

12.0 LANDSCAPE AND VISUAL ASSESSMENT

Introduction

Outline

- 12.1 This section assesses the potential landscape and visual implications of the reclamation of Bentinck Tip and Void and is split into five main sub-sections. This first sub-section is a general introduction and summary of the methodology used.
- 12.2 The second sub-section consists of a “Baseline Study” for the existing site and its surroundings. This is carried out to break the landscape down into component parts, helping to understand and identify any elements or receptors that might be particularly sensitive to the proposals. This stage consists of:
- An examination of the planning context of the proposals;
 - A landscape assessment of the existing site and its surroundings; and
 - A visual assessment of the existing site and its surroundings.
- 12.3 A study of the development proposals is then made to identify Potential Landscape and Visual Effects and impact generators within the proposals. This stage includes:
- Identification of the landscape and visual aspects of the proposals;
 - Development of mitigation measures to minimise any impacts.
- 12.4 Following this, an assessment is made of the Residual Impacts likely to be generated after mitigation has been considered. This stage is divided into the following:
- Predicted residual landscape impacts;
 - Predicted residual visual impacts;
 - Significance of landscape and visual impacts.
- 12.5 Finally a conclusion and summary of the findings is presented.

Methodology

- 12.6 The format of this assessment is based on the principles produced by the Countryside Agency (*“Landscape Assessment Guidance”*, 2002) and the Landscape Institute and Institute of Environmental Management and Assessment (*“Guidelines for Landscape and Visual Impact Assessment”*, Second Edition, 2002). The assessment is also in accordance with the requirements of the Town and Country Planning (Environmental Impact Assessment) Regulations (1999).

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Field Observations

- 12.7 Use was made of desktop study and consultation to identify potential viewpoints. These viewpoints and any others identified during the fieldwork were then visited and assessed for their sensitivity to the proposed development. Photographs were taken to record the existing views and are included in this report. The site visit was carried out on 18th October 2004. The weather conditions were clear with partial cloud cover, and acceptable for assessing all types of views.
- 12.8 Photographs illustrating views from a selected series of 14 viewpoints were taken using a Nikon D70 digital camera, set to the equivalent of a 50mm focal length for a 35mm format camera. Where viewpoints consisted of more than one frame, the relevant frames were merged together using Photovista software (version 1.3.2).

Consultations

- 12.9 Ms Alison Stuart, Landscape Officer for Nottinghamshire County Council was initially contacted to identify any particular visual receptors within the local area. Ms Stuart commented that a number of public rights of way within the surrounding area may have views of the development.

Documents Referenced

- 12.10 A number of documents are referenced within this section of the ES which are relevant to the landscape of the local area. These are listed below:
- Countryside Character, Volume 4: East Midlands (Countryside Agency 1999);
 - Ashfield District Local Plan Review (Adopted November 2002);
 - Nottinghamshire Structure Plan Review (Adopted November 1996);
 - Nottinghamshire Landscape Guidelines (1997);
 - Strategic Plan for Greenwood (September 2002); and
 - Planning Policy Statement 7: Sustainable Development in Rural Areas (2004).

Technical Difficulties

- 12.11 As set out in Section 1 (paragraph 1.46), no technical difficulties were encountered in assessing the landscape and visual impacts of the proposed development.

Planning Context

Planning Policies and Designations

- 12.12 Aspects of the planning guidance and policy, which are of particular relevance to this landscape and visual assessment, are examined below. In addition, Section 4 should be referred to for a more detailed consideration of planning policy.

Planning History

- 12.13 The proposed development area is included within the Ashfield Local Plan Review, adopted (November 2004) and the Nottinghamshire Structure Plan Review adopted (November 1996). The site is also included in the Replacement Nottinghamshire Minerals Local Plan, Deposit Draft (2002) and the adopted Nottingham and Nottinghamshire Waste Local Plan (2002).

National Landscape Designations

- 12.14 The area of the application site does not form part of any national landscape designations such as an Area of Outstanding Natural Beauty (AONB).

Local Landscape Designations

- 12.15 The application site is within or has within its boundary four designations of relevance to this section: Green Belt, Mature Landscape Area (MLA); Site of Special Scientific Interest (SSSI); Site of Importance for Nature Conservation (SINC); and Greenwood Community Forest Plan area. The extent of these designations in relation to the application site is illustrated on Drawing BC12/2, and relevant policies relating to each of these designations are described below:

Green Belt

- 12.16 The application site lies within the Green Belt. The adopted Ashfield Local Plan emphasises the importance of retaining openness within the Green Belt under Policy ENV1. It states that:

“Permission will not be granted for inappropriate development in the Green Belt, except in very special circumstances.”

- 12.17 *Appropriate development comprises:*

A) Engineering, mining or other operations and uses of land which preserve the openness of the green belt and do not conflict with the purposes of including land in it.

All development must be located and designed so as not to adversely affect the purposes of the Green Belt and its openness.”

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- 12.18 Further explanation of this policy is also provided under 3.15 ENV1(a):

“Appropriate development within the Green Belt can include engineering, mining or other operations and uses of land which preserves the openness of the Green Belt and do not conflict with the purpose of including land in it. Mineral extraction often necessarily requires a rural location and need not be inappropriate development, provided that high environmental standards are maintained and that the site is appropriately restored.”

- 12.19 The proposed development and subsequent restoration of the landscape would preserve the openness of the greenbelt. High environmental standards would be insured throughout the reclamation of Bentinck Tip and Void. The restoration scheme (See Drawing BC 3/13) has been designed to produce a landform and after use which are both appropriate in the context of the surrounding landscape.

Mature Landscape Areas (MLA)

- 12.20 Two Mature Landscape Areas are in close proximity to the application site and are identified under the adopted Ashfield Local Plan. Policy EV4 – Mature Landscape Areas states:

“Development which does not adversely affect the character and quality of Mature Landscape Areas will be permitted.”

