6 Landscape and Visual Effects

6.1 Introduction

6.1.1 Gillespies LLP ('Gillespies'), have been commissioned, on behalf of Strata Sterling Barnsley West Ltd ('the Applicant'), to undertake this Landscape and Visual Impact Assessment (LVIA) as part of an Environmental Impact Assessment (EIA) for the proposed residential and employment scheme at Land south of Barugh Green Road, known as 'Barnsley West' (the 'proposed development'). The purpose of this assessment is to identify any potentially significant landscape and visual effects that are predicted to arise from the construction and operational stages of the proposed mixed use development of the 5.2 sq. km Barnsley West site (the 'application site'), which is located between the settlements of Higham and Gawber, west of Barnsley.

6.1.2 This report provides a description of the methods used for the assessment, a description of the baseline conditions of the application site and surrounding area, together with an assessment of the likely potential effects of the proposed development during construction and operation. Embedded mitigation measures are identified to avoid, reduce, or offset adverse effects and / or enhance beneficial effects. Taking account of the embedded mitigation measures, the nature and significance of the likely residual effects are described.

6.1.3 This assessment is accompanied by the following appendices:

- Appendix 6.1: Viewpoint Assessment.
- Appendix 6.2: Visualisations

6.1.4 In addition, this assessment is supported by the following figures and drawings:

- Figure 6.1: Site Location and Study Area;
- Figure 6.2: Topography;
- Figure 6.3: Landscape Character Areas;
- Figure 6.4: Landscape Related Designations;
- Figure 6.5: ZTV;
- Figure 6.6: Viewpoint Locations; and
- Figure 6.7: Visual Receptors.

6.1.5 This assessment also refers to the following figures and drawings:

- Figure 6.8: Landscape Masterplan; and
- Figure 3.1: Parameter Plan.

Proposed Development

6.1.6 As set out in Chapter 3 and the Parameters Plan (Figure 3.1) the proposed development is mixed use and is proposed to provide up to 1,760 new homes and up to 43 hectares of employment land, part of which would be for Use Class E/B2/B8 and part of which would be for Use Class B2/B8 (currently understood to equate to 120,509.3 sqm of employment floor space, of which 114,131.5 sqm would be for Use Class B2/B8 and 6,377.8 sqm would be for Use Class E/B2/B8). In addition, the proposals would provide:

- Part of the Link Road between M1, Junction 37 and the A635, Barugh Green Road (The section from Higham Lane to Barugh Green Road);
- A new primary school;
- Small local shops and community facilities; and
- Strategic areas of greenspace and wildlife corridors.

6.1.7 The maximum heights of proposed development are as follows:

- Residential – Mix of dwelling types up to 3 storeys and maximum height 13.5m;
- Commercial and School – Maximum height 13.5m;
- Employment Use Class E/B2/B8 – Maximum height 14m; and
- Employment Use Class B2/B8 – Maximum height 23m.

6.1.8 Employment use is proposed to be located in the south west of the application site, close to the motorway. Residential use covers much of the application site between strategic areas of green space, and commercial development is located in the central north area of the application site.

6.1.9 The proposed development would require extensive cut and fill earthworks to achieve development plateaus at consistent levels which are suitable for the proposed uses set out on the Parameters Plan (Figure 3.1). The proposed levels are illustrated together with the proposed uses on the Parameters Plan, with further detail provided in Chapter 10 Ground Conditions.

6.1.10 For the purposes of this assessment a Landscape Masterplan (Figure 6.8) for the application site, prepared by Gillespies, has been used to provide assumptions on the design and landscaping of strategic areas of greenspace nominated on the Parameters Plan. The Landscape Masterplan provides an illustration of how the design of greenspace in the development could come forward and forms the basis for assumptions on mitigation planting in this assessment, both in terms of the written assessment and the visualisations (refer to Volume 3 of the ES).

Phasing of Development and Points in Time for Assessment

6.1.11 Reference is made to the construction and development phasing set out within Chapter 3. It is noted that construction of the development would take place in three principal phases as set out below and would span approximately 11 years.

- Phase 1a - Phase 1 of the residential development (up to 229 dwellings) including the primary school and the first part of the Link road running from Barugh Green Road to the northernmost internal roundabout;
- Phase 1b – the Employment development;
- Phase 2 – the remainder of the Link road from Higham Lane to the northernmost internal roundabout; and
- Phase 3 - the remainder of the residential development over a series of further phases.

6.1.12 Given that construction would take place on the application site over approximately 11 years it is recognised that the landscape and visual effects would change during different phases of construction. As such it has been assumed for the purpose of providing a 'worst-case' assessment in this Chapter that the apex of construction activity (where earthworks associated with the site remodelling would be taking place across the whole application site) would be during Phase 1a. During this period Phase 1 of the residential development would be built, along with the primary school and the first part of the link road running from Barugh Green Road to the northernmost internal roundabout. As such Phase 1a has been used for the purposes of this assessment to provide a representative point in time for assessment of construction activities.

6.1.13 Operational effects have been assessed following completion of development across the whole application site comprising Phase 1a, Phase 1b, Phase 2, and Phase 3. Assessment has been undertaken at year 1 and at year 15 following completion of development across the whole application site, to the layout set out on the Parameters Plan (Figure 3.1).

6.2 Assessment Approach

Introduction

6.2.1 The approach and methodology used in the preparation of this LVIA are based on guidance provided in the Landscape Institute and Institute of Environmental Management & Assessment: Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA3)[1] and Technical Guidance Note 06/19 Visual Representation of development proposals[2].

6.2.2 The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) are clear that when preparing an LVIA, the emphasis should be on likely significant effects and stresses that the assessment should be in proportion to the scale of the project and the nature of its likely effects. This does not mean that effects should be ignored or their importance minimised, rather that the assessment should be tailored from the outset.

Study Area

6.2.3 A focussed 3km study area has been identified which includes the application site and the landscape around it. The extent has been determined from the results of baseline studies including the preparation of Zone of Theoretical Visibility (ZTV) mapping as discussed in Section 6.2.4. The LVIA will assess landscape and visual baseline conditions and potential effects within this 3km study area. In addition particularly sensitive visual receptors within the ZTV are also considered up to 5km from the site.

Zone of Theoretical Visibility

6.2.4 The Zone of Theoretical Visibility (ZTV) has been determined using ArcGIS to identify the broad areas from where the proposed development would potentially be visible. This has been produced as a 'bare earth' ZTV, which does not allow for the filtering or screening of views by natural or built components in the landscape, such as woodland, individual trees, buildings or fences. Also the ZTV assumes atmospheric visibility[3] to be 100%. Together the combination of landscape features and atmospheric visibility can potentially reduce visibility to a considerable extent. The ZTV therefore represents the maximum theoretical potential visibility, i.e. the 'worst case' scenario. This is shown on Figure 6.5.

6.2.5 In addition to the ZTV, site visits were undertaken to understand the actual visibility across the study area.

Viewpoint Selection

6.2.6 The LVIA has been based on a number of viewpoints which have been agreed with the Senior Urban Design Officer from Barnsley Metropolitan Borough Council (BMBC). These were selected using the ZTV and fieldwork, and are based on

[1] Landscape Institute & Institute of Environmental Management & Assessment (IEMA). (2013). Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA3)

[2] Landscape Institute. (2019). Technical Guidance Note 06/19 Visual Representation of development proposals.

[3] In this instance Atmospheric Visibility is considered as follows: Visibility is a measure of the distance at which an object or light can be clearly discerned. Atmospheric visibility can be reduced by precipitation, fog, haze, pollution or other obstructions to visibility such as blowing snow, sand or dust.

receptor type and sensitivity, and distance and direction from the application site. As such, they are intended to provide suitable representation of views of the site and the proposed development for EIA purposes. They are all taken from publicly accessible locations and shown in Appendix 6.1.

6.2.7 It should be noted that more potential viewpoints had originally been identified than have been ultimately selected. However a number were discounted due to review on Google Street View and further site verification showing intervening vegetation, localised built form, and landform which restricted views. This included residential parts of Mapplewell, away from the southern edge, and Gawber and Pogmoor, away from the edge of the application site, where built form restricts views. In addition viewpoints were also identified from locations where the application site was visible, such as High Hoyland, however were discounted due to low likelihood of significant effects from these locations, due to distance or existing development visible in the composition of the view.

Baseline Photography

6.2.8 Baseline photographs for each of the viewpoints were taken using a Canon EOS digital SLR with a full frame sensor (36x24mm) using a 50mm equivalent fixed focal length lens. The photographs were taken in accordance with best practice guidance[4] and their location recorded using an on-site GPS. The resulting images were merged together using PTGui to create panoramic views. The time at which the photographs were taken and the prevailing weather conditions were recorded for each viewpoint. They are presented in Appendix 6.1.

Visualisations

6.2.9 The assessment is accompanied by a series of annotated viewpoint photographs from the selected viewpoints showing the extent of proposed development overlaid on the viewpoint photo (in line with visualisation Type 1[5]). They are presented in Appendix 6.1.

6.2.10 In addition massing montages (in line with visualisation Type 3 and AVR Level 1[6]) for four viewpoints have been prepared and are presented in Volume 3 of the ES. These montages present a massing model of the proposed development, overlain on to a viewpoint photo, to provide an understanding of the location, size, and degree of visibility of the proposed development.

Adopted Planning Policy and Regulations

6.2.11 The following planning policy and regulations have been considered in the baseline section of this assessment:

- National Planning Policy Framework;
- Barnsley Local Plan (2019);
- Tree Preservation Orders; and
- The Hedgerow Regulations (1997).

[4] Landscape Institute. (2019). Visual Representation of Development Proposals, Technical Guidance Note 06/19
[5] ibid
[6] ibid

Landscape Character Assessments

6.2.12 The following character assessments have been considered in this assessment:

- Natural England National Character Area (NCA) profiles; and
- Barnsley Borough Landscape Character Assessment (revised in 2016).

Guidance

6.2.13 The following technical guidance has been used to inform this assessment:

- Landscape Institute and Institute of Environmental Management and Assessment (IEMA). (2013). Guidelines for Landscape and Visual Impact Assessment, Landscape Institute and Institute of Environmental Management and Assessment, 3rd Edition;
- Landscape Institute. (2019). Visual Representation of Development Proposals, Technical Guidance Note 06/19;
- Scottish Natural Heritage (SNH). (2017). Visual Representation of Windfarms Version 2.2; and
- Natural England. (2019). An approach to landscape sensitivity assessment – to inform spatial planning and land management.

Data Sources

6.2.14 The following data sources have been used to inform this assessment:

- Information identified on 1:25,000 and 1:50,000 Ordnance Survey (OS) maps;
- Aerial photography and Google Earth;
- Google Maps Street View;
- Terrain data;
- Open source GIS data; and
- Site visits.

Methodology

6.2.15 The assessment of landscape and visual effects are separate, but linked procedures. Landscape effects derive from alterations to the physical landscape (such as the addition, removal or alteration of structures, woodlands, trees or hedgerows), which may alter the fabric, character and perceived quality of the area, or more general effects on landscape character and designated areas of landscape arising from the introduction of new man-made features which alter the setting of the site or surrounding landscape.

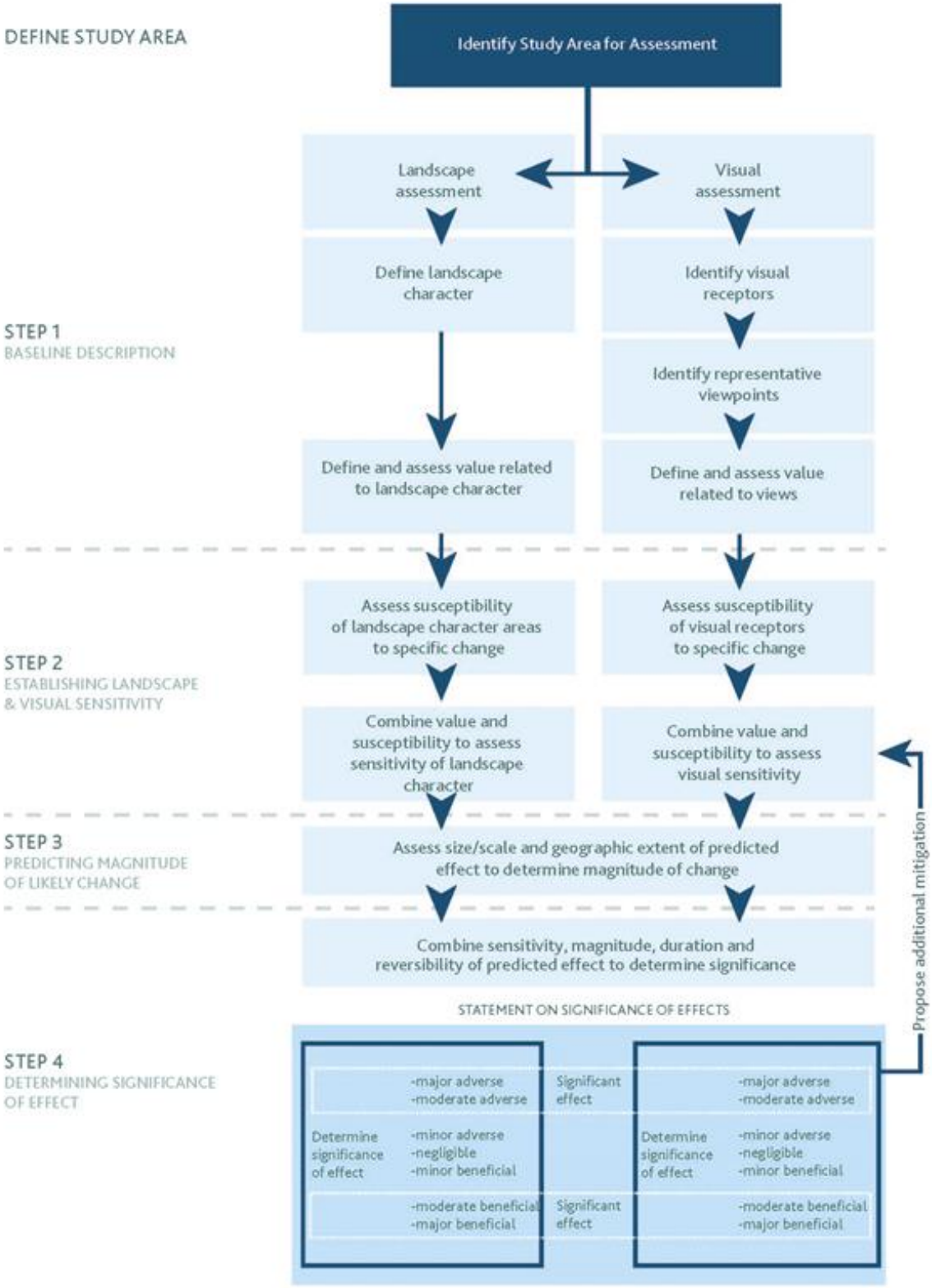
6.2.16 Visual effects relate to the changes in the composition of specific views and wider visual amenity experienced by people as a result of changes to the landscape. The landscape baseline, its analysis and the assessment of landscape effects all contribute to the assessment of visual effects.

