

7 LANDSCAPE VISUAL IMPACT APPRAISAL (LVIA)

7.1 INTRODUCTION

This Chapter of the Environmental Statement (ES) evaluates the effects of the Retford Circular Economy Project (the Proposed Development) on landscape character (as a resource in its own right) and the visual amenity of receptors. The EIA Regulations establish in broad terms what is to be considered when determining the effects of development proposals on landscape and visual impact appraisal (LVIA) issues.

This assessment was undertaken by a chartered landscape architect at Arcus Consultancy Services Limited (Arcus) on behalf of Lound Hive Limited (the Applicant).

This Chapter includes the following elements:

- Planning Policy Context and Guidance;
- Compliance with Planning Policy;
- Consultation Process;
- Assessment Methodology;
- Scope;
- Baseline Conditions;
- Development Proposals Summary;
- Development Design and Mitigation;
- Limitations and Assumptions;
- Assessment of No Development Scenario;
- Assessment of Landscape Effects;
- Assessment of Visual Effects;
- Cumulative Effects Assessment;
- Summary of Residual Effects; and
- Statement of Significance

And the Figures in Volume 2:

- Figure 7.1: Core LVIA Study Areas (1-5 km)
- Figure 7.2: Aerial Mapping
- Figure 7.3: Topography
- Figure 7.4: Existing Bare Earth ZTV with Viewpoint Locations
- Figure 7.5: Existing Screened ZTV with Viewpoint Locations
- Figure 7.6a: East Midlands Landscape Character Areas
- Figure 7.6b: Local Landscape Character Areas
- Figure 7.7: Landscape Designations
- Figure 7.8: Visual Amenity
- Figure 7.9: Transport and Recreational Routes
- Figure 7.10: Cumulative Sites
- Figure 7.11: Existing Photographic Viewpoints – 1 to 12; and
- Figure 7.12: Indicative Restoration Landscape Masterplan (Drawing No. 4092_DR_LAN_101 Rev B).

This Chapter of the EIA Report is supported by the following in the Technical Appendices in Volume 3:

- Appendix 7.1: LVIA Methodology;
- Appendix 7.2: Visual Assessment Methodology;
- Appendix 7.3: Cumulative LVIA Methodology;
- Appendix 7.4: Zone of Theoretical Visibility (ZTV) Methodology;
- Appendix 7.5: Cumulative LVIA (CMLVIA) Tables;

- Appendix 7.6: Landscape Analysis Tables;
- Appendix 7.7: Visual Analysis Tables; and
- Appendix 7.8: Arboricultural Report to BS 5837:2012 (AWA Tree Consultants, December 2022 (AWA4613)).

7.2 PLANNING POLICY CONTEXT AND GUIDANCE

The following guidance, legislation, and information sources have been considered in carrying out this assessment:

- National Planning Policy Framework (NPPF,2021)¹;
- Nottinghamshire County Council Mineral Plan (2021-2036)²;
- Bassetlaw Local Development Framework (2011-2028)³;
- Lound Neighbourhood Plan (February 2022)⁴;
- Sutton-Cum-Lound Neighbourhood Plan (2016)⁵;
- Natural England (2013), National Character Areas: NCA Profile: 39. Humberhead Levels (NE339)⁶;
- East Midlands Regional Landscape Character Assessment (EMRLCA, 2010)⁷;
- Bassetlaw District Landscape Character Assessment (BDLCA, 2009)⁸ ;
- Ordnance Survey mapping at 1:50,000 and 1:25,000 scales;
- Aerial Photography;
- Web GIS data bases;
- Lidar data⁹;
- MAGIC website; and
- Google Earth, Street View and Maps.

7.2.1 National Policy

The National Planning Policy Framework (NPPF, 2021) presents the government planning policies for England and how these are expected to be applied. The NPPF places great emphasis on plans and developments that contribute to sustainable development.

Policies and paragraphs which cover landscape and visual matters and which are most relevant to the Site and the Proposed Development include:

- Paragraph 174 deals with the natural environment with bullets a) and b) noting that policies and decisions should not only protect and enhance valued landscapes, but also recognise the intrinsic character and beauty of the wider countryside. Bullet d)

¹ National Planning Policy Framework (NPPF,2021) Available online: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> Accessed: 08/02/2023;

² Nottinghamshire County Council Adopted Mineral Plan (2021-2036) Available online: <https://www.nottinghamshire.gov.uk/planning-and-environment/minerals-local-plan/adopted-minerals-local-plan> Accessed: 08/02/2023;

³ Bassetlaw Local Development Framework (2011-2028) Available online: <https://www.bassetlaw.gov.uk/planning-and-building/planning-services/planning-policy/core-strategy-and-development-policies/> Accessed; 08/02/2023;

⁴ Lound Neighbourhood Plan (February 2022) Available online: <https://www.bassetlaw.gov.uk/planning-and-building/planning-services/neighbourhood-plans/all-neighbourhood-plans/lound-neighbourhood-plan/> Accessed: 08/02/2023;

⁵ Sutton-Cum-Lound Neighbourhood Plan (2016) Available online: <https://www.bassetlaw.gov.uk/planning-and-building/planning-services/neighbourhood-plans/all-neighbourhood-plans/lound-neighbourhood-plan/> Accessed 08/02/2023;

⁶ Natural England (2013), National Character Areas: NCA Profile: 39. Humberhead Levels (NE339) Available online: <http://publications.naturalengland.org.uk/publication/1843305> Accessed: 08/02/2023;

⁷ East Midlands Regional Landscape Character Assessment (EMRLCA, 2010) Available online: <http://publications.naturalengland.org.uk/publication/5635681403535360> Accessed 08/02/2023; and

⁸ Bassetlaw District Landscape Character Assessment (BDLCA, 2009) Available online: <https://www.bassetlaw.gov.uk/media/1648/bslandscapecharacteroverview.pdf> Accessed: 08/02/2023.

also notes that new development should minimise impacts on, and provide net gains for, biodiversity. Paragraph 130, covers design although matters of layout and appearance are not particularly relevant to the type of development proposed here. However, bullet b) notes that developments should incorporate effective landscaping, whilst bullet c) requires developments to be sympathetic to local character and their landscape setting;

- Paragraph 209 of the NPPF states that *"It is essential that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods that the country needs"* and as these resources are finite and *"...can only be worked where they are found, best use needs to be made of them..."*
- The following Paragraph 210 (b) notes that *"...as far as practicable planning policies should take account of the contribution of substitute or secondary recycled materials and minerals waste provide to the supply of materials before considering extraction of primary resources whilst aiming to source minerals indigenously."*
- It is noted that Paragraph 211 states that *"...great weight should be given to the benefits of mineral extraction, including to the economy"* but that consideration should be provided *'to ensure there are no unacceptable adverse impacts on the natural and historic environment'* and that any assessment should *"...take into account the cumulative effect of multiple impacts from individual sites and / or from a number of sites in a locality"*. It later goes on to say that allowance should be made *"...for restoration and aftercare at the earliest opportunity."*

7.2.2 Nottinghamshire County Council Minerals Plan

Nottinghamshire County Council Minerals Local Plan (2021-2036) provides strategic policies and objectives against which future mineral development is assessed. Strategic objective SO6: Protecting and Enhancing Natural Assets, requires that all proposals should follow an approach of *"...avoiding, minimising, and mitigating potential negative impacts"* and that they *"...maximise net biodiversity gain by enhancing and reconnecting existing habitat and creating new habitat through a landscape led approach."*

Policy DM8: Cumulative Impact states that *"Proposals will be supported where it can be demonstrated that there are no unacceptable cumulative impacts on the environment or on the amenity of a local community."*

7.2.3 Local Planning Framework

The Bassetlaw Local Development Framework (LDF) comprise the development planning documents (DPDs). These documents include the Core Strategy (CS) and Development Management Policies DPD, which is central to this framework. The Bassetlaw Core Strategy & Development Management Policies DPD, (December 2011) is the key LDF document adopted formally on 22nd December 2011 and provides the vision for Bassetlaw up to 2028.

The following strategic planning objectives and policies within the LDF document relevant to landscape and visual matters are set out below:

Policy DM9: Green Infrastructure: Biodiversity & Geodiversity; Landscape; Open Space & Sports Facilities seeks to protect and enhance green infrastructure, biodiversity and related open spaces that may be affected by proposed developments and states that development proposals in the countryside would be expected to be sensitive to setting and the distinctive qualities of the landscape character zone in which they would be sited. Proposals are expected to respond to local recommendations made in the Landscape Character Assessment.

Policy 41: Trees, woodlands and hedgerows notes that the Council will protect existing trees, woodland and hedgerows and secure additional planting that increase canopy cover in the interests of biodiversity, amenity and climate change adaptation by *"...giving*

consideration to trees and hedgerows both on individual merit as well as their contribution to amenity and interaction as part of a group within the broader landscape setting."

7.2.4 Neighbourhood Plans

Since April 2012, local communities have been able to produce Neighbourhood Plans for their local area. Local settlements Lound, and Sutton cum Lound have Neighbourhood Plans. Policies of relevance to landscape and visual matters, are:

- Sutton cum Lound Neighbourhood Plan (2016-2031): Policy 8 Improving Green Infrastructure: This policy notes that support will be given to development which delivers improvements to the local green infrastructure network. Particular support will be given to proposals that *'are compatible with local recommendations made in the Bassetlaw Landscape Character Assessment and do not result in the loss of or harm to features of identified ecological value'*; and
- Lound Neighbourhood Plan and Design Code (February 2022). The Neighbourhood plan boundary adjoins the northern boundary of the Site. Six key views are identified in the plan, one of which Key View 8 from near a heritage asset on Town Street overlooks the Site in a south-easterly direction from the North. This viewpoint is assessed within the visual effects appraisal.

7.2.5 European Landscape Convention

The European Landscape Convention (ELC) was ratified in the UK on the 21 November 2006 and became binding on 1 March 2007.

The ELC defines landscapes as:

"An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors."

The ELC applies to natural, rural, urban and peri-urban areas including land, inland water and marine areas. Its purpose is to promote landscape protection, management and planning in relation to all landscapes, regardless of whether their quality and condition is considered outstanding, ordinary or degraded.

The UK is recognised as putting many of the principles of the ELC into practice. The importance of landscapes in contributing to local identity and in reflecting local cultural influences and ecological diversity is demonstrated through the use of Landscape Character Assessments at a national, regional and/ or local level.

7.3 COMPLIANCE WITH PLANNING POLICY

This development complies with National Planning policy, because the Proposed Development focusses on utilising minerals where they are found, particularly secondary recycled materials in this case pulverised fuel ash (PFA). This LVIA, and the wider EIA, will also ensure that the extraction of this waste material would have limited significant impacts on the wider environment (both individually and cumulatively), and appropriate mitigation would be implemented to minimise impacts.

On a local level, the Nottinghamshire Minerals Plan, and the Local Planning Framework highlight the importance of improving biodiversity and green infrastructure, including species and habitats. The development and its associated Restoration Plan (**Figure 7.12 Volume 2 of this ES**) demonstrates that the Proposed Development would result in a biodiversity net gain on the Site, associated with proposed new habitats such as pasture, wetland meadow, and lakes, and the species that would utilise them.

Existing vegetation would also be enhanced, such as proposed woodland, hedgerows, and trees, which will improve connectivity between green infra-structure in the surrounding area. Furthermore, this LVIA has utilised the Bassetlaw Landscape Character

Assessment to assess the sensitivity of the landscape and consider local recommendations' for the landscape.

The Lound Neighbourhood Plan has also been used to suggest key views that are considered within this assessment, indicating that policy has been reviewed and carefully considered throughout the assessment.

7.4 CONSULTATION PROCESS

Pre-application planning advice was provided by Nottinghamshire County Council (NCC) as the responsible authority in relation to mineral planning in March 2021. Guidance where relevant has been incorporated into the Proposed Development.

A scoping report (Planning Application reference: SC/4471) was subsequently submitted to the relevant planning authority in October 2022 requesting additional comments and guidance on the approach to the LVIA, proposed study areas, guidance to be followed, and viewpoints to be assessed. A response was received on the 4th November 2022. These considerations where applicable, have also been incorporated into this appraisal.

The scoping consultation responses are shown in **Table 7.1** below:

Table 7.1: Scoping and Consultation Response

Consultee	Type and Date	Summary of Consultation Response	Response to Consultee
Nottinghamshire County Council (NCC)	Letter from Planning (11 th March 2021)	Policy DM9 of the Bassetlaw Core Strategy states that development proposals in the countryside will be expected to be sensitive to landscape setting and are expected to enhance the distinctive qualities of the landscape character zone in which they would be sited. Proposals are expected to respond to the local recommendations made in the Landscape Character Assessment	Baseline landscape character analysis is included along with an assessment and effects on the landscape as a resource during construction, operation, and post-restoration and aftercare within this chapter at section 7.7.3 Landscape Character.
		An LVIA will be required to be undertaken to the accepted best practice which is the 'Guidelines for Landscape and Visual Impact Assessment' (GLVIA3), Third Edition published by the Landscape Institute and Institute of Environmental Managers and Assessment (April, 2013) ¹⁰ Landscape and visual impact will need assessing for the operational and restoration stages	This LVIA has been written to this guidance by a suitably qualified and experienced chartered landscape architect. Assessment of the effects of construction, operation and post-restoration and aftercare have been incorporated for landscape and visual amenity. Refer to section 7.15 Summary of Residual Effects
		When selecting viewpoints account should be taken of the various public	Twelve representative viewpoints have been

¹⁰ Landscape Institute/ Institute of Environmental Management and Assessment (2013), 'Guidelines for Landscape and Visual Impact Assessment', 3rd Edition ('GLVIA3')

Consultee	Type and Date	Summary of Consultation Response	Response to Consultee
		footpaths/ rights of way in the area, residential receptors, and views from Lound and Sutton-cum-Lound.	selected to illustrate baseline context and potential effects on PRow, several residential receptors and from the settlement edge of both Lound and Sutton-cum-Lound. Refer to section 7.13.4 Viewpoint Assessment
	Via East Midlands	The scheme will involve the removal of mature vegetation, to this end an arboricultural survey should be included as part of the application to map the existing vegetation, this will help to quantify this resource and aid decisions of what should be retained and what should be removed. Any mitigation can be assessed against the amount of vegetation to be removed.	An arboricultural survey was undertaken in December 2022 and is included in Appendix 7.8 (Volume 3 of the ES)
		Because of the location of the Proposed Development immediately adjacent to the Idle Valley Nature Reserve we are in agreement with the lead Conservation Officer that there needs to be a biodiversity led restoration proposal.	Noted. Post restoration a range of habitats including tree and woodland planting with a reed fringed lake and wet grassland are proposed. Refer to Figure 7.12 Indicative Landscape Restoration Masterplan (Volume 2 of the ES)
		Although the scheme will involve vegetation removal, as the pre-app information describes, it is also an opportunity to remove the incongruous landform of the elevated former PFA lagoons within the flat and open landscape but there must be a balance between the two objectives	Agreed. The embankments would be retained during construction and extraction activities and would only be removed as the PFA lagoons are restored to the new landform gradients and proposed habitat.
		A map of the Zone of Theoretical Visibility (ZTV) should be produced as part of the LVIA. This will need to take account of any tall structures that will be required to process and dry the excavated PFA material	A bare-earth and screened ZTV have been provided. Refer to Figures 7.4 and 7.5 (Volume 2 of the ES)
Nottinghamshire County Council (NCC)	Letter from Planning (4 TH)	It is clear that the LVIA will need to take account of what will be a phased/staged development of initial	Agreed, this will be included within the LVIA

Consultee	Type and Date	Summary of Consultation Response	Response to Consultee
	November 2022)	set up, phased extraction and progressive restoration. The restored landscape may also need time to mature and so assessment say +20 years may also be needed in terms of landscape and also visually	
		Cumulative developments to be listed and shown in a plan. To include the new housing allocations extending along North Road to Bellmoor currently being partially built out, and also include the substantial Tilm Solar Farm about to commence construction to the east of the River Idle.	Noted and agreed
	Via East Midlands	The applicant should refer to Landscape Institute Technical Guidance Note 21 Assessing Landscape Value Outside National Designations (May, 2021)	Noted and agreed
		The EMD team are in agreement with the proposed study area of 2 km radius, and a cumulative study area of 10 km	Noted and agreed
		We agree with the range of viewpoints chosen, these cover recreational receptors on Public Rights of Way (PRoW), residential receptors within the closest settlements, and vehicular receptors on adjacent roads. It is also suggested that additional viewpoints are added from the Grade 1 Listed St Bartholomew's Church, the eastern edge of Sutton-cum-Lound near Sutton FP3, from the beginning of Chainbridge Lane and from Idle Valley Nature Reserve to the north of the River Idle	Noted, these additional viewpoints have been included within the appraisal where there was found to be a potential clear view to the Site. St Bartholomew's Church was visited but found not to have a view due to intervening built form.
	Natural Environment (Conservation Team)	All efforts should be made to retain existing woodland wherever possible, particularly around the site margins, and to enhance this as part of the proposals	Noted, and this is the approach taken.

