b: Island Farm	High Moderate, negative (Year 1/Year 2) Negligible, negative (Year 3)	Moderate adverse (Year 1/Year 2) Slight adverse (Year 3)	Slightly elevated open southerly view of short term activities associated with the NTS Interconnector metering station (550 m).
Visual Receptor VR7.4: Bridleway BW1	High Minor, Moderate, negative (Year 1/Year 2) Negligible, negative (Year 1)	Moderate adverse (Year 1/Year 2) Slight adverse (Year 3)	Bridleway directly affected by construction activity. Users would have a series of sequential filtered or open westerly views over a 600 m length to short term activities associated with the NTS Interconnector and metering station.
Visual Receptor VR7.5: Footpath FP3	High Negligible, negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Users would have a series of sequential open southerly views over a 850 m length of temporary activities associated with the NTS Interconnector (350 m at its closest point).
Visual Receptor VR7.6: Residential properties at Elm Farm, Station Lane	High Negligible, negative (Year 1/Year 2 & Year 3)	Slight adverse (Year 1/Year 2 & Year 3)	Filtered easterly view to short term activity associated with the NTS Connector metering station (350 m) and narrow filtered southerly short range view to temporary activities associated with the NTS interconnector.
Visual Receptor VR7.7: Residential properties and business, Station Lane	High Moderate, negative (Year 1/Year 2) No Change (Year 3)	Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Filtered easterly view to short term activity associated with the NTS Connector metering station (350 m) and open southerly short range view to temporary activities associated with the NTS interconnector.
Visual Receptor VR7.8: Alderwood,	High Minor negative (Year 1/Year 2)	Slight adverse (Year 1/Year 2)	Open short range easterly view to temporary activity associated with the NTS Interconnector.

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Cartmell Lane	No Change (Year 3)	Neutral (Year 3)	
Visual Receptor VR7.9 Island Farm, Cartmell Bank, Business, Cartmell Lane	High Negligible, negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Open easterly view to temporary activity associated with the NTS Interconnector (250 m from nearest property).
Visual Receptor VR7.10: Hoole Farm, Kilcrash Lane	High Minor negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral adverse (Year 3)	Open northerly view to temporary activity associated with the NTS Interconnector (550 m).
Visual Receptor VR7.11: Residential properties, Long moor Lane, Nateby	High Negligible, negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Open northerly view to temporary activity associated with the NTS Interconnector (820 m).
Visual Receptor VR7.12: Footpath FP4	High Minor to Moderate, negative ((Year 1/Year 2) No Change (Year 3)	Slight to Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Footpath directly affected by construction activity. Users would have a series of sequential open views over a 650 m length to temporary activity associated with the NTS interconnector.
Visual Receptor VR7.13: Bowers Hotel, Bowers Lane	High Minor negative (Year 1/Year 2) No Change (Year 3)	Slight adverse (Year 1/Year 2) Neutral (Year 3)	Open northerly view to temporary activity associated with the NTS Interconnector (250 m).
Visual Receptor VR7.14: Footpath FP2	High Minor to Moderate, negative (Year 1/Year 2) No Change (Year 3)	Slight to Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Footpath directly affected by construction activity. Users would have a series of sequential open views over a 450 m length of temporary activity associated with the NTS interconnector.

## Townscape Character Type 8: Suburban Coastal

### TCA-8a: South Fleetwood Edge

- 1.2.125 It is anticipated the potential impacts on the visual amenity of this area would result from construction activity associated with the sea wall crossing within the area and the Brine outfall through the adjacent LCA-2a and LCA-2b. These impacts would occur over a six month period in Year 1 and thereafter operational activities. The construction activities would be of a temporary duration and are summarised in Table 1-44 below.

**Table 1-44 TCA-8a: Schedule of Construction Activity**

<b>Activity</b>	<b>Description</b>
Site investigation – 1 month (Year 1)	Isolated, temporary series of drilling activity associated with the brine outfall at various locations within and adjacent to the area.
Seawall Crossing – 5 months (Year 1)	Low lying, temporary series of sequential activities at the sea wall within a narrow working corridor and includes the channel across the sea wall, installation of underground brine outfall pipe and reinstating sea wall and access.
Fleetwood brine pipeline (LCA-2a)– 2 Months (Year 1)	Low lying, temporary series of sequential activities including temporary fencing, ground excavation, trenching, stock piling of soil and materials, access road, the installation of a small direct drilling compound adjacent to the A587 Broadway, installation of underground pipeline and the reinstatement of ground.  It is assumed the brine outfall pipe would be installed in one section within this area and the work would be carried out over a two month period.
Operational elements	
Reinstated sea wall access and car park	This is anticipated to be similar to the existing situation.

### ***Potential construction impacts on visual amenity***

- 1.2.126 The potential impacts on views are summarised in Table 1-45 below.



**Table 1-45 TCA-8a: Construction Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Visual Receptor VR8.1: Residential Properties Fishermans Way	High Moderate, negative (Year 1) No Change (Year 2/Year 3)	Large adverse (Year 1) Neutral (Year 2/Year 3)	Open westerly short range wall of the temporary sea wall compound on the opposite side of Fairway.
Visual Receptor VR8.2: Predominantly Residential Properties along West Way	High Minor, negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	Mix of open and filtered short range southerly views over West Way of the temporary brine outfall working corridor on the opposite side within the adjacent LCA-2a.
Visual receptor VR8.3: Residential Properties in the vicinity of the junction of the West Way & The Strand	High Moderate, negative (Year 1) No Change (Year 2/Year 3)	Moderate adverse (Year 1) Neutral (Year 2/Year 3)	Mix of filtered and open short range southerly views across adjacent road to temporary compounds associated with drilling under the A588 on opposite side within the adjacent LCA-2a.
Visual Receptor VR8.4: Residential properties on the west side of A587 Broadway (north of the junction with The Strand)	High Moderate, negative (Year 1) No Change (Year 2/Year 3)	Moderate adverse (Year 1) Neutral (Year 2/Year 3)	Mix of filtered and open short range easterly views over A587 Broadway to temporary compound on opposite side.
Visual Receptor VR8.5a: Residential Properties along the A587, Broadway (south of the junction with South Strand)	High Moderate, negative (Year 1) No Change (Year 2/Year 3)	Moderate adverse (Year 1) Neutral (Year 2/Year 3)	Open north westerly view across junction of A587 Broadway and The Strand to temporary drilling compound on opposite side within the adjacent LCA-2a and oblique view across South Strand to temporary compound on opposite side.
Visual Receptor VR8.5b:	High	Slight adverse (Year 1)	Filtered oblique north westerly views to

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Residential Properties along the east side of A587, Broadway (south of the junction with South Strand)	Minor, negative (Year 1) No Change (Year 2/Year 3)	Neutral (Year 2/Year 3)	temporary compound and brine outfall corridor on opposite of Broadway with the adjacent LCA-2a.
Visual Receptor VR8.6: Residential Property on east side of A587, Broadway (North of the junction with South Strand)	High Major, negative (Year 1) Minor, negative (Year 2/Year 3)	Large adverse (Year 1) Slight adverse (Year 2/Year 3)	Open easterly short range view to temporary drilling compound and removal of trees in south east corner of LCA-2b. Open westerly view across A587 to temporary compound on opposite within LCA-2a.
Visual Receptor VR8.7a: Residential Properties, east side of South Strand (west of tram crossing)	High Major, negative (Year 1) Minor negative (Year 2/Year 3)	Large adverse (Year 1) Slight adverse (Year 2/Year 3)	Mix of filtered and open short range views to temporary drilling compound and temporary brine outfall working area as a result of tree removal within the adjacent LCA-2b.
Visual Receptor VR8.7b: Residential Property, east side of South Strand (east of tramway crossing)	High Minor, negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	Mix of filtered and open short range views to temporary brine out fall working area.

### **TCA-8b: Fleetwood Road Holiday Parks**

- 1.2.127 It is anticipated the potential impacts on the visual amenity of this area would result from construction activity within a restricted working corridor at the south edge of this area and within the adjacent LCA-3b. These impacts would occur over a three month period in mid Year 1 and thereafter no impact. The construction activities would be of a temporary duration and are summarised in Table 1-46 below.

**Table 1-46 TCA-8b: Schedule of Construction Activity**

<b>Activity</b>	<b>Description</b>
Site investigation – 1 month (Year 1)	Isolated, temporary series of drilling activity associated with the brine outfall at various locations within and adjacent to the area.
Fleetwood brine pipeline – 2 Months (Year 1)	Low lying, temporary series of sequential activities including temporary fencing, ground excavation, trenching, stock piling of soil and materials and the installation of a short section of above ground pipeline on the north side of the Jameson Road railway bridge and the reinstatement of ground.  It is assumed the brine outfall pipe would be installed in one section within this area and the work would be carried out over a two month period.

***Potential construction impacts on visual amenity***

1.2.128 The potential impacts on views are summarised in Table 1-47 below.

**Table 1-47 TCA-8b: Construction Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> <small>(see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)</small>	<b>Significance of Effect</b> <small>(see Table 14-13 of Chapter 14 of Volume 1A)</small>	<b>Comment</b>
Visual Receptor VR8.8: Broadwater Caravan Park users	High Minor, negative (Year 1) No Change (Year 2/Year 3)	Slight adverse (Year 1) Neutral (Year 2/Year 3)	Open short range view from caravans along entrance road at south edge and filtered view through scrub to temporary brine outfall working corridor on north side of Jameson Road and along the opposite (east) side of the disused Fleetwood railway.

**TCA-8c: Kneps Farm Holiday Park**

1.2.129 It is anticipated the potential impacts on the visual amenity of this area would result from construction activity within the area. These impacts would occur over an eleven month period in Year 1, followed by operational activities. The construction activities would be of a temporary duration and are summarised in Table 1-48 below.

**Table 1-48 TCA-8c: Schedule of Construction Activity**

<b>Activity</b>	<b>Description</b>
Site investigation – 1 month (Year 1)	Temporary and Isolated series of activities which include drilling at the southern crossing (east) compound over a one month period.
South River Crossing - 4 months (Year 1)	Low lying, temporary activity which includes construction of west shoreline temporary compound, including access to River Road, drilling and cable pulling, demobilisation and reinstatement work.
Electric Infrastructure – 2 months (Year 1)	Low lying, temporary activity to route electrical cables from west compound to tie in to electrical sub-station at west edge of area.

***Potential construction impacts on visual amenity***

1.2.130 The potential impacts on views are summarised in Table 1-49 below.

**Table 1-49 TCA-8c: Construction Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> <small>(see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)</small>	<b>Significance of Effect</b> <small>(see Table 14-13 of Chapter 14 of Volume 1A)</small>	<b>Comment</b>
Visual Receptor VR8.9: Kneps Farm Holiday Park users	High Moderate, negative (Year 1) No Change (Year 2/Year 3)	Moderate adverse (Year 1) Neutral (Year 2/Year 3)	Open short range views to hoarding around temporary compound and to restricted temporary linear HV cable routing working area across the centre of the area.

## TCT- 9: Urban / Industrial Estuary Edge

### TCA-9a: A585 Corridor

- 1.2.131 It is anticipated the potential impacts on visual amenity would result from localised construction activity within the area. These impacts would occur a two month period in Year 1. The construction activities would be of short term duration and are summarised in Table 1-50 below.

**Table 1-50 LCA-9a: Schedule of Construction Activity**

Activity	Description
Fleetwood brine pipeline and Sea Water Pipeline (TCA-9c) – 2 Months (Year 1)	Low lying, temporary sequential series of activities including temporary fencing, ground excavation, trenching, stock piling of soil and materials, access road, installation of underground pipelines and the reinstatement of ground.  It is assumed the brine outfall pipe would be installed in one section within this area and the work would be carried out during Year 1.

### *Potential construction impacts on visual amenity*

- 1.2.132 The potential impacts on views are summarised in Table 1-51 below.

**Table 1-51 LCA-9a: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR9.1: United Utilities Bridleway	Moderate, adverse (Year 1) No Change (Year 2 & Year 3)	Large adverse (Year 1) Neutral (Year 2 & Year 3)	Path in planning. Future users would have a series of sequential short range views to the temporary construction activity associated with the brine outfall pipeline within the relatively confined corridor of the disused railway.

### TCA-9b: Fleetwood Dock

- 1.2.133 It is anticipated the potential impacts on the character and visual amenity of this area would result from construction activity within the area. These impacts would occur over a twelve month period in Year 1/Year 2 followed by operational activities. The construction activities would be of short term duration and are summarised in Table 1-52 below.

**Table 1-52 TCA-9b: Schedule of Construction Activity**

<b>Activity</b>	<b>Description</b>
Site investigation 1 month (Year 1)	Isolated, temporary series of drilling activities associated with the brine outfall and at the Seawater Pumping Station within adjacent TCA-9c and TCA-9d.
Sea Water Pump Station 12 months (Year 1/Year 2)	New build activity on area of derelict land within adjacent docks. Activities would include site compound, perimeter hoarding, installation of building and fitting out, permanent security fencing and landscape works.

#### ***Potential Construction Impacts on Townscape Character***

- 1.2.134 With reference to Table 1-52 there would be new build activity within a derelict area of rough ground in the south east corner of this area, between the dock and the Harbour Village development access road. Construction vehicle access would use the existing road within the south part of the area to link with the A585 Amounderness Way. The overall disruption caused to this area would be limited. The proposed landscape scheme at the Seawater Pumping Station would be implemented in winter Year 1/Year 2 and would help to improve local visual amenity of the area.
- 1.2.135 This townscape has the capability to absorb the level of construction activity proposed because of its predominantly run down post industrial nature and set within the context of a wider area which is presently under going significant change.
- 1.2.136 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area to construction is considered to be **low** and on completion of construction is considered to have a **moderate** sensitivity. With reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is considered to be **negligible** negative in Year 1 and **minor** positive, with the implementation of the landscape in Year 2. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **no change** impact in Year 1 and a **slight** beneficial impact in Year 2/Year 3 and thereafter.

**Potential construction impacts on visual amenity**

1.2.137 The potential impacts on views are summarised in Table 1-53 below.

**Table 1-53 TCA-9b: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual receptor VR9.2: Marina and quay side retail area	High Negligible negative (Year 1) Minor positive (Year 2/Year 3)	Slight adverse (Year 1) Slight beneficial (Year 2/Year 3)	There would be open south easterly views across the dock to short term new build activity (350 m at its nearest point). The assessment takes in to account the proposed landscape scheme around the Seawater Pumping Station which would be completed in early Year 2.

**TCA-9c: Fleetwood Harbour Village**

1.2.138 It is anticipated the potential impacts on the visual amenity of this area would result from construction activity at the south edge of this area and within the adjacent TCA-10b at its south west corner. These impacts would occur over a 13 month period in Year 1/Year 2 followed by operational activities thereafter. The construction activities would be of short term duration and are summarised in Table 1-54 below.