6.2.17 In accordance with the EIA Regulations and GLVIA3[7] the assessment focuses on public views to cover a range of locations necessary to identify the likely significant effects. This includes local communities where views contribute to the landscape setting enjoyed by residents in the area, road users and people using recreational routes, features and attractions.

[7] Landscape Institute & Institute of Environmental Management & Assessment (IEMA). (2013). Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA3)

6.2.18 The LVIA follows a four step process, which is set out below and the process is illustrated in Diagram 6.1.

Diagram 6.1: LVIA Process



Step 1: Baseline Description

Landscape Baseline

6.2.19 The objective of the baseline landscape study is to provide an understanding of the landscape within the study area – its constituent elements and features, its character and the way this varies spatially, its history, condition, the way it is experienced and the value attached to it.

6.2.20 The landscape baseline is established using existing landscape assessment studies. Where existing information is to be used this is verified on site by a Chartered Landscape Architect to ensure that the information is accurate and appropriate for the purposes of the LVIA.

6.2.21 The baseline study also establishes the relative value of the site and the wider area. Although the starting point for determining landscape value or importance is often the presence or absence of statutory or local planning policy designations, an absence of designation does not mean that a landscape does not have any value. Factors such as accessibility and local scarcity can render areas of nationally unremarkable landscape highly valuable as a local resource. The European Landscape Convention promotes the need to consider all landscapes, with less emphasis on the special and more recognition that ordinary landscapes have their value. Judgements on value can apply to areas of landscape as a whole, or to the individual elements, features and aesthetic or perceptual dimension which contribute to the character of the landscape.

6.2.22 The value of landscape receptors to a degree reflects the presence of any landscape designations, but may be moderated by consideration of the range of criteria set out in Table 6.1. Similarly, a non-designated landscape may be given a higher value based on consideration of the factors in Table 6.1.

Table 6.1 : Indicative Criteria for Assessing Landscape Value

Category	Criteria
High	Attractive landscape with some distinctive characteristics, features and elements. Recognisable urban structure, legibility, characteristic patterns and combinations of built form and open space. Good condition/ well-managed and largely intact. Historic interest which contributes to landscape character. Recreational value which contributes to recreational/ visitor experience. Habitats of national importance. Good representation of habitats. Good linkages between habitats and reasonable links to natural habitats in the wider area. Valued cultural associations. Strong sense of place with positive perceptual responses.

Category	Criteria
	Occasional detracting features.
Medium	Typical, commonplace and unremarkable landscape, which although scenically pleasing has limited variety or distinctiveness. Distinguishable and urban structure, characteristic patterns and combinations of built form and open space. Average condition with some intactness but scope to improve management for land use. Limited historic interest. Limited recreational value and few visitors. Habitats of local importance. Habitats may be fragmented. Some linkages and connectivity to natural habitats in the wider area. No or very few recorded cultural associations. Some features worthy of conservation. Unremarkable sense of place with neither particularly positive nor negative perceptual responses. Some dominant detracting features.
Low	Landscape degraded or in obvious decline, visually unattractive with poor sense of place. Weak or degraded urban structure, characteristic patterns and combination of built form and open space. Lack of management has resulted in degradation and poor condition. Limited to no historic interest. Limited to no recreational value. Limited ecological value, with few natural habitats and little connectivity. No recorded cultural associations. Frequent dominant detracting features. Disturbed or derelict land requires treatment.

Visual Baseline

6.2.23 Visual baseline conditions are established through identification and analysis of the existing visual resource that may be affected including the nature and extent of key views to the proposed development from visual receptors in the area.

6.2.24 The aim of the visual baseline is to establish the:

- The type and relative numbers of people (visual receptors) likely to be affected;
- The location, nature and characteristics of the existing views; and
- The value attached to particular views.

6.2.25 Judgements about the value attached of a particular view take account of:

- Views which are important in relation to the special qualities of a designated landscape or is defined as an important view for a designation;
- Recognition of the value attached to particular views, for example in relation to heritage assets, or through planning designations;
- Indicators of the value attached by visitors, for example through appearances in guidebooks or on tourist maps, provision of facilities for their enjoyment and references to them in literature or art;
- Location with provision of facilities for enjoyment e.g. parking, picnic and interpretation facilities; and
- Judgements about the quality and condition of the view as assessed by a landscape professional.

Table 6.2 : Indicative Criteria for Assessing Visual Value

Category	Criteria
High	View of regional or local importance. For example PRoW through landscapes of moderate to high value, setting for elements of local and/ or regional cultural heritage value or national value whose settings are already compromised.
Medium	Although the viewpoint may be valuable to local people, the location has no formal planning status, is in an area of ordinary landscape value, or reasonably good landscape value but with detracting elements or features. People are unlikely to visit the viewpoint to experience the view.
Low	Viewpoint is within an area of very low landscape quality (e.g. industrial estate/ busy main road) that has very few positive characteristics).

Step 2: Establishing Landscape and Visual Sensitivity

6.2.26 The first step in assessing the significance of landscape and visual effects is to determine the sensitivity of the receptors to the proposed development. This comprises judgements about the:

- Value attached to the receptor – as explained above, this is determined as part of the baseline conditions of the assessment. It is a professional judgement made separately from the context of the specific proposals; and

- Susceptibility of the receptor to change – this is the ability of the receptor to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/ or the achievement of landscape planning policies and strategies.

Landscape Sensitivity

6.2.27 There can be complex relationships between the value attached to a landscape and its susceptibility to change. Judgements are made in the context of guidance set out in GLVIA3[8] which notes that:

> **'An internationally, nationally or locally valued landscape does not automatically and by definition have high susceptibly to all types of change;**
>
> **It is possible for an internationally, nationally or locally important landscape to have relatively low susceptibility to change arising from the particular type of development in question, by virtue of both the characteristics of the landscape and the nature of the proposal; and**
>
> **The particular type of development may not compromise the specific basis for the value attached to the landscape.'**

6.2.28 Susceptibility varies depending on the character of the landscape and the nature of the development being proposed. The most susceptible landscapes are those are that are less able to accommodate the type of development proposed without undue negative consequences for the baseline situation. Such landscapes offer limited opportunities for accommodating the change without their key characteristics being fundamentally altered, leading to a different landscape character and where the proposed development does not accord with planning policies and strategies. The least susceptible landscapes are more able to accommodate the proposed development without undue negative consequences for the baseline situation. Attributes that make up the character of the landscape are more resilient to being changed by the type of development proposed and the proposed development accords with planning policies and strategies.

6.2.29 An overall assessment of landscape sensitivity is then made using a three-point scale of high, medium and low for each landscape receptor based on professional judgement. High value/ high susceptibility receptors are likely to be more highly sensitive to change, with lower value/ low susceptibility receptors likely to be of low sensitivity to change.

[8] Paragraph 5.46, ibid

Table 6.3 : Indicative Criteria for Assessing Landscape Sensitivity

Category	Criteria
High	A landscape whose overall character, its individual elements/features or particular aesthetic or perceptual aspects are very vulnerable to loss or change and offer limited opportunities to accommodate the proposed development. Typically includes: • Landscapes of particularly distinctive and highly valued character and/or scenic quality (including most statutorily designated landscapes); • Landscape containing elements/features that are unique or nationally scarce, including mature vegetation such as ancient woodland or veteran trees; • Landscapes defined by very distinctive aesthetic or perceptual elements/features that are a defining part of its character; • Landscapes that are well maintained and in very good condition; and • Landscapes which offer no or limited scope for substitution or positive enhancement.
Medium	A landscape whose overall character, its individual elements/features or particular aesthetic or perceptual aspects are reasonably robust, but may exhibit vulnerability to adverse effects from inappropriate or unsympathetic development that may lead to wider effects on character. Typically includes: • Landscapes of positive character but with some evidence of alteration/ degradation of elements/features resulting in areas of more mixed character; • Landscapes that are valued by local communities; • Landscapes containing elements/features that are commonplace; • Landscapes containing elements/features that are rare or unusual locally but are in degraded or poor condition; and • Landscapes in reasonable condition and/or with some scope for substitution or positive enhancement.
Low	A landscape which is of low quality whose overall character, individual elements/features, or particular aesthetic aspects are robust, tolerant to change and offer good opportunities to accommodate the proposed development. Typically includes:

Category	Criteria
	• Landscapes that are relatively bland or neutral in character with few or no distinctive elements/features; • Landscapes in poor or degraded condition; • Landscapes containing elements/features that are nationally or regionally ubiquitous or make little contribution to local distinctiveness; • Landscapes containing intrusive elements/features that detract from landscape character e.g. transport or power infrastructure; and • Landscapes whose key aesthetic or perceptual aspects are robust and unlikely to be affected by the development, or is in the main negative.

Visual Sensitivity

6.2.30 Visual receptors are people experiencing views from a particular location (for instance their homes) or while doing a particular activity (such as walking or driving). The most susceptible visual receptors include people with a particular interest in their surroundings and with prolonged viewing opportunities such as:

- Communities where views contributing to landscape setting are enjoyed by residents;
- People engaged in outdoor recreation whose interest is likely to be focused on landscape and views (e.g. users of land distance routes, country parks and PRoW); and
- Visitors to heritage assets or other attractions where views are important to the experience.

6.2.31 The least susceptible visual receptors include people with a limited or passing interest in their surroundings or with limited viewing opportunities, such as:

- Commuters;
- People engaged in outdoor sport or recreation which does not involve an appreciation of view; and
- People at their place of work, whose attention is likely to be focussed on their activity rather than on the view.

6.2.32 The sensitivity of visual receptors is always determined based on site specific conditions and the type of development proposed as this affects peoples' expectations and therefore their susceptibility. For example, walkers on a National Trail in a tranquil rural area with sparsely dispersed farms and cottages are more likely to be susceptible to a large scale development proposal than they would to a new property built in the local vernacular. Similarly if a section of the trail passes through an industrialised or urban area, it is likely that the expectations of people using the trail will be reduced. Drivers within the urban area are also typically

considered of low sensitivity but if a road is part of a scenic route their sensitivity increases.

6.2.33 An overall assessment of visual sensitivity is then made using a four-point scale of high, medium and low for each landscape receptor based on professional judgement. High value/ high susceptibility receptors are likely to be highly sensitive to change, with lower value/ low susceptibility receptors likely to be of low sensitivity to change.

Table 6.4: Indicative Criteria for Assessing Visual Receptor Sensitivity

Category	Criteria
High	• The view is well known, well-frequented and/or promoted as a beauty spot/visitor destination and has cultural associations or iconic views which are important in relation to the special qualities of a designated landscape, the cultural associations of which are widely recognised in art, literature or other media. • Designated/ protected or promoted views; • Residents at home (may be lower if in a degraded setting where expectations may be reduced); • People living and moving around their local community; • Promoted scenic drives or tourist routes; • Tourist, visitor and other destinations where the view is important to the experience; and •
Medium	• PRoW and incidental footpaths; • Locally promoted walks and cycle routes; • Residential, distributor and local road network; • General public open space, greenspace, recreation grounds and play areas; • People in rural offices and business parks; and • Rural outdoor workers and those engaged in marine surface based activities such as fishing.
Low	• Views that are bland, unattractive, confused and/or consists mainly of discordant features; • Workers in industrial and commercial buildings;

Category	Criteria
	• Users of major roads (although sensitivity may be higher in scenic locations); • Users of indoor facilities; • Commuters; and • Those engaged in outdoor sport or recreation which does not depend on an appreciation of views of their surroundings.

Step 3: Magnitude of Effect

Landscape Magnitude

6.2.34 Determination of the magnitude of landscape effect comprises judgements about the size and scale of the effect, the geographical extent of the area affected and the duration of effect and its reversibility. When predicting magnitude of likely change the embedded mitigation, listed in Section 6.7, has been taken into account.

6.2.35 Paragraph 5.37 of GLVIA3[9] sets out the criteria which should be used in reaching a judgement on the nature or magnitude of effect. These include but are not necessarily restricted to:

'the degree to which the proposal fits with existing character; and

the contribution to the landscape that the development may make in its own right, usually by virtue of good design, even if it is in contrast to existing character.'

6.2.36 Magnitude is also assessed as being either a beneficial or adverse where for:

- Beneficial change the development, or part of it, would appear in keeping with existing landscape character and would make a positive visual and/ or physical contribution to key characteristics. Removal of uncharacteristic or unsightly features would also be a beneficial change; and
- Adverse change the development, or part of it, would be perceived as an uncharacteristic or intrusive component in the context of existing landscape character and would have a negative visual and/ or physical effect on key characteristics.

6.2.37 The judgements on size/ scale of effects and geographical extent are considered together using the indicative descriptions in Table 6.5.

[9] ibid

Table 6.5: Indicative Criteria for Assessing Likely Magnitude of Landscape Change

Category	Criteria
High	Conspicuous change to the landscape over a wide area or considerable change over a limited area with consequences for the character, quality and integrity of the baseline landscape. The development would be a prominent landscape feature and the baseline landscape would be substantially changed. If designated, an adverse change may affect the reasons for the designation.
Medium	Noticeable change to the landscape over a wide area or conspicuous change over a limited area, with some consequences for the character, quality and integrity of the baseline landscape. The development would form a conspicuous landscape feature and the baseline situation may be noticeably changed. If designated, unlikely to adversely affect the reasons for the designation.
Low	Slight change to the landscape over a wide area or noticeable change over a limited area, with few consequences for the character, quality and integrity of the baseline landscape. The development would be noticeable but the baseline landscape would remain largely unchanged. If designated, not adversely affecting the reasons for the designation.
Negligible	Inconspicuous change to the landscape, with no consequences for the character, quality and integrity of the baseline landscape. The development would be only just perceptible and the baseline landscape would appear unchanged. If designated, not affecting the adversely reasons for the designation.

Visual Magnitude

6.2.38 Each of the visual effects is assessed in terms of its size or scale, the geographical extent of the area influenced, its duration and whether it is reversible.

6.2.39 The likely changes in views from identified viewpoints are systematically identified and include consideration of the following factors:

- Extent – the extent of the baseline view that would be occupied by the development;
- Proportion of development visible;
- Contrast – how would the visible parts of the development relate to the surrounding baseline features;
- Angle of view – direct, oblique or peripheral;
- Distance – between the site and the receptor; and
- Duration and reversibility – the relative time over which the view is experienced, whether it is temporary or permanent, intermittent or

continuous e.g. transient (views which are normally experienced when in motion) and seasonal (views which will be subject to seasonal leaf cover).

6.2.40 Other considerations include the level of activity in a scene, presence of noise or lighting, traffic movement, peoples' likely preferences and expectations, quality of the existing view (inevitably a point of judgement), nature of scene (open and directionless, or closed and bounded) and any other elements that affect human perception. The magnitude of change is also dependent on the effectiveness of any mitigation inbuilt into the development proposals.

6.2.41 Magnitude is assessed as being either a beneficial or adverse change where:

- For beneficial change the development, or part of it, would be perceived as a positive addition in the context of the existing view; and
- For adverse change the development, or part of it, would be perceived as an uncharacteristic or intrusive component in the context of the existing view.