- 12.21 Further explanation with regards to proposals affecting Mature Landscape Areas (MLA) is given under 3.41. It states:

“Under policy EV4, should a proposal be acceptable in principle based upon policies EV1 or EV2, the actual form of the development will need to have regard to the particular landscape characteristics of importance to that locality and be in sympathy with and complementary to those characteristics.”

- 12.22 The Kirkby Park Mature Landscape Area (MLA) is located just to the north-west of the site, adjacent to the B6018. Annesley Woodhouse MLA can be found just to the east of the application site bordering the town of Annesley Woodhouse. The restoration scheme has been designed to be sympathetic to the particular landscape characteristics of these two landscape areas.

Sites of Special Scientific Interest (SSSI)

- 12.23 Two Sites of Special Scientific Interest (SSSI) are located adjacent to the boundary of the application site. The first is named as Annesley Woodhouse Quarry and comprises of one of Nottinghamshire’s finest remaining areas of unimproved Magnesium grassland. The second is named as Bogs Farm Quarry and comprises of unimproved acid-loam grassland, marsh, flushes, open water pools and a wooded dumble and is of regional importance. Further details regarding the nature of these SSSIs, are set out in Section 13

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of this EIA. The restoration scheme has been influenced by ecological objectives such as the promotion of biodiversity, species protection and habitat creation.

Site of Importance for Nature Conservation

- 12.24 The application site is also affected by Policy EV6 through the designation of the Void as a SINC. The policy also makes reference to a Nature Conservation Site, Bentinck Banks (Part). Further details regarding the nature of the SINC, and the potential effects of the development upon it, are included within both this Section, and Section 13. However, as has already been noted, the restoration scheme has been influenced by ecological objectives such as the promotion of biodiversity, species protection and habitat creation.

Landscape Character

- 12.25 Policies exist within the Ashfield Local Plan and the Nottinghamshire Structure Plan Review to protect the general landscape character of the local area and only give permission for appropriate development. Policy EV2 – The Countryside, within Ashfield Local Plan states:

“In the countryside, permission will only be given for appropriate development. Development must be located and designed so as not to adversely affect the character of the countryside, in particular its openness.”

- 12.26 *Appropriate development comprises:*

(a) Rural uses, including agriculture, forestry, mineral extraction and waste disposal to reclaim mineral workings,”

- 12.27 Policy 2/7 – Landscape Character, within the Nottinghamshire and Nottingham Joint Structure Plan Deposit Draft Explanatory Memorandum (November 2003) states:

“Local Plans will define local landscape characteristics in accordance with the work of the Countryside Agency and Nottinghamshire County Council’s Landscape Character Guidelines, and promote the conservation and enhancement of local landscape character and distinctiveness and the maintenance of landscape diversity.”

- 12.28 The Bentinck Site would be reclaimed by the importation of waste which is recognised in local policies as “appropriate development”. The restoration scheme would promote conservation and enhance the landscape character of the area.

Landscape Planning Summary

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- 12.29 In conclusion, the Bentinck Site is located within the Green Belt and has a Site of Importance for Nature Conservation (SINC) designation within its boundary. The site is adjacent to two Sites of Special Scientific Interest (SSSI) and two Mature Landscape Areas (MLA).
- 12.30 The proposed development and subsequent restoration of the landscape would preserve the openness of the Green Belt and provide adequate provision for the promotion of biodiversity, species protection and habitat creation in relation to the existing SINC and Sites of Special Scientific Interest. The restoration scheme would also have due regard, be in sympathy with, and complimentary to, the particular landscape characteristics of the two Mature landscape Areas.

Landscape Assessment

Introduction

- 12.31 By analysing the character of an area, its principal features and elements can be identified. Once these elements are identified, potential impacts caused by the proposed development can be measured, and a judgement made as to the overall effect this may have on the local landscape character.
- 12.32 The Countryside Agency guidelines make a clear distinction between the characterisation process (in which the attributes of the landscape are described) and the judgement making process. This section of the assessment deals with the characterisation process, and later sections make judgements about the potential effects of the proposed development based upon the characterisation.
- 12.33 Existing landscape character assessments are an important starting point for any new assessment, due to the hierarchical nature of character assessment.

“Ideally assessments at different scales should fit together as a nested series or a hierarchy of landscape character types and/or areas so that assessment at each level adds more detail to the one above”¹

- 12.34 The study of landscape assessments at different levels is important for a number of reasons including:
- It aids the understanding of the landscape at a wider level;
 - It allows the identification of landscape elements that may be present at a number of different scales, and thus of higher importance;
 - It highlights landscape character that is ‘out of context’ with other levels of the hierarchy; and

¹ Landscape Character Assessment – Countryside Agency and Scottish Natural Heritage (2002) – Paragraph 2.14

- It may identify potential mitigation and restoration options that may not be present at the local scale, but can be beneficial at a higher level.

Existing Landscape Appraisals of the Application Site and its Surroundings

The Countryside Agency

12.35 The Countryside Agency guidelines identify three main levels of Landscape Character Assessment:

- National and regional scale;
- County, district and unitary authority scale; and
- Local, parish and site scale.

12.36 At the regional level landscape character assessment is defined by the Countryside Agency's own assessment work, as set out in 'Countryside Character, Volume 4: East Midlands (Countryside Agency 1999)'. This document identifies the area of the application site as falling within 'Area 30 – Southern Magnesian Limestone Coalfield'. This character area has the following key characteristics:

- Predominantly Magnesian Limestone geology which influences soils and ecological character;
- Long views over surrounding lowland;
- Large number of country houses and estates with parkland, estate woodlands, plantations and game coverts;
- Woodlands combining with open arable land to create a wooded farmland landscape in some parts.