7.5 ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

A detailed description of the assessment methodology is included in the **Technical Appendix (Volume 3 of this ES)**. It is summarised below:

The two components of LVIA referred to throughout the report are based on the following definitions:

- 'Assessment of landscape effects: assessing effects on the landscape as a resource in its own right' ; and
- 'Assessment of visual effects: assessing effects on specific views and on the general visual amenity experienced by 'people'.

Development may have a direct (physical) effect on the landscape in which it is located as well as an indirect or perceived effect from landscape character areas surrounding it. The potential landscape effects occurring during the construction and operational stages of the Proposed Development may therefore include, but are not restricted to, the following:

- Changes to landscape elements: the addition of new elements or the removal of vegetation, buildings and other characteristic elements of the landscape character type;
- Changes to landscape qualities: degradation, erosion, or reinforcement of landscape elements and patterns, and perceptual characteristics, particularly those that form key characteristic elements of landscape character types;
- Changes to landscape character: landscape and character may be affected through the effect on characteristic elements (including perceptual characteristics), landscape patterns and attributes and the cumulative addition of new features, the magnitude and presence of which is sufficient to alter a notable part of the overall landscape character type of a particular area; and
- Cumulative landscape effects: where more than one development may lead to a potential landscape effect.

Visual effects are concerned wholly with the effect of development on visual receptors and general visual amenity. Visual effects are identified for different receptors (people) who would experience the view such as at their places of residence, during recreational activities, at work, or when travelling through the area. Visual effects may include the following:

- Visual effect: change in the appearance of the landscape as a result of development. This may include changes to the quality of the view, ability of the visual receptor to appreciate the view, or changes to the characteristic elements within the view. These changes can be beneficial (i.e. positive or an improvement), neutral (no change), or adverse (i.e. negative or a detraction); and
- Cumulative visual effect: the cumulative or incremental visibility of similar types of development may combine to have a cumulative visual effect.

The process involves design and re-assessment of any remaining, residual significant adverse effects that could not otherwise be mitigated or 'designed out'. Landscape or visual sensitivity is ranked from high, medium, low to negligible, and the magnitude of change is similarly ranked from large, medium, small to negligible as indicated in **Table 7.2**. The type of effect is also considered and may be direct or indirect, temporary or permanent, cumulative, and beneficial, neutral or adverse. The landscape and visual assessment involves a combination of both quantitative and subjective assessment and wherever possible has sought to gain a consensus of professional opinion through consultation, peer review and the adoption of a systematic, impartial, and professional approach.

In accordance with the EIA Regulations, it is essential to determine whether the predicted effects are likely to be 'significant'. Significant landscape and visual effects, in the assessor's opinion, resulting from the Proposed Development would be all those effects that normally result in a 'major', a 'moderate-major', or above a 'moderate' effect with any exceptions being clearly explained (refer to Table 7.2 below). The landscape and visual assessment unavoidably involves a combination of both quantitative and qualitative assessment and wherever possible a consensus of professional opinion has been sought through consultation, internal peer review, and the adoption of a systematic, impartial, and professional approach.

Effects predicted to be of major or above moderate significance are shaded in light grey. Although moderate effects may be viewed as 'not significant' depending upon their context.

Table 7.2: Evaluation of Landscape and Visual Effects

		Sensitivity (value / importance)			
		High	Medium	Low	Negligible
Magnitude of change	Large	Major	Moderate – Major	Minor – Moderate	Negligible
	Medium	Moderate – Major	Moderate	Minor	Negligible
	Small	Minor – Moderate	Minor	Negligible – Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

The level of landscape and visual effect has been assessed based on the sensitivity of the affected resource / receptor, and the magnitude of change caused by the Proposed Development. The higher the sensitivity of the receptor and the greater the magnitude of change results in more potential for significant effects.

7.5.1 Cumulative Assessment

In addition to assessing the Proposed Development as a standalone scheme, an LVIA may also consider the additional effects on landscape character and visual amenity of the Proposed Development in conjunction with other similar schemes in the vicinity. Cumulative assessment relates to the effects of more than one development whose cumulative effects may be greater than the individual effects of development on the landscape. Cumulative effect may be sequential where developments are seen separately one after another as a receptor moves through the landscape or combined (where more than one development is visible in the view).

It is important to note the following:

- Combined cumulative effects may be the same or greater than the individual application scheme;
- Incremental cumulative effects may be the same or reduced i.e. where the effects of other schemes (if consented) would become part of the baseline and the incremental change from the addition of the application scheme would be less apparent; and
- If there is a significant distance and a degree of intervening landform, vegetation or built form between the developments, there may be no cumulative effect.

This is relevant with this proposal, as there is potential for cumulative effects with several other schemes currently in application, construction, or operation within the 5 km cumulative sites study area.

This is discussed in more detail at Section 7.12. The cumulative sites included within this appraisal are illustrated on **Figure 7.10 (Volume 2 of the ES)**.

7.5.2 Zones of Theoretical Visibility

To assist with defining the area within which the Proposed Development would be likely to be seen, and to help identify potential visual receptors and viewpoint locations, particularly of the buildings and plant infra-structure, ZTV diagrams have been prepared.

ZTVs are computer-generated from a digital terrain model of the 2 km radius study area (using OS Terrain 5 at 5 m resolution), with a 3D model of the Development using height parameters of the different elements of the built form and infrastructure i.e., silos and conveyor belts. They illustrate the theoretical visibility of the Proposed Development

throughout the study area based on an average eye height of an adult person (taken as 1.6 m).

In this instance, two ZTVs have been prepared: 'bare-earth' and 'screened' (**refer to Figures 7.4 and 7.5, Volume 2 of the ES**).

The Bare-earth ZTV illustrates theoretical visibility of the Proposed Development without the screening afforded by buildings and vegetation and, as such, it represents a 'worst-case scenario'.

The Screened ZTV takes account of screening by buildings and woodland (identified from OS Vector Map District Data), however, it does not take into account hedgerows, individual and groups of trees and other scattered vegetation which are characteristic features of the study area. In reality, therefore, actual visibility of the Proposed Development is likely to be significantly less than that indicated by the Screened ZTV when factoring in additional screening by hedgerows etc.

The ZTVs are used as a tool in combination with field work, maps, aerial photography and photograph analysis which are used to refine the visual envelope.

7.6 SCOPE

The following documents have been considered for the assessment of potential effects of the Proposed Development on landscape and visual amenity:

- Landscape Institute/ Institute of Environmental Management and Assessment (2013), 'Guidelines for Landscape and Visual Impact Assessment', 3rd Edition ('GLVIA3')¹¹;
- Landscape Institute (2013), GLVIA3 Statement of Clarification 1/13¹²;
- Natural England (2014), 'An Approach to Landscape Character Assessment'¹³;
- Landscape Institute Technical Guidance Note 21 'Assessing Landscape Value outside National Designations (May, 2021)¹⁴; and
- Landscape Institute (2019) Advice Note TGN 06/19 Visual Representation of Development Proposals¹⁵.

As recommended by GLVIA3, this is not a generic LVIA methodology, but has been tailored to be proportionate to the nature, scale, and location of the proposed Scheme.

7.6.1 Study Area / Survey Area

The Study Area comprises the former PFA disposal lagoons and the remaining land required for the Proposed Development (the Site) and the wider setting of the Site. Both the Site and the Study Area fall within the administrative boundaries of Nottinghamshire County Council the responsible minerals planning authority, and Bassetlaw District Council.

The study areas used in this assessment are receptor specific. Different study areas have been used in order to focus on potentially important landscape and visual effects. These

¹¹ Landscape Institute/ Institute of Environmental Management and Assessment (2013), 'Guidelines for Landscape and Visual Impact Assessment', 3rd Edition ('GLVIA3');

¹² Landscape Institute (2013), GLVIA3 Statement of Clarification 1/13 Available online: <https://www.landscapeinstitute.org/technical-resource/glvia3-clarifications/> Accessed 07/02/2023;

¹³ Natural England (2014), 'An Approach to Landscape Character Assessment' Available online: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/691184/landscape-character-assessment.pdf Accessed: 07/02/2023;

¹⁴ Landscape Institute Technical Guidance Note 21 'Assessing Landscape Value outside National Designations (May, 2021) Available online: <https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2021/05/tgn-02-21-assessing-landscape-value-outside-national-designations.pdf> Accessed: 06/02/2023;

¹⁵ Landscape Institute (2019) Advice Note TGN 06/19 Visual Representation of Development Proposals Available online: <https://www.landscapeinstitute.org/visualisation/> Accessed: 05/02/2023.

distances vary, and are established following a review of the specific baseline context of the Site, and on the assessor's opinion based on the zone of visual influence, and the extent to which a development will exert an effect on the surrounding landscape and visual receptors. The study areas used in this assessment are as follows:

- A 0.5 km approximate radius area from the planning application boundary for the Site has been used to appraise visual effects on residential properties;
- A 1.0 km radius area has been used to appraise effects on road and Public Right of Way (PRoW) users;
- A 2 km radius area has been used to appraise effects on landscape character and landscape designations; and
- A 5 km radius area to appraise the potential for cumulative effects with other similar development in the locality.

These specified study areas are considered to be the maximum radius within which significant landscape and/or visual effects could arise given the nature and scale of the Proposed Development and the landscape context being considered. The extents of the study areas are shown in **Figure 7.1 Core LVIA Study Areas (Volume 2 of the ES)**.

7.6.2 Fieldwork

Following the desk-based appraisal, fieldwork was undertaken in September 2022 and January 2023.

Fieldwork was undertaken to:

- Augment and verify published descriptions of landscape character with fieldwork observations;
- Undertake an appraisal of the quality or condition of the baseline landscape and visual resource;
- Identify any significant features and elements in the landscape such as vegetation or built form that would screen the Proposed Development and thereby verify or refine the Zone of Theoretical Visibility (ZTV);
- Review and visit each viewpoint location identified during the desk study and scoping report, and to microsite each viewpoint location in accordance with good practice guidance and to obtain accurate coordinates;
- To undertake viewpoint photography at each viewpoint location; and
- To identify landscape features and elements that may be altered or removed as a result of the Proposed Development.

The fieldwork stage also included an appraisal of effects on the following receptors:

- Landscape resource including landscape character, landscape designations, landscape sensitivity, landscape features and landscape elements;
- Residential and recreational receptors;
- Roads; and
- Public footpaths, bridleways and byways.

7.6.3 Viewpoints

Eleven viewpoints have been selected to illustrate likely views of the Proposed Development from nearby residential properties, the local road network, PRoWs (footpaths, bridleways and byways) and other publicly accessible locations. Some of the viewpoints also illustrate the local landscape context surrounding the Site.

The viewpoints were selected initially by reference to the ZTVs and were then refined in the field to take account of screening by vegetation, buildings and local landform. Following methodology established in GLVIA3, the viewpoints were chosen based on the following criteria:

- Viewpoints should be representative of the likely impacts;
- Viewpoints should show a range of different types of views;
- Viewpoints should be representative of a range of different receptor groups;
- Viewpoints should be representative of a range of distances and directions; and
- Viewpoints should be representative of the varying views of the Proposed Development within the landscape.

A summary of the final viewpoints included in the LVIA is provided in **Table 7.3** below. The location of the viewpoints is shown in conjunction with the ZTVs in **Figures 7.4 Bare-earth ZTV to 2 km with Viewpoints, 7.5 Screened ZTV to 2 km with Viewpoints (Volume 2 of this ES)**. All viewpoints are restricted to publicly accessible locations.

Baseline photographic panoramas located at each viewpoint in the direction of the Site are illustrated on **Figures 7.11a-7.11l (Volume 2 of the ES)**. Some of the viewpoint photography was taken during September and some in the winter during peak visibility. The assessment considers the potential for winter views throughout and the worst-case scenario.

Table 7.3: LVA Selected Viewpoints

Viewpoint Number	Viewpoint Name and Location	Description of View	Receptor Type
1	Chainbridge Lane, Lound (800 m, N)	Viewpoint illustrates landscape context and the immediate setting of the Lound Conservation Area and cluster of Listed Buildings. The view is directed across a field and is filtered by a field boundary hedgerow. Mature woodland forms a skyline feature.	Settlement, residential receptors and PRow user
2	Chainbridge Lane (960 m, NE)	Viewpoint is directed across a wetland area and large lake to a wooded skyline.	Road and PRow user
3	(PRow near Tiln Grange and Whitehouse Farm 770 m, E)	Viewpoint is directed along a track and across arable farmland to a woodland copse and linear belt of trees on the skyline. The distinctive hamlet of Tiln is shown to be in a vegetated setting with open views to the east.	Residential receptor and PRow user
4	Idle Valley Nature Reserve Riverside Discovery Walk (230 m, S)	Viewpoint illustrates the enclosed and vegetated nature of the Idle Valley woodland trails.	Receptors undertaking recreation
5	Idle Valley Nature Reserve Woodland Walk (80 m, S)	Viewpoint is directed across the River Idle and through extensive vegetation to the wooded boundary of the Site	Receptors undertaking recreation
6	Idle Valley Nature Reserve (260 m, S)	Viewpoint is directed across the Idle Valley Nature Reserve wetland area and lake to a belt of mature woodland which is located on the boundary of the Site	Receptors undertaking recreation

Viewpoint Number	Viewpoint Name and Location	Description of View	Receptor Type
7	Sutton Lane North of Cross Road Farm (360 m, SW)	Viewpoint is directed east from the highway through gaps in the hedgerow across a flat landscape of grassland to a vegetated skyline which is the western boundary of the Site	Road user and residential receptors
8	PRoW from end of Town Street, Sutton-cum-Lound (620 m, W)	Viewpoint illustrates the view from a PRoW on the edge of Sutton-cum-Lound. The vegetated landform of the embankment (the 'high-rise') is a skyline feature of a filtered and long-distance and panoramic view.	Settlement, residential receptors and PRoW user
9	PRoW South of Bellmoor Farm (On Western Site Boundary)	Viewpoint illustrates the immediate setting of Bellmoor Farm. The boundary embankment forms a vegetated boundary to the east.	Residential receptor and PRoW user
10	PRoW at Sutton Lakes (260 m, W)	Viewpoint is directed across a large water body to the vegetated western boundary of the Site which forms a backdrop to the hamlet of Bellmoor Farm.	Receptors undertaking recreation and PRoW user
11	Lound Low Road at Wetland Fisheries (On Northern Site Boundary)	Viewpoint illustrates the embankment. This forms the northern boundary. A hedgerow maintained at 1 m height and an avenue of mature trees are prominent in the foreground. There are no views into the internal area of the Site.	Receptors undertaking recreation and PRoW user
12	Town Street by Yew Tree Farm (410 m, N)	Viewpoint southeast from low ridgeline on edge of Lound (KV8 in the Lound Neighbourhood Plan 2021-2038)	Residential receptors, heritage asset and road users

*As measured from the viewpoint to the approximate location of the nearest Site boundary.