6.2.42 The judgements on size/ scale of effects and geographical extent are considered together using the indicative descriptions in Table 6.6.

Table 6.6: Indicative Criteria for Assessing Likely Magnitude of Visual Change

Category	Criteria
High	The balance of features and composition of the view would change markedly and fundamentally affect the appreciation of the view. The change would affect a substantial proportion of the view. The changes or new features would represent an obvious contrast with existing features. Views of the changes would be clear and unencumbered by screening features. The development is likely to occupy the foreground of the view.
Medium	The balance of features in the view would change, but not to such a degree that the existing composition of the view or appreciation of it would fundamentally change. The change would, whilst obvious, be subordinate to existing features. The development is likely to occupy the middle ground of the view.
Low	The balance and composition of the view would not change greatly from the baseline. The change would only affect a small proportion of the view. The changes or new features would not contrast strongly with existing features.

Category	Criteria
	Views of the change may be screened or filtered or otherwise unencumbered by foreground features. The development is likely to occupy the background of the view. The changes would barely affect the composition or appreciation of the view.
Negligible	The development, or part of it, would cause a barely perceptible change or contrast to the view, which would not affect its composition or the appreciation of the view.

Step 4: Determining the Significance of Landscape and Visual of Effects

6.2.43 A key part of the assessment process is the identification of the significance of landscape and visual effects, which is Step 4. In making judgements about significance, the separate judgements on receptor sensitivity and magnitude are combined to arrive at a judgement on the importance of the effect and whether or not it should be considered significant. This step is carried out through sequential combination of all possible effects looking at individual criteria and applying professional judgement. At this stage the duration of change and whether it could be reversed if the development were removed, is also considered.

6.2.44 The relative time over which the change on landscape or view is experienced is defined as the following timescales for the purposes of this assessment, taking into account effects being assessed at year 15, and an approximate 11 year construction phase:

- Short term < 5 years;
- Medium term 5 – 15 years; or
- Long term 15 years plus.

6.2.45 Landscape and visual effects are classified as being major, moderate, minor or negligible. Any effects judged to be moderate or major are deemed to be significant. Effects are also described according to their nature, which may be beneficial or adverse, short or long term, temporary or permanent, direct or indirect, transient, seasonal, reversible or irreversible.

Table 6.7: Definition of Significance Scale

Category	Criteria
Major Adverse (significant)	Would be at considerable variance with the existing character and/or setting of the landscape, degrading its integrity. Would permanently destroy, degrade or diminish valued characteristic elements/features (including aesthetic or perceptual qualities), particularly rare or distinctive landscapes. Would cause a substantial deterioration in the view.

Category	Criteria
	Would conflict with international, national, regional or local environmental policies for the protection and enhancement of the landscape.
Moderate Adverse (significant)	Would be at variance with the existing character and/or setting of the landscape, and diminish its integrity. Would destroy, degrade or diminish valued characteristic elements/features (including aesthetic or perceptual qualities). Would cause a noticeable deterioration in the view. Would be slightly compatible with local environmental policies for the protection and enhancement of the landscape.
Minor Adverse	Would be slightly at variance with the existing character/landscape setting or view. Would damage or partially remove some locally valued characteristic elements/features. Would cause a perceptible deterioration in the view.
Negligible	Would neither enhance nor be at variance with the existing character/ landscape setting or view.
Minor Beneficial	Would slightly enhance the existing character/ landscape setting or view.
Moderate Beneficial (significant)	Would markedly improve and enhance the existing landscape character/ landscape setting or view. Would restore or enhance valued characteristic elements/features largely lost through other land uses. Would make a positive contribution to local environmental policies for the protection and enhancement of the landscape.
Major Beneficial (significant)	Would considerably improve and enhance the existing landscape character/ landscape setting or view. Would restore or reinstate valued characteristic elements/features entirely or substantially lost through other land uses. Would make a substantial positive contribution to local environmental policies for the protection and enhancement of the landscape.

6.2.46 As noted in GLVIA3[10] there are no hard and fast rules about what makes an effect significant and there isn't a standard approach. The final judgment on whether each effect is significant or not relies on informed professional judgement, with the criteria used in reaching a decision clearly supported by narrative text to draw out the key issues, describe the effects and explain the underlying rationale.

6.2.47 As demonstrated in the table, effects are not necessarily adverse. Where, for example, a degraded landscape is to be improved and a more diverse range of habitats created or a derelict site is to be redeveloped or poor quality development improved giving rise to views from adjacent receptors being improved, then effects could be beneficial.

6.2.48 Where significant residual effects are identified, secondary mitigation measures, over and above those included as part of the development proposals may need to be considered.

Approach to Cumulative Assessment

6.2.49 The cumulative assessment considers the effects of the proposed development in combination with other developments that have either been granted planning approval or are awaiting determination. This is considered in Section 6.7.

Scoping and Consultation Responses

6.2.50 The details of specific issues raised in relation to the LVIA during consultation with BMBC planning policy team, comprising the Spatial Planning Project manager and the Senior Urban Design Officer, are included in Table 6.8.

Table 6.8: Consultation Responses

Consultee	Date and Format	Issue /Response	Action
Barnsley Metropolitan Borough Council	Phone call 8th August 2019	Informal phone discussion regarding scoping of LVIA and aim to focus on potential significant effects. Gillespies proposed assessment of effects on landscape character would focus on character areas within which the site lies. It was agreed it would be useful to quantify the amount of vegetation proposed to be lost. Gillespies proposed to focus effects on visual amenity to a 3km study area but also consider particularly sensitive receptors to a 5km study area.	Gillespies issued summary email of discussions.

[10] Paragraph 6.44, ibid

Consultee	Date and Format	Issue /Response	Action
		BMBC requested careful consideration is given to development in relation to existing communities.	
Barnsley Metropolitan Borough Council	Email 8th August 2019	Email summary issued by Gillespies of phone discussions. Follow up from BMBC included: - Explanation that the Barnsley West development is a sensitive issue for existing residents. - The commercial zone could be particularly sensitive as it is located on higher ground. - BMBC would like to see a viewpoint from the motorway and Google Streetview could be used.	-
Barnsley Metropolitan Borough Council	Email 5th September 2019	Gillespies issued examples of massing montages to illustrate the proposed approach for visualisations for four viewpoints. Gillespies issued locations for 13 proposed viewpoints.	Follow up phone call.
Barnsley Metropolitan Borough Council	Phone call 5th September 2019	BMBC requested massing montages be shown at year 1, year 5 and year 15 and has no objection to the approach set out in Gillespies email of 5th September 2019. BMBC requested a viewpoint from the motorway to represent views on the approach to Barnsley. BMBC to review viewpoint locations and provide any comments. It was noted that viewpoints are initially based on the ZTV and	Gillespies issued summary email of discussions.

Consultee	Date and Format	Issue /Response	Action
		then refined during field work and site surveys. BMBC requested that it is made clear why any viewpoints may have been discounted (i.e. distance, intervening vegetation).	
Barnsley Metropolitan Borough Council	Email 5th September 2019	Email summary issued by Gillespies of phone discussions.	-
Barnsley Metropolitan Borough Council	Conference call 31st March 2021	Discussion on the LVIA scoping chapter, viewpoint selection, and methodology. Gillespies wanted to ensure BMBC were comfortable with the approach set out in the scoping chapter. Viewpoint locations agreed, including agreement on micro siting of viewpoints and deletion / addition on one viewpoint following Gillespies field work. BMBC noted preference for the motorway viewpoint to be represented using Google Streeview imagery. Visualisation types agreed including Type 1 for all viewpoints and Type 3 (massing montage) for a small selection of viewpoints to be produced at year 1, year 5, and year 15. Gillespies advised a proposed levels fix would be sought to inform massing montages. Agreed assessment of effects on landscape character would focus on character areas within which the site lies. BMBC advised they had no further comments / queries on the	Gillespies issued summary email of discussions.

Consultee	Date and Format	Issue /Response	Action
		scoping chapter in order to inform their response.	
Barnsley Metropolitan Borough Council	Email 31st March 2021	Summary email issued to cover discussions during conference call including mark-up of viewpoint map.	-

Limitations to Assessment

Parameters

6.2.51 This assessment has been based upon the Parameters Plan (Figure 3.1), development parameters set out in Chapter 3 of the ES and summarised in Section 6.1, and the Landscape Masterplan (Figure 6.8).

6.2.52 The Landscape Masterplan (Figure 6.8) for the application site, prepared by Gillespies, has been used to provide assumptions on the design and landscaping of strategic areas of greenspace nominated on the Parameters Plan. The Landscape Masterplan provides an illustration of how the design of greenspace in the development could come forward and forms the basis for assumptions on mitigation planting in this assessment, both in terms of the written assessment and the visualisations provided in Volume 3 of the ES.

6.2.53 The maximum heights and extents set out in the development parameters in Chapter 3 and on the Parameters Plan (Figure 3.1) have been used for the purposes of this assessment, to represent the worst case scenario in terms of landscape and visual effects.

6.2.54 It is acknowledged that Phase 1 of the proposed residential development (part of Phase 1a of the overall development) is subject to a detailed application. This assessment has considered as a worse-case the development of the whole application site encompassing all its phases, and no specific standalone consideration is given to the Phase 1 detailed residential application. However, it is recognised that Phase 1 of the proposed development would have more effect on some receptors that others which would be impacted more by the subsequent phases of the development. The assessment provided is therefore a worse-case assessment for the Phase 1 detailed residential application, with some receptors being impacted less by Phase 1 than is set out in the Chapter. This is briefly considered in Section 6.12 Summary.

Mitigation Planting and Vegetation Removal

6.2.55 In order to inform the extents of mitigation planting shown in the visualisations a number of assumptions have been in relation to growth rates for a mixed woodland of native tree species in Table 6.9.

Table 6.9: Tree Growth Rates

Sizes at Year 1 • Transplant planted at 0.6m height • Feathered planted at 1.5m height • Standard planted at 3.5m height • Extra heavy standards planted at 4.5m height
Sizes at Year 5 • Transplant grown to 2m height • Feathered grown to 3m height • Standards grown to 5m height • Extra heavy standards grown to 6m height
Sizes at Year 15 • Transplant grown to 5m height • Feathered grown to 6m height • Standards grown to 8m height • Extra heavy standards grown to 9m height

6.2.56 Removal of existing tree and hedgerows to enable construction works has been quantified by Tetratech and is used in this assessment to understand the loss of characteristic features of the application site.

Phasing

6.2.57 Reference is made to the construction and development phasing set out within Chapter 3. It is noted that construction of the development would take place in three principal phases as set out below and would span approximately 11 years.

- Phase 1a - Phase 1 of the residential development (up to 229 dwellings) including the primary school and the first part of the Link road running from Barugh Green Road to the northernmost internal roundabout;
- Phase 1b – the Employment development;
- Phase 2 – the remainder of the Link road from Higham Lane to the northernmost internal roundabout; and
- Phase 3 - the remainder of the residential development over a series of further phases.

6.2.58 Given that construction would take place on the application site over approximately 11 years it is recognised that the landscape and visual effects would change during different phases of construction. As such it has been assumed for the purpose of providing a 'worst-case' assessment in this Chapter that the apex of construction

activity (where earthworks associated with the site remodelling would be taking place across the whole application site) would be during Phase 1a. During this period Phase 1a of the residential development would be built, along with the primary school and the first part of the link road running from Barugh Green Road to the northernmost internal roundabout. As such Phase 1a has been used for the purposes of this assessment to provide a representative point in time for assessment of construction activities.

6.2.59 As noted above it is recognised that following Phase 1a, and during Phase 1b, Phase 2, and Phase 3 construction that the landscape and visual effects would change over the 11 year construction period. Change would be incremental over time during the construction period and the locational focus of construction activities would change as each phase is developed. Mitigation planting and the designed amenity landscape would come forward with each phase so built form and landscape proposals would progress in tandem. Phase 1b would comprise the employment development in the south west of the application site, Phase 2 would comprise the link road from Higham Lane to the northernmost roundabout, and Phase 3 would comprise the remainder of residential development of a series of further phases. As such it is recognised that the effects on receptors beyond the apex of construction at Phase 1a will be more focussed on certain receptors depending on the location of the phase under construction.

6.2.60 Operational effects have been assessed following completion of development across the whole application site comprising Phase 1a, Phase 1b, Phase 2, and Phase 3. Assessment has been undertaken at year 1 and at year 15 following completion of development across the whole application site, to the layout set out on the Parameters Plan (Figure 3.1).

Guidance

6.2.61 This LVIA has been undertaken with reference to industry standard guidance (GLVIA3). It includes categorising individual visual receptors into receptor groups. For example, because it is not practical to assess every point along a street, all pedestrians using a particular street, for whatever purpose, are classified as a single receptor group. Site assessment has been undertaken from publicly accessible viewpoints in accordance with the guidance in GLVIA3.

6.2.62 In line with GLVIA3, the visual assessment relies on a series of representative viewpoints. These are not intended to illustrate every possible location from where there might be a view of the proposed development, but rather to present a selection of views which are likely to experience significant effects.

6.3 Legislative and Policy Context

Legislation

6.3.1 The overarching legislative framework applicable to this EIA for the proposed development is outlined in Chapter 5 Planning Policy Context.

The European Landscape Convention

6.3.2 The European Landscape Convention (ELC, 2000), to which the UK is a signatory, provides a foundation for closer co-operation on landscape issues across Europe. The Convention identifies the need to recognise landscape in law, to develop and promote landscape policies dedicated to the protection, management and creation of landscapes, and to establish procedures for the participation of the general public and other stakeholders in the evolution and implementation of landscape policies.

6.3.3 The ELC defines landscape as 'an area, as perceived by people, whose character is the result of the action and interaction of natural and/ or human factors.'[11] This definition moves beyond the idea that landscape is only a matter of visual amenity and recognises that landscape also has important cultural ecological, environmental and social dimensions and is a key element in achieving sustainable development.

6.3.4 Article 2 of the ELC confirms that the definition of landscape is intended to be inclusive and applies equally to rural, urban and marine areas, irrespective of what their condition may be:

> **'Subject to the provisions contained in Article 15, the convention applies to the entire territory of the Parties and covers natural, rural, urban and peri-urban. It includes land, inland water and marine areas. It concerns landscapes that might be considered outstanding as well as everyday or degraded landscapes. ' [12]**

Town and Country Planning (Environmental Impact Assessment) Regulations

6.3.5 This Landscape and Visual Impact Assessment (LVIA) has been prepared as part of an Environmental Impact Assessment (EIA) under the EIA Regulations. The purpose of the EIA Regulations is to ensure that the likely significant effects on the environment are considered during the development decision making process. The LVIA methodology set out in this chapter has been prepared to identify the likely significant landscape and visual effects to inform the EIA and decision making process.

[11] Page 9, https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=09000016802f80c6

[12] Page 10, ibid

National Planning Policy Framework

6.3.6 The Government's objectives for new development are set out in the National Planning Policy Framework (NPPF) February 2019[13].

6.3.7 Section 2 (Achieving sustainable development) defines three mutually interdependent objectives: sustainability; economic; social; and environmental, as defined below:

- Economic - 'to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure.'