**Table 1-54 TCA-9c: Schedule of Construction Activity**

Activity	Description
Site investigation (TCA-10b) – 1 month (Year 1)	Isolated, temporary series of drilling activities associated with the brine outfall and at the Seawater Pumping Station within the area and the adjacent TCA-9b.
North River Crossing – 4.5 months	Low lying, temporary activity which includes construction of west shoreline compound, hoarding, drilling and cable pulling, demobilisation and

<b>Activity</b>	<b>Description</b>
(Year 1)	reinstatement work. It is assumed the compound would require night time floodlighting. It is also assumed the east shore compound would be a more or less imperceptible element on the opposite side of the estuary.
Fleetwood brine pipeline and Sea Water Pipeline – 2 Months (Year 1)	Low lying, temporary series of sequential activities including temporary fencing, ground excavation, trenching, stock piling of soil and materials, access road, installation of underground pipelines and the reinstatement of ground.  It is assumed the brine outfall pipe would be installed in one section within this area and the work would be carried out over a two month period.
Sea Water Pump Station (TCA-9b) – 12 months (Year 1/Year 2)	New build activity on area of derelict land within adjacent dockland (TCA-9b). Activities would include site compound, perimeter hoarding, installation of building and fitting out, permanent security fencing and landscape works.
Booster Pump Station (LCA-4b)– 10 months (Year 1/Year 2)	Short term new build activity on low lying ground and on the opposite side of Wyre estuary, approximately 1.2 Km from the areas east edge overlooking the estuary.  It is anticipated that most, if not all the construction activity here would not be perceptible from this area as it would be hidden behind the Preesall wastewater treatment works.
Gas Compressor Compound (LCA-4c) – 14.5 months (Year 2/Year 3)	Short term new build activity within the low lying rural hinterland on the opposite side of the Wyre estuary, approximately 2.0 Km from the areas east edge overlooking the estuary.  It is anticipated the majority of the construction activity would be filtered by intervening vegetation and local landform. However the installation of the taller equipment such as the vent stack may be perceptible but only under close scrutiny over the intervening features.

***Potential Construction Impacts on Visual Amenity***

1.2.139 The potential impacts on views are summarised in Table 1-55 below.



**Table 1-55 TCA-9c: Construction Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Visual Receptor VR9.3a: Harbour Village Development: Residential properties along south edge of area (west)	High Moderate, negative (Year 1) Minor positive (Year 2/Year 3)	Large adverse (Year 1) Slight beneficial (Year 2/Year 3)	Open southerly short range view across the new access road to temporary activities associated with the underground brine outfall and sea water pipe line working area, an oblique westerly view to the Seawater Pumping Station new build within the adjacent TCA-9b) and an oblique easterly view to the temporary works associated with the north crossing (west) compound.  The assessment takes in to account the proposed landscape scheme around the Seawater Pumping Station which would be undertaken in winter Year 1/Year 2.
Visual Receptor VR9.3b: Harbour Village Development: Residential properties under construction along south edge of area (east)	High Moderate negative (Year 1) No Change (Year 2/Year 3)	Large adverse (Year 1) Neutral (Year 2/Year 3)	Open southerly short range view to temporary north crossing (west) compound.  The assessment considers the landscape strip to be implemented at south edge of this area as part of the baseline.
Visual Receptor VR9.3c: Harbour Village Development : Residential properties at south west corner of area	High Moderate negative (Year 1), Slight positive (Year 2/Year 3)	Large adverse (Year 1) Slight beneficial (Year 2/Year 3)	Open south westerly short range view to the short term Seawater Pumping Station new build within TCA-9b and to temporary brine outfall / sea water pipe working area where it cross the Harbour Village development access road.  The assessment takes in to account the proposed landscape scheme around the Seawater Pumping Station station which would be completed in Year 2.

## Townscape Character Type TCT-10: Rural Lowland Settlement

### TCA-10a: Preesall

- 1.2.140 It is anticipated the potential impacts on the visual amenity of this area would result from construction activity within LCA-4b and LCA-4c. These impacts would occur over a 24 month period in Year 1/Year 2 followed by operational activities thereafter. The construction activities would be of short term duration and are summarised in Table 1-56 below.

**Table 1-56 TCA-10a: Schedule of Construction Activity**

Activity	Description
Booster Pump Station (LCA-4b)– 10 months (LCA-4b) (Year 1/Year 2)	It is anticipated the short term new build activity in the vicinity of Preesall Wastewater Treatment Works (1.7 km) would be perceptible but under close scrutiny.
Gas Compressor Compound (LCA-4c)– 14.5 months (Year 2/Year 3)	It is anticipated some aspects of the new build activity e.g. excavation work, perimeter earth mounding, and installation of the taller equipment (1.15 Km) would be perceptible.

### ***Potential construction impacts on visual amenity***

- 1.2.141 The potential impacts on views are summarised in Table 1-57 below.

**Table 1-57 TCA-10a: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change <small>(see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)</small>	Significance of Effect <small>(see Table 14-13 of Chapter 14 of Volume 1A)</small>	Comment
Visual Receptor VR10.1: Elevated residential properties on the west side of Preesall, B5337	High Negligible, negative (Year 1) Minor, negative (Year 2) Negligible, negative (Year 3)	Slight adverse	Panoramic westerly view to Wyre estuary within which construction activity associated with the booster pump station (1.7 Km and gas compressor compound (1.15 Km) would potentially be perceptible elements.

**TCA-10b: Preesall Park**

1.2.142 It is anticipated the potential impacts on visual amenity of this area would result from construction activity within the adjacent LCA-4c. These impacts would occur over a two month period in Year 2. The construction activities would be of a temporary duration and are summarised in Table 1-58 below.

**Table 1-58 TCA-10b: Schedule of Construction Activity**

Activity	Description
NTS Interconnector (LCA-4c) – 2 months (Year 2)	<p>Low lying temporary series of sequential activities to install underground gas pipeline between A588 and Back lane with the adjacent LCA-4c and then would wind through the area in the vicinity of Monks Lane requiring the removal of short sections of hedgerow on either side of it.</p> <p>It is understood that the NTS would be installed in sections, with each section being completed prior to work commencing on the next section.</p>

***Potential Construction Impacts on Visual Amenity***

1.2.143 The potential impacts on views are summarised in Table 1-59 below.

**Table 1-59 TCA-10b: Construction Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change <small>(see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)</small>	Significance of Effect <small>(see Table 14-13 of Chapter 14 of Volume 1A)</small>	Comment
Visual receptor VR10.2a: Commercial Properties along the A588	Low Negligible negative (Year 1) Minor negative (Year 2) Negligible negative (Year 3)	Neutral	Southerly filtered, oblique view to construction activities on haul road (Year 1) and its subsequent use by construction vehicles. Also filtered views to construction activity associated with NTS connector in Year 2 (60 m).

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual receptor VR10.2b: Residential Properties along Cemetery Lane	High Negligible, negative (Year 1) Minor, negative (Year 2) Negligible, negative (Year 3)	Slight adverse	Southerly filtered view to construction activities on haul road (Year 1) and its subsequent use by construction vehicles. Also filtered views to construction activity associated with NTS connector in Year 2 (200 m).

### 1.3 Construction and Operation Combined

1.3.1 It is anticipated there would be a potential reduction in the Project's impacts on the character and or visual amenity resulting from the combined construction and operational activity for character areas and or visual receptors within three character types (SCT-1, LCT-4 and LCT-5). All other character areas and visual receptors during this phase would potentially experience similar impacts to those assessed at the end of the construction phase. The potential construction and operation combined effects of the Project are summarised in Table 14-18 of Chapter 14 of Volume 1A.

#### Seascape Character Area SCT-1: Intertidal

##### **SCA-1b; Wyre Estuary**

1.3.2 It is anticipated the potential impacts on the character and visual amenity within the north part of this area as a result of the construction and operation combined activity within the adjacent LCA-4b and LCA-4. The construction impacts would result from localised activities in relation to well head compound 6 which would continue for eleven months and would run concurrently with operational activity at the booster pump station (LCA-4b) and the gas compressor compound. The main construction and operation combined activities within the adjacent LCA-4b and LCA-4c are summarised in Table 1-60 below.

**Table 1-60 SCA-1b: Schedule of Construction and Operation Combined Activity**

Activity	Description
Construction activities	
Well Washing (LCA-4c) – 11 months (Year 4)	Low lying, short term sequential series of “invisible” activities within reconfigured operational well head layout. Washing activity would be 24/7 requiring night time operational lighting. Well head compound 7 (wells 6, 7 and 8).
Operation activities	
Internal Access Tracks	Infrequent vehicle use of access tracks to well heads and booster pump station
Booster Pump Station (LCA-4b)	Agricultural style brick building with compound behind screened predominantly by earth mounding and developing scrub on east and north side and by scrub planting on south side (see Figures 1.22 and 1.24 of Volume 2A).  Scrub would be similar in appearance to perimeter planting around the adjacent Preesall Wastewater Treatment Works.
Gas Compressor Compound (LCA-4c)	Industrial compound hidden behind screen mound with scrub and scattered trees planted on it (see Figure 1.44 of Volume 2A and Figure 14-5 of Volume 2B). With reference to the latter the mound heights would vary along the south side from 11 to 12 m AOD (approximately 5 m above the general surface level within the compound) and west side 10 to 11 m AOD (approximately 3.5 to 4.5 m above finished compound level). It is anticipated the higher elements such as the gas heater (9.81 m high x 1.6 m diameter), the glycol dryers (13 m high x 3 m diameter) within the compound, and the adjacent 16 m high vent stack, although higher than the screen mounds, although potentially visible under close scrutiny, would overall form unobtrusive elements.  For the purposes of this assessment the assessor has been advised that there would be no visible plume from the vent stack, but there would be a potentially visible intermittent plume from the gas heater within the compound. In the worst case scenario, this intermittent plume would only be visible when the gas heater is operating during cold periods i.e. during the winter months and most likely during the early morning and early evening. No information is available on the height, density or width of the plume.
Well head compounds (LCA-4c)	For well head compound layouts in this area see Figures 1.25, 1.30 and 1.32 of Volume 2A. Well head compound 5 would be fully operational by end of Year 3 and well head compound 7 would be fully operational by Year 5. The perimeter security fencing to the two well head compounds would be located within 20 m and 30 m of the east edge of this area.

### ***Potential Construction and Operation Combined Impacts on Seascape Character***

- 1.3.3 With reference to Table 1-60 the construction and operation combined phase would be over an 11 month period in Year 4 resulting in potentially audible but overall very low levels of localised noise emission from the cavern washing operation at well head compound 7. This would be carried out concurrently with the operation and of the booster pump station to the north within LCA-4b and the gas compressor compound further in land within LCA-4c. The south elevation of the former (see Figure 1.24 of Volume 2A) would form part of the setting to the saltmarsh at the east edge of this area. It is anticipated this would include some of the internal elements within the compound although the establishing scrub and scattered trees (planted winter Year 2/Year 3) would overtime screen this part of the elevation and be similar in appearance to the perimeter vegetation around the adjacent wastewater treatment works. The agricultural style red brick building however would form a minor element at the north edge of the saltmarsh at the east edge of this area. The gas compressor compound would also be effectively screened by the perimeter mounding although potentially the gas heater (9.81 m high x 1.6m diameter), the glycol dryers (13 m high x 3 m diameter) and the 16 m high x 30 cm diameter vent stack, would in the context of the wider backdrop form unobtrusive individual elements above the screen mounds and existing hedge line to the south of the compound. It is also anticipated there would be very occasional vehicle activity within the rural hinterland to undertake routine maintenance and monitoring activities.
- 1.3.4 The potentially intermittent plume from the gas heater at the gas compressor compound (LCA-4c) would be visible from this area during cold early morning and early evening periods in the winter months. Overall this element would as a result of its intermittent nature be considered a relatively unobtrusive element.
- 1.3.5 By Year 5 it is anticipated the effects on this area would result from the effects of the booster pump station building forming a new element within the rural eastern hinterland. However in the wider context of the setting it would be a relatively unobtrusive element.
- 1.3.6 This seascape area has the capacity to absorb the construction and operational combined activity proposed because of its low lying position in relation to the intervening sea defence, its large scale and the low level nature of the construction activities at the well head compounds the fact there would be no direct physical impact on its important elements. With reference to Figure 14-8 of Volume 2B during the eleven month combined construction and operational phase it is anticipated the worst case noise levels at the sea defence along the areas east edge would be in the order 38.6 dB and 41.8 dB. These noise levels would be comparable to the  $L_{A90}$  noise measurements taken at The Heads (40.7 dB) and Arm Hill (42.5 dB). In Year 5, during the operation only of the well head compounds 5 and 7, the noise levels would be in the order of between 32 dB and 36.3 dB.
- 1.3.7 With reference to Table 14-2 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **high** and with reference to Table 14-3 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction and operation

combined activities is considered to be **minor** negative in Year 4/Year 5 and **negligible** negative in Year 6 to Year 8. With reference to Table 14-4 of Chapter 14 of Volume 1A this would result in an overall **slight** adverse impact.

**Potential Construction and Operation Combined Impacts on Visual Amenity**

1.3.8 The potential impacts on views are summarised in Table 1-61 below.

**Table 1-61 SCA-1b: Construction and Operation Combined Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-5 and 14-6 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-7 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR1.3: Boat users (main Channel)	Moderate No Change	Neutral	180 degree panoramic easterly view from the main channel to the eastern rural hinterland of LCT-4 set against the back drop of the Bowland Fells. It is anticipated the booster pump station (1.5 Km at its nearest visible point) within LCA-4b, the 9.81 m high x 1.6 m diameter gas heater, the 13 m high x 3 m diameter glycol dryers (1.5 Km) the 16 m high x 30 cm diameter vent stack (1.6 Km) and the infrequent vehicle movements would be unobtrusive new elements considering the distance and their overall scale within the context of the wider view.  The plume from the gas heater at the gas compressor compound (LCA-4c) would be visible in easterly views as an isolated, intermittent, relatively unobtrusive new element in the context of the wider views.

Landscape Character Type LCT-4: Farmed Estuary Edge

**LCA-4a: Knott End Golf Course**

1.3.9 It is anticipated the potential impacts on the character and visual amenity of this area would result from the construction and operation combined activity within the adjacent LCA-4b. These impacts would result from a 28 month period of combined activities followed thereafter by a 22 month period of operational activities. The main construction and operational combined activities within the adjacent LCA-4b are summarised in Table 1-62 below.

**Table 1-62 LCA-4a: Schedule of Construction and Operation Combined Activities and Elements**

Activity	Description
Construction Activity	
Drilling and Well Head Connections – 4 months (Year 4)	Isolated drilling activity at well head compound 1 within LCA-4a. Drilling activity would be 24/7 and include 2 no x 4 m high flood lights. On completion of the drilling, the well head compound will be reconfigured to the operational well head layout.
Cavern Washing – 28 months (Year 4 to Year 6)	These would comprise short term series of sequential “invisible” activities within the reconfigured operational well head layout at well head compound 1.
Operational element	
Internal Access Tracks	It is envisaged the existing access tracks within the adjacent LCA-4b would be used and only minor construction activity would be required to upgrade them.
Booster Pump Station	Agricultural style brick building with compound behind screened predominantly by earth mounding and developing scrub on east and north side and by scrub planting on south side (see Figure 1.24 of Volume 2A). Scrub would be similar in appearance to perimeter planting around the adjacent Preesall Wastewater Treatment Works.
Well head compounds	For general arrangement of well head compound layout (see Figures 1.25 and 1.26 of Volume 2A). Well head compound 1 becomes fully operational in June Year 6. The 2.4 m high perimeter security fence would comprise a plastic coated wire mesh panel (colour Kharki brown) with metal post with angle bar (colour brown) and 3 strand barbed wire.
Plume from Gas Compressor Compound (LCA-4c)	For the purposes of this assessment the assessor has been advised that there would be no visible plume from the vent stack, but there would be a potentially visible intermittent plume form the gas heater within the compound. In the worst case scenario, this intermittent plume would only be visible when the gas heater is operating during cold periods i.e. during the winter months and most likely during the early morning and early evening. No information is available on the height, density or width of the plume.