The viewpoint photography has been undertaken to Landscape Institute guidance and details are set out in **Appendix 7.1, (Volume 3 of the ES)**.

7.7 BASELINE CONDITIONS

This section describes the baseline landscape character, designations and visual amenity of receptors against which the Proposed Development will be appraised. This has been identified through desktop studies supplemented by field observations of the Site and wider study area. As part of the baseline, any value attached to the landscape within the study area is taken into account. This usually takes the form of landscape-related designations valued for their wild qualities or scenic beauty at a national, regional or local level such as National Parks, Areas of Outstanding Natural Beauty (AONBs) and Special Landscape Areas.

The baseline also takes account of any protected features, the presence of which may indicate value at a national, regional or more local level. Protected features mostly relate to cultural heritage or nature conservation assets such as World Heritage Sites, Ancient Monuments, Conservation Areas, Listed Buildings, Historic Parks and Gardens, Sites of Special Scientific Interest, Nature Reserves, Ancient Woodland, etc.

Landscape-related designations and protected features identified within the Site and wider study area from a search of the GIS database and MAGIC website are listed in Table 7.4 below and shown on **Figure 7.7 Landscape Designations (Volume 2 of the ES)**.

Table 7.4: Landscape & Planning Designations and Protected Features

Landscape Designations &/or Protected Features	Present Within Site	Present within Study Area (2 km radius)
National Parks	None	None
Areas of Outstanding Natural Beauty (AONBs)	None	None
Special Landscape Areas (or equivalent)	None	None
Green Belt	None	None
Country Parks	None	None
World Heritage Sites	None	None
Scheduled Monuments	None	None
Conservation Areas	None	Yes (refer to Section 7.7.1)
Listed Buildings	None	Yes (refer to Section 7.7.1)
Registered Historic Parks and Gardens	None	Yes (refer to Section 7.7.1)
Registered Battlefields	None	None
National Trails/ Cycle Routes and Long-Distance Footpaths	None	None
Public Rights of Way (PRoWs)	Yes	Yes (refer to Section 7.7.1)
Ancient Woodland	None	None
Site of Special Scientific Interest (SSSI)	Yes	Yes (refer to Section 7.7.1)
Nature Reserves and Wildlife Sites	Yes	Yes (refer to Section 7.7.1)

7.7.1 Landscape Designations, Protected Features and Heritage Designations

Landscape-related designations and protected features identified within the study area are summarised below and shown on **Figure 7.7 Landscape Designations (Volume 2 of the ES)**.

A number of cultural heritage assets are included within this LVIA in terms of their contribution to landscape character in accordance with GLVIA3. Effects on cultural heritage features and their setting, are assessed in a separate cultural heritage assessment.

The visual assessment of any changes in views from or near the SSSIs are assessed in Sections 7.12 and 7.14 of this report.

7.7.1.1 *Conservation Areas*

The Site is not covered by any conservation area designation within its boundary. The Study Area includes conservation areas, and closest when measured from the centre of the Site is Lound Village Conservation Area, located approximately 1.4 km to the north

The effects of the Development on Lound Conservation Area are considered in detail in **Chapter 5: Archaeology and Cultural Heritage of this ES**. Lound Conservation Area contributes to landscape character and it is in this context that the effects of the Proposed Development are assessed in this Chapter.

7.7.1.2 *Listed Buildings*

There is one Grade I and 12 Grade II Listed Buildings within the study area. They are listed below in order of distance with their orientation to Site:

- Yew Tree Farmhouse, Grade II 500 m N;
- Gate Piers and Gate to Sutton Manor Grounds Grade II 730 m NW;
- The Hall Grade II 810 m N;
- Alpha House and Outbuilding Grade II 850 m N;
- Lound War Memorial Grade II 850 m N;
- Church of St Bartholomew Grade I 850 m NW;
- Highfield House Grade II 1.01 km NW;
- Alpha Farmhouse Grade II 1.20 km N;
- Babworth Hall Grade II 1.79 km S;
- Bolham Hall Grade II 1.80 km SE;
- Stable Block at Babworth House Grade II 1.82 km S;
- West Retford House Restaurant Grade II 1.92 km SE; and
- Stabling to West Retford and Attached Garden Wall Grade II 1.94 km SE.

The screened ZTV suggests there is limited visibility for these heritage assets, apart from the Gate Piers and Gate to Sutton Grange which has potential for 1-20% visibility. These Listed Buildings are therefore scoped out of further appraisal.

7.7.1.3 *Registered Parks & Gardens*

Within the Study Area there is one Registered Park and Garden, 'Babworth Hall', which is Grade II listed and located approximately 2.50 km to the south. Beyond 2 km distance most features become recessive in a viewpoint and Babworth Hall is unlikely to be influenced by the Proposed Development in a meaningful way and is therefore scoped out of further assessment.

7.7.1.4 *Public Rights of Way (PRoW)*

There is an extensive network of PRoW within the 2 km study area. Several routes extend along the Site boundaries and two, NT|Sutton|FP1 and NT|Sutton|FP2 cross the Site and these have the most potential for the visual amenity of PRoW users to be impacted. All PRoW within the study area are listed below in order of their distance from the Site with their orientation shown:

Within or Adjoining Site Boundary

- NT|Sutton|FP1
- NT|Sutton|FP5
- NT|Sutton|FP2
- NT|Sutton|BOAT7
- NT|Sutton|BW4

North of the Site:

- NT|Sutton|FP9 250 m NE;
- NT|Lound|FP1 260 m NW;
- NT|Sutton|FP3 281 m NW
- NT|East Retford|FP19 291 m NE;
- NT|Lound|BOAT10 433 m N;
- NT|Sutton|BOAT8 441 m NE;
- NT|Hayton|BW28 520 m NE;
- NT|Lound|FP4 700 m N;
- NT|Sutton|FP10 780 m NW;
- NT|Lound|BOAT15 980 m N;
- NT|Lound|BW9 1.02 km N;
- NT|Hayton|BOAT21 1.08 km NE;
- NT|Lound|FP8 1.36 km N;
- NT|Hayton|FP23 1.70 km NE;
- NT|Lound|FP5 1.71 km NE.

East of the Site:

- NT|Sutton|FP6#1 1.20 km E;
- NT|Sutton|FP6#2 1.20 km E;
- NT|Hayton|FP29 1.36 km E; and
- NT|Hayton|FP19 1.81 km E.

South of the Site:

- NT|Hayton|FP18 550 m SE;
- NT|East Retford|FP71 760 m SE;
- NT|East Retford|FP70 990 m SE;
- NT|East Retford|FP18 1.07 km SE;
- NT|East Retford|FP69 1.09 km SE
- NT|Hayton|FP14 1.20 km SE;
- NT|Hayton|FP24 1.55 km SE;
- NT|East Retford|FP42 1.60 km SE;
- NT|Hayton|BOAT15 1.74 km SE;
- NT|Hayton|FP13 1.81 km SE;
- NT|East Retford|FP20 1.82 km SE;
- NT|Babworth|FP2 1.92 km SW;
- NT|Babworth|FP1 1.92 km SW; and
- NT|Babworth|FP3 1.99 km S.

The visual amenity of users undertaking recreation on the PRoW adjacent or within the Site will be assessed as they have the most potential for a significant effect. All others are scoped out of further assessment as their effects would be glimpsed views, long-distance views or visible only for a short section.

7.7.1.5 SSSI

The Site adjoins the Sutton and Lound Gravel Pits SSSI and the Chesterfield Canal SSSI is also located to the east of the Site. There would be no direct landscape effect on the SSSI sites, which are designated for their ecological value, however, visual receptors undertaking recreation within them may be sensitive to change.

7.7.2 Visual Amenity

The visual assessment has drawn from the ZTV, site visits and viewpoint analysis and assesses the potential visual effects on views and visual amenity likely to be experienced by receptors (people) within the landscape as follows:

- Views from residential properties and settlements;

- Views from designated / valued landscapes;
- Views experienced while travelling through the landscape (recreational road users, walkers, horse riders, cyclists for example); and
- Views from tourist and recreational destinations.

Visual effects would be experienced by the people who live and work in the area, along with those enjoying recreational activities in this area or simply passing through. Whilst it is people who are the actual receptors of visual effects, it is the places they may occupy, and from which the Proposed Development may be seen, that are listed below. Refer to **Figure 7.8 Visual Amenity (Volume 2 of the ES)**.

7.7.2.1 *Settlements and Residential Properties*

The Site is located in a semi-rural location on the settlement edge of Retford. There are peri urban features to the south and east and the approach to Retford. The settlement pattern to the north and immediately to the west is comprised of a small number of scattered villages as well as a fairly scant distribution of farmsteads and residential properties. The larger villages of Hayton and Clarborough are located to the east, alongside the A620. The main settlements identified in the Study Area where potential visibility may be experienced across or towards the Site are:

- Sutton-cum-Lound, a village located approximately 386 m to the west of the Site; and
- Lound, a small village located approximately 500 m to the north of the Site.

The main residential properties identified in the Study Area where visibility may be experienced either across or towards the Site are:

- Yew Tree Farm (500 m, N) and adjacent property Hill Top (400 m, N) on Town Street;
- Low Farm (34 m, N), located off Lound Low Road;
- Cross Road Farm and Bridge Lodge (367 m, W) on Sutton Lane;
- Brooklyn and Botney (250 m, SW) on the Great North Road;
- Botany Bay (367 m, SW);
- Tiln Grange and Whitehouse Farm to the south of the Site at Tiln (554 m, S); and
- Bellmoor Farm, Bellmoor Cottage and several other residential properties (150 m N and W of the Site).

Refer to **Figure 7.8 Visual Amenity (Volume 2 of the ES)**.

7.7.2.2 *Recreational Routes*

There is a network of PRoW in the vicinity of the Proposed Development and several extend to the Site boundaries and two (NT|Sutton|FP1 and NT|Sutton|FP2) cross the Site. There are also several recreational routes within the Idle Valley Nature Reserve such as the Riverside Walk and Woodland Trail.

There is also a National Trail, the long-distance footpath the Cuckoo Way which follows the alignment of the Chesterfield Canal approximately 750 m southwest.

The PRoW which cross or are within the immediate vicinity of the Site have the most potential for the visual amenity of PRoW users to be impacted.

7.7.2.3 *Outdoor Sport and Recreation*

Visibility of the Proposed Development may be experienced from people engaged in outdoor sport or recreation and these include:

- The Sutton fishing lake located to 260 m to the west and the wetland fishing lakes located immediately to the north of the Proposed Development alongside Lound Low Road; and

- Idle Valley Nature Reserve, located immediately adjoining the Proposed Development to the south.

7.7.24 *Transport Routes*

The main transport routes, within the Study Area include:

- The East Coast Main Train Line, located approximately 2 km to the west that passes through Retford and serves Doncaster from Kings Cross; and the
- A638 Great North Road – vehicular access would extend from here via an existing road shared by commercial businesses and the Idle Valley Nature Reserve. This road previously serviced the Bellmoor Quarry.

7.7.3 **Landscape Character**

This section draws upon published landscape character assessments and personal opinion at the Site level to describe the baseline landscape character at the Site and surrounding area. While the Core LVIA Study Area extends to a 2 km radius in order to accurately reflect the potentially localised effects of the Development, the Site has also been considered in the context of the landscape character of a wider area.

An appraisal of the baseline landscape character has therefore been considered at three levels:

- National landscape character, in relation to National Character Area (NCA) profiles produced by Natural England;
- Regional and Local landscape character; and
- Character of the Site and its immediate context, based on field observations.

7.7.3.1 **National Landscape Character**

At a national level the Site is located in the south of NCA 39 Humber Levels. The Southern Magnesian Limestone (NCA 30) lies to the west, Sherwood (NCA 49) to the south and southwest, with Belvoir Vales (NCA 48) to the east. There is a degree of transition between these NCAs. However the Site and its immediate environs exhibit characteristics of the Humber Levels in that it is low-lying, and land use is predominantly large-scale agriculture with *"long views and big open skies."*

Several rivers extend through this NCA to the Humber Estuary and their influence means that there are flood management issues but also the opportunity for expanding wetland areas for flood water storage.

The Statements of Environmental Opportunity (SEO) for the NCA with relevance for the Site and its restoration following extraction, include:

- SEO1: "Safeguard, manage and expand the wetland habitats...floodplain grazing marsh, reedbeds, wet pasture and water course to protect and enhance biodiversity, contribute to landscape character, climate change, and reduce flood risks; and
- SEO4: *"Protect the open and expansive character of the landscape, its cultural features, and sense of remoteness, by ensuring that new development is sensitively located, accommodates green infrastructure, retains views, and makes a positive contribution to biodiversity"*.

The key characteristics of the NCA of some relevance to the Site include:

- *"A low lying, predominantly, flat landscape with large regular and geometric arable fields without hedges but divided by ditches and dykes, many of which form important habitats or corridors for species movement;"*

- *Views to distant horizons are often long and unbroken, with big, expansive skies and vertical elements like water towers, power stations and wind turbines are very prominent;*
- *Floodplains, washlands, and traditional, grazed, alluvial flood meadows (or ings), associated with major rivers and canals that cross the Levels and give rise to important wetland habitats supporting large numbers of wetland birds and wildfowl, especially over-winter; and*
- *Despite settlements, motorways, and main roads, there is a sense of remoteness to be experienced on the Levels...”*

The size of the NCA is very large in comparison to the scale of the Site and any changes at this level would be unlikely to influence the intrinsic character of the NCA. It is also a very broad-stroke assessment. Effects on the landscape character of the NCA are therefore not considered further, although the SEOs are a consideration.

7.7.3.2 Regional Landscape Character

The East Midlands Regional Landscape Character Assessment (EMRLCA) (2010) identifies 11 groups and 31 Regional Landscape Character Types (RLCTs). Refer to **Figure 7.6a (Volume 2 of the ES)**. The study area is located across two character areas within the EMRLCA:

- 3A: Floodplain Valleys; and
- 3B: Sandland Farmlands.

The key characteristics of 3A of relevance to the Site include:

- *"Limited woodland cover; however, steep riverside bluffs and areas close to settlement or on former gravel extraction sites notable for a higher level of woodland cover;*
- *Sewage treatment plants and power stations closer to larger settlements, that fringe the floodplains;*
- *Restoration of sand and gravel sites to open water.”*

The two areas adjoin and have a degree of overlap or transition. The key characteristics of 3b of relevance to the Site include:

- *"Gently rolling agricultural landscape of low hills set amongst flat, low-lying flood plains and levels;*
- *Regular pattern of roads and fields associated with the enclosure of land;*
- *Pattern of small, nucleated rural villages and isolated brick farms associated with the enclosure of farmland;*
- *Flooded sand and gravel pits, creating a new landscape of scrub, woodland and open water...”*

Both character areas have a stated aim of “protect the open character of the landscape” and the consideration of long-distance views.