- Social - 'to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being'; and

- Environmental - 'to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.'

6.3.8 Section 12 (Achieve well-designed places) of the NPPF emphasises the importance that the Government attaches to the design of the built environment and that:

'The creation of high quality buildings and places is fundamental to what the planning and development process should achieve. Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities.'

6.3.9 Paragraph 127 of NPPF states that new developments:

- 'will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;

- are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;

- are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);

- establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;

13 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf

- optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and

- create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users46; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience.'

6.3.10 An assessment of the effects of the proposed development on the historic environment is presented in Chapter 9 Archaeology and Cultural Heritage, but in recognition that there is overlap with landscape and visual matters, the baseline landscape and visual assessment has noted information on historic environment sites.

Local Planning Context

Barnsley Local Plan

6.3.11 The Barnsley Local Plan[14] was adopted by Barnsley Metropolitan Borough Council in January 2019 and sets out policies and proposals to guide development across the whole of Barnsley Metropolitan Borough Council area. The policies within the Local Plan will be used to determine future planning applications. Policy considerations of specific relevance to this assessment are outline as follows. Where relevant they are also shown on Figure 6.4 Landscape Related Designations.

6.3.12 Policy GD 1 General Development is applied to all development, and the policy specifically discusses the following;

- 'There will be no significant adverse effect on the living conditions and residential amenity of existing and future residents;

- They include landscaping to provide a high quality setting for buildings, incorporating existing landscape features and ensuring that plant species and the way they are planted, hard surfaces, boundary treatments and other features appropriately reflect, protect and improve the character of the local landscape;

- Any adverse impact on the environment, natural resources, waste and pollution is minimised and mitigated;

- Appropriate landscaped boundaries are provided where sites are adjacent to open countryside;

- Existing trees that are to remain on site are considered in the layout in order to avoid overshadowing.'

6.3.13 The follow other policies are relevant to this assessment:

- Policy D1 High Quality Design and Place Making; to protect local distinctiveness and landscape character, to transform degraded physical environments, and to advocate cohesive design and materials of high quality;

[14] Barnsley Local Plan, Barnsley Metropolitan Council, adopted January 2019.

- Policy LC1 Landscape Character; to help retain and enhance the character and distinctiveness of the Landscape Character Areas (as identified in the Barnsley Borough Landscape Character Assessment 2002);

- Policy HE1 The Historic Environment; to protect historical assets, especially those whose settings would be sensitive to change resulting from developments, including Listed Buildings, Scheduled Ancient Monuments and designed landscapes and parks (also discussed within Policy HE4 Developments affecting Historic Areas or Landscapes);

- Policy BTC3 Public Spaces; ensuring all new public spaces make a positive contribution to their context and users, in accordance with wider strategy documents[15];

- Policy GI1 Green Infrastructure and Greenspace; to preserve, maintain and improve the connected Green Infrastructure within the Barnsley area;

- Policy GS1 Green Space; to improve and protect existing areas of green space;

- Policy GS2 Green Ways and Public Rights of Way; to preserve the character of Greenways and Public Rights of Way (PRoW), as well as the experience of their users;

- Policy BIO1 Biodiversity and Geodiversity; protection and improvement of existing habitats, including ancient woodland, and ancient or veteran trees; and

- Policy GB1 Protection of Green Belt; preservation of area of Green Belt from inappropriate development.

6.3.14 The proposed development sits within an area detailed under the Spatial Strategy section of the Local Plan as Urban Barnsley. As part of this section, the area of the site is discussed in broad detail, and advocates that:

'…there is the potential for well managed development to restore and improve the surrounding landscape, particularly on the edges of the built up areas. '[16]

6.3.15 The proposed development is allocated as land proposed for mixed use, under Site Reference: MU1, Site Name: Land South of Barugh Green Road. As detailed within the Local Plan the development is expected to:

- 'Retain, buffer and manage the watercourse, grassland and woodland north-east of Hermit Lane;

- Retain, buffer and manage the species-rich hedgerows and boundary features;

- Create/retain wildlife corridors through/across the site;

- Provide accessible public open space; and

[15] Barnsley Town Centre Public Spaces Strategy, Gillespies 2009.
[16] Paragraph 5.15, Page 19, Section 5. Spatial Strategy, Barnsley Local Plan, January 2019

- Protect the routes of the Public Rights of Way that cross the site, and make provision for these as part of any proposal.'

6.3.16 The allocation description also details the potential for archaeological remains to be present, and consideration should be given to how these remains would be affected by the proposed development.

6.4 Baseline Conditions

6.4.1 This section records, evaluates, and provides a description of the existing landscape and visual conditions throughout the study area. The data collected forms the basis from which the potential landscape and visual effects of the proposed development may be identified and assessed. Data collected and reviewed includes:

- Desk top and site based review of baseline site conditions;
- Desk top review of landscape planning designations and policy;
- An understanding of the landscape in the study area: its constituent elements; its character and the way that this varies spatially; and the value attached to it; and
- An understanding of the areas from which the proposed development may be visible, the different groups of people (visual receptors) who may be affected and the nature of the views and visual amenity currently experienced.

6.4.2 This work was undertaken through Winter 2019/20 and Winter 2020 to Spring 2021.

6.4.3 The ZTV (Figure 6.5) illustrates the potential visibility of the development based on bare earth terrain.

The Site

6.4.4 The application site covers an area of approximately 116 hectares, and comprises gently rolling urban fringe arable farmland, enclosed by buildings and transport corridors. Most of the application site is farmland, with riparian woodland (Craven Wood) following a small stream valley along the eastern boundary. Hermit Lane crosses the application site, running from south west to north east. Topography falls from west to east with landform steepening as it falls to Craven Wood. The only buildings within the application site are the small farm complex of Hermit House Farm, which is located directly to the south of Hermit Lane in the central part of the application site.

6.4.5 The large-scale field pattern to the north of Hermit Lane shows evidence of intensive farming practices with field amalgamation and hedgerow fragmentation. This differs from the medium-scale and irregular field pattern to the south, which is defined by valued landscape elements of taller hedgerows, hedgerow trees, linear woodland, and field boundary trees.

6.4.6 The farmland of the application site is bounded by the coalesced settlements of Higham to the west, Barugh Green to the north west, and Gawber to the east (which comprises Redbrook to the north east and Pogmoor to the south east). The topography within these surrounding areas is more undulating, compared to the gentle contours of the farmland within the application site. The townscape character of some of these areas appears broadly similar, with the predominately 1950s-60s detached residential properties within Gawber and Higham being of a similar appearance and character. This contrasts with the larger-scale commercial and

light industrial buildings within and adjacent to Barugh Green and Redbrook, to the north of the application site.

6.4.7 The northern and southern boundaries of the application site are defined by the A635 Barugh Green Road to the north, and the M1 motorway in vegetated cutting to the south.

6.4.8 The topography becomes more undulating beyond the application site, with the land rising to localised high points at Mapplewell to the north, and Dodworth to the south.

6.4.9 The application site affords mainly open views north whereas rising topography contains views to the south. A number of public rights of way (PRoW) cross the application site, and have connectivity to the wider PRoW network. In addition a Green Way ('paths and other routes of mostly open character that provide links between housing, countryside an services'[17]) is identified in the Barnsley Local Plan along Hermit Lane from Higham Common Road to Church Street.

6.4.10 The application site does not form part of any national or regional landscape designations. There is a Grade II listed structure (mid to late C19th milepost) that lies adjacent to the northern boundary of the application site, along the A635 Barugh Green Road. A small area of woodland covered by a Tree Preservation Order (TPO), falls just inside the eastern boundary. With the exception of these two constraints / considerations there are no other landscape or landscape-related designations within or adjacent to the site. Valued landscape features within the site boundary comprise areas of woodland to the east at Craven Wood and the network of hedgerows and with some field boundary trees to the south of the site. Hedgerows are maintained and appear in good condition, and some are classified as 'important' in relation to wildlife and landscape criteria (refer to Appendix 7.5 and 7.6, Chapter 7 Ecology).

6.4.11 The application site forms a visual and physical break between the residential edge of Barnsley (Gawber and Pogmoor) and Higham; albeit that these areas are linked by existing commercial development to the North. As such it may be valued locally by residents in terms of recreation routes (PRoW) and also as a green area which makes a contribution to the local landscape between urban areas.

6.4.12 Beyond the application site, within the study area, there are a number of sensitive heritage assets, including several Scheduled Monuments, Registered Parks and Gardens, and listed building/ structures. Effects on the setting of these assets will be considered in Chapter 9 Archaeology and Cultural Heritage. The LVIA will consider these assets in relation to making judgements on landscape value and in terms of potential effects on people visiting any assets which are publically accessible.

[17] Page 3, https://www.barnsley.gov.uk/media/9889/local-plan-adopted-policies-map.pdf

Study Area Extents

6.4.13 Due to the site being locally contained by the abrupt urban edge character of the surrounding settlements, existing variations in topography, and presence of vegetation cover, a study area of 3 km from the application site boundary is considered appropriate for the assessment. However, the visual assessment also considers particularly sensitive receptors up to a buffer of 5 km. The study area was agreed with Barnsley Metropolitan Borough Council during the scoping process and is shown on Figure 6.1.

Overview Description

6.4.14 The study area is predominantly undulating, with some localised high points, including Hugset Wood and Stainborough. A large portion of the study area is urban in character, and this includes the western aspects of the city of Barnsley and its outlying settlements, as well as the settlement of Dodworth to the south. The urban areas are a generally a mix of residential, and clustered commercial or light industrial developments.

6.4.15 These urban areas are separated by the M1, which runs from north to south and bi-sects the study area. Besides the presence of the M1, a number of other larger transport corridors also cross the study area, including the A635, B6099 and the Penistone and Hallam railway lines.

6.4.16 Between and surrounding the settlements, an urban fringe landscape of fields, linear woodland and amenity spaces is evident. Larger areas of woodland are present to the south-west, and this gives way to a more historic rural landscape of irregular fields to the north-west and west. This landscape also contains parkland. Further, larger fragmented open fields and linear woodland sit with the floodplain of the River Dearne, along the north-west periphery of the study area between the Hallam and the former Stairfoot to Nostell railway lines. The restored landscape here shows evidence of its mining and industrial past, including the disused and partially filled Barnsley Canal, and former Gawber colliery.

6.5 Landscape Baseline

Designations

6.5.1 Landscape related designations are shown on Figure 6.4, and the data included represents designations at the time of writing (May 2021). Designations found within the application site and the 3 km study area are described below.

National Designations

6.5.2 There are no World Heritage Sites, National Scenic Areas or National Parks within the application site of study area. The following landscape designations are present within the study area.

Registered Parks and Gardens

6.5.3 Locke Park is considered to be of high value for its historical and cultural aspects, and is a Grade II listed Registered Park and Garden. This 47 acre public open space was gifted to the people of Barnsley, by Phoebe Locke in memory of her husband Joseph Locke in 1861. Although the design has been added to in more recent years, the overall layout of the ornamental gardens still contain many of the original Victorian features including fountains, a wrought iron construction bandstand and Locke Park Tower (which is a Grade II* listed building). This designated area lies approximately 2km to the south east of the application site.

6.5.4 Cannon Hall gardens and estate parkland, sits at the edge of the 3km study area, is considered to be of high value for its historical and cultural aspects, and is a Grade II listed Registered Park and Garden. The designed landscape, which dates from the late 18th century, provides the setting for the Grade II* Cannon Hall listed building, both designed by Richard Woods. A key feature of the landscape are the avenues and Ha-ha's within the parkland. This designated area lies at the west edge of 3km study area.

6.5.5 Wentworth Castle and its estate parkland are considered to be of high value for its historical and cultural aspects, and is a Grade I listed Registered Park and Garden. The extensive ornamental gardens and pleasure grounds, dating from C18th, surround the Grade I listed building, and give way to parkland, formal avenues of trees and woodland further away from the castle. This designated area lies approximately 2.5km to the south of the application site.

Listed Buildings and Scheduled Ancient Monuments

6.5.6 Within the study area, there are a number of sensitive heritage assets, including several Scheduled Ancient Monuments, and listed building/ structures, although none sit within the application boundaries. Due to proximity and projected visibility (based on the ZTV, Figure 6.5) of the proposed development, the only heritage asset which has the potential to be affected by the scheme is a Grade II listed structure (mid to late C19th milepost) that lies adjacent to the northern boundary of the application site, along the A635 Barugh Green Road.

Barnsley Metropolitan Borough Council Local Plan Designations

Green Belt

6.5.7 Much of the western portion of the study area is covered by Green Belt (as classified by Barnsley Metropolitan Borough Council). This allocation runs along the southern

boundaries of the application site, but does not cover the site itself, which is covered by an allocation for mixed use (site reference MU1) in the Barnsley Local Plan. Green Belt is mentioned in this report for context however it is not considered to be a landscape receptor and as such landscape effects on the Green Belt have not been considered.

Green Ways and PRoW

6.5.8 Existing Green Ways are described in the Barnsley Local Plan as linkages which are part of the green infrastructure. , 'Paths and other routes of mostly open character that provide links between housing, countryside and services.'[18]

6.5.9 There are a number of Green Ways that run through the study area, and of these, two are of interest. One is routed along the south-western boundaries of the application site (along Higham Common Road), and is described within the Local Plan as, 'Linking aspirational routes across the M1 on Higham Lane to Hermit Lane Higham'. Another runs through the application site (along Hermit Lane), and is described as, 'From the Cawthorne to Darton aspirational route to Church Street Gawber.' As identified within Section 6.3 of this report, the GS2 policy seeks to protect these Green Ways from proposed development where their character and function could be affected.

6.5.10 Three PRoW cross the site and Policy GS2 also seeks to preserve the character of PRoW, as well as the experience of their users.

Biodiversity or Geological Interest Site

6.5.11 There are a number of areas that fall within the study area that have been identified by Barnsley Metropolitan Council for either their ecological or geological importance. One such area lies directly along the eastern boundary of the application site, and is identified as 'Redbrook Pastures', and is an area of semi-improved neutral grassland. The designation is split either side of Hermit Lane, and is also a Local Wildlife Site.

Green Space

6.5.12 The Barnsley Local Plan describes Green Space as, 'Parks and open spaces, play areas, sports pitches, local natural areas and cemeteries.'[19] Within the study area there are a number of these identified, with a large number of fragmented Green Spaces within and along the edges of the more urban areas.

6.5.13 Two of these areas identified within the Local Plan are contiguous with the application site boundaries. The 'Miner's Public House Recreation Ground' falls immediately to the west, just off Higham Common Road, and 'Harden Close to

[18] Page 229, Barnsley Local Plan, Barnsley Metropolitan Council, adopted January 2019
[19] Page 233, ibid

Pogmoor Lane' is located along the eastern edge of the Planning Application Boundary, between Harden Close and Farm House Lane.

Conservation Areas

6.5.14 Conservation areas may identify areas of increased landscape value or sensitive visual receptors, and therefore these are also considered as part of the LVIA.

6.5.15 Cawthorne Conservation Area includes the historic core of Cawthorne Village, including Tivy Dale, Hill Top and Church Street, which lies approximately 2.5km to the west of the proposed development.