### ***Potential Construction and Operation Combined Impacts on Landscape Character***

- 1.3.10 With reference to Table 1-62 the construction and operation combined phase would be over a 28 month period resulting in potentially localised low key visual intrusion from drilling at well head compound 1 and activity during its re-configuration (completed Year 4), followed by possibly some audible noise, although considered to be very low level, from the cavern washing operation which would continue into Year 6. The reconfigured well head compound would be a relatively unobtrusive element as it would be filtered by intervening semi mature vegetation at the south edge of the area.
- 1.3.11 Activities at the well head compound would be carried out concurrently with the operation of the booster pump station at the south edge of LCA-4b. It is anticipated the visible part of it i.e. the roof, with the rest of the compound and the lower part of the building being screened by a combination of existing scrub, a local ridgeline and mounding with, overtime associated scrub, would form a minor element. There would also be some infrequent vehicle activity on the track to the well head compound, in addition to the occasional access required to the sewage treatment works.
- 1.3.12 It is anticipated construction and operational combined noise potentially would be audible but would overall be of a very low level. A noise predication at a nearby point along the Wyre Way within the adjacent LCA-4b, for the worse case construction and operation scenario, indicates a level of 36 dB on the adjacent Wyre Way. Overall, it is considered these levels would not have an overall impact on the tranquillity of the area. It is also anticipated that night time lighting associated with the construction activity would not impact on the overall baseline night time levels of this area, which are considered to be ELZ 2. In Year 7 well head compound 1 would be fully operational.
- 1.3.13 The potentially intermittent plume from the gas heater at the gas compressor compound (LCA-4c) would be visible from this area during cold early morning and early evening periods in the winter months. Overall this element would as a result of its intermittent nature be considered a relatively unobtrusive element.
- 1.3.14 This landscape area has the capacity to absorb some of the construction and operation combined activities because of the presence of the existing mature woodland copse at the south edge of this area and the perimeter scrub around the wastewater treatment works and the nature of the topography within LCA-4b, which would help to mostly integrate the Project elements in to the landscape.
- 1.3.15 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **moderate** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the first four months of the construction and operation combined work is considered to be **minor** negative in Year 4 and **negligible** negative in Year 5 to year 8. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **slight** adverse impact in Year 4 and a **neutral** impact in Year 5 to Year 8 and thereafter.

**Potential construction and operation combined impacts on visual amenity**

1.3.16 The potential impacts on views are summarised in Table 1-63 below.

**Table 1-63 LCA-4a: Construction and Operation Combined Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor: VR4.1: Golf Course users	Moderate Minor negative (Year 4) Negligible negative (Year 5 to Year 8)	Slight adverse (Year 4) Neutral (Year 5 to Year 8)	Users would have a filtered view to activity associated with well head compound 1. The upper part of the booster pump station building would also perceptible although overtime this would diminish overtime as the scrub on top of the perimeter mounding establishes.  The plume from the gas heater at the gas compressor compound (LCA-4c) would be visible in south easterly views as an isolated intermittent, relatively unobtrusive new element in the context of the wider views.

**LCA-4b: Hackensall Farmed Lowland**

1.3.17 It is anticipated the potential impacts on the character and visual amenity of this area would result from the combined construction and operational activities within the area and the adjacent LCA-4d. These impacts would occur over a 30 month period. The main combined construction and operational activities within and visible from the area are summarised in Table 1-64 below.

**Table 1-64 LCA-4b: Schedule of Construction and Operation Combined Activity**

Activity	Description
Construction Activity (late Year 3 to late Year 4)	
Drilling and well head connections – 9 months (Year 4)	<p>Low lying, temporary series of sequential isolated drilling activity at well head compound 1 within the area and well head compound 3 within LCA-4d. Drilling activity would be 24/7 and include 2 no x 4 m high flood lights. On completion of the drilling, the well head compound will be reconfigured to the operational well head layout.</p> <p>Well head compound 1 – 3 months Well head compound 3 – 6 months</p>
Cavern Washing – 30 months (Year 4/Year 6)	<p>These would comprise short term series of sequential “invisible” activities within the reconfigured operational well head layout (well head compound 1 within the area and well head compound 3 in LCA-4d.</p> <p>Well head compound 1 – 28 months Well head compound 3 - 16 months</p>
Operational Activity	
Internal Access Tracks	Occasional vehicle activity on the 4 m wide loose stone access tracks connecting well head compound 1 as well as access to the booster pump station within the area and connecting well head compounds 2 and 3 within LCA-4d.
Booster Pump Station	Booster pump station would be located immediately east of the Preesall wastewater treatment works with the compound and its industrial elements hidden by a combination of wall and perimeter earth mounding with the external facing slope regarded and returned to agriculture) on the east side, by earth mounding on the north side and by scrub planting on the south side (see Figure 1.24 of Volume 2A).
Well head compounds	Both Well head compound 1 and well head compound 3 would become operational during Year 6. For layouts see Figures 1.25, 1.26 and 1.28 of Volume 2A.
Plume from Gas Compressor Compound (LCA-4c)	For the purposes of this assessment the assessor has been advised that there would be no visible plume from the vent stack, but there would be a potentially visible intermittent plume form the gas heater within the compound. In the worst case scenario, this intermittent plume would only be visible when the gas heater is operating during cold periods i.e. during the winter months and most likely during the early morning and early evening. No information is available on the height, density or width of the plume.

### ***Potential Construction and Operation Combined Impacts on Landscape Character***

- 1.3.18 With reference to Table 1-64 the construction and operation combined phase would be over a 30 month period resulting in a sequential series of localised low key visual intrusion from drilling at well head compound 1 and activity during its re-configuration (completed during Year 4) and at well head compound 3 within the adjacent LCA-4d (completed during Year 4). With reference to Figure 14-8 of Volume 2B, although potentially some noise associated with the cavern washing operations may be audible, overall it would be very low level with a predicted worse case L<sub>90</sub> noise level for the nearby Wyre Way at 36 dB. The reconfigured well head compounds would form low lying relatively remote elements which would be set in to the landscape, although the 2.4 m high perimeter security fencing would be a minor, relatively unobtrusive element, although the regular pattern of fence posts would form a series of minor vertical elements with the 2.3 m high mound within the compound and the establishing scrub on it clearly visible behind.
- 1.3.19 The activities at the well head compounds would be carried out concurrently with the operation of the booster pump station at the south edge of LCA-4b. With reference to Figure 1.24 of Volume 2A it is anticipated the visible part of it i.e. an agricultural style red brick building would be of appropriate scale for this local rural landscape. The compound behind would be effectively screened by a combination of mounding and establishing scrub on the west and north side and by scrub and scattered trees along the south side and which would be similar in appearance to the perimeter vegetation around the adjacent wastewater treatment works. The outward facing slope of the mounding would be regarded so that it can be reinstated as arable farmland.
- 1.3.20 There would also be some infrequent vehicle activity on the access tracks to the well head compounds and booster pump station, in addition to the occasional access required to the Preesall Wastewater Treatment Works. The tracks themselves would be unfenced low key elements typical of the area. It is also anticipated there would be some infrequent night time lighting from these activities but overall would have a negligible impact on the relatively dark night time landscape
- 1.3.21 The booster pump station building located in the south part of this area would be of agricultural appearance and scale with the industrial elements of the compound behind integrated by earth mounding along its east and west side with the outward facing slope returned to agriculture. Scrub would be allowed to develop along the top of the mounding and the inward facing slope so that over time it would be of similar appearance to the existing adjacent scrub surrounding the Preesall Wastewater Treatment Works. However some of the internal elements of the compound would for a short period of time be exposed through the perimeter fence / access gate along the south side, although again adjacent scrub planting adjacent to this boundary would over time establish to create a dense screen similar in appearance to the adjacent scrub.
- 1.3.22 The potentially intermittent plume from the gas heater at the gas compressor compound (LCA-4c) would be visible from this area during cold early morning and early evening periods in the winter months. Overall this element would as a result of its intermittent nature be considered a relatively unobtrusive element.

- 1.3.23 It is anticipated construction and operational combined noise potentially would be audible but would overall be of a very low level. Noise predications at various points along the Footpath FP61 and the Wyre Way within the area for the worse case construction and operation scenario indicate levels of between 36 dB and 43.5 dB depending on proximity to the booster pump station and the well head compound. Overall, it is considered these levels would not have an overall impact on the tranquillity of the area. It is also anticipated that night time lighting associated with the construction activity would not impact on the overall baseline night time levels of this area, which are considered to be ELZ 2.
- 1.3.24 In Year 7 when well head compound 3 in the adjacent LCA-4b would be fully operational it is anticipated the effects on the character and visual amenity of the area would be similar to those previously assessed.
- 1.3.25 This landscape area has the capability to absorb some of the construction and operation combined activity because of the gently undulating landform, the outline of the Wastewater Treatment Works and associated perimeter scrub, the relatively unobtrusive nature of some of the operating elements and the fact there would be no loss in the important elements.
- 1.3.26 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **high** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction and operation combined work is considered to be **moderate** negative. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **moderate** adverse impact during this phase.

**Potential Construction and Operation Combined Impacts on Visual Amenity**

- 1.3.27 The potential impacts on views are summarised in Table 1-65 below.

**Table 1-65 LCA-4b: Construction and Operation Combined Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor: VR4.2a: Wyre Way (runs concurrently with Footpath FP42)	High Moderate , negative to minor negative	Large adverse to moderate adverse (Year 4 to Year 7) Moderate adverse to slight adverse (Year 6 to	With reference to Figure 14.9c Sheet 2 of Volume 2B, users would have a series of sequential southerly views across undulating farmland to the outline of the booster pump station building. There would be no view of the compound or its internal elements. Perimeter scrub planting on top of the screen mound around it, would overtime help to integrate this building with the adjacent perimeter

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
		Year 8)	<p>planting around the wastewater treatment works.</p> <p>Well head compound 1 would form a minor element and although set back from the Wyre Way it would be situated on a local ridgeline against the skyline. Potentially the upper parts of the perimeter security fence posts may be visible, although overtime these would become less obvious as the scrub establishes on the perimeter mound behind (planted during winter Year 2/Year 3).</p> <p>It is anticipated that the access tracks would not be discernable elements and its use by traffic so infrequent as to be overall negligible. The appearance of the access track along the Wyre Way would be similar to the existing.</p>
Visual Receptor: VR4.2b: Wyre Way (runs concurrently with Footpath FP42)	High Moderate negative	Large adverse (Year 4/Year 5) Moderate adverse (Year 6 to Year 8)	<p>Users would have a series of sequential open short range westerly views across arable farmland to the booster pump station building set against the perimeter scrub planting of the adjacent wastewater treatment works. Although there would be no open view in to the compound there would, in the short term, be an oblique north westerly view (on the track to the south of the building) to the south facade and a view through the perimeter fence to some of the elements within. However, overtime the scrub and intermittent tree planting along the outside of the fence would overtime screen this elevation and also help integrate it with the adjacent wastewater treatment works perimeter scrub.</p> <p>It is anticipated there would be an open easterly view across arable farmland to the perimeter mound and scrub establishing on it, through the relatively unobtrusive wire mesh perimeter security fencing at well head compound 3. However, overtime the proposed hedge on the east side of the path would screen this element.</p> <p>It is anticipated that the access tracks would not be discernable</p>

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
			<p>elements and its use by traffic so infrequent as to be overall negligible. The appearance of the access track along the Wyre Way would be similar to the existing.</p> <p>It is anticipated the booster pump station building would only impact on the existing southerly views to the estuary for a very short section of the Wyre Way. Elsewhere the existing view would be unaffected.</p> <p>The plume from the gas heater at the gas compressor compound (LCA-4c) would be visible in easterly views as an isolated intermittent, relatively unobtrusive new element in the context of the wider views.</p>
Visual Receptor VR4.3: Re-opened (Year 4) Footpath FP61	High Moderate negative	Large adverse (Year 4/Year 5) Moderate adverse (Year 6 to Year 8)	<p>Users would have a northerly short range view to the south elevation of the booster pump station. In the short term there would be an open view through the relatively unobtrusive 2.4 m high wire mesh perimeter fence to some of the elements within the compound. However, overtime the scrub and intermittent tree planting along the outside of the security fence would overtime screen most of the fenced section of the elevation and also help integrate it with the adjacent wastewater treatment works perimeter scrub. However, there would be a view along the access track to the compound entrance gate, although planting within the compound would help to limit the exposure of the internal compound elements.</p> <p>It is anticipated that the access tracks would not be discernable elements and its use by traffic so infrequent as to be overall negligible. The appearance of the access track along the Wyre Way would be similar to the existing.</p> <p>The existing southerly views from this footpath to the estuary (SCA-1b) would be unaffected by the project elements.</p>

### LCA-4c: Agglebys Farmed Lowland

1.3.28 It is anticipated the potential impacts on the character and visual amenity of this area would result from construction and operation combined activity within the area and the adjacent LCA-4b. These impacts would occur over a twelve month period in Year 4, followed by a 48 month operational phase. The main construction and operation activities are summarised in Table 1-66 below.

**Table 1-66 LCA-4c: Schedule of Construction and Operation Combined Activities**

Activity	Description
Construction activities	
Cavern Washing –12 months (Year 4)	<p>These would comprise a short term series of sequential “invisible” activities within the reconfigured operational well head layout. It is anticipated the actual activity would not be a perceptible visual element within this area.</p> <p>This activity would continue through to the construction and operation combined phase.</p> <p>Well head compound 6 – 12 months Well head compound 4 - 12 months</p>
Operational activities	
Access Road	Occasional vehicle activity on the 6 m wide metalled access road between the A588 and Back Lane. The proposed hedgerows between Higher Lickow and gas compressor compound would be planted during winter Year 2/Year 3.
Internal Access Tracks	Occasional vehicle activity on the 4 m wide loose stone access tracks connecting between the gas compressor compound and well head compounds 5, 7, 6, and 4 as well as access to the booster pump station and well head compound 1 within LCA-4b and well head compounds 3 and 2 within LCA-4d.
Higher Lickow Control buildings (LCA-5a)	Renovated farmhouse and adjacent new workshop located in a relatively remote location enclosed by mature vegetation, with recently planted clumps of tree trees and renovated sections of field boundary hedgerows (planted during winter Year 1/Year 2) adjacent to it would over time reinforce the sense of enclosure.
Booster Pump Station (LCA-	Agricultural style building and compound located immediately east of the Preesall



Activity	Description
4b)	wastewater treatment works (see Figure 1.24 of Volume 2A). The compound and its industrial elements hidden by a combination of wall, scrub (planted during winter Year 1/Year 2) and perimeter earth mounding with the external facing slope regarded and returned to agriculture) on the east side, by earth mounding on the north side and by scrub planting(planted during winter Year 1/Year 2) on the south side.
Gas Compressor Compound	<p>The compound would be hidden behind vegetated screen mounds ((planted during winter Year 2/Year 3). With reference to Figure 14-5 of Volume 2B, to minimise the engineered appearance of the mounds they would have a rounded top and an undulating longitudinal profile which would be gently tapered down to existing ground level at each end. In addition the majority of the outward facing slope to the north mound would be regarded to 1v to 5h so that part of the mound could be returned to pasture. The mound heights along the south and north side would reach up to between 12 m and 13 m AOD (generally between 5 to 6 m above existing ground on the south side and 4 to 5 m above existing ground on the north side). The mound on the west side would, at its highest, be 10 m AOD. It is anticipated the tops of the taller elements within the compound e.g. the Glycol dryers (13 m high with the top at 18 m AOD) and the vent stack (20 m AOD) would be perceptible over the mound up to 1.5 km, but at this distance only under close scrutiny.</p> <p>For the purposes of this assessment the assessor has been advised that there would be no visible plume from the vent stack, but there would be a potentially visible intermittent plume form the gas heater within the compound. In the worst case scenario, this intermittent plume would only be visible when the gas heater is operating during cold periods i.e. during the winter months and most likely during the early morning and early evening. No information is available on the height, density or width of the plume.</p>
Well head compounds	For typical layout arrangement of the well head compound see Figures 1.29 to 1.32 of Volume 2A. Well head compound 5 would be fully operational at commencement of this phase and well head compounds 7, 6 and 4 during Year 5. The scrub on the earth mound within well head compound 5 would be planted during winter Year 3/Year 4 with the other three planted during winter Year 4/Year 5.