12.37 The application site is also in close proximity to 'Area 38 – Nottinghamshire, Derbyshire and Yorkshire Coalfield'. Some elements of this character area are also reflected in the landscape of the site, most notably:

- Substantial areas of intact agricultural land in both arable and pastoral use;
- Small, fragmented remnants of pre-industrial landscape and semi-natural vegetation, including many areas of woodland, river valley habitats, subsidence flashes and other relict habitats;
- Ever-present urban influences from major cities, smaller industrial towns and mining villages;
- Widespread influence of transport routes, including canal, road (M1, M62) and rail, with ribbon developments emphasising the urban influence in the landscape;
- Rolling landforms with hills, escarpments and broad valleys;
- Local variation in landscape character reflecting variations in underlying geology;
- Strong cultural identity arising from history of coal mining and other heavy industry.

Nottinghamshire Landscape Guidelines and the Strategic Plan for Greenwood

- 12.38 At the county level a detailed landscape assessment has been carried out by Nottinghamshire County Council². This assessment also links closely with the Strategic Plan for Greenwood³ carried out by the Countryside Agency, Forestry Commission and Local District and Borough Councils.
- 12.39 The Nottinghamshire Landscape Guidelines and the Strategic Plan for Greenwood not only refine the regional character areas, identified by the Countryside Agency, into more detailed 'Sub-regional Character Areas', but also define a series of 'Landscape Types' that reflect the primary characteristic features of specific areas.
- 12.40 The application site and the surrounding area are defined as the 'Limestone Fringe' under section 2 of the 'Magnesian Limestone Ridge' character area within the Nottinghamshire Landscape Guidelines. The Strategic Plan for Greenwood also refers to the 'Magnesian Limestone Ridge' as a separate character area.
- 12.41 The key characteristics of the 'Limestone Fringe' are *"A well-wooded, undulating, estate landscape characterised by large fields, framed by hilltop and valley woodlands"*. Within the description of this character type the following elements are identified as Characteristic Features:
- Large scale undulating topography;
 - Strong sense of seclusion and wooded enclosure;
 - Large fields framed by estate woodlands and belts of trees;
 - Late enclosure pattern of medium to large sized fields;
 - Sparsely settled, largely inaccessible landscape.
- 12.42 The key characteristics of the 'Magnesian Limestone Ridge' character area, (as defined by the Strategic Plan for Greenwood) are *"A gently rolling, and in places urbanised agricultural landscape, characterised by large, hedged fields, estate woodlands and small limestone villages"*. Within the description of this character type the following elements are identified as Characteristic Features:
- Gently rolling limestone escarpment;
 - Fertile soils supporting productive arable farmland;
 - Regular pattern of large hedged fields;
 - Large estate woodlands and belts of trees;

² Nottinghamshire Landscape Guidelines supported by the Countryside Commission – Chapter 4 Magnesian Limestone Ridge (1997)

⁴ Strategic Plan for Greenwood – Forest Wide Vision – Landscape Character 'Magnesian Limestone Ridge' (September 2002)

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- Views often framed by wooded skylines;
- Nucleated pattern of small stone villages;
- Limestone buildings with orange pantile roofs;
- Large self-contained mining settlements;
- Mine sites with associated pit heaps and railway lines.

Landscape Appraisal of the Application Site and its Surroundings

- 12.43 The Countryside Agency guidance on landscape appraisal recommends that landscapes are initially characterised, and that judgements about the nature and sensitivity of these landscapes are then based on this characterisation process. The Agency's guidance recommends that the characterisation process should be based on an assessment of natural factors, cultural social factors and aesthetic and perceptual factors.
- 12.44 These factors have been examined for the application site and its adjacent landscape up to 3km away. Each of these factors is assessed below.

Natural Characteristics

- 12.45 The natural Geology of the area consists of a lower unit of dolomite and dolomitic limestones, which form a dominant landscape feature. These are overlain by red mudstone with gypsum.
- 12.46 The application site's original landform has been created by erosion of glacial sands, gravels and clays by the River Erewash and its tributaries and in particular by the Cuttail Brook. This rises near Annesley Park approximately 2km south of the application site at around 160m AOD and flows northwards to join the Erewash approximately 1km north of the site at 100m AOD. Cuttail Brook has been recently engineered into a series of water attenuation ponds, where it flows through the Sherwood Business Park to the south-east of the application site. Its course northwards as far as the culvert under Salmon Lane is typical of the valley character ascribed to the 'Limestone Fringe'.
- 12.47 North of Salmon Lane the original valley of the Cuttail Brook is substantially affected and degraded by both deep, and opencast, coal mining. Within the application site the opencast coal mining has over-deepened the original valley, locally to about 110m AOD, whereas original levels were around 125m AOD. It has also steepened the valley sides to around 1 in 2.5 to 1 in 3. As part of these operations Cuttail Brook was diverted into an engineered course along the eastern flank of the over steepened valley side. The re-aligned watercourse has subsequently been blocked and its flow diverted (as a result of structural instability on the over steepened side slope) to flood the adjoining void to a maximum depth of 9-10 metres.
- 12.48 To the north of the now flooded void, the brook has been culverted as far as its confluence with the River Erewash. The culverted course of the brook has been overtipped with colliery spoil from the Annesley-Bentinck Colliery. This colliery spoil heap, currently rising to around 145 m AOD, but originally

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planned to extend to over 175m AOD, is the dominant landscape element and visual influence in the vicinity of the application site.