6.5.16 Barnsley-Huddersfield Road Conservation Area encompasses a section of Huddersfield Road, and a number of intersecting smaller residential streets, and lies approximately 1.5km to the east of the proposed development.

6.5.17 Barnsley-Victoria Road Conservation Area lies directly to the south of the previous area, and also includes a section of Huddersfield Road, as well as a number of smaller roads, including Hopwood Street, Western Street, Victoria Road, Victoria Street and Longman Road. This Conservation Area also lies approximately 1.5km to the east of the proposed development.

6.5.18 Barnsley-Old Town Conservation Area also lies directly to the south of the previous two conservation areas, and encompasses a number of roads including Church Street, St Mary's Place, Eastgate and Regent Street. This Conservation Area also lies approximately 1.5km to the east of the proposed development.

Tree Preservation Orders

6.5.19 The propose development is located adjacent to land which is covered by an area Tree Preservation Order (TPO), Red Brook Plantation (reference number 1, tree reference number W1). This designation provides protection to the woodland within its extents, and will be a material consideration when determining the planning application.

Landscape Character

6.5.20 Landscape character is defined as the distinct recognisable and consistent pattern of elements in the landscape that makes one landscape different from another. The character comes from a combination of elements including landform, land use, vegetation cover, field boundaries, settlement patterns and types of buildings, roads, railways and rights of way. In accordance with GLVIA3 (paragraph 3.16) it is appropriate to utilise existing Landscape Character Assessments to help understand the baseline landscape character of the study area, in order that an appraisal can be made as to what, if any, effects may arise from the proposed development.

National Landscape Character

6.5.21 At a national level, the application site falls within the NCA Profile 38: Nottinghamshire, Derbyshire and Yorkshire Coalfield (Natural England, 2013). In summary, the key characteristics of this broad area which are reflected in the character of the application site and the study area are:

- 'A mixed pattern of built-up areas, industrial land, pockets of dereliction and farmed open country;

- Small, fragmented remnants of pre-industrial landscapes and more recent creation of semi-natural vegetation, including woodlands… with field boundaries of clipped hedges or fences …; and

- Many areas affected by urban fringe pressures creating fragmented landscapes, some with a dilapidated character, separated by substantial stretches of intact agricultural land in both arable and pastoral use.'[20]

6.5.22 The more valued landscape elements of the application site in relation to this character area are the presence of hedgerow field boundaries, a small area of woodland with TPO designation, and to a lesser extent land cover of agricultural land in both arable and pastoral use.

Local Landscape Character

6.5.23 At a local level, the study area falls wholly within the Barnsley Metropolitan Borough Council local authority area. The Barnsley Borough Landscape Character Assessment was undertaken by Barnsley Metropolitan Borough Council in 2002 (revised in 2016) and outlines the different landscape characters within the local authority area. Each LCA identifies information on how the area's character could be conserved, enhanced or restructured as appropriate. The location and extents of these LCAs are shown on Figure 6.3.

6.5.24 The application site lies within an area categorised as Landscape Area E2 (Barnsley Settled Wooded Farmland), which falls within the wider Landscape Type E (Settled Wooded Farmland). The key characteristics of Landscape Area E2 Barnsley Settled Wooded Farmland are identified to be:

- Gently rolling landform sloping towards the Rivers Dove and Dearne;

- Diverse range of land use, including agriculture, recreation, residential, industry, communication and landscape renewal;

- Dominant presence of urban development;

- Sense of urbanisation with urban fringe pressures and skyline views of settlements;

- Isolated pockets of farmland with farmsteads;

- Fields, predominantly pasture, bounded by fences and poorly managed hedgerows;

- Traditional mining settlements lie within the character area - Dodworth, Barugh, Barugh Green, Higham and Barnsley;

- Evidence of past and present industrial activity due to presence of reclaimed tips and working warehouse units on settlement edges;

- Some areas of scrubby, compartmentalised field units adjacent to settlements at the urban interface; and

[20] Page 6, National Character Profile 38: Derbyshire and Yorkshire Coalfield, Natural England (2013)

- Urban Greenspace running into the urban fabric of Barnsley and having a variety of uses, but predominantly recreational'. [21]

6.5.25 The application site is influenced by some of the forces for change recognised in the assessment; including being 'isolated farmland cut off from wider countryside by urban, road and railway development', and 'pressure for further development due to the proximity of existing urban development and roads'[22]. The application site also exhibits the following characteristics identified in the assessment; 'gently rolling farmland, fields bounded by hedgerows, and small watercourses' which contribute to some strength of character.

6.5.26 In the assessment the strength of character for Barnsley Settled Wooded Farmland is judged to be moderate, and due to degrading condition of the land with poor maintenance of hedgerows the landscape condition is considered to be poor. The assessment considers that 'built development in this area would not have a large adverse effect on landscape character'[23] and considers landscape sensitivity to built development to be medium and the landscape capacity of the area to be medium.

6.5.27 The assessment makes specific comment on the suitability of the application site for potential development, named as 'Farmland between Higham/ Barugh Green and Barnsley'. The assessment notes:

- It is judged that the landscape character of much of this area would be adversely affected by development. However, some urban edges on lower ground, for example at Barugh Green and Redbrook, could be improved by appropriate development, and landscape improvements in the form of hedge and tree planting.

- This area of land is isolated and enclosed, so it could be all be developed (along with retention of some open areas as urban greenspace) without significant adverse effects, either within or outside this landscape character area. This particularly applies to the lower slopes that are less visible from land outside the character area to the north and north east. However, it is important that the settlements of Higham and Barugh Green are not allowed to merge with Barnsley, as this would compromise their individual identities and sense of place'[24].

6.5.28 In the context of the above notes this assessment also takes into account that the application site is allocated as land proposed for mixed use, under Site Reference: MU1, Site Name: Land South of Barugh Green Road. As such the allocation is considered to set aside the matter of the settlements of Higham and Baraugh Green not being allowed to merge with Barnsley.

6.5.29 This assessment has focussed on effects on landscape character of Landscape Area E2, within which the site boundary falls, to ensure this assessment focuses on likely significant effects. It is consider that due to distance, topography, intervening land cover and infrastructure, and the enclosure of the application site with existing development, that there is no potential for wider significant effects on landscape

[21] Page 147, Barnsley Borough Landscape Character Assessment, Barnsley Metropolitan Borough Council (2002)
[22] Page 149, ibid
[23] Page 150, ibid
[24] Page 153, ibid

character. As such the surrounding Landscape Areas have not been described but have been mapped on Figure 6.3 for context.

Summary of Landscape Receptors

6.5.30 Table 6.10 summarises the landscape receptors which will be assessed against the development proposals. The landscape designations described in Section 6.5 form part of the baseline character of the study area and give context to the value of the landscape receptors being assessed. These landscape designations are not considered landscape receptors in their own right. Table 6.10 determines whether the proposed development is likely to have an effect on the landscape receptor, or whether there is unlikely to be any effect. For those landscape receptors which are considered likely to be effected by the proposed development a judgement is made on their value and they are then considered further in Section 6.8 Potential Effects. In the instances where effects are unlikely this is stated and receptors are discounted from the subsequent appraisal.

Table 6.10: Landscape Receptors

Landscape Receptor	Likelihood of Effect	Reasoning	Value
The landscape of the application site including specific elements of hedgerows, field boundary trees, groups of trees, woodland and topography	Likely	The Parameters Plan proposes development extents which would require removal of much of the landscape features of the application site and largely change the character of the application site, including extensive changes to topography.	Medium
NCA 38 Nottinghamshire, Derbyshire and Yorkshire Coalfield	Unlikely	NCA 38 covers an extensive area along the M1 corridor and includes the settlements of Rotherham, Wakefield, and Leeds. While it is recognised that gradual expansion of urban areas may affect the NCA in the long term, it is considered that the scale of proposed development and the location surrounded by existing development would not have a perceptible effect on NCA 38. As such it is not considered further in this assessment.	-
LCA E2: Barnsley Settled Wooded Farmland	Likely	The proposed development lies within this LCA and the scale of it would further reduce the areas of isolated pockets of farmland within the LCA.	Medium

6.6 Visual Baseline

6.6.1 The visual baseline establishes the area in which the proposed development may be visible and 'the different groups of people who may experience views of the development, the places where they will be affected and the nature of views and visual amenity at those points.' [25]

Zone of Theoretical Visibility

6.6.2 The Zone of Theoretical visibility (ZTV) is shown on Figure 6.5. This has been produced as a 'bare earth' ZTV, which does not allow for the filtering or screening of views by natural or built components in the landscape, such as woodland, individual trees, buildings or fences. Also the ZTV assumes atmospheric visibility[26] to be 100%. Together the combination of landscape features and atmospheric visibility can potentially reduce visibility to a considerable extent. The ZTV therefore represents the maximum theoretical potential visibility, i.e. the 'worst case' scenario.

6.6.3 The bare earth ZTV (Figure 6.5) indicates that the proposed development would be visible around the application site in close proximity. Visibility becomes reduced towards the outer extents of the 3km study area to the east and west. Visibility is more extensive to the north of the 3km study area around Mapplewell and Kexbrough. Beyond the 3km study area, up to the 5km buffer, visibility becomes patchier and is focussed around Cawthorne Park, the west edge of Carlton, and Kine Moor.

6.6.4 Based on fieldwork, review of aerial mapping, OS mapping, and Google Street View visibility is in reality would be much reduced from the ZTV when built form and vegetation are taken into account.

Visual Receptors

6.6.5 As noted in the site description (Section 6.4) much of the application site is edged by existing residential and commercial development, as well as the M1 motorway corridor in a cutting to the west of the site. Woodland and rising topography limit views to the south and west, and the surrounding residential and commercial edges often limit close proximity views to residents at the site boundary. There are more open views north to Mapplewell and Kexbrough.

6.6.6 Elevated parts of the application site to the south are potentially the most visible, and distant views from outside the site are afforded from the north and north west.

[25] Paragraph 6.3, Landscape Institute, Guidelines for Landscape and Visual Impact Assessment (Third Edition) GLVIA3

[26] In this instance Atmospheric Visibility is considered as follows: Visibility is a measure of the distance at which an object or light can be clearly discerned. Atmospheric visibility can be reduced by precipitation, fog, haze, pollution or other obstructions to visibility such as blowing snow, sand or dust.

There are frequent close up views of the site from the edges of the nearby settlements.

6.6.7 The main visual receptors are mapped on Figure 6.7 and summarised below.

Recreational and Amenity Receptors

- Recreational users on PRoW and Green Ways (R1).
- Visitors to Cannon Hall, Registered Park and Garden (R2).

Community Receptors

- Higham and the west end of Hermit Lane (H1).
- Gawber (H2).
- Pogmoor (H3).
- Mapplewell (H4).
- Kexbrough (H5).
- High Hoyland (H6).

Employment Receptors

- People working at the commercial development north of the A635 (E1).

Receptors on the road network

- Road users of local roads around the site (T1).
- Road users of the A635 Barugh Green Road (T2).
- Road users of the M1 motorway (T3).

Viewpoints

6.6.8 A number of viewpoints have been identified to illustrate views from visual receptor groups within the study area. All viewpoints are located on publicly accessible land and it should be noted that viewpoints for community receptors are representative and not from a specific property. Baseline photos are shown on the Viewpoint Assessment Sheets in Appendix 6.1 and Table 6.10 provides a summary of the viewpoints.

Table 6.10: List of Viewpoint Locations

Ref	Viewpoint Location	Representative of Key Receptors	View value	Approximate Distance to Application Site
VP A	Downs Crescent, Gawber	Representative of views from community receptors (H2)	Medium	0.5km
VP B	Junction of Higham Common Road and Hermit Lane, Higham	Representative of views from nearby community receptors (H1)	Medium	10m
VP C	Off Welland Court	Representative of views from nearby community receptors (H1)	Medium	20m
VP D	Junction of Avon Close and Darton UD 11 Footpath	Representative of views from nearby community receptors (H1), and recreational users of PRoW (R1)	Medium	0m
VP E	Cannon Way	Representative of views from employment receptors (E1), and road users	Low	10m
VP F	Junction of Cawthorne Road and Claycliffe Avenue	Representative of views from nearby community receptors (H2)	Medium	10m
VP G	St Thomas's Road	Representative of views from nearby community receptors (H2), and informal recreational space	Medium	10m

Ref	Viewpoint Location	Representative of Key Receptors	View value	Approximate Distance to Application Site
VP H	Darton UD 12 footpath, near to junction with Hermit Lane	Representative of views from nearby community receptors (H2), and recreational users of PRoW (R1)	Medium	10m
VP I	Barnsley County Borough Footpath 248	Representative of views from nearby community receptors (H3), and recreational users of PRoW (R1)	Medium	10m
VP J	Junction of Dury Farm Court and Barnsley County Borough Footpath 248	Representative of views from nearby community receptors (H3), and recreational users of PRoW (R1)	Medium	10m
VP K	Bence Lane	Representative of views from nearby community receptors (H5)	Medium	2km
VP L	B6131 Darton Lane	Representative of views from nearby community receptors (H4)	Medium	2km
VP M	Cawthorne CP Footpath 20, north edge of Registered Park and Garden of Cannon Hall	Representative of views of recreational users of landscape and hall, and setting of RP&G and listed building (R2)	High	4km
VP N	M1 motorway	Representative of views of transport users (T3)	Low	50m

6.7 Embedded Mitigation

6.7.1 The Parameters Plan (Figure 3.1) sets out the proposed extents of development and Chapter 3 Site and Project Description describes the proposed development. The development of the Parameters Plan has been part of an iterative design process, and through the concurrent development of the Landscape Masterplan (Figure 6.8) for the application site it has been possible to embed some landscape mitigation principles.

6.7.2 Thought was given to the likely effects of the proposed development on the landscape and visual baseline, and the retention of characteristic landscape features such as woodland areas. The Parameters Plan allows space for the following measures during operation:

- Employment development is set back from the site boundaries at the southern extent of the site to allow for strategic open space with woodland between the proposed development and existing community areas (38m to 126m set back), as well as the M1 motorway (7m to 26m set back);
- Areas of strategic open space have been set out to accommodate publicly accessible green space and drainage infrastructure as shown on the Landscape Masterplan;
- Protection and retention of the majority of existing woodland at Craven Wood and trees with a Tree Preservation Order within the application site (0.25ha of woodland is proposed to be removed); and
- Continuation of public access on reinstated and rerouted PRoW (known as diversions) and a Green Way through the site, with pedestrian connections maintained to adjacent residential areas.

6.7.3 The Landscape Masterplan sets out a way in which the design of the strategic greenspace could come forwards, although the final detail for those parts of the site which are subject to an outline application would be confirmed through subsequent planning applications. It includes the following areas of planting which are considered as mitigation measures which could be subject to a planning condition for the purposes of this assessment, and provide a further level of detail to the Parameters Plan:

- Amenity open space with planting to the proposed roundabout on the A635;
- Woodland planting to north and east facing slopes at the north application site boundary;
- Set back of residential development from Gawber with proposed woodland planting and amenity landscape;
- Proposed routes for diverted PRoW;
- Continuation Craven Wood with proposed woodland planting further into the application site;
- Woodland planting between the proposed employment development and Pogmoor / M1;

- Amenity open space with a mix of planting types connecting east to west through the application site;
- Tree planting and amenity space along the link road; and
- Woodland planting buffer to the playing field at Higham.