### ***Potential Construction and Operational Combined Impacts on Landscape Character***

- 1.3.29 With reference to Table 1-66 the construction and operation combined phase would be over a twelve month period resulting in localised low key construction noise activity associated with the cavern washing at well head compounds 7, 6 and 4 within the reconfigured well head layout. Well head compound 5 would be fully operational during this period with the other three becoming operational during Year 5. The two largest well head compounds (5 and 7) which are approximately 6550 m<sup>2</sup> and 6000 m<sup>2</sup> respectively would be located within low lying flat open arable farmland at the west edge of the area and form relatively large, but low lying elements in the landscape. The low mounds with the establishing scrub would more or less hide all the operational elements. The plastic coated wire mesh perimeter security fence would be a relatively unobtrusive element although the posts would appear as a repeating vertical element around each well head compound. Well head compounds 6 and 4, which are smaller (2850 m<sup>2</sup> and 3750 m<sup>2</sup> respectively) and more in keeping with the typical size of the field ponds scattered throughout the area are relatively more remote and being located in the context of existing landscape elements would be better integrated in to the landscape. There would also be some very infrequent vehicle activity on the unfenced 4.0m wide loose gravel access tracks to the well heads and night time lighting associated with activity within the well head compound would be screened / filtered by the perimeter mound.
- 1.3.30 The activity at the well head compounds would run concurrently with various other operational activities, with the main one being those associated with the gas compressor station. Although this compound would be a large scale industrial element containing several tall pieces of equipment, it would for the most part be set behind screen mounds (see Figure 14-5 of Volume 2B). These mounds would extend up to a height of 11 to 12 m AOD on the south side, 11 to 10 m AOD on the west side and 13 to 14 m AOD on the north side. The south and west screen mounds would be designed to steep engineered slopes in order to minimise the loss of functionally linked arable farmland which is used by pink footed geese. However to help integrate these bunds, which in themselves would be relatively large scale features, the tops would be rounded and the longitudinal profile would be gently undulating with the ends tapered gently down to existing ground. Over time these mounds would be softened by the establishing scrub planting on them. The majority of the outward facing slope of the north bund would be re-graded out to 1v to 5h with the lower part of the slope returned to pasture.. It is recognised that some of the pieces of tall equipment within the compound e.g. the glycol dryers at approximately 18 m AOD would be higher than the top height of the constructed mounds. However, a balance has had to be made between the need to screen the industrial elements within the compound at day one with the need to ensure the mounds themselves do not appear as un-natural engineered elements in the context of the surrounding topography and how they would be visualised from the various visual receptors around.
- 1.3.31 The potentially intermittent plume from the gas heater at the gas compressor compound would be visible from this area during cold early morning and early evening periods in the winter months. Overall this element would as a result of its intermittent nature be considered a relatively unobtrusive element.

- 1.3.32 With reference to Figure 14-8 of Volume 2B it is anticipated operational noise from the compound and associated lighting would be limited by the perimeter mounds. Noise measurements have been predicted at two locations along Footpath FP45 (within LCA-4d and indicate for worse case construction and operation combined a noise level of between 34 dB and 41.8 dB.
- 1.3.33 In the east part of the area would be the overall unobtrusive 6.0 m wide metalled, unlit fenced access road between the A588 and Back Lane, which would be used by a combination of some construction vehicles and some operational vehicles, although the overall forecast levels of traffic on this road would be very low.
- 1.3.34 Within the adjacent LCA-4b would be the operation activities associated with the booster pump station which would form a minor element to the north west and set in the context of the Preesall Wastewater Treatment Works.. The built form would look like a typical red brick agricultural building typical of this landscape character type and would form a minor element within the west edge of this area.
- 1.3.35 Within the adjacent LCA-5a would be the operational activities associated with the control building, workshop, control gate and areas of hard standing at Higher Lickow (see Figures 1.36, 1.37 and 1.38 of Volume 2A), but set within a relatively remote and secluded area. It is anticipated there would be some night time lighting from this location but which would be filtered by the adjacent vegetation.
- 1.3.36 It is anticipated construction and operational combined noise potentially would be audible but would overall be of a very low level and of a continuous nature. Noise predications at various points along the Wyre Way within the area for the worst case construction and operation scenario indicate levels of between 33.1 dB and 41.1 dB depending on proximity to the booster pump station and the well head compound. Overall, it is considered these levels would not have an overall impact on the tranquillity of the area. It is also anticipated that night time lighting associated with the construction activity would not impact on the overall baseline night time levels of this area, which are considered to be ELZ 2.
- 1.3.37 Overall, this landscape would have the capability to absorb some of the construction and operational combined activity, although this would potentially be exceeded as a result of the generally widespread nature of the activities which would occur within an open and relatively tranquil area.
- 1.3.38 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **high** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction and operational combined activities is considered to be **moderate** negative. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in an overall **moderate** adverse impact during this phase.

**Potential construction and operation combined impacts on visual amenity**

1.3.39 The potential impacts on views are summarised in Table 1-67 below.

**Table 1-67 LCA-4c: Construction and Operation Combined Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Visual Receptor VR4.4a: Wyre Way (runs concurrently with Footpaths FP42 and FP41)	High Moderate negative to Minor negative	Moderate adverse	<p>With reference to Figure 14.9d, Sheet 2 and Figure 14.9e Sheet 2 of Volume 2B, users on this 740 m long section of the Wyre Way would have a series of sequential 360 degree panoramic views within which there would be some easterly short range open views through the perimeter wire mesh perimeter security fence to the earth mounds and establishing scrub around well head compounds 5 and 7 (planted winter Year 2/Year 3) with well head compounds 6 and 4 slightly further away. Beyond the well head compounds the farm building at Higher Lickow would be discernable (650 m at its nearest point) although considered to be similar in appearance to the baseline. The taller elements at the gas compressor compound (600 m at its nearest point) would also be discernable above the screen mound and establishing scrub.</p> <p>There would also be a northerly open view of the operational booster pump station (140 m at its nearest visible point) within the adjacent LCA-4b.</p> <p>The westerly 180 degree panoramic views across the saltmarsh and estuary (SCA-1b) would be unaffected.</p> <p>The plume from the gas heater at the gas compressor compound (LCA-4c) would be visible in easterly views as an isolated intermittent, relatively unobtrusive new element in the context of the wider views.</p>

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR4.4b: Wyre Way which runs concurrently with Footpath FP16	High Minor negative (Year 4 to Year 6) Negligible negative (Year 7/Year 8)	Moderate adverse to Slight adverse (Year 4 to Year 6) Slight adverse (Year 7/Year 8)	<p>With reference to Figure 14.9f Sheet 2 and Figure 14.9g Sheet 2 of Volume 2B, users on this 540 m long section of the Wyre Way would have a series of sequential 180 degree panoramic westerly views across the saltmarsh (SCA-1b). There would be a northerly view the operational well head compounds 7 and 5 (130 m and 480 m at their nearest respective points) although they would be relatively minor low lying elements in the view with the booster pump station (870 m at its nearest visible point) beyond, within the adjacent LCA-4b). Easterly views to other activity within LCA-4c would be heavily filtered by the intervening linear scrub immediately adjacent to the Wyre Way.</p> <p>The typical westerly panoramic views across the saltmarsh and estuary (SCA-1b) would be unaffected.</p> <p>The plume from the gas heater at the gas compressor compound (LCA-4c) would be visible in north easterly views as an isolated intermittent, relatively unobtrusive new element in the context of the wider views.</p>
Visual Receptor VR4.5a: Footpath FP43	High Moderate negative (Year 4/Year 5) Minor negative (Year 6 to Year 8)	Moderate adverse (Year 4 to Year 6) Slight adverse (Year 7/Year 8)	<p>Users on this footpath would have open short range views to the establishing scrub on the mounds through the perimeter security fencing at well head compounds 5 and 4. The wire mesh fencing although visible would be a relatively transparent element although the posts would form regular vertical features. There would also be more distant but open views across open arable fields to well head compound 7 and well head compound 6. It is anticipated the majority of the above ground elements associated with the gas compressor station and the booster pump station would be hidden or</p>

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
			<p>heavily filtered by intervening semi mature and mature vegetation.</p> <p>The plume from the gas heater at the gas compressor compound (LCA-4c) would be visible in easterly views as an isolated intermittent, relatively unobtrusive new element in the context of the wider views.</p>
Visual Receptor VR4.6: Bridleway BW2a (Corcas Lane)	<p>High Minor negative (Year 4 &amp; Year 5) Negligible negative (Year 6 to Year 8)</p>	Slight adverse	<p>With reference to Figure 14.9h of Volume 2B, users on a 640 m long section of the bridleway would have a series of sequential panoramic northerly views within which there would be a filtered view to Higher Lickow (760 m at its nearest visible point), although this element would be considered similar to the base line, with head compound 7 (570m) and the booster pump station (1. 2 km at its nearest visible point) within the adjacent LCA-4b) being potentially discernable under close scrutiny. Well head compound 6 (790 m) would also be discernable and some of the taller elements within the gas compressor station, such as the gas heater and glycol dryers (730 m) would be visible over the south screen mound (670 m) as well as the adjacent vent stack (670 m).</p> <p>The plume from the gas heater at the gas compressor compound (LCA-4c) would be visible in northerly views as an isolated intermittent, relatively unobtrusive new element in the context of the wider views.</p>
Visual Receptor VR4.8: Ivy Cottages, Back Lane	<p>High Negligible negative</p>	Slight adverse	<p>There would be open ground and upper storey easterly view to low levels of traffic on the access road between the A588 and Back Lane.</p>

**LCA-4d: Clods Carr Farmed Lowland**

1.3.40 It is anticipated the potential impacts on the character and visual amenity of this area would result from the combined construction and operational activities within the adjacent LCT-4. These impacts would occur over a 35 month period and be of a short term nature followed by a 25 month period of operational activities. The main combined construction and operational activities within the adjacent LCT-4 are summarised in Table 1-68 below

**Table 1-68 LCA-4d: Schedule of Construction and Operation Combined Activity**

Activity	Description
Construction Activity	
Drilling and well head connections – 8 months (Year 4)	<p>Low lying, temporary series of sequential isolated drilling activity at well head compounds 1 within the area and well head compound 3 within LCA-4d. Drilling activity would be 24/7 and include 2 no x 4 m high flood lights. On completion of the drilling, the well head compound will be reconfigured to the operational well head layout.</p> <p>Well head compound 3 – 6 months Well head compound 2 – 2 months</p>
Cavern Washing – 18 months (Year 5/Year 6)	<p>These would comprise short term series of sequential “invisible” activities within the reconfigured operational well head layout at well head compounds 3 and 2 within the area. It is anticipated the actual activity would not be a perceptible visual element within this area.</p>
Operational Activity	
Internal Access Tracks	<p>Low level of vehicle activity on 4 m wide loose stone access tracks connecting well head compounds 2 and 3 and in the vicinity of the booster pump station within LCA-4b).</p>
Booster Pump Station (LCA-4b)	<p>Booster pump station would be located immediately east of the Preesall Wastewater Treatment Works. The east elevation of the agricultural style red brick building would from a minor element in some westerly views across the area, but set in the context of the perimeter scrub vegetation to the wastewater treatment works.</p>

Activity	Description
Gas Compressor Compound LCA-4c)	<p>The majority of the gas compressor compound would be hidden behind its large scale planted north screen mound with its rounded ridge at 14 m AOD (see Figure 14-5 of Volume 2B). It is anticipated the taller equipment with the compound e.g. 9.81 m high gas heater and the 13 m high glycol dryers along with the adjacent 16 m high vent stack, would form minor elements above the screen mound, but seen in the context of other vertical elements such as overhead power line posts.</p> <p>For the purposes of this assessment the assessor has been advised that there would be no visible plume from the vent stack, but there would be a potentially visible intermittent plume from the gas heater within the compound. In the worst case scenario, this intermittent plume would only be visible when the gas heater is operating during cold periods i.e. during the winter months and most likely during the early morning and early evening. No information is available on the height, density or width of the plume.</p>
Well head compounds	Well head compounds 3 and 2 would become fully operational by August Year 6.
Relocated or buried 33 KV o/h Power line	The existing o/h power line would need to be realigned in the vicinity of the gas compressor station as a result of the project construction. This element may potentially be buried. (Implication on its alignment).

***Potential construction and operation combined impacts on landscape character***

- 1.3.41 With reference to Table 1-68 there would be some localised disruption as a result of drilling activity during Year 4 at well head compounds 3 and 2 and their reconfiguration to their operational layout. These two well head compounds would be located within a relatively remote part of the area. Overall it is anticipated the actual well washing activity, which would be ongoing until Year 6, would have a limited influence on the wider area as it would take place within the operational well head compound layout and would require limited external activity such as infrequent night time lighting and access. The former would be more or less filtered by the earth mounding around the internal compound and overtime by the associated scrub vegetation planted during winter Year 4/Year 5.



- 1.3.42 The activity at the well head compounds would coincide with operational activity at the adjacent Booster Pump Station within LCA-4b. This agricultural style red brick building would be a minor element at the west edge of the area but because of its position it would overall have a relatively limited influence on the wider character. It is anticipated any night time lighting from the booster pump station over this area would be screened by the building and wall on the east elevation.
- 1.3.43 In addition there would be potential operational activity at the gas compressor compound at the south edge of this area. With reference to Figure 14-5 of Volume 2B, the majority of the industrial elements and the associated activity within the compound would be hidden behind the north earth mound with a top height of 14 m AOD. It is anticipated that some items of the compound such as the top of the glycol dryers (18 m AOD) would potentially be a perceptible element but only under close scrutiny over the top of the mound and its establishing scrub planting (planted during winter Year 2/Year 3). In addition the vent stack at 20 m AOD would also from a minor element at the south edge of the area., although its slim form i.e. 30 cm diameter would be seen in the context of other vertical elements in the landscape such as telegraph poles.
- 1.3.44 The potentially intermittent plume from the gas heater at the gas compressor compound (LCA-4c) would be visible from this area during cold early morning and early evening periods in the winter months. Overall this element would as a result of its intermittent nature be considered a relatively unobtrusive element.
- 1.3.45 With reference to Figure 14-8 of Volume 2B it is anticipated operational noise from the compound and associated lighting would be limited by the perimeter mounds. Noise measurements have been predicted at three locations along Footpaths FP61 and FP45 (within LCA-4d and indicate for worst case construction and operation combined a noise level of between 34 dB and 43.5 dB. It is anticipated any night time lighting from the compound would also be filtered by the perimeter earth mound and have no impact on the overall dark night time landscape of the area.
- 1.3.46 This landscape area has the capability to absorb most of the combined construction and operational activity because of the ability of the local landform to the north of the gas compressor station to accommodate the large scale screen mound and its associated scrub planting. However it is anticipated the upper parts of the taller compound elements such as the glycol dryers and the vent stack would be minor vertical elements but seen in the context of other vertical elements such as overhead power line and telegraph posts. The other elements such as the booster pump station and well head compounds 3 and 2 would be relatively unobtrusive elements.
- 1.3.47 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **high** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction and operation combined phase is considered to be **moderate** negative and with reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **moderate** adverse impact during this phase.