7.7.3.3 Local Landscape Character

The Bassetlaw District Landscape Character Assessment (BDLCA) (2009) includes Landscape Description Units (LDUs). Refer to **Figure 7.6b (Volume 2 of the ES)**.

The Site and the 2 km study area are located within the Idle Lowlands LDU. Of these units five are urban with the remaining 30 sub-divided into 47 landscape character parcels (LCPs). The host LCP is IL10 with IL07 to the North and IL09 to the south. The study area is located across three policy areas within BDLCA, specifically the ‘Idle Lowlands’ Regional Character Area (RCA). The policy prescription, condition and landscape sensitivity for each of these parcels is described below:

- Policy Zone IL07: Lound
Prescription of Conserve and Reinforce;
Landscape Condition is Good; and
Landscape Sensitivity is Moderate.
- Policy Zone IL09: Retford
Prescription of Create and Reinforce;
Landscape Condition is Moderate; and
Landscape Sensitivity is Low.
- Policy Zone IL10: Ranskill
Prescription of Conserve and Reinforce;
Landscape Condition is Good; and
Landscape Sensitivity is Moderate.

7.7.3.4 Landscape Character of the Site

The Site is currently used for sheep grazing. It is comprised of three areas: Area A, Area B and Area C.

Area A is a restored landfill site/PFA lagoons and the landform is artificially raised and slopes down to the south east. It is a very large and uncharacteristic feature in a generally low lying valley type landscape, due to its height and flat top, and impacts on the openness of the character area IL10 Ranskill. The embankment to the northern boundary restricts views across to the Idle valley to the south. Perimeter woodland and tree planting increase the sense of introspection and enclosure and views into the centre of the Site are generally screened.

Area B includes fields with vegetated boundaries and contains an area of woodland and semi-mature tree groupings. Its character is enclosed to the east but it looks out across farmland to Sutton Lane and Cross Road Farm to the west.

Area C is situated within Bellmoor Industrial Estate, adjoining an area of rough grassland and several commercial businesses, including a concrete batching plant with silo and has some urban influences including the A638 Great North Road.

The landscape character of the Site does not reflect the grading of its host Policy Zone IL10 and the author would suggest it is of low to moderate condition and low sensitivity over-all although the woodland has some landscape and ecology value. However, there are no rare landscape elements that could not be replaced.

7.7.3.5 Landscape Value and Condition Summary

The Site has no landscape designations relating to landscape value, although the young woodland plantations on the embankments and other tree and hedgerow planting have some landscape and ecological value at the Site level. **Table 7.5** below describes the factors relating to the value of the landscape at both the Site and study area scale.

Table 7.5: Landscape & Planning Designations and Protected Features

Factor	Study Area	Site Scale
Landscape Quality (Condition)	The landscape is open and there are long-distance views available from higher land. Lound is designated as a Conservation Area but the wider landscape is generally valued at a local level	The Site is a restored landfill site currently used for sheep grazing. The landform is not typical of the surrounding generally flat and undulating topography and it is not valued other than for its functional use. Paragraph 6.98 of the Nottinghamshire Mineral Local Plan (2005) states that the Site and some adjacent land used to be the site of the largest PFA infilling scheme in Nottinghamshire. Importantly, the same paragraph goes on to note that <i>"PFA reclamation includes high-level lagoons, which visually have not proved to be a success"</i> .
Scenic Quality	There are scenic qualities and a degree of tranquillity associated with the scattered pattern of settlement and the expansive areas of wetland within the River Idle valley, despite peri urban influences on the edge of Retford, including existing pylons, silos and other legacies of the industrial past	The Site has some limited scenic qualities although the perimeter woodland has some value, particularly where it adjoins and provides habitat connectivity to the woodland to the south and west
Rarity	The landscape of the study area contains features that represent the wider regional context and of low rarity	The Site contains no rare landscape features
Representativeness	The study area does not contain any important representative examples other than the wetland habitat created through sand and gravel extraction	The restored landfill site is an example of a post-industrial restored landscape, which planning policy states has not been a success.
Conservation Interest	The SSSI wetland to the south and east has some value and there are a few Listed Buildings in the wider landscape	The ditches that drain the site and the perimeter woodland have conservation value
Recreation	The area is relatively well served by recreational routes including PRoW, and the Cuckoo Way along the Chesterfield Canal	Several PRoW cross or adjoin the Site on and connect with the network of trails within the Idle Valley Nature Reserve

Recreation Value	There are several fishing lakes in the study area although access is normally restricted to members	There is some limited public access via the two PRoW that cross the site.
Perceptual Aspects	There are some locations within the study area that could be regarded as having some characteristics of tranquillity although there are some	The Site has an enclosed nature due to the landform and perimeter woodland.
Associations	None have been identified	None have been identified
Overall Landscape Value	<p>Moderate</p> <p>The landscape in the study area has some high value features and exhibits some perceptual qualities and a degree of tranquillity despite being heavily influenced by the floodlights, pylons, sewage works, and industrial buildings.</p>	<p>Low to Moderate</p> <p>The Site is a restored landfill site currently used for pasture. There is some woodland and hedgerow planting of ecological value which provides screening and serves as a skyline feature in views from Lound, and Sutton-cum-Lound. Landform is not sensitive to the surrounding topography although it serves to provide a vegetated embankment setting to the Idle Valley to the south. Planning policy states that the higher-level site restoration has not been successful.</p>

7.8 DEVELOPMENT PROPOSALS SUMMARY

To enable an effective comparison against which the Proposed Development may be assessed, the baseline conditions are reviewed and projected forward to provide a future 'no development' future baseline scenario. The potential impacts of the Proposed Development upon the future baseline landscape and the visual amenity of receptors are then identified and any resulting effects (adverse, neutral or beneficial) considered.

The Site is approximately 115 hectares (ha) and is comprised of three distinct areas although there would be a degree of overlap as the Site is worked:

- Area A - Main Operational Site (PFA extraction area);
- Area B - Conveyor and Link Road; and
- Area C – Main Processing Site.

The extraction would progress in 11 phases/stages, with progressive restoration following extraction. There are two public right of way (NT|Sutton|FP1 and NT|Sutton|FP2) that cross the Site. These would be kept open with appropriate safeguards in place throughout construction and operation, other than a short period (around 1 week) where NT|Sutton|FP1 would be temporarily closed in order to construct a suitable crossing of the haul road and conveyor.

This Chapter considers the landscape and visual effects for the following:

- **Construction (2023-2025)** - Site preparation to comprise haul road, office, 'Coomtech' storage modules, silos, conveyor belt and plant construction (6-18 months). The assessment considers the effects from viewpoints 7 and 9 as these are the only potential significant effects identified;

- Operation (2025 – up to 2046) Phased extraction and processing of the PFA and the progressive and concurrent restoration of voids;
- Decommissioning (up to 2046) – The removal of plant, machinery and other infrastructure from Phase 7; and
- Post-restoration and After-care (from 2061) – Allows for the suitable establishment of any proposed landscape mitigation or enhancement. This includes a return to agricultural use with lakes and associated areas of habitat creation including wet grassland, reeds, species-rich pasture, woodland and hedgerow planting.

Effects may be temporary, permanent, short-term or long-term. The landscape and visual appraisal effects may be further categorised as being direct i.e., originate from within the Site, or indirect from within the wider landscape e.g., off-site visual impact of construction and operational traffic movements.

Height parameters used in the appraisal and ZTVs include:

- Silos up to 20 m in Area C;
- Combined Heat and Power Units (CHP units) up to 15 m in Area C;
- Buildings and raised conveyor up to 12 m in Area C;
- Conveyor belt up to 3 m in height from ground at change of direction in Area A and Area B; and
- Gas storage tanks up to 5.6 m in Area C.

These height parameters have been used to apply a Rochdale Envelope approach. That is maximum heights have been used to create a 'worst case' scenario to the expected footprint of the visual envelope, and visibility within viewpoints. Actual visibility may be less than shown.

An arboricultural report to BS 5837:2012 has been prepared for the Site (refer to **Appendix 7.8, Volume 3 of the ES**). 30 individual trees and 48 tree groupings or hedges have been identified mostly semi-mature. Higher value trees are located along the southern boundary or perimeter of the Site, with lower value trees in the interior. A and B value trees would be incorporated where possible within the layout and appropriately protected during construction and operational activities.

Ground levels post-extraction would be manipulated to create naturalistic profiles suitable for planting and establish a minimum level of around 13 m AOD embankment along the southern boundary to prevent flood encroachment into the Site from the River Idle. The precise height of the embankment would be determined by a suitable planning condition(s).

A detailed description of the Development is contained in Chapter 5 Site Description.

7.9 DEVELOPMENT DESIGN & MITIGATION

Measures to avoid or reduce potential effects on landscape and visual receptors have been incorporated into the design of the Proposed Development (the 'embedded mitigation'). This includes 'mitigation by design' whereby aspects of the Proposed Development have been re-designed to avoid or reduce effects. Embedded mitigation is taken into consideration along with any additional landscape and ecological mitigation when undertaking the assessment of significant effects. If significant effects are predicted further mitigation is detailed.

7.9.1 Mitigation by Design

The 'embedded mitigation' incorporates the following:

- The retention of the existing woodland to the west of HR P1, and to the south and east of the filter ponds, soakaway ponds and the Low-Rise area (phases LR P1 to P5). The woodland plantation on the embankment on the western boundary of HR

P4 and HR P5 also would be retained until the restoration of stages 8 and 9. There is also a belt of plantation woodland to the immediate north of HR P1 outside of the redline boundary and a linear belt of trees and along the western boundary of HR P1. All vegetation to be retained would be appropriately protected during the construction and operational phases. These retained woodland areas would provide screening of some of the construction phase activities, plant area, and the working of the earlier phases;

- Phased extraction and concurrent restoration of the previously extracted phase;
- The PFA in the High-Rise area of the Site is contained by significant embankments (around 6m high), constructed primarily from sandstone and soil (no PFA). The embankments provide a significant mitigation opportunity and scheme design includes retaining these embankments during PFA extraction in each phase, in order to provide a visual and noise screen for sensitive receptors inside and outside of the Site. The embankment would screen views of the PFA working area and plant operating in each phase (refer to Lagoon Cross-section Drawing GEO3 (SLR, January 2023)). The embankments would only be removed when PFA extraction behind them has been completed, in order to provide site-won fill material to restore and raise levels in each phase. The removal of each embankment would take a number of weeks (short-term), after which the phase would be restored to the approved gradients and restoration habitats;
- The conveyor crossing between LR P6 and LR1 would be partially recessed into the ground and would have a bund to attenuate visual impact along its length. More detail would be reserved by a suitable planning condition(s);
- Use of the existing vehicular access from the A638;
- The conveyor would be partially recessed in places to attenuate visual impacts;
- The selection of four 20 m high silos in Area, C instead of one or two taller/larger silos;
- The siting of the temporary Processing Areas 1-3 away from site boundaries and PRoWs; and
- A wooden fence and a native mix hedgerow along the entire western boundary of Area B, to screen the haul road and conveyor from Sutton lane.

7.10 LIMITATIONS AND ASSUMPTIONS

The main limitation noted is that the screened ZTV has been run on building height parameters and the screening benefits of landform and existing vegetation blocks. However, as the landform and the level of vegetation on the perimeter embankments would be changed by the phased extraction, it is not fully representative of the visual envelope of the Proposed Development as phased extraction process commences and the embankments are excavated and removed.

Another limitation is that the assessment has been based on appraisals from publicly accessible locations and as many of the residential receptors included within the assessment are located down private drives or roads. These appraisals are an estimation and have been undertaken from the nearest available public viewpoint using professional judgement.

It is acknowledged that there would be other views to the Proposed Development. A selection of viewpoints have been analysed from a variety of directions and distances and to illustrate potential effects on the landscape context, and a range of visual receptors (e.g. road users, PRoW users, residential receptors and those undertaking recreation), to provide an overview 'in the round'.

7.11 ASSESSMENT OF NO DEVELOPMENT SCENARIO

It is expected that should the Proposed Development not proceed, the existing baseline conditions would continue. The land-use would continue to be pasture for sheep grazing. The existing perimeter woodland would continue to mature and the existing landform which is not sensitive to the surrounding topography would remain unaltered. The restoration comprising the creation of the water feature, reedbeds, wet grassland and hedge and tree planting would not be implemented.

The waste PFA used for landfill would remain unutilised and in the ground and this resource would have to be sourced elsewhere, either through the use of primary aggregate or an alternative source of waste PFA.

7.12 ASSESSMENT OF LANDSCAPE EFFECTS

7.12.1 Landscape Effects during the Construction Stage

The initial construction phase would require the removal of an area of vegetation on the Site boundary to facilitate the access link from Area A to Area C, over Area B. The construction of the haul road, plant area and conveyor would introduce noise, movement and disturbance to an area that is currently quiet and comprised of tree groupings and hedge. Trees to be removed would be minimised and replacement planting/habitats would be implemented as part of the restoration scheme for the Site. All trees and vegetation to be retained would be appropriately protected both during construction and during operational use.

7.12.2 Landscape Effects at Soil Stripping Stage

The landscape effects would vary according to the location and timing of stripping works. This also minimises the extent of change as effects would be localised within one phase of the Site. The soil stripping activities would introduce vehicle movements and an increase level of disturbance that would change the character from a semi-rural character to one of an industrial nature.

7.12.3 Landscape Effects at Operation: Year 1

Landscape effects at Year 1 would be concentrated on HR P1 and the main vehicular access from the A638. Construction and operation would have a disruptive influence (some temporary) on the existing baseline landscape character. The removal of vegetation to facilitate the construction of the new access would be noticeable and would open up views to moving traffic and the construction activities within the Site. The effects are most notable at the Site level or from adjoining PRoW.

Any replacement planting would have limited screening benefits at this point.

7.12.4 Landscape Effects at Restoration: Ongoing & After Decommissioning

Restoration would be undertaken on a rolling programme following the extraction of each phase. This would enable restoration seeding and planting to be completed in the appropriate season following the cessation of working. As the phased working proceeds the restoration seeding and planting already undertaken would provide some benefits at the Site level at early stages of the Proposed Development, although the planting would not be sufficiently mature to provide the full range of landscape and ecological benefits such as a closed canopy until 10-15 Years+.

As the operation of the Site extraction ceases and all machinery and infra-structure is decommissioned and removed, the landscape restoration would be finalised and enter the aftercare period. The landscape restoration envisages a biodiversity led scheme combined with agriculture (gazing), including the provision of reed-fringed lakes with wet grassland,

woodland and hedge, and tree planting. These features would provide an enhancement at the Site level and establish habitat connectivity to the wider landscape. It could also provide more sensitive landform gradients and potentially open up some long-distance views across the Site to the Idle Valley Nature Reserve to the south. The effects are beneficial at both the Site level and for the wider landscape setting.

7.13 ASSESSMENT OF VISUAL EFFECTS

This section of the LVIA describes the baseline visual amenity resources of the Core LVIA Study Area. The Core LVIA Study Area of 2 km is considered appropriate for the following reasons:

- The phased nature of the Proposed Development and the progressive restoration to be undertaken such that effects are localised and temporary;
- Site location adjacent to other developments with similar features of an equivalent height, i.e. silo at the concrete batching plant adjacent to the Site, the sewage treatment works at Retford, anaerobic digestion plant at Sutton Grange, and the large pre-cast concrete works on Chainbridge Lane; and
- The relatively enclosed character of the Site relative to the wider landscape.

The visual appraisal draws on the predicted ZTV, site visits and viewpoint analysis to determine the potential effects of the Proposed Development on views and visual amenity experienced by a variety of visual receptors (people) within the study area.