6.7.4 The following mitigation measures will be embedded during construction:

- Adoption of standard construction industry working hours;
- Temporary closure of PRoW at the site during construction, with PRoW 11, 12, 248, 249, 252, and 254 to be reinstated following some localised diversion during Phase 1a of construction. Remaining PRoW to be reinstated with some localised diversions following construction of all phases;
- Protection and retention of the majority of existing woodland and trees with a Tree Preservation Order within the application site (0.25ha is proposed to be removed);
- Protection and retention of 60m of hedgerow and translocation of 1km of hedgerow to Phase 1a; and
- Development and implementation of a Construction Environmental Management Plan (CEMP), to include as a minimum, measures relating to: construction traffic routing, site access/deliveries, parking, contractor management, parking, fuels and materials storage, standard dust and noise suppression techniques and standard pollution presentation and control techniques.

6.7.5 This assessment has been undertaken on the basis of the Parameters Plan and the Landscape Masterplan, with the above embedded mitigation.

6.8 Assessment of Likely Significant Effects

Potential Effects

6.8.1 This section describes the types of landscape and visual effects that could occur as a result of the proposed development during construction and operation.

Construction

6.8.2 Construction would take place on the application site over approximately 11 years. As such it has been assumed for the purpose of providing a 'worst-case' assessment in this Chapter that the apex of construction activity (where earthworks associated with the site remodelling would be taking place across the whole application site) would be during Phase 1a. During this period Phase 1 of the residential development would be built, along with the primary school and the first part of the link road running from Barugh Green Road to the northernmost internal roundabout. As such Phase 1a has been used for the purposes of this assessment to provide a representative point in time for assessment of construction activities.

6.8.3 The sources of potential landscape and visual effects during the construction phase include:

- Remodelling of the site including bulk earthworks and land surcharging [time for the ground to settle and strengthen] in order to create appropriate platforms for the development;
- Phasing of construction work across the application site;
- Closure of the existing Hermit Lane for the section which passes within the site;
- Temporary closure of PRoW and Green Ways during construction, with some PRoW to be reinstated during Phase 1a of construction. Remaining PRoW to be reinstated with some localised diversions following construction of all phases;
- Protection of woodland and vegetation to be retained comprising 1.22ha woodland and 60m of hedgerow;
- Translocation of 1km of hedgerow to Phase 1a;
- Site clearance, tree felling and boundary/ hedgerow removal comprising 0.25ha woodland at Craven Wood and 6.1km hedgerow across the application site;
- Long term / permanent loss of agricultural landscape character within the application site;
- Topsoil stripping;
- Movement of construction related traffic including delivery and removal of material to and from site, off-site road traffic including workers travelling to and from site;
- Construction of temporary site accesses and access tracks;

- Construction of new permanent access routes into the application site including a link a north / south link road with four new roundabouts (two at the site boundaries with A635 Cawthorne Road and Higham Common Road, and two internally);

- Construction of the first part of the Link road running from Barugh Green Road to the northernmost internal roundabout;

- General construction activities including the movement of large scale construction equipment (including cranes), construction compounds and temporary buildings required for construction, parking on site and materials stockpiles;

- Service diversions;

- Construction lighting; and

- Temporary hoardings and/or security fencing or signage.

Operation (Completed Development)

6.8.4 This assessment has been based upon the Parameters Plan (Figure 3.1) and development parameters set out in Chapter 3 of the ES, and summarised in Section 6.1. The assessment of the parameters set out represents the worst case scenario in terms of landscape and visual effects.

6.8.5 The sources of potential landscape and visual effects during the operation phase include:

- The introduction of permanent built form including residential properties to 13.5m height, commercial and school properties to 13.5m height, and employment development to 23m height;

- Permanent new road access including four new roundabouts on a north / south link road (two at the site boundaries with A635 Cawthorne Road and Higham Common Road, and two internally);

- Permanent new landscape scheme with amenity open space, tree planting, woodland areas, parkland, swales and drainage infrastructure resulting in a change to the immediate landscape character of the application site;

- Movement of increased numbers of vehicles;

- Permanent changes to site signage and boundary treatments;

- Reinstated diverted PRoW and Green Way Routes; and

- Operational lighting.

Landscape Effects

6.8.6 The assessment of landscape effects are set out in Table 6.12 and 6.13, and take into account the embedded mitigation set out in Section 6.7

6.8.7 As noted in Section 6.8.2, the assessment of effects during construction are undertaken at the apex of construction activity.

Table 6.12: Summary of Effects on Landscape Receptors During Construction

Landscape Receptor	Construction			
	Sensitivity	**Magnitude of Change**	**Significance of Effect**	**Rationale**
The character of the landscape of the application site including specific elements including hedgerows, field boundary trees, groups of trees and woodland	Medium	High adverse	Major adverse (significant)	The landscape of the site would experience direct changes, including the demolition of existing farm buildings, extensive cut and fill earthworks, new access arrangements, and site clearance including tree felling and boundary hedgerow removal / relocation. There would be presence of construction machinery and cranes. Extensive earthworks across the entirety of the application site would be undertaken at the apex of construction being assessed, along with residential development in Phase 1a. As such the magnitude of change is considered to be high. Combined with the overall medium sensitivity of the landscape of the application site, the level of effect during construction is considered to be major adverse.
LCA E2: Barnsley Settled Wooded Farmland	Low	Medium adverse	Moderate adverse (significant)	LCA E2 would experience direct changes during construction due to the isolated pocket of farmland within which the application site sits being subject to the demolition of existing farm buildings, extensive cut and fill earthworks, new access arrangements, and site clearance including tree felling and boundary hedgerow removal / relocation. A large proportion of the farmland within LCA E2 would be affected, and as such there would be a conspicuous change to the character of part of this LCA. However given the

Landscape Receptor	Construction			
	Sensitivity	Magnitude of Change	Significance of Effect	Rationale
				dominant presence of existing urban development within the LCA the magnitude of change is considered to be medium. Combined with the overall medium sensitivity of the landscape of the LCA, the level of effect during construction is considered to be moderate adverse.

Table 6.13: Summary of Effects on Landscape Receptors During Operation

Landscape Receptor	Operation			
	Sensitivity	**Magnitude of Change**	**Significance of Effect**	**Rationale**
Landscape of the application site including hedgerows, field boundary trees, groups of trees and woodland	Medium	Year 1 High Adverse Year 15 Medium Adverse	Year 1 Major Adverse (significant) Year 15 Moderate Adverse (significant)	Year 1 The proposed development would result in a direct and long term change to the immediate character of the application site. While a landscape buffer would be retained along the east edge of the site to Craven Wood, the majority of the existing farmland of the application site would become developed, with substantial changes to the existing landform thereby entirely altering the character of the farmland landscape. Proposed large scale employment development to the south of the application site would have the greatest change to landscape character. The proposed residential development to the north of the application site relates to existing land use and character of residential areas. Approximately 30% of the site would be landscaped amenity space or space for drainage infrastructure. Landscaped amenity space would include newly planted with trees, shrubs, hedgerows and seeded and turfed with grass and wildflower meadows; however, at year 1 the overall beneficial effect of the landscaped areas would be relatively low. As such the magnitude of change is considered to be high. Combined with the overall medium sensitivity of the landscape of the application site, the level of effect during operation is considered to be major adverse. Year 15

Landscape Receptor	Operation			
	Sensitivity	Magnitude of Change	Significance of Effect	Rationale
				Adverse effects would lessen over time to the north, east, south west, and south east application site boundaries. This would occur as embedded mitigation planting becomes established and matures. This includes landscape buffers at the east edge of the site and running through the site which provide pedestrian connections (existing PRoW would be rerouted) and public open space / amenity landscape. While the type of open space provided as part of the new development would differ in character to a farmland landscape, it is considered that it would tie in with existing woodland at Craven Wood and provide an amenity parkland / woodland character which would be a positive change in terms of landscape elements and character. Overall, by year 15 the magnitude of change is considered to reduce to medium. Combined with the overall medium sensitivity of the landscape of the application site, the level of effect at operation year 15 is considered to be moderate adverse.
LCA E2: Barnsley Settled Wooded Farmland	Low	Year 1 Medium Adverse Year 15	Year 1 Moderate Adverse (significant) Year 15	Year 1 The urban context of Barnsley is noted in this assessment along with the application site's allocation for mixed use development in the Barnsley Local Plan. The allocation is considered to set aside

Landscape Receptor	Operation			
	Sensitivity	Magnitude of Change	Significance of Effect	Rationale
		Low Adverse	Minor Adverse	the matter of the settlements of Higham and Baraugh Green not being allowed to merge with Barnsley as noted in LCA E2[27]. The proposed development would result in the open, farmed landscape of the application site being lost and the new development would reduce the break between the developed areas of Gawber and Higham (as recognised in the context of the application sites allocation). A landscape buffer at the east edge of the application site would maintain some separation in combination with existing small scale fields and woodland outside the application site boundary; however, the setting of these settlements would change. LCA E2 is characterised as having a dominant presence of urban development, and there is precedent of employment development to the north and south of the application site. LCA E2 is also characterised as having isolated pockets of farmland. The proposed development would lead to a reduction of isolated pockets farmland landscape within the character area, but would fit with the character of a more urbanised landscape. The adopted Masterplan Framework for the application site requires good design so it is considered that the proposed residential development would tie in with surrounding residential character and be designed to be high quality. The proposed large scale employment development in the south of the application site is of

[27] Page 153, Barnsley Borough Landscape Character Assessment, Barnsley Metropolitan Borough Council (2002)

Landscape Receptor	Operation			
	Sensitivity	Magnitude of Change	Significance of Effect	Rationale
				greater conflict with existing landscape character due to its height and large massing. Approximately 30% of the site would be landscaped amenity space or space for drainage infrastructure. Landscaped amenity space would include newly planted with trees, shrubs, hedgerows and seeded and turfed with grass and wildflower meadows; however, at year 1 the overall beneficial effect of the landscaped areas on LCA E2 would be negligible. At Year 1 the magnitude of change is considered to be medium. Combined with the overall low sensitivity of the landscape of the LCA, the level of effect is considered to be moderate adverse. Year 15 There would be some reduction in adverse effects over time, as mitigation planting becomes established and matures within landscape amenity space and becomes part of the landscape matrix of LCA E2. At year 15 the magnitude of change is considered to be low. Combined with the overall medium sensitivity of the landscape of the LCA, the level of effect at operation year 15 is considered to be minor adverse.

Visual Effects

6.8.8 To inform the assessment of visual effects on receptor groups, fourteen representative viewpoints were assessed and included in Appendix 6.1 Viewpoint Assessment. Annotated photographs from the selected viewpoints show the maximum development parameters overlaid on the viewpoint photo (in line with visualisation Type 1[28]).

6.8.9 Viewpoints E, H, L, and N are also represented as massing montages (in line with visualisation Type 3 and AVR Level 1 [29]) in Volume 3 of the ES. These photomontages present a massing model of the proposed development, overlain on to a viewpoint photo. The proposed development is shown at year 1, year 5, and year 15 including extents of mitigation planting.

6.8.10 The assessment of visual effects on receptor groups are set out in Table 6.14 and 6.15, and take into account the embedded mitigation set out in Section 6.7 Visual receptor groups are mapped on Figure 6.7.

[28] Landscape Institute. (2019). Visual Representation of Development Proposals, Technical Guidance Note 06/19

[29] ibid

Table 6.14: Summary of Effects on Visual Receptors during Construction

Visual Receptor	Construction			
	Sensitivity	**Magnitude of Change**	**Significance of Effect**	**Rationale**
Recreational and Amenity Receptors				
Recreational users on PRoW and Green Ways (R1)	-	-	-	An assessment of visual effects during construction on users of these PRoW and Green Ways has not been undertaken as they will be tclosed for the duration of construction to facilitate the construction works.
Visitors to Cannon Hall, Registered Park and Garden (R2)	High	Negligible	Negligible	Represented by viewpoint M. Construction activities are likely to be obscured by the existing residential area of Higham with the exception of cranes. Cranes would be seen at a long distance and in a narrow field of the view. They would be in the context of the urban edge of Barnsley where the composition of the view already comprises a mix of residential and employment development, with the hospital development and overhead power lines punctuating the skyline. The magnitude of change is considered to be negligible. Combined with the high sensitivity of the receptors, the level of effect during construction is considered to be negligible.
Community Receptors				
Higham, and the west end of	High	Medium adverse	Moderate Adverse (significant)	Represented by viewpoints B, C, D. Residents at the very eastern edge of Higham, and the west end of Hermit Lane would have close proximity views to construction

Visual Receptor	Construction			
	Sensitivity	**Magnitude of Change**	**Significance of Effect**	**Rationale**
Hermit Lane (H1)				operations across a large proportion of the view. There may be some screening of views by garden vegetation however due to the extensive excavations at the apex of construction to change topography, and the close proximity of operations it is considered there would be a substantial change in views. Residents in properties set back from the edge of this residential area, which are the majority within this area of community receptors, would have views filtered by other properties and construction activities would be likely to be seen in glimpsed views between properties or above roof lines. For residents at the very eastern edge of Higham and the west end of Hermit Lane the magnitude of change during construction is considered to be high and as such it is recognised that small parts of the community would experience a major adverse level of effect as a 'worst case'. However, overall magnitude of change is considered to be medium adverse, taking into account that most views would be filtered. Combined with the high sensitivity of the receptors, the overall level of effect during construction is considered to be moderate adverse.
Gawber (H2)	High	Medium adverse	Moderate Adverse (Significant)	Represented by viewpoints A, F, G, H. Residents at the very western edge of Gawber would have close proximity views to construction operations across a large proportion of the view. There may be some screening and filtering of views by garden vegetation, or vegetation at the end of streets, however due to the extensive excavations at the apex of construction related to changes in

Visual Receptor	Construction			
	Sensitivity	Magnitude of Change	Significance of Effect	Rationale
				topography, and the close proximity of operations it is considered there would be a substantial adverse change in views. From properties at higher elevations within Gawber construction operations would be seen in the mid distance with the context of existing residential properties and rooftops in the foreground. Wind turbines are visible in the distance and on the horizon. Properties at lower elevations or those on streets running parallel to the application site are unlikely to experience views due to obstruction from existing residential properties. For residents at the very western edge of Gawber the magnitude of change during construction is considered to be high and as such it is recognised that small parts of the community would experience a major adverse level of effect as a 'worst case'. However, overall the magnitude of change is considered to be medium adverse. Combined with the high sensitivity of the receptors, the level of effect during construction is considered to be moderate adverse.
Pogmoor (H3)	High	Medium adverse	Moderate Adverse (significant)	Represented by viewpoints I, J. Residents at the very northern edge of Pogmoor would have close proximity views to construction operations across a large proportion of the view. There may be some screening and filtering of views by garden vegetation, or vegetation at the end of streets, however due to the extensive excavations at the apex of construction related to changes in