**Potential construction and operation combined impacts on visual amenity**

1.3.48 The potential impacts on views are summarised in Table 1-69 below.

**Table 1-69 LCA-4d: Construction and Operation Combined Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR4.5b: Footpath FP43	High Moderate negative (Year 4/Year 5) Minor negative (Year 6 to Year 8)	Moderate adverse (Year 4 to Year 6) Slight adverse (Year 7/Year 8)	Users would have a series of sequential south easterly views over a 50 m length to the gas compressor compound's north screen mound and associated scrub (130 m at its nearest point). It is assumed the 33 KV o/h power line would be reinstated as an above ground element and would be similar in appearance to the baseline. The plume from the gas heater at the gas compressor compound (LCA-4c) would be visible in south easterly views as an isolated intermittent new element.
Visual Receptor VR4.9: Footpath FP61	High Moderate negative (Year 4/Year 5) Minor negative (Year 6 to Year 8)	Moderate adverse (Year 4/Year 5) Slight adverse (Year 6 to Year 8)	Users would have a series of sequential southerly filtered views over a 380 m length through existing hedge across west part of LCA-4c to mound and establishing scrub at well head compound 5 (140 m) with well head compound 7 (410 m) beyond and a short range open view over a reinstated hedge (planted winter Year 3/Year 4) and through the perimeter chain link fence to establishing scrub on the internal mound at well head compound 4 and a narrow direct view along the adjacent access track.

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
			<p>Users would also have a narrow view to an area of reinstated scrub (planted winter Year 3/Year 4) over gas and water manifolds.</p> <p>It is assumed the 33 KV o/h power line would be reinstated as an above ground element and would be similar in appearance to the baseline.</p> <p>The plume from the gas heater at the gas compressor compound (LCA-4c) would be visible in easterly views as an isolated intermittent, relatively unobtrusive new element in the context of the wider views.</p>
Visual Receptor VR4.10a: Footpath FP45 (Clods Carr Lane)	High Moderate negative (Year 4/Year 5) Minor negative (Year 6 to Year 8)	Moderate adverse (Year 4/Year 5) Slight adverse (Year 6 to Year 8)	<p>With reference to Figure 14.9j Sheet 2 of Volume 2B, users would have a series of sequential southerly low lying views to the gas compressor compounds north screen mound and the top of the gas heater and glycol dryers(250 m at its closest point).</p> <p>The plume from the gas heater at the gas compressor compound (LCA-4c) would be visible in easterly views as an isolated intermittent new element in the context of the wider views.</p>
Visual Receptor VR4.10b: Footpath FP45 (Clods Carr Lane)	High Minor negative (Year 4 to Year 6) Negligible negative (Year 7/Year 8)	Moderate adverse (Year 4/Year 5) Slight adverse (Year 6 to Year 8)	<p>Users would have a series of sequential slightly elevated westerly panoramic views across the area with a filtered distant view to the booster pump station (920 m at its nearest visible point) and an open easterly view to the gas compressor compound north screen mound (500 m) with the top of the glycol dryers (610 m) and the adjacent</p>

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
			<p>vent stack (650 m at its nearest visible point) visible above it.</p> <p>It is assumed the 33 KV o/h power line would be reinstated as an above ground element and would be similar in appearance to the baseline.</p> <p>The plume from the gas heater at the gas compressor compound (LCA-4c) would be visible in southerly views as an isolated intermittent new element in the context of the wider views.</p>
Visual Receptor VR4.11: Cote Walls Farmhouse	High Negligible negative (Year 4) No Change (Year 5 to Year 8)	Slight adverse (Year 4) Neutral (Year 5 to Year 8)	Isolated property with a west and north aspect to adjacent semi immature vegetation and a mature copse in the west and to field boundary hedgerows to the north. Views south are blocked by adjacent outbuildings.
Visual Receptor VR4.12: Footpath FP46 (Acres Lane)	High Minor negative (Year 4 to Year 6) Negligible negative (Year 7/Year 8)	Slight adverse	<p>Users would have a series of sequential With reference to Figure 14.9k Sheet 2 of Volume 2B, users would have slightly elevated southerly panoramic views with a filtered distant view to the booster pump station (1.14 Km at its nearest visible point) and a southerly open view to the gas compressor compound's north screen mound and associated scrub (710 m at its nearest visible point) with the gas heater and glycol dryers (870 m) visible above it. The vent stack may potentially be visible although in most views it is anticipated it would be filtered or screened by intervening vegetation</p> <p>The plume from the gas heater at the gas</p>

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
			compressor compound (LCA-4c) would be visible in southerly views as an isolated intermittent, relatively unobtrusive new element in the context of the wider views.
Visual Receptor VR4.13: Curwens Hill Farmhouse, Acres Lane	High Negligible negative	Slight adverse	<p>There would be a southerly elevated view to the gas compressor compound's north screen mound and associated scrub (990 m) with the gas heater, glycol dryers and potentially the adjacent vent stack visible over it.</p> <p>The plume from the gas heater at the gas compressor compound (LCA-4c) would be visible in easterly views as an isolated intermittent, relatively unobtrusive new element in the context of the wider views.</p>
Visual Receptor VR4.14: New Heys Farm, off Whinney Lane	High Negligible negative (Year 4/Year 5) No Change (Year 6 to Year 8)	Slight adverse (Year 4 & Year 5) Neutral (Year 6 to Year 8)	<p>There would be a filtered south easterly view to the gas compressor compound's north screen mound (920 m) and associated scrub (planted during winter Year 2/Year 3) with the gas heater and glycol dryer (1 Km) and potentially the adjacent vent stack (1.15 km) visible over it.</p> <p>The plume from the gas heater at the gas compressor compound (LCA-4c) would be visible in easterly views as an isolated intermittent, relatively unobtrusive new element in the context of the wider views.</p>

## Landscape Character Type LCT-5: Farmed Settlement Fringe

### LCA-5a: Preesall Lowland Fringe

- 1.3.49 It is anticipated the potential impacts on the visual amenity of this area would result from construction and site traffic on the access road within the adjacent LCA-4c and are summarised in Table 1-70 below.

**Table 1-70 LCA-5a: Schedule of Construction and Operation Combined Activity**

Activity	Description
Operational element	
Access Road (LCA-4c)	Intermittent low levels of traffic on the access road between Back Lane and A588 would be visible

- 1.3.50 With reference to Table 1-70 there would be some localised vehicle activity along the access road within the south west corner of this area. In addition the establishment of the reinstated hedgerows (planted winter Year 2/Year 3) along the route of the HV cable and the embedded landscape design proposals would overtime help to reinforce the intimate and enclosed landscape at Higher Lickow.
- 1.3.51 This landscape overtime has the capacity to absorb the construction and operation activity of the type proposed because of the establishing reinstatement planting and embedded landscape proposals at Higher Lickow.
- 1.3.52 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **moderate** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is considered to be **negligible** negative in Year 4 to Year 7 and **no change** in Year 8. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **slight** adverse impact in Year 4 to Year 7 and a **neutral** impact in Year 8.

#### ***Potential Construction Impacts on Visual Amenity***

- 1.3.53 The potential impacts on views are summarised in Table 1-71 below.

**Table 1-71 LCA-5a: Construction and Operation Combined Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR5.1: Park Cottage, Cemetery Lane	High Negligible negative	Slight adverse	Short range filtered southerly view to low levels of vehicle movements on the access road between Back Lane and A588.
Visual Receptor VR5.2: Properties on, Cemetery Lane	High Negligible negative	Slight adverse	Short range filtered southerly view to low levels of vehicle movements on the access road between Back Lane and A588.

## 1.4 Operation

1.4.1 It is anticipated there would be a potential reduction in the Project’s impacts on the character and or visual amenity resulting from the operational activity for character areas and or visual receptors within five character types (LCT-4, LCT-6, LCT-7, TCT-8 and TCT-10). All other character areas and visual receptors during this phase would potentially experience similar impacts to those assessed at the end of the construction or combined construction and operation phases. The potential operation effects of the Project are summarised in Table 14-19 of Chapter 14 of Volume 1A.

### LCT 4: Lowland Estuary Edge

#### **LCA-4b: Hackensall Farmed Lowland**

1.4.2 It is anticipated the potential impacts on the character and visual amenity of this area would result from permanent above ground elements and operational activity within the area and the adjacent LCA-4d, which are summarised in Table 1-72 below.

**Table 1-72 LCA-4b: Schedule of Operational Elements**

<b>Activity</b>	<b>Description</b>
Internal Access Tracks	Tracks would have very occasional access required for maintenance. Very similar to baseline condition.
Booster Pump Station	An agricultural style red brick building of appropriate scale with compound predominantly hidden by screen mound and establishing scrub on east and north side and by scrub and intermittent trees along south side (Planted winter Year 2/Year 3).
Well head compounds	Low lying, elements with 2.4 m high perimeter security fencing with generally 2.3 m high earth mound planted with scrub behind.
Plume from Gas Compressor Compound (LCA-4c)	The intermittent plume from the gas heater during early morning and early evening winter operation would continue to be a visible but overall unobtrusive element.

***Potential Operational Impacts on Landscape Character***

- 1.4.3 With reference to Table 1-72 it is anticipated the project impact on the character of this area would be similar to that assessed previously. However with reference to Figure 14-9c Sheet 3 of Volume 2B it is anticipated the embedded landscape design proposals i.e. the perimeter scrub to the booster pump station would by Year 9 have established to create a 3 m high dense screen along the south elevation and on top of the regarded mound along the east and north side and would be similar in appearance to the scrub around the adjacent wastewater treatment works.
- 1.4.4 With reference to Figure 14-8 of Volume 2B there would be some operational noise from the booster pump station, although it is anticipated, based on the predicated worse case L<sub>90</sub> noise level of 42.2 dB on Footpath FP61 in the immediate vicinity of it. This level compared to the measured noise level of 42.5 dB at Arm Hill would suggest that the predicted noise levels for the project would not have an overall impact on the tranquillity of this area.
- 1.4.5 This landscape area has the capability to absorb some of the operational elements because of its gently undulating landform, the presence of the wastewater treatment works and its perimeter scrub, the relatively remote location for the well head compound. However, the booster pump station building would be a permanent visible element, although its red brick design and scale would not be out of character or scale with the agricultural built form of the wider landscape character type.



1.4.6 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **high** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the operation combined work is considered to be **moderate** negative. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **moderate** adverse impact.

**Potential Operation Impacts on Visual Amenity**

1.4.7 The potential impacts on views are summarised in Table 1-73 below.

**Table 1-73 LCA-4b: Operation Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Visual Receptor: VR4.2a: Re-instated Wyre Way (runs concurrently with Footpath FP42)	High Moderate negative to Minor negative	Moderate adverse to Slight adverse	With reference to Figure 14-9c Sheet 3 of Volume 2B users would have a series of sequential westerly open views across farmland to the booster pump station building, which to some extent would partially block part of a narrow view to the estuary beyond it. Well head compound 1 would be an unobtrusive element.
Visual Receptor: VR4.2b: Re-instated Wyre Way (runs concurrently with Footpath FP42)	High Moderate negative	Moderate adverse	Users would have a series of sequential westerly short range open views to the booster pump station building. Some elements of the compound behind the building would be visible early on in filtered north westerly views through establishing scrub. Overtime these elements would be screened by the scrub and intermittent trees. Users would also have a north easterly view to the establishing scrub at well head compound 3

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
			<p>within the adjacent LCA-4d.</p> <p>The southerly view of the estuary from this section of the Wyre Way would predominantly remain unaffected.</p> <p>The plume from the gas heater at the gas compressor compound would continue to be a visible isolated and intermittent element in easterly views.</p>
Visual Receptor VR4.3: Footpath FP61	High Moderate negative	Moderate adverse	<p>Users would have in the early years have a northerly view to the south elevation of the booster pump station and a filtered view through establishing scrub and intermittent trees to some elements within the compound behind, although overtime this would be mostly screened by the scrub and intermittent trees. There would also be a permanent view along the access track to the compound entrance gate, although planting within the compound behind would help to screen views of the elements within the compound.</p> <p>The southerly views across the saltmarsh (SCA-1b) would be unaffected.</p> <p>The plume from the gas heater at the gas compressor compound would continue to be a visible isolated and intermittent element in easterly views.</p>

**LCA-4c: Agglebys Farmed Lowland**

1.4.8 It is anticipated the potential impacts on the character and visual amenity of this area would result from permanent above ground elements and operational activity within the area and the adjacent LCA-4b, which are summarised in Table 1-74.

**Table 1-74 LCA-4c: Schedule of Operational Elements**

Activity	Description
Access Road	The forecast levels of use of use would be very low. The road surface itself would be an unobtrusive element although the permanent timber fencing along both sides would form a minor element where the road divides an existing field.
Internal Access Tracks	Tracks would have very occasional access required for maintenance and would be considered to be similar to baseline condition.
Higher Lickow Control buildings (LCA-5a)	This element would be similar in appearance to the baseline.
Booster Pump Station (LCA-4b)	An agricultural style red brick building of appropriate scale with compound predominantly hidden by screen mound and establishing scrub on east and north side and by scrub and intermittent trees along south side (planted during winter Year 2/Year 3).
Well Head compounds 5, 7 6 & 4	Low lying elements with 2.4 m high plastic coated chain link perimeter security fencing with predominantly 2.3 m high earth mound planted with scrub behind.
Gas Compressor Compound	<p>Industrial compound predominantly hidden behind screen mound with scrub planted on it. The south and west mounds 11 to 12 m AOD and 10 to 11 m AOD respectively would screen the majority of the compound elements although the taller elements i.e. gas heater (9.81 m high x 1.6 m diameter), glycol dryers (13 m high x 3 m diameter) and the adjacent 16 m high vent stack would be minor elements over it.</p> <p>The intermittent plume from the gas heater during early morning and early evening winter operation would continue to be a visible but overall unobtrusive element.</p>

### ***Potential Operation Impacts on Landscape Character***

- 1.4.9 With reference to Table 1-74 it is anticipated the project impact on the character of this area would be similar to that assessed previously. However it is anticipated the embedded landscape design proposals perimeter scrub on the screen mounds (planted winter Year 2/Year 3) would by Year 9 have achieved a 3 m high dense screen along the west and south elevation with an overall screening height of between 14 and 15 m AOD, on the south side and 13 to 14 m AOD on the south side. In addition the woodland scrub and tree planting on the higher north screen mound would also overtime become more noticeable against which the taller equipment would be set and thereby reducing the extent to which the glycol dryers and vent stack would be visible elements.
- 1.4.10 With reference to Figure 14-8 of Volume 2B there would be some operational noise from the gas compressor compound and the well head compounds and it is anticipated, based on the predicated worse case L<sub>90</sub> noise level of 36.1 dB on the Footpath FP45 within (LCA-4d) to the north of the compressor compound and at 34.8 dB on the Wyre Way near well head compound 5, that these levels compared to the measured noise level of 32.8 dB at Cote Walls Farm (LCA-4d) and 41.8 dB at Arm Hill (SCA-1b) would potentially be audible. However, the predicted noise level would overall be very low, and although it is recognised as a subjective matter, it is considered that noise from the Project would have very little impact on the tranquillity of this area.
- 1.4.11 With reference to Figure 14-9d Sheet 3, Figure 14-9e Sheet 3, Figure 14-9f Sheet 3 and Figure 14-9g of Volume 2B, the scrub on the various well head compound perimeter mounds would also have established although its purpose is to provide a mosaic of open scrub vegetation rather than as a dense vertical screen with views over to the landscape beyond and which would be clearly visible through the perimeter security fence. However it is recognised that well head compounds 5 and 7 would from low level locally intrusive elements within the open arable farmland adjacent to the estuary.
- 1.4.12 Overall, this open large scale landscape would be capable of absorbing some operational elements although overall, it is compromised as a result of the two large well head compounds located within an open arable farmland area.
- 1.4.13 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **high** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is considered to be **moderate** negative in Year 9 and **minor** negative in Year 10 to Year 40. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **moderate** adverse impact in Year 9 and a **slight** adverse impact in Year 10 to Year 40.