Visual receptors include people who:

- Live and work in the area;
- Visit the area for a specific reason (for instance, visitors to tourist or recreational attractions); and
- Pass through the area (on foot, by horse, by bicycle, by car or by train).

In this instance, the following key receptor groups have been identified within the study area:

- Occupiers of residential properties (individually, in groups or part of larger settlements);
- Users of sign-posted recreational routes (local footpaths, bridleways and byways);
- People engaged in outdoor sport or recreation; and
- Users of the existing road and rail network where applicable (motorways, A and B class roads, local roads and railways).

Within these key receptor groups, the appraisal of effects focusses on receptors who are most likely to undergo the 'greatest' change in visual amenity arising from views gained of the Proposed Development.

7.13.1 Residential Areas

Figure 7.8 (Volume 2 of the ES) shows the settlements included within this appraisal labelled as S1 and S2; and individual properties and property clusters labelled from R1-R9.

7.13.2 Roads, Recreational Routes and Public Rights of Way (PRoW)

Figure 7.9 (Volume 2 of the ES) shows the roads, recreational routes and PRoW included within this appraisal.

7.13.3 Visual Effects at Construction, Soil Stripping, Operation and Restoration

The individual stages of the Proposed Development would have different effects in terms of the visual receptors affected and the extent.

7.13.3.1 Visual Effects at the Construction Stage

The visual effects of the construction stage would be restricted to vegetation clearance along the vehicular access and the construction of the haul road, conveyor belt and the processing areas (Processing Area 1 and the Main Processing Site) which would introduce noise, movement and disturbance, although it should be noted that Area C where most of the work would take place forms part of an existing industrial estate. Trees to be removed would be minimised and replacement planting along the haul road and conveyor in Area B would be implemented in the first planting season after the removal of trees to facilitate access. All trees to be retained would be appropriately protected both during construction and during operational use. This would open up some views of construction activities from Sutton Lane and from the residential receptors located along a short section. An area of existing woodland planting would be retained along part of the western boundary of the vehicular access and this in combination with the linear length of woodland immediately to the north of HR P1 would provide some screening benefits particularly from Sutton-cum-Lound. Views from Bellmoor Farm and Bellmoor Cottage (and the other residential properties here) would be mostly screened at this stage by topography and vegetation.

7.13.3.2 Visual Effects at the Soil Stripping Stage

As with landscape effects, the visual effects of the soil stripping stage would be restricted to one area or phase at a time and this would minimise the extent of the magnitude of change. Any effects would be of a temporary and reversible nature. The soil and overburden would be stored in mounds adjacent to HR P1 during the initial construction stage and then moved adjacent to phase HR P2.

The stripping activities would introduce noise and disturbance to a localised area to be extracted and the removal of the soils would reveal the PFA which is a black-grey colouration.

The lagoon embankments in each phase would be retained until all material has been extracted, and would only be removed during restoration. This would provide screening and noise attenuation benefits.

7.13.3.3 Visual Effects at Operation

Visual effects at Year 1 would be concentrated on views from the PRoWs (NT|Sutton|FP1 and NT|Sutton|FP2) that run through the Site. These would be kept open throughout construction and operation, with appropriate safeguards in place, other than a short period (around 1 week) where NT|Sutton|FP1 would be temporarily closed in order to construct a suitable crossing of the haul road and conveyor.

There would also be pronounced effects on Bellmoor Farm and Bellmoor Cottage (and the other properties in this location) (R2).

The removal of vegetation to facilitate the new vehicular access and views or construction traffic and activities would have a temporary and visually intrusive influence particularly on the two PRoW that cross the Site (NT|Sutton|FP1 and NT|Sutton|FP2), Sutton Lane, and the residential properties located along it near Cross Road Farm (R3).

Replacement planting would not have any pronounced screening benefits for up to 10 years.

7.13.3.4 Visual Effects at Restoration: Ongoing & After Decommissioning (2046)

The ongoing and progressive restoration of the Site would provide some filtering to views throughout the operation and restoration of the Site. However, the full screening and visual benefits of the proposed landscape restoration would not be completely realised until 15 years+ post-planting. These visual effects would be most notable once the infra-

structure, machinery and haul road are removed and there would be a pronounced improvement to the visual amenity of those receptors looking to or across the Site.

The raised landform would be progressively removed, using the lagoon embankments as restoration fill, to be more sympathetic to the surrounding topography with the potential to create viewpoints or vistas across the Site. New replacement tree and hedgerow planting to replace the vegetation to be removed, and additional enhancements would establish new linkages to the habitats in the wider landscape. The void created through the extraction process would be graded to provide a lake feature in the Low-Rise with slopes at 1:10-1:40 and water depths suitable for the reed-beds to establish at the fringes of the lake. An undulating landform would be created to facilitate the establishment of a wet grassland area.

7.13.4 Viewpoint Assessment

A total of 12 viewpoints, representative of the type of receptors likely to be affected by the Proposed Development, are used in the LVIA. The viewpoint locations are shown on **Figures 7.4 and 7.5 (Volume 2 of the ES)** and listed with a brief description of the baseline existing view in Table 7.3.

Figures 7.11a-7.11l (Volume 2 of the ES) show photographs of the existing view from locations agreed with the Council. The viewpoint photography was taken during site visits in September 2022 and January 2023. The viewpoints show the Site and sufficient landscape context so that the composition of the view can be fully understood.

Each viewpoint shows the approximate horizontal extent of the Development. This annotation is included to orientate the reader and does not indicate that the Development will be visible. The assessment of effects explains the potential visibility of the Development from each viewpoint.

The coordinates at which each photograph was taken, together with the view direction, are provided on each viewpoint figure to assist in orientating the reader.

Viewpoints are an important element of the LVIA but should not be the sole means of considering the potential effects of the Development. The assessment of effects at viewpoints should therefore be read in conjunction with the assessment of effects on other landscape and visual receptors described in the LVIA.

7.13.4.1 Viewpoint 1 Chainbridge Lane, Lound (800 m, N)

The viewpoint illustrates landscape context and the immediate setting of the Lound Conservation Area and cluster of Listed Buildings from a PROW immediately to the north of the Site. **Refer to Figure 7.11a (Volume 2 of the ES)**. The viewpoint is representative of residents of properties on the eastern edge of Lound who are of high sensitivity to the Proposed Development.

Mature woodland forms a skyline feature. The Proposed Development would be barely discernible through the trees and hedges from this viewpoint at ground level although there may be glimpsed upper storey views of taller features within the Proposed Development from upper storeys. These views of infrastructure such as the top of the silo and CHP within Area C would be long-distance and extensively filtered. Views would also be in the context of some notable industrial influences, such as the nearby anaerobic digestion plant and pre-cast concrete works. Where such views are obtained the magnitude of change would be at most negligible which, combined with a high sensitivity receptor, would result in an effect grading of neutral or no effects during the initial construction phase and negligible adverse during operation. Effects would be temporary and reversible.

7.13.4.2 Viewpoint 2 Chainbridge Lane (960 m, NE)

This viewpoint is illustrated on Figure 7.11b. The viewpoint is directed across a wetland area and large lake to a wooded skyline. The Proposed Development would be barely discernible through the linear belt of mature trees which would be retained and managed through the lifetime of the Proposed Development. The primary focus of the PROW user or people undertaking recreation at this location would be enjoying the views and the activities of the wildlife within the area and they would be of high sensitivity. However, the magnitude of change would be neutral during the construction phase which is located further away from this viewpoint, and negligible adverse and temporary during operation, with positive and wider landscape and visual benefits post-restoration.

7.13.4.3 Viewpoint 3 PROW near Tiln Grange and Whitehouse Farm (770 m, E)

This viewpoint is representative of views from a PROW and Tiln hamlet to the east of the Proposed Development. It is illustrated on **Figure 7.11c (Volume 2 of the ES)**.

The view is directed along a track and across arable farmland to a woodland copse and linear belt of trees on the skyline which would be retained. The distinctive hamlet of Tiln (R6) is shown in the middle of the viewpoint within the vegetated setting.

Both PROW users and residential receptors are of high sensitivity. There is potential for filtered or glimpsed views of taller elements within the Proposed Development such as the top of the silos and CHP within Area C, particularly from upper storeys but ground level views are not expected and the magnitude of change is assessed as negligible during the construction phase and during the operation of the Proposed Development. This would result in a level of effect of negligible adverse and temporary and reversible with some negligible benefits post-restoration and aftercare.

7.13.4.4 Viewpoint 4 Idle Valley Nature Reserve Riverside Discovery Walk (230 m, S)

This viewpoint is representative of views that would be available from a trail within the Idle Valley Nature Reserve and illustrates the enclosed and vegetated nature of the Idle Valley woodland south of the Proposed Development. It is illustrated on **Figure 7.11d (Volume 2 of the ES)**.

A linear belt of tree planting and scrub would be retained along the southern boundary of the Site and it is unlikely that there would be a meaningful view of the Proposed Development from this location, although taller features such as the screen at the closest Processing Area may be seen emerging above the woodland in some sections. This would be extensively filtered and a glimpsed and transient view.

Recreational receptors are of high sensitivity but the maximum level magnitude of change is assessed as negligible with an effects grading of negligible adverse during construction and some positive and beneficial effects post-restoration.

7.13.4.5 Viewpoint 5 Idle Valley Nature Reserve Woodland Walk (80 m, S)

This viewpoint is representative of views that would be available from a woodland walk within the Idle Valley Nature Reserve. Refer to **Figure 7.11e (Volume 2 of the ES)**.

The view is directed across the River Idle and through extensive vegetation to the wooded boundary of the Site. The density of the woodland planting means that meaningful views are unlikely even in winter as this photograph shows. Any views of the taller infrastructure such as the screen at the closest Processing Area which may be seen emerging above the woodland would be filtered, glimpsed, and transient in nature.

People undertaking recreation are assessed as having high sensitivity which in combination with a negligible magnitude of change assessment would result in an effects grading of negligible adverse during both construction and operation and temporary and

reversible. Following the restoration, there would be beneficial effects on both the wider landscape and visual amenity.

7.13.4.6 Viewpoint 6 Idle Valley Nature Reserve (260 m, S)

The view is directed across the Idle Valley Nature Reserve wetland area and lake to a belt of mature woodland which is located on the boundary of the Site. This woodland belt would be retained and managed during the lifetime of the Proposed Development and aftercare period. Refer to **Figure 7.11f (Volume 2 of the ES)**.

It is unlikely that there would be a meaningful view to activities on Site from this location, although some taller features in Area C may be glimpsed emerging above the woodland. These would however be viewed in the context of existing taller elements at the Bellmoor Industrial Estate, including the exiting concrete batching plant. Recreational receptors are of high sensitivity to change but the magnitude of change from this location would be negligible giving rise to a negligible adverse, temporary and reversible effects grading. Again with some negligible benefits for both the wider landscape and visual amenity following restoration.

7.13.4.7 Viewpoint 7 Sutton Lane North of Cross Road Farm (360 m, SW)

This view is directed east from the highway through gaps in the hedgerow across a flat landscape of grassland to a vegetated skyline which is the western boundary of the Site. Refer to **Figure 7.11g (Volume 2 of the ES)**.

It is representative of views that would be available to the Proposed Development from residential receptors and road users. Residential receptors are of high sensitivity and road users of minor roads such as this are of medium sensitivity.

Primary effects on Cross Road Farm (R3) would be from the initial construction phase when vegetation would be removed to facilitate the new vehicular access. This would open up views to moving traffic and construction and operational activities, including the operation of the conveyor throughout much of the lifetime of the Proposed Development. A new wooden fence and a line of native mix hedgerow planting with trees would provide partial screening and an existing area of woodland would be retained, managed and protected. The magnitude of change would be small resulting in a minor adverse effect for road users and minor-moderate effect for the residential receptor (R3) during the construction and operational stages.

7.13.4.8 Viewpoint 8 PRoW from end of Town Street, Sutton-cum-Lound (620 m, W)

This viewpoint location illustrates the views available from the edge of Sutton-cum-Lound (S1). Refer to **Figure 7.11h (Volume 2 of the ES)**.

The vegetated landform of the High-Rise embankment is a skyline feature of a filtered, long-distance and panoramic view. There would be filtered and long-distance views of activities during the removal of the embankments at the end of phases HR P4 and P5, which would result in the temporary loss of woodland from the skyline. However, the removal of the embankments would take place over a number of weeks, in order to restore these sections of the Site following PFA extraction. Importantly, the embankments would only be removed after PFA extraction behind them is completed. The retention of the embankment in this way is purposeful, as they act as a significant visual screen during extraction and effectively limit visual impacts until they are removed as part of restoration activities. Following removal, these areas of the Site would potentially open up vistas to the restored landscape.

PRoW and residential receptors users are both assessed as high sensitivity. The magnitude of change is appraised as negligible during construction and up to small during operation particularly during the restoration of HR P4 and HR P5. As the embankment is used to provide fill for restoration, traffic movements and loss of vegetation may be visible

on the skyline. This would result in a maximum of minor-moderate adverse, and temporary and reversible effect. Post-restoration there would be a beneficial effect as vistas would be opened and the incongruous landform of the restored landfill is restored to a more naturalistic profile for its surroundings.

7.13.4.9 Viewpoint 9 PRow South of Bellmoor Farm (On Western Site Boundary)

The view illustrates the immediate landscape context and visual amenity of Bellmoor Farm and Bellmoor Cottage (and the other properties in this location) (R2). The boundary embankments of the Site form raised vegetated boundaries and significant visual screens to the east and south. Refer to **Figure 7.11i (Volume 2 of the ES)**.

It is proposed to retain the embankments during construction and PFA extraction, to screen these activities. The southern embankment would be retained in perpetuity (the northern half of it is not controlled by the Applicant) and the eastern embankment would only be removed only after PFA extraction behind it has been completed. There would be a visible loss of woodland from the eastern embankment, but this would be temporary and only evident until the area is restored, which would be ongoing as soon as the embankment is removed. The landform would reduce in scale. Traffic movements on the embankment would be visible to both PRow users and residential receptors during restoration activities, although this would be for a temporary period and earlier phases would not have this effect.

There also would be oblique views to the conveyor and haul road that crosses the valley between HR P6 and HR P1. These views would be screened by the embankments that are to be left in place during operation. There are also proposals to recess the haul road and conveyor, as noted earlier in this Chapter, which it is proposed would be secured by a suitable planning condition(s).

Both PRow users and residential receptors are assessed as high sensitivity. The magnitude of change is assessed as medium during operation, specifically the short-term removal of the lagoon embankment in HR P5 and HR P6, which would result in up to a moderate-major adverse, temporary and reversible effect.

Following the reduction in height of the embankment open views would be revealed across the Site, which would provide an open aspect, with long-distance views, a characteristic of the surrounding landscape character. Replacement woodland would eventually filter this view as the vegetation matures. This would provide a small positive change in the magnitude of change resulting in minor-moderate beneficial effects.

7.13.4.10 Viewpoint 10 PRow at Sutton Lakes (260 m, W)

The view is directed across a large water body to the vegetated High-Rise embankment forming the western boundary of the Site which forms a backdrop to the hamlet of Bellmoor Farm and Bellmoor Cottage (and the other properties in this location) (R2). Refer to **Figure 7.11j (Volume 2 of the ES)**.

As HR P4 and P5 are extracted there would be a loss of woodland from the skyline, although some vegetation on the lower slopes may be protected and retained.

It is proposed to retain the embankment during PFA extraction, to screen these activities. The embankment would only be removed after PFA extraction behind it has been completed. There would be a visible loss of woodland from the embankment, but this would be temporary and only evident until the area is restored, which would be ongoing as soon as the embankment is removed. Restoration activities including vehicular movements would be visible during this period for a short period of time.