- 12.49 There are relatively few broadleaved woodlands within the vicinity of the application site. These include a large plantation known as Annesley Plantation that is located 2.5km to the south-east of the site and Millington Springs woodland, located 1km south of the application site and adjacent to the proposed access road on the western side of the M1. To the north of the site broadleaved woodland is limited to a small area adjacent to the M1, 1.5km to the north-west and directly adjacent to the north-east of the site.
- 12.50 Most tree cover to the north and east is concentrated in field boundaries. Significant woodland on steep banks has also been planted either side of the M1 directly to the west of the site.

Cultural and Social Factors

- 12.51 The limestone ridge within this character area made this a favoured area for early settlement. Evidence also exists within the area that from the Iron Age to well after the end of the Roman occupation, ditches and banks were increasingly used to bound settlements, stock pens, fields and tracks. In this period it is thought that the landscape had been cleared of much woodland and occupied by single-spaced farmsteads with their associated field systems.
- 12.52 Wealthy landowners over the years have had a noticeable influence on the landscape by the creation of fine buildings and landscapes such as Hardwick Hall, the renowned gardens of Studley Royal and estates like Bramham.
- 12.53 The application site is located in a predominantly pastoral agricultural area. Residential areas are located at Kirkby Woodhouse and Annesley Woodhouse 0.25km directly to the east of the application site, Selston 0.5km to the south-west of the application site, and Bentinck Town and Kirkby in Ashfield 1 and 2km to the north-east of the site. The application site is also surrounded by a number of roads. These include Salmon Lane, adjacent to the south of the site, the M1 0.25km to the west, and Park Lane (B6018) located adjacent to the north of the site.
- 12.54 There are a number of public rights of way both within and around the immediate context of the site. As part of the site assessment these rights of way were walked; some appeared to be well maintained and well used while others were not signposted, and appeared not to be regularly used.

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Aesthetic and Perceptual Aspects

12.55 The aesthetic qualities of the local area are summarised in Table 12/1, divided into the main categories identified within the guidance ⁴

Table 12/1
Aesthetic Attributes of the Landscape around the Application Site

Aesthetic Factors	
Enclosure	The tall, dense hedgerows and woodland, especially in the base of the lower valleys to the north and the south of the application site give a generally enclosed feeling to the landscape. The feeling of enclosure is reduced and becomes more open at the tops of the hills; however hill top woodland particularly to the south of the site partially reduces this effect.
Balance	The disturbed nature of the site and its context creates a generally discordant feel to the landscape.
Pattern	The medium to large scale pastoral agriculture of the area, especially on higher ground, instils a rectilinear pattern to the landscape. This agricultural pattern becomes more random across the valley sides due to the interaction of vegetation and a smaller field size.
Diversity	The landscape is generally diverse with main elements consisting of fields, hedges, woodland, operational workings of Midland Mining Limited Tip and differing ages of buildings clustered around the settlements of Selston, Kirkby Woodhouse, Annesley Woodhouse and Kirkby in Ashfield.
Scale	The scale of the landscape within the application site is generally small due to the enclosed nature of the topography. The small scale continues on the valley slopes, before widening and becoming large scale on surrounding hilltops.
Form and Line	The predominant form is curved and rolling due to the ridgeline, undulating topography, meandering local roads and mature vegetation.
Colour	Muted greens, browns and yellows of the agricultural land, form the main colours of the landscape. Hedges, trees and woodland provide a darker green as a contrast. Buildings of limestone and pantile vernacular style contrast strongly with the newer bolder brick and slate residential houses found in nearby settlements. The operational workings of Midland Mining Limited Tip give a grey tinge to the otherwise green landscape when viewed from the north of the application site.
Movement	There is a contrast between the generally still agricultural areas, small villages and parklands, and the busy towns e.g. Annesley Woodhouse and modern road links such as the M1.

Landscape Dynamics

⁴ Landscape Character Assessment – Countryside Agency and Scottish Natural Heritage (2002) – Paragraph 5.12

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- 12.56 The landscape is not still but continually changing and evolving, mainly in response to the demands placed upon it, but sometimes due to a lack of management. An examination of the likely changes to the landscape as a whole is important in setting the context of potential changes caused by the proposed development. It may also identify opportunities in which the proposed development can help the landscape resist changes perceived as negative, or help extend changes considered as positive.
- 12.57 Much of the application site has been despoiled by activities associated with coal extraction. If the proposed development does not occur, these areas would remain in a disturbed state, with gradual greening of some areas as a result of natural regeneration.

Classification and Evaluation

- 12.58 The above appraisal concludes that the classification of the existing landscape as part of the 'Southern Magnesian Limestone' and 'Limestone Fringe' character types is an accurate reflection of the character of the application site and adjacent landscape. The existing landscape is fairly diverse in nature and a further sub-classification is not considered necessary to allow accurate assessment of landscape impacts.

Landscape Sensitivity

- 12.59 The sensitivity of the existing landscape resource is based on the following factors:
- The value placed on the landscape;
 - Compatibility of the proposed development with the existing land-uses and landscape character;
 - Condition of the landscape;
 - Contribution of the landscape within the site to the overall landscape character;
 - The scope for mitigation of the proposed development; and
 - Degree to which landscape elements and characteristics can be replaced or substituted.

The sensitivity of a landscape is categorised as high, medium, low or negligible.

- 12.60 The application site contains a SINC, designated due to the natural colonisation of historic mining activities. Outside of the application site there are several areas of higher landscape value, including the MLAs and the SSSIs.
- 12.61 The following table (Table 12/2) illustrates how these criteria have been appraised to achieve an assessment of the areas sensitivity.

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Table 12/2
Sensitivity of Existing Landscape Resource

Landscape Element	Description	Level of Sensitivity
Value	The site includes a SINC and is adjacent to MLA and SSSI designations	Medium
Compatibility	Extensive previous mineral extraction operations within the application area make the site compatible with the reclamation and restoration of Bentinck Tip and Void.	Negligible
Condition	Much of the existing site is disturbed and only a small area of landscape value exists that would be impacted upon.	Negligible
Scope for Mitigation	The development proposals offer considerable potential for restoration and enhancement of the existing despoiled landscape of the site.	Low
Potential for replication or substitution	There are very few characteristic elements within the site.	Negligible
Overall landscape sensitivity of the site		Low

The application site is therefore considered to have a **low** sensitivity to the proposed development due principally to its poor condition and the considerable scope for enhancement by the development proposals.