Visual Receptor	Construction			
	Sensitivity	Magnitude of Change	Significance of Effect	Rationale
				topography, and the close proximity of operations it is considered there would be a substantial change in views. The majority of residential properties are set back from edges of Pogmoor, and would have views filtered by other properties and garden vegetation. Construction activities are likely to be seen in glimpsed views between properties, at the end of streets perpendicular to the application site, or above roof lines. For residents at the very northern and western edge of Pogmoor the magnitude of change during construction is considered to be high adverse and as such it is recognised that small parts of the community would experience a major adverse level of effect. However, overall magnitude of change is considered to be medium adverse, taking into account that most views would be filtered. Combined with the high sensitivity of the receptors, the overall level of effect during construction is considered to be moderate adverse.
Residents at the south edge of Mapplewell (H4)	High	Low adverse	Minor Adverse	Represented by viewpoint L. Receptors at the south edge of residential development in Mapplewell, concentrated along the B6131, would have mid distance and typically filtered views to construction operations on much of the application site. Construction operations would be seen in the context of existing edge of Barnsley, employment development at Barugh and a pylon line to the fore of the application site. Cranes used for construction would be new

Visual Receptor	Construction			
	Sensitivity	Magnitude of Change	Significance of Effect	Rationale
				features, but would be seen alongside other similar vertical structures of the overhead pylon lines. The magnitude of change is considered to be low adverse. Combined with the high sensitivity of the receptors, the level of effect during construction is considered to be minor adverse.
Residents at Kexbrough (H5)	High	Low adverse	Minor Adverse	Represented by viewpoints K. Construction activities are likely to affect a relatively small portion of the view in the long distance. Much of the application site is screened by the residential area of Higham. Cranes used for construction would be new features, but would be seen over rooftops of properties in Higham and alongside other similar vertical structures, such as Barnsley Hospital infrastructure and overhead pylon lines. The magnitude of change is considered to be low. Combined with the high sensitivity of the receptors, the level of effect during construction is considered to be minor adverse.
Residents at High Hoyland (H6)	High	Low adverse	Minor Adverse	No representative viewpoint. Construction activities would be seen at a long distance, in a small portion of the view, and in the context of the urban edge of Barnsley where the composition of the view already comprises a mix of residential and employment development. Cranes would be visible against the urban edge of Barnsley, in the context of a pylon line and the Barnsley Hospital building visible on the skyline.

Visual Receptor	Construction			
	Sensitivity	**Magnitude of Change**	**Significance of Effect**	**Rationale**
				The magnitude of change is considered to be low. Combined with the high sensitivity of the receptors, the level of effect during construction is considered to be minor adverse.
Employment Receptors				
People working at commercial development north of the A635 (E1)	Low	Medium Adverse	Minor Adverse	Represented by viewpoint E. Construction operations would be seen in the foreground of views from the edge of the Barugh Green commercial development, and for people entering and exiting the development on Cannon Way. There would be changes to the road network, removal of boundary vegetation, and earthworks. While changes would affect a substantial proportion of the view from the edge of the existing development, and the balance of features in the view would change, this would be over the short to medium term. The works would introduce additional movement and activity in the view, but would this would not be uncharacteristic of the urban area. The magnitude of change is considered to be medium. Combined with the low sensitivity of the receptors, the level of effect during construction is considered to be minor adverse.
Road Network Receptors				
Road users of local roads	Low	High Adverse	Moderate Adverse (significant)	Represented by viewpoint B.

Visual Receptor	Construction			
	Sensitivity	Magnitude of Change	Significance of Effect	Rationale
around the site (T1)				Hermit Lane within the extent of the application site would be closed from commencement of construction operations. As such only the west end of the lane, for access to properties, and the east to remain as a section of public highway will be considered for assessment. Users on Hermit Lane would experience a mix of channelled (to the east end of the lane) and close proximity (to the west end of the lane) views. Users on local roads around the periphery of the application site would experience of mix of channelled, intermittent, and transient views of construction operations. These would typically be broken up by residential properties. There would be channelled views from roads perpendicular to the application site where extensive earthworks and large scale machinery including cranes would be visible The magnitude of change is overall considered to be high. Combined with the low sensitivity of the receptors, the level of effect during construction is considered to be moderate adverse.
Road users of the A635 Barugh Green Road (T2)	Low	Medium Adverse	Minor Adverse	Represented by viewpoint E. Road users of the A635 would have oblique and transient views to construction operations. Clearance of site boundary vegetation would open up wider views to construction over the short to medium term. The works would introduce additional movement and activity in the view, but this would not be uncharacteristic of the urban area with presence of existing employment development at Barugh Green.

Visual Receptor	Construction			
	Sensitivity	**Magnitude of Change**	**Significance of Effect**	**Rationale**
				The magnitude of change is considered to be medium. Combined with the low sensitivity of the receptors, the level of effect during construction is considered to be minor adverse.
Road users of the M1 motorway (T3)	Low	Low Adverse	Negligible	Represented by viewpoint N. South bound motorway users would have transient and brief views to the southern extents of the application site during construction operations. Views would be in close proximity to the application site but for a short period of time, taking into consideration users travelling at approximately 70mph. The works would introduce additional movement and activity in the view, but would this would not be uncharacteristic of the motorway environment. North bound motorway users would only have transient views to some construction operations, namely cranes and large machinery, however the north bound carriageway is set at a lower level to the south bound carriageway and works may not be perceptible from this lower level. The magnitude of change is considered to be low. Combined with the low sensitivity of the receptors, the level of effect during construction is considered to be negligible.

Table 6.15: Summary of Effects on Visual Receptors during Operation

Visual Receptor	Operation			
	Sensitivity	**Magnitude of Change**	**Significance of Effect**	**Rationale**
Recreational and Amenity Receptors				
Recreational users on PRoW and Green Ways (R1)	Medium	Year 1 High Adverse Year 15 Medium Adverse	Year 1 Moderate Adverse (significant) Year 15 Moderate Adverse (significant)	Represented by viewpoints D, H, I. Year 1 Recreational users at the edges of the application site and on re-routed PRoW (known as a diversion) through the site would experience a high magnitude of change in their view. Views of the proposed development would be in close proximity at the entry point of PRoW to the application site, and recreational users would be able to connect on re-routed PRoW through the application site. As such the composition of the view would change and users would experience a change from a suburban edge farmland landscape, to a development with amenity landscape areas of public open space. While a designed amenity landscape has different qualities to the existing farmland landscape of the application site, it is not considered to be negative. However at Year 1 the context of large areas of proposed residential and employment development is considered against a new landscape which has not yet matured and as such development will be a prominent detraction in views. The magnitude of change is considered to be high. Combined with the medium sensitivity of the receptors, the level of effect is considered to be moderate adverse. Year 15

Visual Receptor	Operation			
	Sensitivity	**Magnitude of Change**	**Significance of Effect**	**Rationale**
				After 15 years the planting within designed amenity areas of public open space would have established and be maturing and would provide an amenity parkland / woodland character around the proposed walking trails, re-routed PRoW, community orchards, play areas, allotments, native woodland planting, and areas of ornamental planting. This designed landscape would filter some views and soften the appearance of the proposed development, however the scale of the proposed development would still be very prominent The magnitude of change is considered to be medium. Combined with the medium sensitivity of the receptors, the level of effect is considered to be moderate adverse.
Visitors to Cannon Hall, Registered Park and Garden (R2)	High	Year 1 Negligible Year 15 Negligible	Year 1 Negligible Year 15 Negligible	Represented by viewpoint M. Year 1 The upper elevations of the proposed employment development would be present in long distance views though would be barely perceptible. They would be only seen in a small portion of the view and set against the context of the existing urban edge of Barnsley with Barnsley Hospital visible on the skyline. Much of the proposed development would be obscured by the existing residential area of Higham.

Visual Receptor	Operation			
	Sensitivity	**Magnitude of Change**	**Significance of Effect**	**Rationale**
				The magnitude of change is considered to be negligible. Combined with the high sensitivity of the receptors, the level of effect is considered to be negligible. Year 15 Taking into account that much of the proposed development would be obscured by the existing residential area of Higham, no mitigation planting is anticipated to be visible. As such no change in level of effect is anticipated from Year 1.
Community Receptors				
Higham, and the west end of Hermit Lane (H1)	High	Year 1 Medium Adverse Year 15 Medium Adverse	Year 1 Moderate Adverse (significant) Year 15 Moderate Adverse (significant)	Represented by viewpoints B, C, D. Year 1 Residents at the very eastern edge of Higham would have foreground views to the proposed development across a large proportion of the view. There may be some screening of views by garden vegetation however given the proximity of development it is considered there would be a deterioration in view, albeit it is recognise that views would not be out of character given the residential and suburban nature of the local area. There would be a change in composition of the view from open farmland landscape forming a visual break to the west edge of Barnsley where existing built form comprises part of the mid distance view, to residential or employment development filling the foreground of the view. While no new features are being brought into the view, the balance

Visual Receptor	Operation			
	Sensitivity	Magnitude of Change	Significance of Effect	Rationale
				of features and composition of the view would change and to bring development forward in the view. At the west end of Hermit Lane development would include a new roundabout, road infrastructure, and employment development to 14m maximum height. The Landscape Masterplan proposes mixed tree and shrub planting around the roundabout. There would be filtered views beyond the roundabout to employment development to 23m height. The view would change substantially. Residents in properties set back from the immediate edge of Higham, which are the majority within this area of community receptors, would have channelled views between properties or from the end of streets perpendicular to the application site. As such the majority of this community receptor would not be greatly affected. For residents at the very eastern edge of Higham and the west end of Hermit Lane the magnitude of change during operation year 1 is considered to be high and as such it is recognised that small parts of the community would experience a major adverse level of effect. However, overall the magnitude of change is considered to be medium. Combined with the high sensitivity of the receptors, the level of effect is considered to be moderate adverse. Year 15

Visual Receptor	Operation			
	Sensitivity	Magnitude of Change	Significance of Effect	Rationale
				Limited mitigation planting or landscape buffer is proposed to the application site boundary to Higham and the west edge of Hermit Lane. As such no change in level of effect is anticipated from Year 1.
Gawber (H2)	High	Year 1 Medium Adverse Year 15 Medium Adverse	Year 1 Moderate Adverse (significant) Year 15 Moderate Adverse (significant)	Represented by viewpoints A, F, G, H. Year 1 Residents at the northern extents of Gawber, around Claycliffe Avenue, and in close proximity to the application site would experience a marked change in view. The existing view would change from open farmland (albeit slightly degraded in appearance with unmanaged hedgerows and a wood pole pylon line) with properties visible at Higham on the horizon, to foreground views of a steep embankment rising up 4-8m. This embankment would be planted with mixed native woodland. Beyond the embankment, the green space shown on the Parameters Plan adjacent this residential area would accommodate drainage infrastructure. A substantial proportion of the view would be affected and new features would be a notable change to the baseline existing condition. From properties at higher elevations within Gawber the proposed development would be seen in the mid distance with the context of existing residential properties and rooftops in the foreground. The more prominent component of the proposed development in the view would be the employment zone, which would rise above

Visual Receptor	Operation			
	Sensitivity	Magnitude of Change	Significance of Effect	Rationale
				the woodland on the skyline in the view and created a new developed skyline. Proposed residential development would also rise above the skyline of Higham. Residents in properties set back from the immediate edge of Gawber, which are the majority within this area of community receptors, at lower elevations, or those on streets running parallel to the application site are either unlikely to experience views due to obstruction from existing residential properties or would have channelled views between properties or from the end of streets perpendicular to the application site. As such the majority of this community receptor would not be greatly affected. For residents at the very edge of Gawber the magnitude of change during operation year 1 is considered to be high and as such it is recognised that small parts of the community would experience a major adverse level of effect. However, overall the magnitude of change is considered to be medium. Combined with the high sensitivity of the receptors, the level of effect is considered to be moderate adverse. Year 15 By year 15 woodland planting would have matured within the site and the landscape buffer to the east edge of the application site, which would help soften views to proposed built form. However given the scale of the employment development and it rising above

Visual Receptor	Operation			
	Sensitivity	Magnitude of Change	Significance of Effect	Rationale
				the existing skyline to the west no change of level of effect is anticipated.
Pogmoor (H3)	High	High Adverse	Year 1 Major Adverse (significant) Year 15 Major Adverse (significant)	Represented by viewpoints I, J. Year 1 Residents at the east edge of the application site to Pogmoor, would experience a change in view from long distance views over open farmland to residential development directly abutting the existing residential area. The proposed development would be set at a similar level to existing properties, would take up the foreground of the view, and affect a substantial proportion of the view. The composition of the view would change. Residents at the south east edge of the application site to Pogmoor currently have views from some locations which include the roof line of employment development at Capitol Close (west of the M1). This is screened by woodland in the summer months and open farmland lies in the foreground of the view. Other views are more open and long distance, with farmland in the foreground and urban development in the mid distance. Once the proposed development is operational these residents would have a buffer of open space in the foreground of their view, of meadow and scrub (on the areas of drainage infrastructure) and woodland (outside of drainage infrastructure). In the mid ground of the view employment development would be visible. This would be set at a lower ground level than residential properties however at 23m height the scale

Visual Receptor	Operation			
	Sensitivity	Magnitude of Change	Significance of Effect	Rationale
				of the employment development would be much larger than existing residential properties and much closer than development at Capitol Close. There may be some screening of views by garden vegetation, or vegetation at the end of streets, however due to the scale of employment development it is considered there would be a substantial change in views. The composition of views would be altered. Residents in properties set back from the immediate edge of Pogmoor (which are the majority of receptors in this community group) would have channelled views between properties or from the end of streets perpendicular to the application site to the upper elevations of proposed employment development. The proposed development would introduce a new element into views. Overall for this community receptor, given the scale of the employment development and it's visibility from within the residential area of Pogmoor, it is considered that the magnitude of change during operation year 1 is high and as such the overall level of effect would be major adverse. Year 15 No change in level of effect is anticipated from year 1 due to the scale of the employment development being higher than tree planting in year 15. In addition areas of proposed residential development do not have any mitigation planting to the interface with Pogmoor.

Visual Receptor	Operation			
	Sensitivity	**Magnitude of Change**	**Significance of Effect**	**Rationale**
Residents at the south edge of Mapplewell (H4)	High	Year 1 Low Adverse Year 15 Low Adverse	Year 1 Minor Adverse Year 15 Minor Adverse	Represented by viewpoint L. Year 1 The proposed development would extend the urban edge of Barnsley visible in the view and reduce the area of farmland landscape visible in the mid distance. However the change would only affect a small portion of the view. The employment area of the proposed development would break the skyline and introduce built form in to the skyline. This would be seen with the context of the existing employment development at Barugh Green and an overhead pylon line, and as such the changes would not contrast with existing features in the view. The magnitude of change is considered to be low. Combined with the high sensitivity of the receptors, the level of effect is considered to be minor adverse. Year 15 By year 15 woodland planting within the application site would be established and starting to mature. It would provide filtering of views to the lower elevations of proposed development and the development would appear more settled in the landscape. As such the magnitude of change is considered to fall slightly but remain low due to the scale of development. Combined with the high sensitivity of the receptors, the level of effect is considered to fall slightly but remain minor adverse.