People undertaking recreation are assessed of medium sensitivity, while PRow users are of high sensitivity. From this location, the magnitude of change is assessed as negligible during construction which would result in negligible effects. During operation the

magnitude of change would increase to small, which would result in a minor adverse effect on the people using the fishing lake and a minor-moderate adverse effect on the PRow user. Effects would be temporary and reversible although the reduction in the height of the embankment would be a permanent change.

Post-restoration there would be a positive small magnitude of change resulting in up to a minor-moderate beneficial effect on both the wider landscape and visual amenity.

7.13.4.11 Viewpoint 11 Lound Low Road at Wetland Fisheries (On Northern Site Boundary)

The viewpoint illustrates the visual amenity of PRow and road users on Lound Low Road (NT|Sutton|BOAT7). Refer to **Figure 7.11k (Volume 2 of the ES)**.

The High-Rise embankment forms the northern boundary to the Site. A hedgerow maintained at 1 m height and an avenue of mature trees are prominent in the foreground. The existing low maintained hedgerow would be allowed to grow taller and additional tree planting would filter this view. There would be negligible effects during construction but as the northern phases are extracted in the Low-Rise there would be views available into the interior of the Site and the soil and overburden storage area. However, extraction activities would be screened by retaining the High-Rise embankment as mitigation until restoration commences in each phase.

PRow users are of high sensitivity and road users of medium sensitivity. The magnitude of change would be up to medium. This would result in a moderate adverse effect for road users and a moderate-major adverse effect for PRow users. This would be temporary and partially reversible effect as the landform would be permanently altered.

There are two residential properties at Wetlands Fisheries (R9) located behind a vegetated curtilages. Visual impacts are considered to be negligible for these properties, due to the screening effect of the garden vegetation, retained hedgerow and lagoon embankment. The main impacts, would be the short-term removal of the embankment following PFA extraction for restoration purposes.

Following restoration there would be a positive change resulting in beneficial effects for both the landscape and visual amenity from the additional tree and hedgerow planting to the perimeter and the potential for vistas across to the lake and wet grassland areas. Over time the extent of this view would diminish as the new supplementary planting matures, although some framed vistas could be retained. This is assessed as a small magnitude of change resulting in minor-moderate beneficial effects for PRow users, the general setting of the residential properties, and minor beneficial effects for road users.

7.13.4.12 Viewpoint 12 Town Street by Yew Tree Farm (410 m, N)

This viewpoint is directed southeast from a low ridgeline on the settlement edge of Lound (KV8 in the Lound Neighbourhood Plan 2021-2038) near to Yew Tree Farm (R8). Refer to **Figure 7.11l (Volume 2 of the ES)**.

It is representative of views available from higher ground along Town Street and from Hill Tops and Holly Tree Farm (Grade II). The view encompasses a panoramic view of the High-Rise embankment along the northern boundary of the Site. As the northern phases are restored following extraction there would be a view to activity on the upper slopes and a noticeable loss of woodland from a section. This is a long-distance view and there are already views to moving traffic.

The magnitude of change is appraised as negligible to small. This would result in up to a minor-moderate adverse effect on the residential receptors Hill Top (R7) and Yew Tree Farm (R8) which are of high sensitivity and a minor adverse effect on the visual amenity of road users that are of medium sensitivity as their primary focus is on their direction of travel.

7.14 CUMULATIVE EFFECTS ASSESSMENT

The appropriate scale for considering cumulative development depends on the nature of the potential effect. They are considered in turn, for each category of potential effect.

There are a number of development sites, either consented or in the planning process, within the 5 km cumulative sites study area as set out in **Table 7.6** below. The location of the cumulative sites included within this appraisal is illustrated on **Figure 7.10 (Volume 2 of the ES)**.

Table 7.6: Cumulative Sites

Development	Status	Approximate Distance and direction from the Site
Erection of 4 Holiday Lodges, Fish Welfare/Reception/Equipment Store, Driveway and Car Parking Area	22/01698/FUL submitted 20.12.2022 (re-submission of a 2018 planning permission granted permission (04/04/2018))	0.1 km west of the Site
Trinity Farm, Retford: Planning permission has been granted for Phase 1 comprising 196 dwellings and 11.11ha of employment/employment. A further 305 dwellings on 11.15 ha is proposed	Allocation Site (SITE HS7) in the Draft Local Plan Regulation 22 Version	0.38 km southwest of the Site
Land North Of Chainbridge Road Lound Nottinghamshire: Retain Engineering Operations to Sub-Divide Lake into Four Smaller Lakes, Including Dredging of Lake to Achieve Original Depth of 1.5 metres	17/01509/FUL Approved (27/04/2020)	1.09 km north of the Site
Tiln Farm Land: Installation and Operation of a Solar Farm with all Associated Works, Equipment and Necessary Infrastructure. Variation of Conditions 2, 3, 4, 12, 13 and 14 of P.A. 20/01405/FUL to Amend the Location, Design and Elevations and Retention of the 132kV Substation and Associated Access Beyond the Temporary 40 Years to a Permanent Basis	20/01405/FUL Approved – (19/02 /2021) and 21/00508/VOC (05/07/2021)	1.2km east of the Site
Land North Of Bigsby Road Retford Nottinghamshire:171 Dwellings	Screening Opinion - Not EIA – 25/02/2019	3.04 km southeast of the Site
Land South Of Broad Gores Claborough: Proposed Residential Development	Outline Planning Application with Some Matters Reserved - Awaiting decision	3.62 km east of the Site
Ordsall South, Retford: 106.5ha site provides an opportunity to create a sustainable and well-	Allocation Site (SITE HS13) in the Draft Local Plan Regulation 22 Version SITE	4.06 km south of the Site

integrated extension for up to 1,250 dwellings		
Land West Of Great North Road Ranskill Retford Nottinghamshire: Reserved Matters Application for the Approval of Appearance, Landscaping, Layout and Scale to Erect 27 Dwellings Following Outline Application 20/00424/VOC (Original Outline Application 17/01300/OUT)	21/01666/RES Approved (28/06/2022)	5.28 km northwest of the Site

7.15 SUMMARY OF RESIDUAL EFFECTS

Table 7.7 below provides a summary of residual landscape and visual effects detailed within this chapter post mitigation.

Table 7.7: Summary of Residual Effects

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
LANDSCAPE EFFECTS (Refer to Figures 7.6a and 7.6b: Volume 2 of this ES)				
Landscape Character				
IL07 Lound (BDLCA)				
Construction Phase	Construction traffic movements, disruption, and construction lighting would be added to the baseline conditions.	Medium sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Negligible adverse and temporary
Operation	Traffic movements, conveyor operation, and processing activities would introduce a level of disruption	Medium sensitivity/ Small magnitude of change	Specified working hours and low impact lighting policy using directional lighting.	Minor adverse temporary and reversible
Restoration (Yr 15-20 post-restoration)	Improved setting from more sensitive landform creation and potential for views into and across Site to lake and new planting	Medium sensitivity/ Small magnitude of change	Progressive restoration and enhancement	Minor beneficial
IL09 Retford (BDLCA)				
Construction Phase	Construction traffic movements, disruption, and construction lighting would be added to the baseline conditions.	Low sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Negligible adverse and temporary

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
Operation	Traffic movements, conveyor operation and processing activities would introduce a level of disruption	Low sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting.	Negligible adverse and temporary if long-term and reversible
Restoration (Yr 15-20 post-restoration)	Positive enhancement to wider landscape setting	Low sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
IL10 Ranskill (BDLCA) - This is the host 'LCP'				
Construction Phase	Construction traffic movements, disruption, and construction lighting would be added to the baseline conditions.	Medium sensitivity/ Medium magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Moderate adverse and temporary
Operation	Traffic movements, conveyor operation and processing would introduce activity.	Medium sensitivity/ Large magnitude of change	Specified working hours and low impact lighting policy using directional lighting.	Moderate – major adverse, temporary and reversible
Restoration (Yr 15-20 post-restoration)	Improved setting from more sensitive landform creation and potential for views into and across Site to lake and new planting	Medium sensitivity/ Medium magnitude of change	Progressive restoration and enhancement	Moderate beneficial
3a Floodplain Valleys (EMRLCA)				
Construction Phase	Construction traffic movements, disruption, and construction lighting would be added to the baseline conditions.	Medium sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Negligible adverse and temporary
Operation	Traffic movements, conveyor operation, and processing would introduce activity	Medium sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting.	Negligible adverse, temporary and reversible
Restoration (Yr 15-20 post-restoration)	Improved setting from more sensitive landform creation and potential for views into and across	Medium sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
	Site to lake and new planting			
3b Sandstone Farmland (EMRLCA) - This is the 'host' LCA				
Construction Phase	Construction traffic movements, disruption, and construction lighting would be added to the baseline conditions.	Medium sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Negligible adverse and temporary
Operation	Traffic movements, conveyor operation, and processing would introduce activity	Medium sensitivity/ Small magnitude of change	Specified working hours and low impact lighting policy using directional lighting.	Minor adverse, temporary and reversible
Restoration (Yr 15-20 post-restoration)	Improved setting from more sensitive landform creation and potential for views into and across Site to lake and new planting	Medium sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
Site Landscape Character				
Construction Phase	Construction traffic movements, disruption, and construction lighting, would be added to the baseline conditions. Loss of vegetation would be apparent	Medium sensitivity/ Medium magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Moderate adverse and temporary
Operation	Traffic movements, conveyor operation, and processing would introduce activity	Medium sensitivity/ Large magnitude of change	Specified working hours and low impact lighting policy using directional lighting.	Moderate – major adverse temporary and reversible
Restoration (Yr 15-20 post-restoration)	Improved setting from more sensitive landform creation and potential for views into and across the Site	Medium sensitivity/ Medium magnitude of change	Progressive restoration and enhancement	Moderate beneficial at the Site level

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
VISUAL EFFECTS (Refer to Figures 7.4, 7.5, 7.8 and 7.9: Volume 2 of this ES)				
Viewpoints 1-12				
Viewpoint 1: Chainbridge Lane, Lound (800 m, N)				
Construction	Not applicable	Prow user: High sensitivity Residential receptor: High sensitivity/ Neutral magnitude of change	Not applicable	No effects during the initial construction phase
Operation	Traffic movements, conveyor operation, and processing would introduce activity	Prow user: High sensitivity Residential receptor: High sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting.	Negligible adverse, temporary and reversible
Restoration (Yr 15-20 post-restoration)	Improved wider landscape context	Prow user: High sensitivity Residential receptor: High sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
Viewpoint 2: Chainbridge Lane (960 m, NE)				
Construction	Not applicable	Prow user: High sensitivity /Neutral (no change)	Not applicable	No effects during the initial construction phase
Operation	Traffic movements, conveyor operation, and processing would introduce activity	Prow user: High sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting.	Negligible adverse, temporary and reversible
Restoration (Yr 15-20 post-restoration)	Improved wider landscape context	Prow user: High sensitivity / Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
Viewpoint 3: PRow near Tilm Grange and Whitehouse Farm (770 m, E)				
Construction	Additional traffic, and direct effects such as	Prow user: High sensitivity	Specified working hours.	Negligible adverse,

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
	construction lighting and activity	Residential receptor: High sensitivity/ Negligible magnitude of change	Sensitive lighting policy.	temporary and reversible
Operation	As the progressive extraction and restoration proceeds the most pronounced effects would occur during the working of the phase adjacent to the southern boundary (Phases LR P1-P4 and HR P6) although the embankment and a line of vegetation would be retained as a visual screen.	Prow user: High sensitivity Residential receptor: High sensitivity/ Negligible magnitude of change	Retention of vegetation along the southern boundary Specified working hours. Sensitive lighting policy and progressive restoration	Negligible adverse, temporary and reversible
Restoration (Yr 15-20 post-restoration)	Improved setting from additional and new planting to Site perimeter	Prow user: High sensitivity Residential receptor: High sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
Viewpoint 4: Idle Valley Nature Reserve Riverside Discovery Walk (230 m, S)				
Construction	Additional traffic, and direct effects such as construction lighting and increased activity to the baseline conditions.	Recreational receptor: High sensitivity/ Negligible magnitude of change	Specified working hours. Sensitive lighting policy.	Negligible adverse, temporary and reversible
Operation	As the progressive extraction and restoration proceeds the most pronounced effects would occur during the working of the phase adjacent to the southern boundary (Phases LR P1-P4 and HR P6) although buffers would be instigated and the embankment and a line of vegetation would be retained as a visual screen	Recreational receptor: High sensitivity/ Negligible magnitude of change	Retention of vegetation along the southern boundary Specified working hours. Sensitive lighting policy and progressive restoration	Negligible adverse, temporary and reversible
Restoration (Yr 15-20 post-restoration)	Improved setting from additional and new planting to Site perimeter	Recreational receptor: High sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
Viewpoint 5: Idle Valley Nature Reserve Woodland Walk (80 m, S)				
Construction	Additional traffic, and direct effects such as construction lighting, and activity the baseline conditions.	Recreational receptor: High sensitivity/ Negligible magnitude of change	Specified working hours. Sensitive lighting policy.	Negligible adverse, temporary and reversible
Operation	As the progressive extraction and restoration proceeds the most pronounced effects would occur during the working of the phase adjacent to the southern boundary (Phases LR P1-P4 and HR P6) although buffers would be instigated and a line of vegetation would be retained	Recreational receptor: High sensitivity/ Negligible magnitude of change	Retention of vegetation along the southern boundary Specified working hours. Sensitive lighting policy and progressive restoration	Negligible adverse, temporary and reversible
Restoration (Yr 15-20 post-restoration)	Improved setting from additional and new planting to Site perimeter	Recreational receptor: High sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
Viewpoint 6: Idle Valley Nature Reserve (260 m, S)				
Construction	Additional traffic, and direct effects such as construction lighting, and activity	Recreational receptor: High sensitivity/ Negligible magnitude of change	Specified working hours. Sensitive lighting policy.	Negligible adverse, temporary and reversible
Operation	As the progressive extraction and restoration proceeds the most pronounced effects would occur during the working of the phase adjacent to the southern boundary (Phases LR P1-P4 and HR P6) although buffers would be instigated and a line of vegetation would be retained	Recreational receptor: High sensitivity/ Negligible magnitude of change	Retention of vegetation along the southern boundary Specified working hours. Sensitive lighting policy and progressive restoration	Negligible adverse, temporary and reversible
Restoration (Yr 15-20 post-restoration)	Improved setting from additional and new planting to Site perimeter	Recreational receptor: High sensitivity/ Negligible	Progressive restoration and enhancement	Negligible beneficial

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
		magnitude of change		
Viewpoint 7: Sutton Lane North of Cross Road Farm (360 m, SW)				
Construction	Additional traffic, and direct effects such as construction lighting, and activity. Removal of vegetation to facilitate the new and widened vehicular access would be noticeable and would reveal potential views into Site	Residential receptor: High sensitivity Road user: Medium sensitivity/ Small magnitude of change	Specified working hours. Sensitive lighting policy. Retention of some perimeter planting and replacement planting at key positions	Minor-moderate adverse for Cross Road Farm (R3) and Minor adverse for road user. Both effects would be temporary and reversible
Operation	Traffic movements, conveyor operation and processing activities. Removal of vegetation to facilitate the new and widened vehicular access would be noticeable and would reveal potential views into Site from upper-storeys	Residential receptor: High sensitivity Road user: Medium sensitivity/ Small magnitude of change	Specified working hours and low impact lighting policy using directional lighting Retention of as much vegetation as possible and replacement tree and hedge planting along a new boundary fence-line in Area B	Minor-moderate adverse for Cross Road Farm and Bridge Lodge (R3) and Minor adverse for road user. Both identified effects would be temporary and reversible
Restoration (Yr 15-20 post-restoration)	Positive enhancement to wider landscape setting	Residential receptor: High sensitivity Road user: Medium sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
Viewpoint 8: PRow at end of Town Street, Sutton-cum-Lound (620 m, W)				
Construction	Additional traffic, and direct effects such as construction lighting, and activity	Prow User: High sensitivity/ Negligible magnitude of change	High sensitivity/ Negligible magnitude of change	Negligible adverse and temporary
Operation	Glimpsed views of traffic movements on the embankment are possible at certain stages of the Proposed Development.	High sensitivity/ Small	Specified working hours and low impact lighting policy using	Minor-moderate adverse,