**Potential Operation Impacts on Visual Amenity**

1.4.14 The potential impacts on views are summarised in Table 1-75 below.

**Table 1-75 LCA-4c: Operation Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR4.4a: Wyre Way (runs concurrently with Footpaths FP42 and FP41)	High Moderate negative to Minor negative (Year 9) Minor negative to Negligible negative (Year 10 to Year 40)	Moderate adverse (Year 9) Moderate adverse to Slight adverse (Year 10 to Year 40)	<p>Users on this 740 m long section of the Wyre Way would have a series of sequential 360 degree panoramic views and with reference to Figure 14-9d Sheet 3 and Figure 14-9e Sheet 3 of Volume 2B within which there would be a series of slightly elevated short range open views through the perimeter security fence to establishing scrub on the mounds within well head compounds 5 and 7 and the landscape beyond. The perimeter wire mesh fencing although visible would be a relatively transparent element although the posts would form regular vertical features. The other well head compounds 6 and 4 would be relatively unobtrusive elements in the view.</p> <p>Users would also have s a series of sequential northerly views to the booster pump station (140 m at its nearest visible point) within the adjacent LCA-4b.</p> <p>There would also be a filtered view to the gas heater and glycol dryer (430 m) above the gas compressor compounds screen mound and establishing scrub and the adjacent vent stack (500 m).</p> <p>The westerly 180 degree panoramic views across the saltmarsh and estuary (SCA-1b) would be</p>

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
			<p>unaffected.</p> <p>The plume from the gas heater at the gas compressor compound would continue to be a visible isolated and intermittent element in easterly views.</p>
<p>Visual Receptor VR4.4b: Wyre Way (runs concurrently with Footpath FP16)</p>	<p>High Minor negative to Negligible negative</p>	<p>Slight adverse</p>	<p>Users on this 550 m long section of the Wyre Way would have a series of sequential northerly views to the booster pump station (870 m at its nearest visible point) within the adjacent LCA-4b). With reference to Figure 14-9f Sheet 3 and Figure 14-9g Sheet 3 of Volume 2B the scrub mounds within the well head compounds 5 and 7 would also be noticeable elements although the landscape would be visible beyond.</p> <p>The typical westerly panoramic views across the saltmarsh and estuary (SCA-1b) would be unaffected.</p> <p>The plume from the gas heater at the gas compressor compound would continue to be a visible isolated and intermittent element in easterly views.</p>
<p>Visual Receptor VR4.5a: Footpath FP43</p>	<p>High Minor negative</p>	<p>Slight adverse</p>	<p>Users would have open short range views through the perimeter security fencing to the establishing scrub on the mounds at well head compounds 5 and 4. The wire mesh fencing although visible would be a relatively transparent element although the posts would form regular vertical features. There would also be more distant but open views across the arable fields to well head compound 7 although well head compound 6 would form a relatively unobtrusive</p>

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
			<p>element.</p> <p>The plume from the gas heater at the gas compressor compound would continue to be a visible isolated and intermittent element in easterly views.</p>
<p>Visual Receptor VR4.6: Bridleway BW2a (Corcas Lane)</p>	<p>High Negligible negative (Year 9) No Change (Year 10 to Year 40)</p>	<p>Slight adverse (Year 9) Neutral (Year 10 to Year 40)</p>	<p>With reference to Figure 14-9h Sheet 3 of Volume 2B users on a 640 m long section of the bridleway would have a series of sequential panoramic northerly views within which there would be an open view to the establishing scrub on the gas compressor compound's south screen mound (670 m). The tops of the gas heater and the glycol dryers would be visible over the top of the mound although overtime they would become less perceptible as the screen effects of the scrub take over. The adjacent vent stack (670 m) would also be visible.</p> <p>The distant booster pump station (1.2 Km within LCA-4b) and the scrub on the mounds at well head compounds 5 and 7 would be lost against the background.</p> <p>The plume from the gas heater at the gas compressor compound would continue to be a visible isolated and intermittent element in easterly views.</p>
<p>Visual Receptor VR4.8: Ivy Cottages, Back Lane</p>	<p>High Negligible negative</p>	<p>Slight adverse</p>	<p>Short range filtered southerly view to low levels of vehicle movements on the access road between Back Lane and A588.</p>

### LCA-4d; Clods Carr Farmed Lowland

- 1.4.15 It is anticipated the potential impacts on the character and visual amenity of this area would result from permanent above ground elements and operational activity within the area and the adjacent LCA-4c, which are summarised in Table 1-76 below.

**Table 1-76 LCA-4d: Schedule of Operational Elements**

Activity	Description
Internal Access Tracks	Tracks would have very occasional access required for maintenance and would be considered to be similar to baseline condition.
Booster Pump Station	An agricultural style red brick building of appropriate scale with compound predominantly hidden by screen mound and establishing scrub on east and north side and by scrub and intermittent trees along south side (Planted winter Year 2/Year 3).
Well head compounds	Low lying, elements with 2.4 m high plastic coated chain link perimeter security fencing with a predominantly 2.3m high earth mound planted with scrub behind.
Gas Compressor Compound	<p>Industrial compound predominantly hidden behind screen mound with scrub planted on it. The top of the north mound would be at 14 m AOD and would screen the majority of the compound elements although the taller elements i.e. glycol dryers (13 m high x 3 m diameter) and the adjacent 16 m high vent stack would be minor elements over it.</p> <p>The intermittent plume from the gas heater during early morning and early evening winter operation would continue to be a visible but overall unobtrusive element.</p>

### ***Potential Operational Impacts on Landscape Character***

- 1.4.16 With reference to Table 1-76 it is anticipated the project impact on the character of this area would be similar to that assessed previously. However, with reference to Figure 14-9j Sheet 3 and Figure 14-9k Sheet 3 of Volume 2B it is anticipated the embedded landscape design proposals i.e. the perimeter scrub on the gas compressor compounds north screen mound (planted during winter Year 2/Year 3) would by Year 9 have achieved a 3 m high dense screen along the west and south elevation with an overall screening height of between 16 and 17 m AOD and thereby reducing the extent to which the glycol dryers and vent stack would be visible elements.



- 1.4.17 With reference to Figure 14-8 of Volume 2B there would be some operational noise from the gas compressor compound and it is anticipated, based on the predicated worse case L<sub>90</sub> noise level of 41.4 dB at the junction of Footpath FP61 and Footpath FP45 in close proximity to the west side of the compressor compound (100 m) that this level compared to the measured noise level of 32.8 dB at Cote Walls Farm would be audible. However at 300 m from the compound the predicted noise level has fallen to 36.1 dB. It is anticipated noise from the Project would potentially be audible, although overall it would still be relatively low. However, it is recognised that noise is a subjective matter and it is considered that noise from the Project would have a potentially localised impact on the tranquillity of this area and which would also be accessible to the public.
- 1.4.18 Night time lighting and from the compound would be filtered by the perimeter earth mound and have no impact on the overall dark night time landscape of the area.
- 1.4.19 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **high** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction and operation combined phase is considered to be **minor** negative in Year 9 reducing to **negligible** negative in Year 10 to Year 40. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in an overall **slight** adverse impact during this phase.

***Potential Operation Impacts on Visual Amenity***

- 1.4.20 The potential impacts on views are summarised in Table 1-77 below.

**Table 1-77 LCA-4d: Operation Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR4.5b: Footpath FP43	High Minor negative (Year 9) Negligible negative (Year 10 to Year 40)	Slight adverse	Users would have a series of sequential south easterly views over a 50 m length to the gas compressor compound's north screen mound and associated establishing trees and shrubs (130 m at its nearest point).  The intermittent plume from the gas heater during early morning and early evening winter operation would continue to be a visible element.

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR4.9 Footpath FP61	High Minor negative (Year 9) Negligible negative (Year 10 to Year 40)	Slight adverse	<p>Users would have a series of sequential southerly filtered views through hedge across west part of LCA-4c to well head compounds 5 and 7 over 380 m length and a short range open view over a recently planted hedge (planted during winter Year 3/Year 4) to establishing scrub on internal mound through relatively unobtrusive perimeter fencing at well head compound 4 and direct narrow view along access track.</p> <p>There would also be a narrow open view to area of establishing scrub (planted winter Year 3/Year 4) over gas and water manifolds.</p> <p>It is assumed the 33 KV o/h power line would be reinstated as an above ground element and would be similar in appearance to the baseline.</p> <p>The intermittent plume from the gas heater during early morning and early evening winter operation would continue to be a visible element.</p>
Visual Receptor VR4.10a: Footpath FP45 (Clods Carr Lane)	High Minor negative (Year 9) No Change (Year 10 to Year 40)	Slight adverse (Year 9) Neutral (Year 10 to Year 40)	<p>With reference to Figure 14-9j Sheet 3 of Volume 2B users would have a series of sequential southerly low lying views to the gas compressor compound's north screen mound (planted winter Year 2/Year 3), with the top of the gas heater and the glycol dryers visible over it. It is assumed the 33 KV o/h power line would be reinstated as an above ground element and would be similar in appearance to the baseline.</p>

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
			The intermittent plume from the gas heater during early morning and early evening winter operation would continue to be a visible element.
Visual Receptor VR4.10b: Footpath FP45 (Clods Carr Lane)	High Negligible negative	Slight adverse	<p>Users would have a series of sequential slightly elevated westerly panoramic views across area with a filtered distant view to booster pump station (920 m at its nearest visible point) and an open easterly view to the gas compressor compound's north screen mound (500 m) with the top of gas heater and glycol dryers (610 m) visible over the top of it. The vent stack (650 m) would mainly be filtered or screened by intervening vegetation.</p> <p>It is assumed the 33 KV o/h power line would be reinstated as an above ground element and would be similar in appearance to the baseline.</p> <p>The intermittent plume from the gas heater during early morning and early evening winter operation would continue to be a visible element.</p>
Visual Receptor VR4.12: Footpath FP46 (Acres Lane)	High Negligible, negative (Year 9) No Change (Year 10 to Year 40)	Slight adverse (Year 9) No Change (Year 10 to Year 40)	With reference to Figure 14-9k of Volume 2B users would have a series of sequential slightly elevated southerly panoramic views with filtered view to the relatively unobtrusive booster pump station (1.2 Km at its nearest visible point) and a southerly open view to the gas compressor compound's northern perimeter screen mounding and associated scrub (800 m at its nearest visible point).

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
			The intermittent plume from the gas heater during early morning and early evening winter operation would continue to be a visible but overall unobtrusive element.
Visual Receptor VR4.13: Curwens Hill Farmhouse, Acres Lane	High Negligible negative (Year 9) No Change (Year 10 to Year 40)	Slight adverse (Year 9) Neutral (Year 10 to Year 40)	With reference to Figure 14-3 of Volume 2B in the early years there would be a southerly elevated view to the gas compressor compound's northern perimeter screen mounding and associated scrub (1.1 Km) with the glycol dryers within the compound and the adjacent vent stack visible above the screen mounding. After 2022, as the screen planting on the mound establishes these industrial elements although visible would become relatively unobtrusive when seen in the context of the wider view.  The intermittent plume from the gas heater during early morning and early evening winter operation would continue to be a visible but overall unobtrusive element.

### Landscape Character Type LCT-6: Farmed Mosslands

#### LCA-6a: Pilling Farmed Mosses

- 1.4.21 It is anticipated the potential impacts on the visual amenity of this area would result from operation activity associated with the NTS Interconnector metering station in the early years of this phase. The main operation activity within the area is summarised in Table 1-78 below.

**Table 1-78 LCA-6a: Schedule of operation activity**

<b>Activity</b>	<b>Description</b>
NTS Interconnector Metering Station (LCA-7a)	The metering station compound would be a low key element within a relatively open low lying arable farmland but set against an existing coniferous woodland copse and field boundary hedgerows. The embedded landscape design proposals (Planted winter Year 2/Year 3) would overtime help to screen/integrate the compound (see Figure 1.49 of Volume 2A).

***Potential Operation Impacts on Visual Amenity***

1.4.22 The potential impacts on views are summarised in Table 1-79 below.

**Table 1-79 LCA-6a: Operation Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Visual Receptor VR6.25: Cogie Hill Farm, Crookabreast Farm & Gibstick Cottages, Island Lane	Negligible, negative (Year 9 to Year 18) No Change (Year 19 to Year 40)	Slight adverse (Year 9 to Year 18) Neutral (Year 19 to year 40)	Either filtered or open slightly elevated southerly view to the metering station (700 m from closest property). Overtime the embedded landscape design proposals would integrate it in the wider view.

## Landscape Character Type LCT-7: Farmed Lowland

### LCA-7a: Nateby Lowland

- 1.4.23 It is anticipated the potential impacts on the visual amenity of this area would result from operation activity associated with the NTS Interconnector metering station in the early years of this phase. The main operation activity within the area is summarised in Table 1-80 below.

**Table 1-80 LCA-7a: Schedule of Operation Activity**

Activity	Description
NTS Interconnector Metering Station (LCA-7a)	The metering station compound would be a low key element within a relatively open low lying arable farmland but set against an existing coniferous woodland copse and field boundary hedgerows. The embedded landscape design proposals (Planted winter Year 2/Year 3) would overtime help to screen/integrate the compound (see Figure 1.21 of Volume 2A).

### *Potential Operation Impacts on Visual Amenity*

- 1.4.24 The potential impacts on views are summarised in Table 1-81 below.

**Table 1-81 LCA-7a: Operation Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR7.2: Footpath	Negligible, negative (Year 9 to Year 18) No Change (Year 19 to Year 40)	Slight adverse (Year 9 to Year 18) Neutral (Year 19 to Year 40)	Users would have a series of sequential open southerly views over 950 m length to the NTS Interconnector metering station. (350 m at its closest point). Overtime the embedded landscape design proposals would integrate it in the wider view.