Potential for Landscape Enhancement

- 12.62 The Nottinghamshire Landscape Guidelines and the Countryside Agency's own assessment work identify the potential forces for change at the regional level. In particular the Landscape Strategy for the 'Limestone Fringe' of Nottinghamshire County Council's Landscape Guidelines is considered to be to:

"Restore and enhance the overall unity and locally distinctive, well-wooded character of the landscape"

- 12.63 Given the existing disturbed and degraded land of much of the application site the potential exists for considerable landscape enhancement within the site including creation of significant large scale woodlands, hedgerows to improve wildlife habitats and the reinstatement of a locally appropriate landscape structure.

Conclusions on the Landscape Appraisal of the Existing Site

- 12.64 The existing designations within and adjacent to the application site are illustrated in Drawing BC 12/2. This shows the site to be within the Green Belt and have a SINC within its boundary. It is also adjacent to two SSSIs and two MLAs. It also illustrates the sites location within the surrounding landscape areas and other landscape features.

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- 12.65 A large proportion of the site is also disturbed and is of a low condition due to previous extraction and spoil disposal.
- 12.66 The application site is therefore overall considered to have a **low** sensitivity to the proposed development due principally to its poor condition, the lack of characteristic elements, and the considerable potential for enhancement which the development proposals offer.

Visual Assessment

Introduction

- 12.67 Visual Impact Assessment relates to “*changes that arise in the composition of the available views as a result of changes to the landscape, to peoples’ responses to the changes and to the overall effects with respect to visual amenity*”, (“Guidelines for Landscape and Visual Impact Assessment”, Second Edition, *op.cit*). Initially, it is necessary to define the extent of visibility both within and outside the site. Principal and Secondary Viewpoints are then selected to represent views from the most commonly used locations in and around the site, and the existing views from each of these points are briefly described with the aid of photographs.

General Visibility of the Application Site

- 12.68 The visibility of the application site is restricted by two factors: firstly the undulating topography characteristic of the area, and secondly the existing vegetation bordering the north, south and west of the application site. The approximate zone of visual influence is marked on Drawing BC 12/1.
- 12.69 Lower topography to the north of the site in the area of Kirkby Lane (B6019), and Bentinck Town allows views looking up to the higher ground of the site 1km away. However the site is a small part of the overall view and is partially screened by intervening hedges and mature trees along Park Lane (B6019). Clear views into the site are available to the east of the site from a public right of way accessed via Arthur Green Avenue in Kirkby Woodhouse. These views are at a similar elevation to the site and thus viewers are only able to perceive the vertical elements which include mature hedgerows and woodlands on the other side of the Void. To the south, views are also obtainable from points along Salmon Lane, adjacent to the southern boundary of the site, and a public right of way to the west of the M1 on higher topography. Glimpsed views from the public right of way on higher topography just to the north of the A608 are also available and give views of the proposed private access road for Bentinck Site. To the west of the application site, views into the site from the village of Selston are contained by woodland on the embankments of the M1 and around Kirkby Park Farm. However, views are obtainable from the right of way adjacent to the north-west boundary of the site.
- 12.70 In summary, those parts of the surrounding landscape likely to be sensitive to the proposed development include:

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- Distant views from Kirkby Lane (B6019) and public right of way to the south of Meadow Farm to the north of the site;
- Distant views from residential properties at Bentinck Town;
- Clear views from a public rights of way and residential properties along Arthur Green Avenue at Kirkby Woodhouse to the east;
- Glimpsed views during the summer and partially clear views during winter through vegetation to the south of the site along Salmon Lane;
- Glimpsed views from a public right of way to the south of the site adjacent to the M1; and

Choice of Viewpoints

12.71 An initial study of the Ordnance Survey 1:25,000 map was made to identify potential viewpoints based on the following criteria:

- Proximity to the site;
- High concentrations of viewers, such as settlements, local recreational facilities, etc.;
- Views from designated areas, private properties, footpaths and other receptors;
- Views illustrating the visual character of the surrounding area; and
- Areas identified as having a high potential for visual impact from the ZVI.

12.72 Field work was then undertaken to assess the potential views from these areas and identify any viewpoints having a clear open view towards the application site.

12.73 A number of these viewpoints have been recorded to illustrate the general range of visibility across the study area, as well as viewpoints with the potential to experience the greatest magnitude of impact from the proposed development. The location of viewpoints is marked on Drawing BC 12/1.

12.74 Photographs were taken from each viewpoint to record the view. The photographs are reproduced in Drawings BC 12/3 to BC12/9, with annotation added and details of the image recorded.

Sensitivity of Viewpoints

12.75 The list of the identified viewpoints set out below also includes a brief assessment of their sensitivity. Sensitivity depends on the following factors⁵:

- **The location and context of the viewpoint.** For example, viewpoints which are closer to the site are generally more sensitive;
- **The number of viewers who commonly use the viewpoint.** Some viewpoints are commonly used by the public, such as formal viewing

⁵ Guidelines for Landscape and Visual Impact Assessment (Second Edition) Paragraphs 7.31 and 7.35

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platforms, picnic areas or recreational rights of way. Other viewpoints may be difficult to gain access to;

- **The nature of the viewpoint.** Residential properties are sensitive to visual impacts as the residents experience the impacts on a regular and prolonged basis. Public footpaths can also be sensitive, since the users' attention is often focused on the landscape. By contrast, views from outdoor sport facilities, transport routes or places of work are less sensitive;
- **Movement of viewers at the viewpoint.** More transitory views, for example from a motorway, are generally less sensitive than views experienced from residential properties and footpaths; and
- **The cultural significance of the viewpoint,** including its appearance in guidebooks and tourist maps, or cultural and historical associations.