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
	The most pronounced effects would occur during the restoration of the phases adjacent to the northern boundary and western boundary (Phases LR P5 and HR P2-5). The vegetated embankment would be retained during extraction activities and would only be removed for final landform restoration	magnitude of change	directional lighting.	temporary and reversible
Restoration (Yr 15-20 post-restoration)	Positive enhancement to wider landscape setting	High sensitivity/ Small magnitude of change	Progressive restoration and enhancement	Minor – moderate beneficial
Viewpoint 9: PRoW South of Bellmoor Farm (On Western Site Boundary)				
Construction	Additional traffic, and direct effects such as construction lighting, and activity	PRoW user and residential receptor: High sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Negligible adverse, temporary and reversible
Operation	Glimpsed views of traffic movements on the embankment are possible at certain stages of the Proposed Development. The most pronounced effects would occur during the restoration of HR P5 and HRP6. The vegetated embankment would be retained during extraction activities and would only be removed for final landform restoration	PRoW user and residential receptor: High sensitivity/ Medium magnitude of change	Specified working hours and low impact lighting policy using directional lighting. Retention of some perimeter planting	Moderate-major adverse, temporary and reversible
Restoration (Yr 15-20 post-restoration)	Positive enhancement to wider landscape setting and more naturalistic landform to embankment	PRoW user and residential receptor: High sensitivity / Small magnitude of change	Progressive restoration and enhancement	Minor-moderate beneficial
Viewpoint 10: PRoW at Sutton Lakes (260 m, W)				
Construction	Additional traffic, and direct effects such as construction lighting, and activity.	PRoW user High sensitivity and recreational	Specified working hours and low impact lighting	Negligible adverse, temporary and reversible

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
		receptor: Medium sensitivity / Negligible magnitude of change	policy using directional lighting	
Operation	Glimpsed views of traffic movements on the embankment are possible at certain stages of the Proposed Development. The most pronounced effects would occur during the restoration of HR P4 and HR P5. The vegetated embankment would be retained during extraction activities and would only be removed for final landform restoration	PRoW user: High sensitivity Recreational receptor: Medium sensitivity / Small magnitude of change	Specified working hours and low impact lighting policy using directional lighting. Retention of embankment until restoration of landform	Minor-moderate adverse for PRoW user and Minor adverse for road user and for recreationists. Effects would be temporary and reversible
Restoration (Yr 15-20 post-restoration)	Positive enhancement to wider landscape setting and more naturalistic landform to embankment	PRoW user High sensitivity and recreational receptor: Medium sensitivity/ Small magnitude of change	Progressive restoration and enhancement	Minor-moderate beneficial
Viewpoint 11: Loud Low Road at Wetland Lakes (On Northern Site Boundary)				
Construction	Additional traffic, and direct effects such as construction lighting, and activity	Residential receptor and PRoW user: High sensitivity Road user: Medium sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Negligible adverse, temporary and reversible
Operation	Glimpsed views of traffic movements on the embankment are possible at certain stages of the Proposed Development. The most pronounced effects would occur during the restoration of the phases adjacent to the northern boundary and western boundary (Phases LR P5 and HR P2-5). The vegetated	Residential receptor and PRoW user: High sensitivity Road user: Medium sensitivity/ Medium magnitude of change	Specified working hours and low impact lighting policy using directional lighting Retention of as much vegetation as possible and replacement tree planting.	Moderate-major adverse for PRoW user, and Moderate adverse for road user. Both effects would be temporary and reversible

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
	embankment would be retained during extraction activities and would only be removed for final landform restoration			
Restoration (Yr 15-20 post-restoration)	After the Site is decommissioned there would be only direct and indirect beneficial effects. As progressive restoration is proposed these effects may be apparent earlier than the cessation of operations	PRoW user: High sensitivity Road user: Medium sensitivity/ Small magnitude of change	Progressive restoration and enhancement	Up to Minor-moderate beneficial
Viewpoint 12: Town Street by Yew Tree Farm (410 m, N)				
Construction	Indirect effects from additional traffic, and direct effects such as construction lighting, and activity	Residential receptor: High sensitivity Road user: Medium sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting.	Negligible adverse and temporary
Operation	Glimpsed views of traffic movements on the embankment are possible at certain stages of the Proposed Development. The most pronounced effects would occur during the restoration of the phases adjacent to the northern boundary and western boundary (Phases LR P5 and HR P2-5). The vegetated embankment would be retained during extraction activities and would only be removed for final landform restoration	Residential receptor: High sensitivity Road user: Medium sensitivity/ Small magnitude of change	Specified working hours and low impact lighting policy using directional lighting. Retention of some boundary planting	Minor-moderate adverse for residential receptor R7 and minor adverse for road users. Both effects would be temporary and reversible
Restoration (Yr 15-20 post-restoration)	Improved setting from more sensitive landform creation and potential for views into and across Site to lake and new planting	Residential receptor: High sensitivity Road user: Medium sensitivity/ Negligible	Progressive restoration and enhancement	Negligible beneficial

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
		magnitude of change		
Settlements (Refer to Figure 7.8, Volume 2 of the ES)				
S1: Sutton-cum-Lound (386 m, N)				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity	High sensitivity/ Negligible magnitude of change	High sensitivity/ Negligible magnitude of change	Negligible adverse and temporary
Operation	Glimpsed views of traffic movements on the embankment are possible at certain stages of the Proposed Development. The most pronounced effects would occur during the restoration of the phases adjacent to the western boundary (Phases HR P4-5). The vegetated embankment would be retained during extraction activities and would only be removed for final landform restoration	High sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting.	Negligible adverse, temporary and reversible
Restoration (Yr 15 - 20 post restoration)	Positive enhancement to wider landscape setting	High sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
S2: Lound (500 m, N)				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity	High sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Negligible adverse and temporary
Operation	Glimpsed views of traffic movements and activities on Site are possible from certain locations on the outskirts or from upper-storeys. As the progressive extraction and restoration proceeds the most pronounced effects would occur during the working of the phases adjacent to the northern boundary and	High sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting.	Negligible adverse, temporary and reversible

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
	western boundary (Phases LR P5 and HR P2-5) although buffers would be instigated and a line of vegetation would be retained			
Restoration (Yr 15-20 post-restoration)	Positive enhancement to wider landscape setting	High sensitivity/ Neutral or no change magnitude of change	Progressive restoration and enhancement	No effects
Residential Receptors (Refer to Figure 7.8, Volume 2 of the ES)				
R1: Low Farm (34 m, N)				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity	High sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Negligible adverse and temporary
Operation	Glimpsed views of traffic movements on the embankment are possible at certain stages of the Proposed Development. The most pronounced effects would occur during the restoration of the phases adjacent to the northern and western boundaries (Phases LR P5 and HR P2-5). The vegetated embankment would be retained during extraction activities and would only be removed for final landform restoration	High sensitivity/ Small magnitude of change	Specified working hours and low impact lighting policy using directional lighting.	Minor-moderate adverse, temporary and reversible
Restoration (Yr 15-20 post-restoration)	Improved setting from more sensitive landform creation and potential for views into and across Site to lake and new planting	High sensitivity/ Small magnitude of change	Progressive restoration and enhancement	Minor-moderate beneficial
R2: Bellmoor Farm and Bellmoor Cottage and Other Properties (150 m, N and W)				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity	High sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using	Negligible adverse and temporary

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
			directional lighting	
Operation	Glimpsed views of traffic movements on the embankment are possible at certain stages of the Proposed Development. The most pronounced effects would occur during the restoration of HR P5 and HR P6. The vegetated embankment would be retained during extraction activities and would only be removed for final landform restoration	High sensitivity/ Medium magnitude of change	Specified working hours and low impact lighting policy using directional lighting. Retention of some perimeter planting	Moderate-major adverse, temporary and reversible
Restoration (Yr 15-20 post-restoration)	Positive enhancement to wider landscape setting	High sensitivity/ Small magnitude of change	Progressive restoration and enhancement	Minor-moderate beneficial
R3: Cross Road Farm and Bridge Lodge (367 m, SW)				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity. Removal of vegetation to facilitate the new and widened vehicular access would be noticeable and would reveal potential views into Site	High sensitivity/ Small magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Minor-moderate adverse and temporary
Operation	Traffic movements, conveyor operation and processing activities would introduce a high level of activity and noise. Removal of vegetation to facilitate the new and widened vehicular access would be noticeable and would reveal potential views into Site from upper-storeys	High sensitivity/ Small magnitude of change	Specified working hours and low impact lighting policy using directional lighting. Retention of as much vegetation as possible and replacement tree and hedge planting along wooden fence in Area B	Minor-moderate adverse and temporary and reversible
Restoration (Yr 15-20 post-restoration)	Positive enhancement to wider landscape setting	High sensitivity/ Small magnitude of change	Progressive restoration and enhancement	Negligible beneficial

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
		Negligible magnitude of change		
R4: Botney and Brooklyn (250 m SW)				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity	High sensitivity/ Small magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Minor-moderate adverse and temporary
Operation	Traffic movements, conveyor operation and processing activities would introduce a high level of activity and noise. Removal of vegetation to facilitate the new and widened vehicular access would be noticeable and would reveal potential views into Site	High sensitivity/ Small magnitude of change	Specified working hours and low impact lighting policy using directional lighting Retention of as much vegetation as possible and replacement tree planting	Minor-moderate adverse and temporary and reversible
Restoration (Yr 15-20 post-restoration)	Positive enhancement to wider landscape setting	High sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
R5: Botany Bay Farm (367 m SW)				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity	High sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Negligible adverse and temporary
Operation	Traffic movements, conveyor operation and processing activities would introduce activity	High sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting Retention of as much vegetation as possible and replacement tree planting	Negligible adverse and temporary and reversible
Restoration (Yr 15-20 post-restoration)	Positive enhancement to wider landscape setting	High sensitivity/ Negligible	Progressive restoration	Negligible beneficial

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
		magnitude of change	and enhancement	
R6: Tilm Grange and Whitehouse Farm (554 m, S)				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity	High sensitivity/ Negligible magnitude of change	Specified working hours. Sensitive lighting policy.	Negligible adverse and temporary
Operation	There is some limited potential for filtered or glimpsed views of taller elements within the Proposed Development such as the top of the silo and CHP within Area C. The most pronounced effects would occur during the construction and restoration of the soakaway and settlement lagoons adjacent to the southern boundary (Phases LR P1-P5)	High sensitivity/ Negligible magnitude of change	Retention of vegetation along the southern boundary Specified working hours. Sensitive lighting policy. Delayed extraction and progressive restoration and retention of boundary vegetation	Negligible adverse, temporary and reversible
Restoration (Yr 15-20 post-restoration)	Improved setting from new planting	High sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
R7: Hill Top (400 m, N)				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity	High sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Negligible adverse and temporary
Operation	Glimpsed views of traffic movements on the embankment are possible at certain stages of the Proposed Development. The most pronounced effects would occur during the restoration of the phases adjacent to the northern boundary and western boundary (Phases LR P5 and HR P2-5). The vegetated embankment would be retained during extraction activities and would only be removed	High sensitivity/ Small magnitude of change	Specified working hours and low impact lighting policy using directional lighting. Retention of some boundary planting	Minor-moderate adverse, temporary and reversible

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
	for final landform restoration			
Restoration (Yr 15-20 post-restoration)	Improved setting from more sensitive landform creation and potential for views into and across Site to lake and new planting	High sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
R8: Yew Tree Farm (500 m, N)				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity	High sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Negligible magnitude of change and temporary
Operation	There is some very limited potential for long-distance views of traffic movements on the embankment at certain stages of the Proposed Development. Views would be directed across Town Street and moving traffic and through gaps in vegetation or built form	High sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting. Retention of embankment during phased extraction	Negligible adverse and temporary and reversible
Restoration (Yr 15-20 post-restoration)	Improved setting from more sensitive landform creation and potential for views into and across Site to lake and new planting	High sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
R9: Two Residential Dwellings at Wetland Fisheries, Lound Low Road (30 M, N)				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity. However these properties are located behind vegetated curtilages and most activity would be screened	High sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Up to negligible adverse, temporary and reversible
Operation	Glimpsed and oblique views of traffic movements on the embankment are possible at certain stages of the Proposed Development, although most views from the dwellings would be screened by planting	High sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting. Retention of as much	Negligible adverse, temporary and reversible

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
	on the curtilage. There may be glimpsed views during the restoration of the phases adjacent to the northern boundary (Phases HR P2-P3). The vegetated embankment would be retained during extraction activities and would only be removed for final landform restoration		vegetation as possible and replacement tree planting.	
Restoration (Yr 15-20 post-restoration)	After the Site is decommissioned there would be only direct and indirect beneficial effects. As progressive restoration is proposed these effects may be apparent earlier than the cessation of operations	Residential receptor: High sensitivity/ Up to small magnitude of change	Progressive restoration and enhancement	Minor-moderate beneficial effects to the general setting although views from the curtilages would be limited resulting in a negligible beneficial effect
PRoW Users (Refer to Figure 1.9, Volume 2 of the ES)				
NT Sutton FP1				
Construction Phase	Construction traffic movements and activities, construction lighting, and activity.	High sensitivity/ Medium magnitude of change	Specified working hours. Sensitive lighting policy. Retention of vegetation along the northern boundary of the plant area	Moderate-major adverse and temporary
Operation	Traffic movements, conveyor operation and processing activities. The vegetated embankment would be retained during extraction activities and would only be removed for final landform restoration	High sensitivity/ Medium magnitude of change		Moderate-major adverse and temporary and reversible
Restoration (Yr 15 - 20 post-restoration)	Improved setting from more sensitive landform creation, open aspect and potential for views into and across Site to the new lake and new planting	High sensitivity/ small magnitude of change	Progressive restoration and enhancement	Minor-moderate beneficial

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
NT Sutton FP2				
Construction Phase	Construction traffic movements, disruption, and activity. Loss of vegetation would be apparent	High sensitivity/ Medium magnitude of change	Specified working hours. Sensitive lighting policy. Retention of vegetation along the western boundary and replacement planting / enhancements along section where vegetation is to be removed	Moderate – major adverse, temporary and reversible
Operation	Traffic movements, conveyor operation and processing activities. The vegetated embankment would be retained during extraction activities and would only be removed for final landform restoration	High sensitivity/ Small magnitude of change	Specified working hours. Sensitive lighting policy	Minor-moderate temporary and reversible
Restoration (Year15 - 20 post-restoration)	After the Site is decommissioned there would be only direct and indirect beneficial effects. As progressive restoration is proposed, these effects may be apparent earlier than the cessation of operations	High sensitivity/ Small magnitude of change	Progressive restoration and enhancement	Minor-moderate beneficial
NT Sutton FP5				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity	High sensitivity/ Negligible magnitude of change	Specified working hours. Sensitive lighting policy. Retention of vegetation along a section of the boundary	Negligible adverse and temporary
Operation	As the progressive extraction and restoration proceeds the most pronounced effects would occur during the restoration of the phase adjacent to the western boundary (Phases HR P4 and HR P5) The vegetated embankment	High sensitivity/ Small magnitude of change	Specified working hours. Sensitive lighting policy Phased extraction and progressive restoration	Minor-moderate adverse, temporary and reversible