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Visual Receptor VR7.3a: Converted Barn	Negligible, negative (Year 9 to Year 18) No Change (Year 19 to Year 40)	Slight adverse (Year 9 to Year 18) Neutral (Year 19 to Year 40)	Slightly elevated open southerly view to the NTS Interconnector metering station (550 m). Overtime the embedded landscape design proposals would integrate it in the wider view.
Visual Receptor VR7.3b: Island Farm	Negligible, negative (Year 9 to Year 18) No Change (Year 19 to Year 40)	Slight adverse (Year 9 to Year 18) Neutral (Year 19 to Year 40)	Slightly elevated open southerly view of short term activities associated with the NTS Interconnector metering station (550 m). Overtime the embedded landscape design proposals would integrate it in the wider view.
Visual Receptor VR7.4: Bridleway BW1	Negligible, negative (Year 9 to Year 18) No Change (Year 19 to Year 40)	Slight adverse (Year 9 to Year 18) Neutral (Year 19 to Year 40)	Users would have a series of sequential filtered or open westerly views over a 600 m length to the NTS Interconnector metering station. Overtime the embedded landscape design proposals would integrate it in the wider view.
Visual Receptor VR7.6: Residential properties at Elm Farm, Station Lane	Negligible, negative (Year 9 to Year 18) No Change (Year 19 to Year 40)	Slight adverse (Year 9 to Year 18) Neutral (Year 19 to Year 40)	Filtered easterly view to the NTS Connector metering station (350 m). Overtime the embedded landscape design proposals would integrate it in the wider view.

## Townscape Character Type 8: Suburban Coastal

### TCA-8a: South Fleetwood Edge

- 1.4.25 It is anticipated the potential impacts on the local visual amenity of this area would result from the loss of the block of scrub in the south west corner of this area in the early years of this phase. The operation activity is summarised in Table 1-82 below.

**Table 1-82 TCA-8a: Schedule of Operation Activity**

<b>Activity</b>	<b>Description</b>
Fleetwood brine pipeline	The loss of scrub to the rear of properties along the north side of the South Strand (Visual receptor VR8.6) and adjacent to the tram way. It is anticipated a part of the removed scrub would be reinstated (Planted winter year 1/Year2) and overtime would create a similar feature.

***Potential Operation Impacts on Visual Amenity***

1.4.26 The potential impacts on views are summarised in Table 1-83 below.

**Table 1-83 TCA-8a: Operation Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Visual Receptor VR8.6: Residential Property on east side of A587, Broadway (North of the junction with South Strand)	Negligible, negative (Year 9 to Year 18) No Change (Year 19 to Year 40)	Slight adverse (Year 9 to Year 18) Neutral (Year 19 to Year 40)	Open easterly short range view to playing field with tram way beyond (LCA-2c) The re-in stated planting to the rear of VR:8.7a and along the tram way would overtime re establish to create similar features to those lost.
Visual Receptor VR8.7a: Residential Properties, east side of South Strand (west of tram crossing)	Negligible, negative (Year 9 to Year 18) No Change (Year 19 to Year 40)	Slight adverse (Year 9 to Year 18) Neutral (Year 19 to Year 40)	Mix of filtered and open short range views to playing field with tram way beyond (LCA-2c). The re-in stated planting to the rear of these properties and along the tram way would overtime re establish to create similar features to those lost.



## Townscape Character Type TCT-10: Rural Lowland Settlement

### TCA-10a: Preesall

1.4.27 It is anticipated the potential impacts on the visual amenity of this area would result from operation activity within LCA-4b and LCA-4c within the early years of this phase. The operation activity is summarised in Table 1-84 below.

**Table 1-84 TCA-10a: Schedule of Operation Activity**

<b>Activity</b>	<b>Description</b>
Booster Pump Station (LCA-4b)	It is anticipated the building would be perceptible but under close scrutiny. Overtime the embedded landscape design proposals would soften this feature, although not altogether hide it.
Gas Compressor Compound (LCA-4c)	It is anticipated the taller elements within the compound e.g. the gas heater and glycol dryers (see Figure 14-9I Sheet 3 of Volume 2B) would be visible in the early years above the north screen mound, but over time the embedded landscape design proposals would help screen these features.  The intermittent plume from the gas heater during early morning and early evening winter operation would continue to be a visible but overall unobtrusive element.

### ***Potential Operation Impacts on Visual Amenity***

1.4.28 The potential impacts on views are summarised in Table 1-85 below.

**Table 1-85 TCA-10a: Construction Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Visual Receptor VR10.1: Elevated residential properties on the west side of Preesall, B5337	Negligible, negative (Year 9 to Year 18) No Change (Year 19 to Year 40)	Slight adverse (Year 9 to Year 18) Neutral (Year 19 to Year 40)	With reference to Figure 14-9k Sheet 3 of Volume 2B, there would be panoramic westerly views to Wyre estuary within which the booster pump station (1.7 Km and elements of the gas compressor compound (1.15 Km) would potentially be perceptible but over time would be filtered (bearing in mind distance and nature of view) or screened by the embedded landscape design proposals.  The intermittent plume from the gas heater during early morning and early evening winter operation would continue to be a visible but overall unobtrusive element.

## 1.5 Decommissioning

- 1.5.1 The Project may or may not be decommissioned and as such the decommissioning phase would have no greater impacts than those previously identified for either the construction, construction and operation combined or the operation phases i.e. it has been assessed as a 'worst case' scenario.

## 2 CUMULATIVE EFFECTS

### 2.1 Introduction

- 2.1.1 Cumulative effects are those which may arise as a result of additional changes to the landscape and / or its visual amenity caused by the Project in conjunction with other developments. This aspect of the assessment assumes a worst case scenario whereby cumulative effects would potentially arise as a result of parallel construction and operation phases for two other developments which lie within or immediately adjacent to the study area.

### 2.2 Construction

- 2.2.1 It is anticipated there would be potential cumulative impacts on the character and or visual amenity of the study area as a result of the Project's construction activity being undertaken at the same time as other construction work associated with other development adjacent to it. It is anticipated that these cumulative effects would be limited to the character and or visual amenity within four character types (LCT-3, LCT-6, LCT-7 and TCT-9). The potential cumulative construction effects of the Project are summarised in Table 14-23 of Chapter 14 of Volume 1A.

#### Landscape Character Type LCT-3: Recreational Estuary Edge

##### **LCA-3a: Fleetwood Marsh Nature Reserve**

- 2.2.2 It is anticipated the potential cumulative impacts would affect both the character and visual amenity of this area and would result from the combined construction activity associated with the Project's brine outfall, Seawater Pumping Station, northern river crossing (west) compound and that of the adjacent Riverside Waste Transfer and Recycling Centre. These cumulative impacts would potentially occur over a 12 month period in Year 1 and would be of short term duration. The combined construction elements of the Project and the Riverside Waste Transfer and Recycling Centre are summarised in Table 1-86 below.

**Table 2-86 LCA-3a: Schedule of Cumulative Construction Activity**

<b>Activity</b>	<b>Description</b>
North River Crossing (TCA-9c)– 4.5 months (Year 1)	Low lying, temporary activity associated with the crossings west compound and its perimeter hoarding.
Fleetwood brine pipeline and Sea Water Pipeline (TCA-9c) – 2 Months (Year 1)	Low lying, temporary series of sequential activities associated with laying the underground pipelines including trenching, stock piling of soil and materials, access road and the reinstatement of ground.
Sea Water Pump Station (TCA-9b) – 12 months (Year 1 / Year 2)	New build activity including site compound, perimeter hoarding, installation of building and fitting out, permanent security fencing and landscape works.
Planning application 02/11/0671. Riverside Waste Transfer and Recycling Centre (TCA_9a) (Source LCC)	This development would be located on Jameson Road within townscape character type TCA-9a: A595 Corridor. The development would comprise a £40 m waste to energy facility which would comprise the erection of a building to house a completely contained fluidised bed combustion apparatus to generate up to 10 Mw of electricity from pre stored dry waste with secondary heat/drying capacity, together with construction of a high level enclosed waste conveyer, a 28 m high chimney, and a 40 seat visitor centre and car park. Planning application submitted and validated.

***Potential Construction Cumulative Impacts on Landscape Character***

- 2.2.3 With reference to Table 1-86 the construction phase would be over a 12 month period in Year 1 resulting in a disturbance along its north and west edge. It is anticipated the work would not result in any direct loss in its physical elements, but would result in disruption to its setting, although this activity needs to be considered in terms of the industrial and or derelict nature of the land to the west within TCA-9a and TCA-9b.
- 2.2.4 This area is considered to have the capability to accommodate the combined short term development proposed, by virtue of its surrounding industrial and urban context. Night time working activity would most likely be absorbed in to the background suburban setting.

2.2.5 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **low**, and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the construction work is considered to be **moderate** negative in Year 1 and **minor positive** in Year 2/Year 3. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **slight** adverse impact in Year 1 and a **slight** beneficial impact in Year 2/Year 3 and thereafter.

**Potential Construction Cumulative Impacts on Visual Amenity**

2.2.6 The potential impacts on views are summarised in Table 1-87 below.

**Table 2-87 LCA-3a: Construction Cumulative Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change <small>(see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)</small>	Significance of Effect <small>(see Table 14-13 of Chapter 14 of Volume 1A)</small>	Comment
Visual Receptor VR3.1: Fleetwood Marsh Nature Park users	High Moderate negative (Year 1) Minor beneficial (Year 2/Year 3)	Moderate adverse (Year 1) Slight beneficial (Year 2/Year 3)	The construction activity associated with both the Project's Seawater Pumping Station new build and the Riverside Waste Transfer and Recycling Centre would form two prominent local elements at the west edge of the park but set within the context of a discordant industrial backdrop. The construction activity associated with the brine and water pipelines and the northern crossing (west compound) would form a low lying series of activities set within an urban residential backdrop.

## Landscape Character Type LCT-6: Farmed Mosslands

### LCA-6a: Pilling Farmed Mosses

2.2.7 It is anticipated the potential cumulative impacts would affect both the landscape character and visual amenity of this area and would result from the combined construction activity associated with the NTS Interconnector and the adjacent Orchard End wind farm. These impacts would occur mainly over a six month period in Year 1/Year 2 and would be of temporary duration. The combined construction elements of the NTS interconnector and the Orchard End wind farm which would potentially be visible at the same time are summarised in Table 1-88 below.

**Table 2-88 LCA-6a: Schedule of Cumulative Construction Activity**

Activity	Description
NTS Interconnector – 6 months (Year 1/Year 2)	Low lying series of sequential activities to install the underground gas within a 37 m wide working area.
Planning Application 09/00352 (Resubmission of 08/00204) (CLP Wind Projects) (Source WBC)	This development would be located at Orchard End Farm, Eagland Hill, approximately 350 m south of the study area at the east extent of LCA-6: Pilling Farmed Mosses. The development would comprise the erection of 2 wind turbines with a hub height of 80m and a tip height of 125m, access track, control building and a temporary compound.

### ***Potential Construction Cumulative Impacts on Landscape Character***

2.2.8 With reference to Table 1-88 the construction phase would be over a six month period in Year 1/Year 2 resulting in localised disturbance within a relatively narrow working corridor across a large scale low lying flat area. The construction of the wind turbines at Orchard End would form a noticeable new element within the east part of this area.

2.2.9 It is anticipated by Year 3 the land within the interconnector working area would have been fully reinstated and returned to agricultural resulting in no further cumulative impacts on the character of the area.

2.2.10 This landscape has some capacity to absorb the type of construction and post construction activity proposed because, with reference to LCC document: Landscape Sensitivity to Wind Energy Development in Lancashire (2005), Figure 2, it is

recognised that this is a landscape which has a low sensitivity for wind farm development and because of its low lying, flat landform and large scale would also be able to absorb the relatively low key and temporary nature of the Project activities.

2.2.11 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **low** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the temporary construction work would be **moderate** negative in Year 1/Year 2 and **negligible** negative in Year 3. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **slight** adverse impact in Year 1/Year 2 and a **neutral** impact in Year 3.

**Potential Construction Cumulative Impacts on Visual Amenity**

2.2.12 The potential impacts on views are summarised in Table 1-89 below.

**Table 2-89 LCA-6a: Construction Cumulative Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Visual Receptor VR6.15: Stafford's Farm, Rosa Villa & Glen Carr, off Garstang Road	High Minor. Negative (Year 1/Year 2) No Change (Year 3)	Moderate adverse (Year 2) Neutral (Year 3)	Filtered southerly views to temporary activity associated with the NTS Interconnector (500 m) with construction work associated with Orchard End wind farm visible beyond (2.7 km).
Visual Receptor VR6.16: North View, Bone Hill Lane	High Moderate Negative (Year 1/Year 2) No Change (Year 3)	Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Filtered southerly view to temporary activity associated with the NTS Interconnector (450 m) with construction work associated with Orchard End wind farm visible beyond (2.2 km).
Visual Receptor VR6.17: Footpath 39	High Moderate, negative (Year 1/Year 2) No change (Year 3)	Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Footpath directly affected by construction activity. Users would have a series of sequential open views

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
			over a 1 km length to temporary activity associated with the NTS Interconnector with construction work associated with Orchard End wind farm visible in a series of sequential southerly views beyond (1.2 Km at its closest location).
Visual Receptor VR 6.18: Bone Hill Farm, Bone Hill Lane	High Moderate negative (Year 1/Year 2) No Change (Year 3)	Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Open easterly views to temporary activity associated with the NTS Interconnector (250 m). There would also be a southerly view to construction work associated with Orchard End wind farm (1.8 km).
Visual Receptor VR6.19: Footpath FP43	High Moderate Negative (Year 1/Year 2) No Change (Year 3)	Neutral (Year 1) Moderate adverse (Year 2) Neutral (Year 3)	Users would have a series of sequential filtered and open northerly views over a 750 m length to temporary activity associated with the NTS Interconnector (400 m at its nearest point). There would also be a series of sequential southerly views to construction work associated with Orchard End wind farm (980 m at its closest point).
Visual Receptor VR6.20: Properties at Rushy Slack Farm, Bone Hill Lane	High Moderate negative (Year 1/Year 2) No Change (Year 3)	Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Filtered north and westerly views to temporary activity associated with the NTS Interconnector (250 m). There would also be a southerly view to construction work associated with



<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
			Orchard End wind farm (1.4 km).
Visual Receptor VR6.21: Black Hill Farm	High Moderate Negative (Year 1/Year 2) No Change (Year 3)	Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Open northerly view to temporary activity associated with the NTS Interconnector (700 m). There would also be a southerly view to construction work associated with Orchard End wind farm (920 m).
Visual Receptor VR6.22: Footpath FP44	High Moderate negative (Year 1/Year 2) No change (Year 3)	Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Users would have a series of sequential filtered and open northerly views over a 700 m length to temporary activity associated with the NTS Interconnector (500 m distance at its nearest point). There would also be a series of sequential southerly views to construction work associated with Orchard End wind farm (1.4 km at its closest point).
Visual Receptor VR6.23: Kentucky Farm off Bone Hill Lane	High Moderate negative (Year 1/Year 2) No Change (Year 3)	Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Open northerly short range view to temporary activity associated with the NTS Interconnector (150 m). There would also be a southerly view to construction work associated with Orchard End wind farm (1.4 km).
Visual Receptor VR6.24: Footpath FP15a	High Moderate, negative (Year 1/Year 2) No Change (Year 3)	Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Users would have a series of sequential open northerly short range views over a 450 m length to temporary activity associated with the NTS Interconnector (100 m distance at

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
			its nearest point). There would also be a series of sequential southerly views to construction work associated with Orchard End wind farm (1.4 km).
Visual Receptor VR6.25: Cogie Hill Farm, Crookabreast Farm & Gibstick Cottages, Island Lane	High Moderate negative (Year 1/Year 2) Moderate (Year 3)	Moderate adverse (Year 1/Year 2) Significant (Year 3)	Either filtered or open slightly elevated southerly view to temporary activity associated with the NTS Interconnector (250 m) and south westerly view of short term activities associated with NTS Interconnector metering station (700 m from closest property). Construction work associated with Orchard End wind farm (1.95 km) would be visible beyond.