Visual Receptor	Operation			
	Sensitivity	**Magnitude of Change**	**Significance of Effect**	**Rationale**
Residents at Kexbrough (H5)	High	Year 1 Low Adverse Year 15 Low Adverse	Year 1 Minor Adverse Year 15 Minor Adverse	Represented by viewpoints K. Year 1 The proposed development would be present in long distance views, affecting a small proportion of the view, and appearing as a slight extension to the urban residential edge of Barnsley. Existing development at Higham would screen much of the proposed residential development. However the upper elevations of employment development are anticipated to be visible at the northern extent of the application site and would break the skyline. The proposed development would be seen in the context of employment development at Barugh Green (to the north of the application site), Barnsley Hospital buildings and tower on the skyline, and an overhead pylon line to the foreground of the application site. As such the changes would not contrast with existing features in the view. The magnitude of change is considered to be low. Combined with the high sensitivity of the receptors, the level of effect is considered to be minor adverse. Year 15 Taking in to consideration that the viewpoint is 2km from the application site, and much of the site is screened by existing development at Higham, any mitigation or screening planting

Visual Receptor	Operation			
	Sensitivity	**Magnitude of Change**	**Significance of Effect**	**Rationale**
				would not be visible. As such no change in level of effect is anticipated from Year 1.
Residents at High Hoyland (H6)	High	Year 1 Negligible Year 15 Negligible	Year 1 Negligible Year 15 Negligible	No representative viewpoint. Year 1 From High Hoyland there is an elevated, long distance view to Barnsley and the proposed development would be visible in a small portion of the view. The M1 motorway and an overhead pylon line are visible to the fore of the application site. The proposed development would merge into the urban edge of Barnsley and would not affect the composition or appreciation of the view. The magnitude of change is considered to be negligible. Combined with the high sensitivity of the receptors, the level of effect is considered to be negligible. Year 15 It is considered that any mitigation or screening planting would be difficult to perceive at over 3km distance or it would be blocked by built form of the proposed development. As such no change in level of effect is anticipated from Year 1.

Visual Receptor	Operation			
	Sensitivity	**Magnitude of Change**	**Significance of Effect**	**Rationale**
Employment Receptors				
People working at commercial development north of the A635 (E1)	Low	Year 1 Medium Adverse Year 15 Low beneficial	Year 1 Negligible Year 15 Minor beneficial	Represented by viewpoint E. Year 1 The proposed development would be seen in the urban context and would extend the edge of Higham towards Gawber, increasing the extent of urban development in the view. New residential properties and road infrastructure would not be uncharacteristic features in the view. There would be loss of existing boundary vegetation to the application site however an area of green space is proposed with amenity planting and would provide a setback of new development form the A635. The composition of the view would change however no new components would be introduced. The magnitude of change is considered to be medium. Combined with the low sensitivity of the receptors, the level of effect is considered to be negligible. Year 15 Planting within the proposed green space adjacent the proposed roundabout and the A635 would have had time to mature and soften the change to the view and would present an improved frontage to the A635. As such the magnitude of change is considered to be low. Combined with the low sensitivity of the receptors, the level of effect is considered to be minor beneficial.

Visual Receptor	Operation			
	Sensitivity	**Magnitude of Change**	**Significance of Effect**	**Rationale**
Road Network Receptors				
Road users of local roads around the site (T1)	Low	Year 1 Low Adverse Year 15 Low Adverse	Year 1 Minor Adverse Year 15 Minor Adverse	Represented by viewpoint B. Year 1 Hermit Lane within the application site would be closed permanently. To the west of the Link Road, Hermit Lane would remain as a public highway, for access to the existing houses as well as building in a turning head in the access to the small employment plot. To the east of the site boundary, Hermit Lane would remain as a public highway. Users on Hermit Lane would experience channelled views (to the east of the lane) and close proximity views (to the west of the lane to the proposed development. Users on local roads around the periphery of the application site would experience intermittent and transient views of the proposed development which would typically be filtered by vegetation or residential properties. There would be some channelled views from roads perpendicular to the application site. The proposed development would be seen in the urban context of Barnsley, and while increasing the extent of urban development in the view it would be an extension of existing features in the view which local road users are familiar with. There would be a slightly higher magnitude of change for local road users around the employment development at the south extent of the site due to the scale of the development.

Visual Receptor	Operation			
	Sensitivity	Magnitude of Change	Significance of Effect	Rationale
				Magnitude of change is locally considered to be medium at the west end of Hermit Lane due to the proximity of proposed development to the road, however due to the lower sensitivity of receptors the level of effect is not considered to be significant. The overall magnitude of change is considered to be low. Combined with the low sensitivity of the receptors, the level of effect at year 1 operation is considered to be minor adverse. Year 15 Some local road users would experience softening of views due to planting maturing over time. However proposed development to the west edge of the application site backs on to existing residential areas so there is no screening, and proposed employment development to the south of the site is in close proximity to local roads and at a scale much larger than existing properties. As such overall there is considered to be no change in level of effect is anticipated from Year 1.
Road users of the A635 Barugh Green Road (T2)	Low	Year 1 Medium Adverse Year 15 Low Adverse	Year 1 Minor Adverse Year 15 Negligible	Represented by viewpoint E. Year 1 Road users of the A635 would have oblique and transient views to the proposed development. The proposed development would be seen in the urban context and would extend the edge of Higham towards Gawber, increasing the extent of urban development in the view. New residential properties and road infrastructure would

Visual Receptor	Operation			
	Sensitivity	**Magnitude of Change**	**Significance of Effect**	**Rationale**
				not be uncharacteristic features in the view. The composition of the view would change however no new components would be introduced. The magnitude of change is considered to be medium. Combined with the low sensitivity of the receptors, the level of effect during construction is considered to be minor adverse. Year 15 Planting within the proposed green space adjacent the proposed roundabout and the A635, along with strategic areas of greenspace, would have had time to mature and soften the change to part of the view. As such the magnitude of change is considered to reduce to low by year 15 and the level of effect is considered to reduce to negligible.
Road users of the M1 motorway (T3)	Low	Year 1 Medium Adverse Year 15 Medium Adverse	Year 1 Minor Adverse Year 15 Minor Adverse	Represented by viewpoint N. Year 1 South bound motorway users would have close proximity transient and brief views to the southern extents of the proposed development, comprising the upper elevations of proposed employment development. Views would be in close proximity to

Visual Receptor	Operation			
	Sensitivity	Magnitude of Change	Significance of Effect	Rationale
				the application site but for a short period of time, taking into consideration users travelling at approximately 70mph. North bound motorway users would again have transient views to a portion of the southern extents of the proposed development. However the north bound carriageway is set at a lower level to the south bound carriageway and so less development would be visible. Proposed employment development would be seen in the context of the motorway environment with often high volumes of traffic and signage hoardings. The upper elevation of existing employment development at Capitol Close is partially visible from the motorway where it is not screened by vegetation or mounding. As such the proposed development would not introduce any uncharacteristic components in to the view, albeit it would be more visible. Due to the scale of the proposed employment development, albeit being viewed in a transient context, the magnitude of change is considered to be medium. Combined with the low sensitivity of the receptors, the level of effect during construction is considered to be minor adverse. Year 15

Visual Receptor	Operation			
	Sensitivity	**Magnitude of Change**	**Significance of Effect**	**Rationale**
				By year 15 woodland planting at the boundary to the application site would be maturing however would not fully screen the proposed development. The magnitude of change is considered to remain medium. Combined with the low sensitivity of the receptors, the level of effect is considered to remain minor adverse.

6.9 Residual Effects

6.9.1 As embedded mitigation (Section 6.7) has been taken into account for assessment of likely significant effects, and no secondary mitigation measures are proposed, residual effects are as assessed in Section 6.8.

6.9.2 At year 15 significant residual landscape effects would be experienced on the landscape character of the site.

6.9.3 At year 15 significant residual visual effects would be experienced by recreational receptors on PRoW (R1), and residents at Higham (H1), Gawber (H2), and Pogmoor (H3).

6.10 Cumulative Effects

6.10.1 The cumulative assessment considers the effects of the proposed development in combination with other developments that have either been granted planning approval or are awaiting determination. There is one planning application which is under consideration, adjacent the proposed development, which may affect the same receptors identified in this assessment:

- Application for 140 dwellings (App 2020/0977), on a parcel of land which lies adjacent to the application site and which also forms part of the wider site allocation (MU1 in the Barnsley Local Plan).

6.10.2 As the timescale for both the proposed development and cumulative development are unknown at the time of assessment, the cumulative effects have been considered at year 15 only.

Cumulative Landscape Effects

6.10.3 At year 15 there would be adverse cumulative landscape effects on LCA E2 as a result of the development noted in Section 6.11.1 together with the proposed development of the application site as there would be further extension of the residential suburban fringe of Barnsley into land which is currently undeveloped. The character of the application site surrounds would become further developed.

6.10.4 There would be adverse cumulative landscape effects resulting from the merging of Higham with the north east edge of Gawber.

6.10.5 The site of App 2020/0977 forms part of the wider site allocation in the Barnsley Local Plan (Site Reference: MU1, Site Name: Land South of Barugh Green Road). Land is allocated for mixed use. The site of App 2020/0977 is a smaller area relative to the extents of proposed development set out on the Parameters Plan for the application site. So while there would be adverse cumulative landscape effects from this additional development, it is relatively contained compared to proposed development and would not increase the level of effect.

Cumulative Visual Effects

6.10.6 At year 15 adverse cumulative visual effects would be concentrated to the north east of the site as App 2020/0977 is in close proximity to the residential area of Gawber and employment development on the A635. Cumulative effects would relate to the further addition of residential development into views from residential

receptors in Gawber (H3), people on the road network (T2), and people working in the local area (E1).

6.10.7 The addition of further residential development would not be a new element in the view however land which is currently undeveloped would further disappear from views, to become more developed with no visual break between the residential area of Gawber and Higham. Magnitude of change would increase slightly but due to the scale of the proposed development on the application site, it would not be to such an extent to increase the level of effect for these receptors.

6.11 Summary

Conclusions

6.11.1 This assessment has considered the likely effects of the proposed development on the landscape and visual resource of the study area. Significant construction and operation effects of the proposed development are contained within or in close proximity to the site in terms of both landscape and visual effects and Section 6.12 provides a summary of these significant effects.

Landscape Effects During Construction

6.11.2 The assessment of landscape effects during construction concludes that works would have significant adverse effects on the landscape of the application site. This is due to extensive works to the whole of the application site including extensive cut and fill earthworks and site clearance including trees and hedgerows. It is also considered that there would be some significant adverse effects on the character of LCA E2: Barnsley Settled Wooded Farmland during construction due to the isolated pocket of farmland within which the application site sits being subject to extensive construction activities. Construction operations will be over the medium term (5-15 years).

Landscape Effects During Operation

6.11.3 The assessment of landscape effects during operation concludes that the proposed development would have significant adverse effects on the landscape of the application site at year 1 and year 15. This is due to the extent of proposed development and the distinct change of land use from agricultural land to large extents of residential and employment use.

6.11.4 The green space set out on the Parameters Plan seeks to retain levels and trees around existing woodland at Craven Wood and provide green links through the application site. There would be introduction of positive landscape features as shown in the Landscape Masterplan, with approximately 30% of the application site set aside for designed amenity space and strategic planting. This would comprise areas of woodland, meadows, and orchards which would tie in to Craven Wood and while different in character to the existing landscape they would be positive landscape features. However due to the extent of proposed residential and employment development it is considered there will be a direct and long term change to the character of the application site.

6.11.5 The assessment of landscape effects during operation also concludes that the character of LCA E2: Barnsley Settled Wooded Farmland would be significantly adversely affected by the proposed development at year 1. By year 15 the level of effect would have reduced with maturing planting and the development becoming

more settled in the landscape. The LCA for LCA E2 notes the application site 'is isolated and enclosed, so it could be all be developed (along with retention of some open areas as urban greenspace) without significant adverse effects, either within or outside this landscape character area'.[30]

Cumulative Landscape Effects

6.11.6 The assessment of cumulative landscape effects concludes that at year 15 while there would be adverse cumulative landscape effects from the additional development on LCA E2, however the additional development is relatively contained compared to proposed development and would not increase the level of effect.

Visual Effects During Construction

6.11.7 The assessment of visual effects during construction concludes that significant adverse effects are concentrated on community receptor groups adjacent to the application site at Higham (H1), Gawber (H2), and Pogmoor (H3). This is due extensive construction operations across the site including extensive cut and fill earthworks, and use of machinery such as cranes which will be visible from within the noted communities. Construction works will affect the composition and character of views and will be over the medium term (5-15 years).

6.11.8 There would also be some significant adverse effects on road users of local roads (T1) due to the scale of earthworks and presence of larger scale machinery during construction.

Visual Effects During Operation

6.11.9 The assessment of visual effects during operation at year 1 concludes that significant adverse effects would be concentrated on recreational users on PRoW and Green Ways (R1), and community receptor groups at Higham (H1), Gawber (H2), and Pogmoor (H3). The proposed development would change the character and composition of views, from open farmland landscape to residential or large scale employment development. There would be introduction of positive landscape features as shown in the Landscape Masterplan however at year 1 the scale of proposed development would be prominent in views and form a substantial change in views. At year 15 significant adverse effects would remain. This is due to the overall scale of proposed development, and maturing vegetation would not have enough mitigating effect to reduce the level of effect below significant for these receptor groups.

Cumulative Visual Effects

6.11.10 The assessment of cumulative visual effects concludes that adverse effects would be concentrated to the north east of the application site as the cumulative development assessed is in close proximity to the residential area of Gawber (H3), people on the road network (T2), and people working in the local area (E1). The addition of further residential development would not be a new element in the views around the north east of the application site however land which is currently undeveloped would further disappear from views, to become extensively developed with no visual break between the residential area of Gawber and Higham. Magnitude of change would increase slightly but due to the scale of the

[30] Page 153, Barnsley Borough Landscape Character Assessment, Barnsley Metropolitan Borough Council (2002)

proposed development on the application site, it would not be to such an extent to increase the level of effect for these receptors.

Recognition of Phase 1 Residential Detailed Application

6.11.11 It is recognised that Phase 1 of the proposed residential development (part of Phase 1a of the overall development) is subject to a detailed application. This assessment has considered as a worse-case the development of the whole application site encompassing all its phases, and no specific consideration is given to Phase 1 detailed residential application. However, it is recognised that Phase 1 of the proposed development would have more effect on some receptors that others which would be impacted more by the subsequent phases of the development. The assessment provided is therefore a worse-case assessment for the Phase 1 detailed residential application, with some receptors being impacted less by Phase 1 than is set out in the Chapter. During operation the receptors more likely to be impacted by the Phase 1 residential development is anticipated to comprise the landscape of the north west corner of the application site, and community receptors in Higham (H1) and Gawber (H2), recreational receptors (R1), employment receptors (E1), and road network receptors (T2). It is anticipated that greater effects would be focussed on these receptors noted in close proximity to the site, rather than any impacts from the wider landscape.