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
	would be retained during extraction activities and would only be removed for final landform restoration		would have benefits	
Restoration (Year 15 - 20 post-restoration)	After the Site is decommissioned there would be only direct and indirect beneficial effects. As progressive restoration is proposed these effects may be apparent earlier than the cessation of operations	High sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
NT Sutton BOAT7				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity	High sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Negligible adverse, temporary and reversible
Operation	Glimpsed views of traffic movements on the embankment are possible at certain stages of the Proposed Development. The most pronounced effects would occur during the restoration of the phases adjacent to the northern and western boundaries (Phases LR P5 and HR P2-5). The vegetated embankment would be retained during extraction activities and would only be removed for final landform restoration	High sensitivity/ Medium magnitude of change	Specified working hours and low impact lighting policy using directional lighting Retention of as much vegetation as possible and replacement tree planting.	Moderate-major adverse, temporary reversible
Restoration (Year15 - 20 post-restoration)	After the Site is decommissioned there would be only direct and indirect beneficial effects. As progressive restoration is proposed these effects may be apparent earlier than the cessation of operations	High sensitivity/ Small magnitude of change	Progressive restoration and enhancement	Minor-moderate beneficial
NT Sutton BW4				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity.	High sensitivity/ Small	Specified working hours and low impact lighting	Minor-moderate adverse and temporary

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
		magnitude of change	policy using directional lighting	
Operation	Glimpsed views of traffic movements on the embankment are possible at certain stages of the Proposed Development. The most pronounced effects would occur during the restoration of the phases adjacent to the northern and western boundaries (Phases HR P4-5). The vegetated embankment would be retained during extraction activities and would only be removed for final landform restoration	High sensitivity/ Medium magnitude of change	Specified working hours. Sensitive lighting policy. Delayed extraction and progressive restoration would have benefits	Moderate-major adverse, temporary and reversible
Restoration (Year15 - 20 post-restoration)	After the Site is decommissioned there would be only direct and indirect beneficial effects. As progressive restoration is proposed these effects may be apparent earlier than the cessation of operations	High sensitivity/ Small magnitude of change	Progressive restoration and enhancement	Minor - moderate beneficial
NT Hayton FP18				
Construction	Additional traffic, and direct effects such as construction lighting, and activity.	High sensitivity/ Negligible magnitude of change	Specified working hours. Sensitive lighting policy.	Negligible adverse and temporary
Operation	There is some limited potential for filtered or glimpsed views of taller elements within the Proposed Development such as the top of the silo and CHP within Area C. The most pronounced effects would occur during the construction and restoration of the soakaway and settlement lagoons adjacent to the	High sensitivity/ Negligible magnitude of change	Retention of vegetation along the southern boundary Specified working hours. Sensitive lighting policy and progressive restoration	Negligible adverse, temporary and reversible

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
	southern boundary (Phases LR P1-P5)			
Restoration	Improved setting from new planting	High sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
Recreational Routes (Refer to Figure 1.9, Volume 2 of the ES)				
Cuckoo Way				
Construction Phase	Indirect effects such as additional traffic	High sensitivity/ Negligible magnitude of change	Specified working hours	Negligible adverse and temporary
Operation	Additional traffic noise and disruption – no visual effects are expected	High sensitivity/ Negligible magnitude of change	Specified working hours. Noise attenuation and replacement planting	Negligible adverse, temporary and reversible
Restoration (Year15 - 20 post-restoration)	Positive enhancement to wider landscape setting	High sensitivity/ Neutral (no change)	Progressive restoration and enhancement	Neutral or no change
Recreational Sites				
Sutton Lakes				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity.	recreational receptor: Medium sensitivity / Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Negligible adverse, temporary and reversible
Operation	Glimpsed views of traffic movements on the embankment are possible at certain stages of the Proposed Development. The most pronounced effects would occur during the restoration of the phases adjacent to the northern boundary and western boundary (Phases HR P4-5). The vegetated embankment	Recreational receptor: Medium sensitivity / Small magnitude of change	Specified working hours and low impact lighting policy using directional lighting. Retention of embankment until restoration of landform	Minor-moderate adverse, temporary and reversible

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
	would be retained during extraction activities and would only be removed for final landform restoration			
Restoration	Positive enhancement to wider landscape setting and more naturalistic landform to embankment	Recreational receptor: Medium sensitivity / Small magnitude of change	Progressive restoration and enhancement	Minor-moderate beneficial
Wetland Fishing Lakes (On Northern Boundary)				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity	Medium sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Negligible adverse and short-term
Operation	Glimpsed views of traffic movements on the embankment are possible at certain stages of the Proposed Development. The wetland lakes are enclosed by vegetation and structures and views other than from the approach are unlikely. The most pronounced effects would occur during the restoration of the phases adjacent to the northern boundary and western boundary (Phases LR P5 and HR P2-5). The vegetated embankment would be retained during extraction activities and would only be removed for final landform restoration	Medium sensitivity/ Small magnitude of change	Specified working hours and low impact lighting policy using directional lighting Retention of as much vegetation as possible and replacement tree planting.	Minor adverse, temporary and reversible
Restoration (Year15 - 20 post-restoration)	Positive enhancement to wider landscape setting	Medium sensitivity/ Small magnitude of change	Progressive restoration and enhancement	Minor beneficial

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
Transport Routes (Refer to Figure 1.9, Volume 2 of the ES)				
A638 Great North Road				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity to the baseline conditions. Removal of vegetation to facilitate new and widened vehicular access	Low sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting Retention of as much vegetation as possible and replacement tree / hedge planting and fence along boundary to Area B planting	Negligible-minor adverse and temporary
Operation	Glimpsed views of traffic movements	Low sensitivity/ Negligible magnitude of change	As above	Negligible adverse and temporary
Restoration (Year15 - 20 post-restoration)	Positive enhancement to wider landscape setting	Low sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
Lound Low Road				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity	Medium sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Negligible adverse and temporary and reversible
Operation	Glimpsed views of traffic movements on the embankment are possible at certain stages of the Proposed Development. The most pronounced effects would occur during the restoration of the phases adjacent to the northern boundary and western boundary (Phases LR P5 and HR P2-5). The vegetated embankment would be retained during extraction activities and	Medium sensitivity/ Medium magnitude of change	Specified working hours and low impact lighting policy using directional lighting. attenuation and for visual mitigation	Moderate adverse, temporary and reversible

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
	would only be removed for final landform restoration			
Restoration (Year15 - 20 post-restoration)	Improved setting from more sensitive landform creation and potential for views into and across Site to lake and new planting.	Medium sensitivity/ Small magnitude of change	Progressive restoration and enhancement	Minor beneficial
Town Street				
Construction Phase	Additional traffic, and direct effects such as construction lighting, and activity	Medium sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting	Negligible adverse and temporary
Operation	Glimpsed views of traffic movements on the embankment are possible at certain stages of the Proposed Development although the road is bordered by hedges. Any views would be glimpsed and intermittent. The most pronounced effects would occur during the restoration of the phases adjacent to the northern boundary and western boundary (Phases LR P5 and HR P2-5). The vegetated embankment would be retained during extraction activities and would only be removed for final landform restoration	Medium sensitivity/ Negligible magnitude of change	Specified working hours and low impact lighting policy using directional lighting.	Negligible adverse, temporary and reversible
Restoration (Year15 - 20 post-restoration)	After the Site is decommissioned there would be only direct and indirect beneficial effects. As progressive restoration is proposed these effects may be apparent earlier than the cessation of operations	Medium sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
Sutton Lane				
Construction Phase	Indirect effects such as additional traffic. Direct effects from loss of vegetation to facilitate new widened vehicular	Medium sensitivity/ Small magnitude of change	Specified working hours and low impact lighting policy using	Minor adverse and temporary

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
	access and construction lighting		directional lighting Retention of as much vegetation as possible	
Operation	Traffic movements, conveyor operation and processing activities. Removal of vegetation to facilitate the new and widened vehicular access would be noticeable and would reveal transient views into Site	Medium sensitivity/ Small magnitude of change	Specified working hours and low impact lighting policy using directional lighting Retention of as much vegetation as possible and replacement tree/ hedge planting and fence along boundary to Area B	Minor adverse, temporary and reversible
Restoration (Year15 - 20 post-restoration)	Positive enhancement to wider landscape setting	Medium sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
Randall Way				
Construction Phase	Indirect effects such as additional traffic and activity	Low sensitivity/ Negligible magnitude of change	Specified hours of working and sensitive lighting policy	Negligible adverse and temporary
Operation	Indirect effects such as additional traffic and activity	Low sensitivity/ Negligible magnitude of change	Specified hours of working and sensitive lighting policy	Negligible adverse, temporary and reversible
Restoration (Year15 - 20 post-restoration)	Positive enhancement to wider landscape setting	Low sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
Hallcroft Road				
Construction Phase	Indirect effects such as additional traffic and activity	Low sensitivity/ Negligible magnitude of change	Specified hours of working and sensitive lighting policy	Negligible adverse and temporary
Operation	Indirect effects such as additional traffic and activity	Low sensitivity/ Negligible magnitude of change	Specified hours of working and	Negligible adverse and temporary

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
		Negligible magnitude of change	sensitive lighting policy	
Restoration (Year15 - 20 post-restoration)	Positive enhancement to wider landscape setting	Low sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
East Coast Main Train Line				
Construction Phase	Indirect effects such as glimpses of additional traffic and movement	Low sensitivity/ Negligible magnitude of change	Specified hours of working and sensitive lighting policy	Negligible adverse and temporary
Operation	Indirect effects such as glimpses of additional traffic and movement	Low sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible adverse and temporary
Restoration (Year15 - 20 post-restoration)	Positive enhancement to wider landscape setting	Low sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial
CUMULATIVE EFFECTS Refer to Figure 7.10 (Volume 2 of this ES).				
Construction Phase	Several of the stated cumulative sites may be constructed at the same time, creating indirect effects such as additional traffic, and direct effects such as construction lighting and increased activity to the baseline conditions	Medium sensitivity/ Negligible magnitude of change	Low impact lighting policy using directional lighting. The use of existing main roads such as the A638 where other traffic of a similar nature would be using the same route. Appropriate noise attenuation and specified working hours	Negligible adverse and temporary

Receptor/Phase	Description of Impact	Sensitivity and Magnitude of Change	Mitigation Proposed	Classification of Residual Effect
Operation	There are very few locations where static views would encompass more than one development at a time. However sequential cumulative effects are expected, particularly for road users	Medium sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible adverse, temporary and reversible
Restoration (Year15 - 20 post-restoration)	After the Site is decommissioned there would be only direct and indirect beneficial effects. As progressive restoration is proposed these effects may be apparent earlier than the cessation of operations	Medium sensitivity/ Negligible magnitude of change	Progressive restoration and enhancement	Negligible beneficial

7.15.1 Summary of Restoration Effects

The restoration would be undertaken on a phased and ongoing basis. This would provide some landscape and visual benefits during the operational phase and enable the seeding and planting time to undergo a period of aftercare and establishment prior to the decommissioning of the plant and infrastructure. This means that by 2046 (estimated) the Site should have an established framework of tree and hedge planting, particularly along the main access to the plant area and in the Low-Rise area which would be the first areas to receive landscape mitigation. Areas which are programmed to be extracted last would be restored later and this planting would require longer to provide a closed canopy and provide any screening and/or fuller ecological benefits (from 2060).

The proposed restoration would provide landscape and ecological enhancement at both the Site level and for the wider landscape.

7.15.2 Summary of Cumulative Effects

There is limited potential for static cumulative effects but there is potential for sequential cumulative effects particularly for road users. The most notable effects would be during the construction phase when there may be indirect cumulative effects from the increased activity during the combined construction of a variety of developments. As the operational phase commences these effects would continue but slowly diminish as other developments approach build out. The overall magnitude of change would be negligible on the landscape and the visual amenity of receptors during construction and operation. This would result in a negligible adverse and temporary effect.

7.16 STATEMENT OF SIGNIFICANCE

The phased approach to extraction and restoration and its embedded mitigation would reduce the landscape and visual effects of the Proposed Development. There would be localised and temporary effects on the existing landscape character resource and on the visual amenity of a variety of receptors. Therefore, although there would be pronounced and in some cases significant effects in terms of the EIA Regulations predicted on landscape or visual amenity receptors during the construction, operation or decommissioning phases of the Development, these effects would be temporary in nature

and would be for an established and discrete period of time as an individual phase is worked and then restored.

Receptors that have been identified with the most potential to have a significant effect from the Proposed Development include:

Landscape Effects:

- The landscape character within the Site would have a moderate-major adverse landscape effect during construction; and
- IL10: Ranskill (BDLCA) 'host' LCP would have a moderate-major adverse landscape effect during the operational phase.

Visual Effects:

- Bellmoor Farm, Bellmoor Cottage and other adjoining properties (R2) and bridleway NT|Sutton|BW4. The vegetated embankment would be left as a visual and noise attenuation screen throughout extraction in relevant phases and would only be removed subsequently. This would mitigate impacts although there would be moderate-major adverse visual effects from traffic movements on the embankment during the restoration of HR P5 and P6. This would be a temporary effect over a discrete period of time.;
- NT|Sutton|BOAT7 footpath and Lound Low Road which partially extends along the northern boundary would have a moderate-major adverse and temporary and reversible effect during operation and the working of the northern phases;
- NT|Sutton|FP1 footpath which extends north-south across the Site between parcels HR P1 and HR P6 would have a moderate-major visual effect from both the construction and operational phases. However this effect would be temporary and would be for a short section of its length and would not detract from views from other sections; and
- NT|Sutton|FP2 footpath which extends from the A368 and crosses the Site vehicular access would have a temporary moderate-major adverse visual effect during the construction phase. Again this effect would affect a short length of the route and would be viewed in the context of the existing industrial estate. It would not detract from other views available as the footpath proceeds to the Idle Valley.

There are recreational opportunities within the Study Area, particularly in association with the River Idle, the Idle Valley Nature Reserve and its network of woodland and river trails. There would be no significant direct visual effects on this resource and some limited and not significant indirect effects from additional traffic movements and other activities as a result of the Proposed Development both in isolation or cumulatively.

The trails within the Idle Valley Nature Reserve are generally vegetated and any panoramic viewpoints are directed across or to the wetland features. There are already filtered views to pylons, silos (25 m high approximately), floodlighting and commercial and largescale infra-structure within the adjoining Bellmoor Industrial Estate, Hallcroft Industrial Estate and the Sewage Works and so the baseline landscape context already includes some vertical structures. The magnitude of change is therefore reduced.

There would be significant effects on the visual amenity of PROW users that traverse the Site, however this is for a short section of these footpaths and some receptors may find the extraction activities of some interest. Significant effects would be transient and for a short duration of the length of the route.

Post-restoration as the reed-fringed lakes, wet grassland and tree and hedgerow planting mature and become functional habitats there would be some benefits at both the Site and local level providing habitat connectivity to the SSSI to the south and east; and improvements to the general landscape setting of Sutton-cum-Lound and Lound,

revealing open views across the Site. These beneficial effects would be most notable at the Site level resulting in a moderate beneficial effect and along Lound Low Road which would have a minor-moderate beneficial effect.