The sensitivity of viewpoints is categorised as high, medium, low or negligible.

Principal and Secondary Viewpoints

- 12.76 Principal Viewpoints⁶ are selected on the basis of which points provide the clearest views of the site and are also the most accessible to the public. Secondary Viewpoints represent views from areas which are not commonly used by the public, or which would provide less clear views of the proposed development. Secondary Viewpoints also represent areas which may be perceived to be sensitive to the visual impact of the proposed development due to proximity, but which in reality have restricted views of the site.

Principal Viewpoints

- 12.77 **Viewpoint 1 – Kirkby Lane (B6019) and Kirkby Lane Works.**
(Grid Reference: E 447350, N 355318, at an elevation of approximately 112m AOD and approximately 1.25km from the application site boundary.)

A view from Kirkby Lane looking across agricultural pasture land to rising ground, upon which Bentinck Tip is located. The view is most likely to be experienced as a distant transient view from a vehicle, and is therefore assessed to be of low sensitivity.

- 12.78 **Viewpoint 2 – Laburnum Avenue, Bentinck Town.**
(Grid Reference: E 449157, N 355258, at an elevation of approximately 122m AOD and approximately 750m from the application site boundary.)

A viewpoint from Laburnum Avenue, representative of views from residential properties in Bentinck Town. The viewpoint has been assessed as being of a

⁶ Guidelines for Landscape and Visual Impact Assessment (Second Edition) Paragraph 6.29

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medium sensitivity due to the angle of view, intervening vegetation and distance of 1km from the site.

12.79 **Viewpoint 3 – Public Right of Way No adjacent to the north-west boundary of the site.**

(Grid Reference: E 447858, N 353884, at an elevation of approximately 135m AOD and approximately 50m from the application site boundary.)

This right of way runs adjacent to the north-west boundary of the site. The viewpoint is within fields and its sensitivity is rated as high, due to its proximity and open views of the site.

12.80 **Viewpoint 4 – Public Right of Way accessed via Arthur Green Avenue, Kirkby Woodhouse.**

(Grid Reference: E 449068, N 354198, at an elevation of approximately 155m AOD and approximately 100m from the application site boundary.)

A view from a public right of way representing the views experienced from a majority of residential semi-detached houses along Arthur Green Avenue. Views are partially screened by existing hedgerow and the angle of view. The viewpoint has been assessed as being of medium sensitivity.

12.81 **Viewpoint 5 – Public Right of Way adjacent to The Gables, Kirkby Woodhouse.**

(Grid Reference: E 449205, N 353851, at an elevation of approximately 170m AOD and approximately 500m from the application site boundary.)

This viewpoint is located within a field that borders the residential area of Kirkby Woodhouse. The view towards Bentinck Tip is open whilst views towards Bentinck Void are limited by fore and middle ground vegetation to the left of the panorama. The viewpoint is of a low to medium sensitivity as a result of the low frequency of observed use and the intervening vegetation.

12.82 **Viewpoint 6 – Salmon Lane.**

(Grid Reference: E 449002, N 353270, at an elevation of approximately 126m AOD and approximately 20m from the application site boundary.)

This view looking north towards the Bentinck Site from Salmon Lane. Glimpsed views of the steeper slopes to the east of Bentinck Void and Annesley Woodhouse Mature Landscape Area are experienced by both high and low vehicles. Annesley Woodhouse Quarry SSSI to the left of the panorama obscures a majority of views along much of the remainder of Salmon Lane. The viewpoint has been assessed as being of a low to medium sensitivity.

12.83 **Viewpoint 7 – Boggs Farm, Salmon Lane.**

(Grid Reference: E 448269, N 353173, at an elevation of approximately 130m AOD and approximately 20m from the application site boundary.)

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Clear views of Bentinck Void are experienced from Boggs Farm to the south of the Bentinck Site. Views from the upstairs of the property are expected to be clearer. The viewpoint has a medium to high sensitivity.

- 12.84 **Viewpoint 8 – Public Right of Way No adjacent to the M1.**
(Grid Reference: E 448261, N 352894, at an elevation of approximately 160m AOD and approximately 400m from the application site boundary.)

This viewpoint is located within agricultural fields overlooking the M1 across to Bentinck Void to the left of the panorama and the proposed private access road to the right. A partial vegetation screen adjacent to the M1 obscures a majority of views and therefore the viewpoint has been assessed as being of low sensitivity.

Secondary Viewpoints

- 12.85 The location of the Secondary Viewpoints, a photograph of each existing view and location, are included on Drawings BC 12/7 to BC 12/9.
- 12.86 **Viewpoint A – Bentinck Town (B6019).** This viewpoint illustrates views from Bentinck Town, across the valley floor to rising topography where Bentinck Tip is located. Foreground intervening vegetation, an existing Caravan Park and degraded land detract and deter viewers away from the ridgeline thus reducing sensitivity to the proposals to low.
- 12.87 **Viewpoint B – Kirkby Lane Bridge over M1 Motorway.** This viewpoint was chosen to reflect views from vehicles and pedestrians travelling from Selston to Bentinck Town along Kirkby Lane, over the M1 Motorway. The motorway embankment and intervening vegetation reduces sensitivity to the proposals to a negligible level.
- 12.88 **Viewpoint C – Salmon Lane Road Bridge (north-east).** This viewpoint was chosen to reflect the views from the highest point along Salmon Lane. The M1 vegetated embankment screens all potential views of the site and reduces sensitivity to negligible.
- 12.89 **Viewpoint D – Salmon Lane Road Bridge (south-east)** In a similar way this viewpoint was chosen to reflect views from higher ground along Salmon Lane but looking south-east towards the proposed Bentinck Tip and Void private access road. Distance and glimpsed views through existing vegetation reduces sensitivity to the proposals to a negligible to low level.
- 12.90 **Viewpoint E – Salmon Lane looking south.** This viewpoint was chosen to represent potential views looking south from the Salmon Lane where the proposed access road would be located. Distance and intervening vegetation reduces sensitivity to the proposals to a low level.
- 12.91 **Viewpoint F – Public Right of Way adjacent to the A608.** This viewpoint was chosen to reflect views from the more distant south, looking north towards the application site, and potential views of the proposed private