### Landscape Character Type LCT-7: Farmed Lowland

#### LCA-7a: Nateby Farmed Lowland

- 2.2.13 It is anticipated the potential cumulative impacts would be solely related to those affecting the visual amenity of this area and would result from the combined construction activity associated with the NTS Interconnector, its metering station and the adjacent Orchard End wind farm. These impacts would occur mainly over a 12 month period in Year 1/Year 2 and would be of short term duration. The combined construction elements of the NTS interconnector and the Orchard End wind farm which would potentially be visible at the same time are summarised in Table 1-90 below.

**Table 2-90 LCA-7a: Schedule of Cumulative Construction Activity**

<b>Activity</b>	<b>Description</b>
NTS Interconnector - 12 months (Year 1/Year 2)	Low lying temporary series of sequential activities to install underground gas pipeline within a 37 m wide working area. Construction activity associated with the installation of the above ground metering station (see Figure 1.21 of Volume 2A).
Planning Application 09/00352 (Resubmission of 08/00204) (CLP Wind Projects) (Source WBC)	This development would be located at Orchard End Farm, Eagland Hill, approximately 350 m south of the study area at the east extent of LCA-6: Pilling Farmed Mosses. The development would comprise the erection of 2 wind turbines with a hub height of 80m and a tip height of 125m, access track, control building and a temporary compound.

***Potential Construction Cumulative Impacts on Landscape Character***

- 2.2.14 With reference to Table 1-90 the construction phase would be over a 12 month period in Year 1/Year 2 resulting in localised disturbance within a relatively narrow working corridor across a large scale low lying flat area. The construction of the wind turbines at Orchard End would form a noticeable new element within the west part of this area.
- 2.2.15 It is anticipated, by Year 3 the land within the working area of the interconnector pipeline, other than at the metering station compound would be fully reinstated and returned to agriculture. However, the metering station compound although a relatively minor element would be visible in the context of the wind turbines at Orchard End.
- 2.2.16 This landscape has some capacity to absorb the type of construction and post construction activity proposed because, with reference to LCC document; Landscape Sensitivity to Wind Energy Development in Lancashire (2005), Figure 2, it is recognised that this is a landscape which has a low sensitivity for wind farm development and because of its low lying, flat landform and large scale would be able to absorb the relatively low key and temporary nature of the Project activities.
- 2.2.17 With reference to Table 14-8 of Chapter 14 of Volume 1A the sensitivity of this area is considered to be **low** and with reference to Table 14-9 of Chapter 14 of Volume 1A the magnitude of change resulting from the short term construction work in Year 1/Year 2 is considered to be **minor** negative and in Year 3 **negligible negative**. With reference to Table 14-10 of Chapter 14 of Volume 1A this would result in a **slight** adverse impact in Year 1/Year 2 and a **neutral** impact in Year 3.

**Potential Construction Cumulative Impacts on Visual Amenity**

2.2.18 The potential impacts on views are summarised in Table 1-91 below.

**Table 2-91 LCA-7a: Construction Cumulative Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change <small>(see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)</small>	Significance of Effect <small>(see Table 14-13 of Chapter 14 of Volume 1A)</small>	Comment
Visual Receptor VR7.2: Footpath	High Moderate, negative (Year1/Year 2) Moderate (Year 3)	Moderate adverse (Year 1/Year 2) Significant (Year 3)	Users would have a series of sequential open southerly views over 950 m length of short term activities associated with the NTS Interconnector metering station. (350 m at its closest point) with construction work associated with Orchard End wind farm (2 km) visible beyond.
Visual Receptor VR7.3a: Converted Barn	High Moderate, negative (Year1/Year 2) Moderate (Year 3)	Moderate adverse (Year 1/Year 2) Significant (Year 3)	Slightly elevated open southerly view of short term activities associated with the NTS Interconnector metering station (550 m). Construction work associated with Orchard End wind farm (2 km) would be visible beyond.
Visual Receptor VR7.3b: Island Farm	High Moderate, negative (Year 1/Year 2) Moderate (Year 3)	Moderate adverse (Year 1/Year 2) Significant (Year 3)	Slightly elevated open southerly view of short term activities associated with the NTS Interconnector metering station (550 m). Construction work associated with Orchard End wind farm (2.2 km) would be visible beyond.
Visual Receptor VR7.4: Bridleway BW1	High Moderate, negative (Year 1/Year 2)	Moderate adverse (Year 1/Year 2) Significant (Year 3)	Bridleway directly affected by construction activity. Users would have a series of sequential filtered or open westerly views over a 600 m length to short term activities

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
	Moderate (Year 3)		associated with the NTS Interconnector and metering station. Construction work associated with Orchard End wind farm (2.2 km) would be visible beyond.
Visual Receptor VR7.5: Footpath FP3	High No Change (Year 1) Moderate negative (Year 2) No Change (Year 3)	Neutral (Year 1) Moderate adverse (Year 2) Neutral (Year 3)	Users would have a series of sequential open southerly views over a 850 m length of temporary activities associated with the NTS Interconnector (350 m at its closest point). There would also be a westerly view to construction work associated with Orchard End wind farm (2.4 km).
Visual Receptor VR7.12: Footpath FP4	High Moderate, negative (Year 1/Year 2) No Change (Year 3)	Moderate adverse (Year 1/Year 2) Neutral (Year 3)	Footpath directly affected by construction activity. Users would have a series of sequential open views over a 650 m length to temporary activity associated with the NTS interconnector. There would also be a westerly view to construction work associated with Orchard End wind farm (2.4 km).

## TCT- 9: Urban / Industrial Estuary Edge

### TCA-9c: Fleetwood Harbour Village

- 2.2.19 It is anticipated the potential cumulative impacts would solely affect the visual amenity of this area and would result from the combined construction activity associated with the Project's brine outfall, seawater pump station, northern river crossing (west) compound with that of the adjacent Riverside Waste Transfer and Recycling Centre. These cumulative impacts would potentially occur over a 12 month period in Year 1 and would be of short term duration. The combined construction elements of the Project and the Riverside Waste Transfer and Recycling Centre are summarised in Table 1-92 below.

**Table 2-92 LCA-3a: Schedule of Cumulative Construction Activity**

<b>Activity</b>	<b>Description</b>
North River Crossing (TCA-9c)– 4.5 months (Year 1)	Low lying, temporary activity associated with the crossings west compound and its perimeter hoarding.
Fleetwood brine pipeline and Sea Water Pipeline (TCA-9c) – 2 Months (Year 1)	Low lying, temporary series of sequential activities associated with laying the underground pipelines including trenching, stock piling of soil and materials, access road and the reinstatement of ground.
Sea Water Pump Station (TCA- 9b) – 12 months (Year 1 / Year 2)	New build activity including site compound, perimeter hoarding, installation of building and fitting out, permanent security fencing and landscape works.
Planning application 02/11/0671. Riverside Waste Transfer and Recycling Centre (TCA_9a) (Source LCC)	This development would be located on Jameson Road within townscape character type TCA-9a: A595 Corridor. The development would comprise a £40 m waste to energy facility which would comprise the erection of a building to house a completely contained fluidised bed combustion apparatus to generate up to 10 Mw of electricity from pre stored dry waste with secondary heat/drying capacity, together with construction of a high level enclosed waste conveyor, a 28 m high chimney, and a 40 seat visitor centre and car park. Planning application submitted and validated.

***Potential Construction Cumulative Impacts on Visual Amenity***

2.2.20 The potential impacts on views are summarised in Table 1-93 below.

**Table 2-93 TCA-9c: Construction Cumulative Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	Significance of Effect (see Table 14-13 of Chapter 14 of Volume 1A)	Comment
Visual Receptor VR9.3a: Harbour Village Development: Residential properties along south edge of area (west)	High Moderate, negative (Year 1) Minor positive (Year 2/ Year 3)	Large adverse (Year 1) Slight beneficial (Year 2/Year 3)	Open southerly short range view across the new access road to temporary activities associated with the Project's underground brine outfall and sea water pipe with construction activity associated with the waste transfer station in TCA-9a visible beyond. There would also be an oblique westerly view to construction activity at the Project's Seawater Pumping Station new build within the adjacent TCA-9b.
Visual Receptor VR9.3b: Harbour Village Development: Residential properties under construction along south edge of area (east)	High Moderate negative (Year 1) No Change (Year 2/ Year 3)	Large adverse (Year 1) Neutral (Year 2/Year 3)	Open southerly short range view across the new access road to temporary activities associated with the Project's underground brine outfall and sea water pipe. Construction activity associated with the waste transfer station in TCA-9a would be visible beyond.
Visual Receptor VR9.3c: Harbour Village Development : Residential properties at south west corner of area	High Moderate negative (Year 1), Slight positive (Year 2/Year 3)	Large adverse (Year 1) Slight beneficial (Year 2/Year 3)	Open south westerly short range view to short term construction activity at the Projects Seawater Pumping Station new build within TCA-9b Construction activity associated with the waste transfer station in TCA-9a would be visible beyond. There would also be a short range view to temporary construction activity at the Project's underground brine outfall / sea water pipe working area.

## 2.3 Operation

2.3.1 It is anticipated there would be a potential reduction in the cumulative impacts on visual amenity resulting from the Project's operation in combination with the operation of the Orchard End wind farm. It is anticipated that these cumulative effects would be limited to visual amenity within two character types (LCT-6 and LCT-7). The potential operation cumulative effects of the Project are summarised in Table 14-24 of Chapter 14 of Volume 1A.

### Landscape Character Type LCT-6: Farmed Mosslands

#### **LCA-6a: Pilling Farmed Mosses**

2.3.2 It is anticipated the potential cumulative impacts would be solely related to those affecting the visual amenity of this area and would result from the combined construction activity associated with the NTS Interconnector and the adjacent Orchard End wind farm. These impacts would occur mainly over a six month period in Year 1/Year 2 and would be of temporary duration. The combined construction elements of the NTS interconnector and the Orchard End wind farm which would potentially be visible at the same time are summarised in Table 1-94 below.

**Table 2-94 LCA-6a: Schedule of Cumulative Operation Activity**

<b>Activity</b>	<b>Description</b>
NTS Metering Station (LCA-7a)	Operation activity associated with a small above ground metering station (see Figure 1.21 of Volume 2A).
Planning Application 09/00352 (Resubmission of 08/00204) (CLP Wind Projects) (Source WBC)	Operation of two wind turbines with a hub height of 80m and a tip height of 125m at Orchard End Farm, Eagland Hill, approximately 350 m south of the study area at the east extent of LCA-6: Pilling Farmed Mosses.

#### ***Potential Operation Cumulative Impacts on Visual Amenity***

2.3.3 The potential impacts on views are summarised in Table 1-95 below.



**Table 2-95 LCA-6a: Construction Cumulative Visual Impact Schedule**

<b>Visual Receptor</b>	<b>Sensitivity and Magnitude of Change</b> (see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)	<b>Significance of Effect</b> (see Table 14-13 of Chapter 14 of Volume 1A)	<b>Comment</b>
Visual Receptor VR6.25: Cogie Hill Farm, Crookabreast Farm & Gibstick Cottages, Island Lane	Moderate (Year 9 to Year 18) No Change (Year 19 to Year 40)	Significant (Year 9 to Year 18) Neutral (Year 19 to year 40)	Either filtered or open slightly elevated southerly view to the metering station (700 m from closest property) with the two turbines at Orchard End visible beyond (1.95 km). Overtime the Projects embedded landscape design proposals would integrate the metering station in the wider view.

Landscape Character Type LCT-7: Farmed Lowland

*LCA-7a: Nateby Farmed Lowland*

2.3.4 It is anticipated the potential cumulative impacts would be solely related to those affecting the visual amenity of this area and would result from the combined construction activity associated with the NTS Interconnector, its metering station and the adjacent Orchard End wind farm. These impacts would occur mainly over a 12 month period in Year 1/Year 2 and would be of short term duration. The combined construction elements of the NTS interconnector and the Orchard End wind farm which would potentially be visible at the same time are summarised in Table 1-96 below.

**Table 2-96 LCA-7a: Schedule of Cumulative Operation Activity**

<b>Activity</b>	<b>Description</b>
NTS Metering Station	Operation activity associated with a small above ground metering station (see Figure 1.21 of Volume 2A).
Planning Application 09/00352 (Resubmission of 08/00204) (CLP Wind Projects) (Source WBC)	Operation of two wind turbines with a hub height of 80m and a tip height of 125m at Orchard End Farm, Eagland Hill, approximately 350 m south of the study area at the east extent of LCA-6: Pilling Farmed Mosses.

**Potential Operation Cumulative Impacts on Visual Amenity**

2.3.5 The potential impacts on views are summarised in Table 1-97 below.

**Table 2-97 LCA-7a: Operation Cumulative Visual Impact Schedule**

Visual Receptor	Sensitivity and Magnitude of Change <small>(see Tables 14-11 and 14-12 of Chapter 14 of Volume 1A)</small>	Significance of Effect <small>(see Table 14-13 of Chapter 14 of Volume 1A)</small>	Comment
Visual Receptor VR7.2: Footpath	Moderate (Year 9 to Year 18) No Change (Year 19 to Year 40)	Significant (Year 9 to Year 18) Neutral (Year 19 to Year 40)	Users would have a series of sequential open southerly views over 950 m length to the NTS Interconnector metering station. (350 m at its closest point) with the two turbines at Orchard End visible beyond (2 km). Overtime the Projects embedded landscape design proposals would integrate the metering station in the wider view.
Visual Receptor VR7.3a: Converted Barn	Moderate (Year 9 to Year 18) No Change (Year 19 to Year 40)	Significant (Year 9 to Year 18) Neutral (Year 19 to Year 40)	Slightly elevated open southerly view to the NTS Interconnector metering station (550 m) with the two turbines at Orchard End visible beyond (2 km). Overtime the Projects embedded landscape design proposals would integrate the metering station in the wider view.
Visual Receptor VR7.3b: Island Farm	Moderate (Year 9 to Year 18) No Change (Year 19 to Year 40)	Significant (Year 9 to Year 18) Neutral (Year 19 to Year 40)	Slightly elevated open southerly view of short term activities associated with the NTS Interconnector metering station (550 m) with the two turbines at Orchard End visible beyond (2.2 km). Overtime the Projects embedded landscape design proposals would integrate the metering station in the wider view.
Visual Receptor VR7.4: Bridleway BW1	Moderate (Year 9 to Year 18) No Change (Year 19 to Year 40)	Significant (Year 9 to Year 18) Neutral (Year 19 to Year 40)	Users would have a series of sequential filtered or open westerly views over a 600 m length to the NTS Interconnector metering station with the two turbines at Orchard End visible beyond (2.2 km). Overtime the Projects embedded landscape design proposals would integrate the metering station in the wider view.