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access road to the Bentinck Site. The openness of the view and close proximity to the proposed access road has resulting in this viewpoint having a high sensitivity.

Potential for Visual Enhancement

- 12.92 A number of views of the existing application site, particularly from the north, east and south are currently available. A large proportion of the Bentinck Site including the previously mined area to the north is visually unattractive and the potential exists to reduce the existing visual impact of the site by the long term restoration of the Bentinck site.

Conclusions of the Visual Assessment of the Existing Site

- 12.93 Drawing BC 12/1 illustrates the maximum extent of the potential ZVI for the existing Bentinck site. Field work has identified the limited nature of the site's actual visibility and this is confirmed by the viewpoint photographs.

The main areas of existing visual impact can be listed as:

- Distant views from lower topography to the north of Bentinck Tip. These are limited mainly to Kirkby Lane (B6019), and a number of residential properties within Bentinck Town (see principal viewpoints 1 and 2).
 - Clear views from two public rights of way and residential properties along Arthur Green Avenue, Kirkby Woodhouse of the vertical elements of the site (see principal viewpoints 4 and 5)
 - Glimpses of Bentinck Void through existing vegetation from Salmon Lane (see viewpoint 6)
 - Clear Views of Bentinck Void from Boggs Farm along Salmon Lane (see viewpoint 7)
 - Glimpsed views from a public right of way adjacent to the M1 to the south-west of the site.
 - Clear views from a public right of way adjacent to the western boundary of the site within agricultural fields (see viewpoint 3)
- 12.94 A number of clear views of the application site currently exist from public rights of way and residential properties to the north, east and south of the site. It is also important to highlight that a large proportion of the application site is visually unattractive and the potential exists to reduce the existing visual impact of the site by the long term restoration of the Bentinck Site.

The Potential Landscape and Visual Implications of the Proposed Development

Nature and Extent of the Proposed Development

- 12.95 The extent of the proposed development is described in detail within Section 3 of the ES and is summarised in paragraphs 1.10 to 1.11 in Section 1.
- 12.96 The boundary of the application site is illustrated on Drawings BC 2/2, which has been transposed onto Drawing BC12/1, whilst the layout of the proposed development is illustrated on Drawing BC 3/1. The total area of the application site extends to some 152 hectares, and comprises the former Bentinck Tip situated to the south of Park Lane, the Bentinck Void, located to the north of Salmon Lane and a strip of land lying adjacent to the M1 within which the proposed private access road would be constructed. The Void itself comprises some 23.5 hectares, whilst the Tip and access road comprise 88 hectares and 12.5 hectares respectively. The remainder of the site's 28 hectares consists of pasture and scrub, enclosed by hedgerows, much of which has been disturbed as a result of mineral working.

Potential Adverse and Beneficial Landscape and Visual Elements of the proposed development

- 12.97 The main potential landscape and visual elements of the proposed development, not taking account of the mitigation measures, can be summarised as follows:

Site Preparation Works

- 12.98 It would be necessary to construct the private access road linking the site to the public highway network. This would involve the removal of soils along the road and areas of cutting or embankment and their temporary storage, and the laying of pavement. Wherever possible the road would be constructed at ground level, however some sections would run in either cutting or embankment. The potential visual impact derived from the construction of the access road relates both to the presence of heavy machinery/vehicles, the creation of new landforms and the change in the landscape as soils are removed and pavement laid.
- 12.99 Within the Void, site preparation would be limited to clearance of existing vegetation and excavation/regrading to create the base of the landfill, internal access roads, associated infrastructure and landfill cells. The potential visual impact derived from earthworks on the site again, like the construction of the private access road, relates to both the presence of heavy machinery/vehicles and the creation of new landforms

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Built Development

12.100 The main principal landscape and visual elements of built development would be the compost maturation facility and gas engines. Potential impact may also arise from the other built elements such as the site offices, weighbridge and garage waste reception areas, an environmental compound for leachate and the movement of vehicles around them.

Reclamation of the Tip

12.101 It is important to note that the Tip currently consists of unvegetated dark colliery spoil in an engineered landform which contrasts with the colour and natural rolling topography of the adjacent surrounding area. Consequently, whilst operations on the tip are likely to cause adverse impacts in the short to medium term, the long term restoration of this tip has the potential to cause significant landscape and visual benefits.

Reclamation of the Void

12.102 Primary visual impact would potentially arise from the construction of engineered cells, placement of artificial liners at the end of each phase and from the placement of waste above the natural ground level which would contrast in form, texture and colour with the immediate surrounding landscape. Secondary impacts may arise from vehicles to and from the site, compactors and other machinery in motion on the landfill, litter fences, litter and landfill capping operations. Once capped, landfill infrastructure such as leachate and landfill gas extraction chambers would form an incongruous element in the landscape. However, once more the progressive restoration of this area has the potential to create significant landscape and visual benefits in the medium to long term.

Lighting

12.103 Lighting would be used within the site compound. The impact of lighting is likely to be in the form of glimpsed views and concentrated to the south along Salmon Lane. Viewpoints in this area would be affected by the use of lights during working hours during winter time. This assessment is based on day time field work and has not been confirmed by night time observation.

Removal of Scrub

12.104 The development would necessitate the clearance of some existing mature scrub and grassland. Elsewhere appropriate stand-offs would be retained to existing woodland hedges and grassland (e.g. calcareous grassland to the south-east of the Void). No woodland would be lost as a result of the development proposals.

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Planting of New Woodlands and Hedgerows

12.105 As Drawing BC3/13 illustrates, an integral part of the proposals is the planting of extensive areas of woodland and the planting of new hedgerows. In total, approximately 35 hectares of new woodland would be planted, as well as over 2.7 kilometres of new hedgerow. This planting would be progressively implemented at the earliest opportunity either as advance planting or at appropriate stages throughout the operational life of the Bentinck Site and at final restoration.

Timescales of Potential Impacts

12.106 The initial site preparation works including topsoil/subsoil stripping, vegetation clearance, excavation/regrading to create the base of the landfill and internal access roads, would be completed in 12 months, depending on weather conditions. Once the site preparations are complete, seeding and planting would be carried out in the first available season (early autumn or spring for seeding, late autumn or winter for planting). Both the screening landform around Bentinck Tip and Void areas, and any associated planting, would remain as a permanent part of the restoration.

12.107 The private access road would be constructed at the commencement of the development. The associated operational infrastructure of both the Tip and Void, and compost maturation facility are likely to be constructed within 12 months or earlier should they be required.

12.108 Following the initial site preparation the waste disposal on the Tip and in the Void would occur in parallel. The Tip would be progressively reclaimed in five phases, importing inert wastes over a period of approximately 10 years and the Void would be reclaimed progressively, in ten phases through the importation of non-hazardous waste for approximately 10 to 12 years.

12.109 Final restoration of both the Tip and Void would be likely to continue after the completion of the landfill operations for a period of up to 1-2 years, followed by 5 years of aftercare.

Timescales of Potential Indirect Impacts

12.110 Indirect landscape and visual impacts from the proposed development may arise from such factors as increased traffic flows creating movement in a static landscape, lighting or alterations in surface/groundwater causing changes in vegetation.

12.111 The main indirect impact would be from development traffic generated from a new temporary access road between the A608 and Salmon Lane. The transportation of the landfill waste from and to the Bentinck site on this new road would have a visual impact for users of the local communication network for 10-12 years and a general impact on the scenic quality of local views.

Proposed Mitigation Measures

Site Location and Configuration

- 12.112 The proposed development area has been carefully designed to respect existing field boundaries where possible, retain existing vegetation and maintain appropriate stand-offs to properties.
- 12.113 The routing of the private access road has been designed so that it is set against the background of the M1 embankment over most of its course when viewed from the north and east. Provision of a 1.5 to 3m high soil bank along most of its north-eastern flank, would further screen it from views to the north and east. The advance planting of substantial numbers of trees and shrubs primarily on the eastern side of the road and between Two Dale Farm and the gas compound would again reduce visibility. Lowering the road to 1 metre below ground level would also substantially decrease the visual impact of vehicles transporting waste to and from the landfill.
- 12.114 The proposed development allows for the early restoration of the northern, north-eastern and western boundary of the Tip in Phase 1. The final restoration levels, up to a maximum height of approximately 145m AOD, would be constructed along this edge, and a broad belt of woodland planting, approximately 15 hectares in extent, would also be established on this margin. All future operations on the Tip would then take place behind this landscaped margin, which would be at least 100 metres wide. Also, the proposed compost maturation facility and gas engines would be sited at an elevation of 130m AOD adjacent to Boggs Farm Wood and the 8m high roof ridgeline and exhaust stacks would therefore be at 138m AOD and benefit from the intervening landform and vegetation.
- 12.115 Over both the Tip and the Void, the final restoration scheme would be progressively implemented throughout the life of the site. This means that the area of restored land would gradually increase throughout the operational phase, thus reducing the impacts caused by the existing despoiled site and gradually assimilating it into surrounding landscape.

Predicted Residual Landscape Impacts

- 12.116 Having assessed the landscape baseline and identified the potential elements of the development likely to cause change to that baseline, a detailed assessment of the possible changes can be made.

Magnitude of Landscape Impacts

- 12.117 The magnitude of landscape impacts depends upon the following factors⁷:
- The scale or degree of change to the existing landscape resource;

⁷ Guidelines for Landscape and Visual Impact Assessment (Second Edition) Paragraphs 7.18 and 7.23

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- The nature of the change caused by the proposed development (for example, beneficial or adverse?); and
- The timescale, or phasing, of the proposed development

The magnitude of change is categorised as high, medium, low or negligible.

Changes in Natural Characteristics

- 12.118 In the short term, the proposals would result in the removal of a significant proportion of the SINC due to the construction of the formation levels within the Void. Adverse impacts would also result from the temporary removal of soils along the route of the access road and the construction of the site infrastructure (offices, haul routes, weighbridge, garage, etc.), composting maturation facility and gas engines.
- 12.119 Throughout the operational life of the Bentinck site the beneficial impacts of progressive restoration would gradually be effected. The gas engines and access road would be the principal elements to remain in the long term. Parts of the site which are currently despoiled and anomalous due to their landform would gradually be restored to pasture and woodland, and would thus become assimilated into the surrounding landscape.
- 12.120 The final restoration scheme would result in a permanent alteration of the topography of the site. The most significant alteration would be the filling of the Void, resulting in raising the existing elevations by up to 45 metres (post settlement). This increase in height would allow the site to integrate with the natural rolling topography of the adjacent surrounding area. A number of new ponds would also be created during the first phase works through remodelling of the ground to the north, south and east of Bentinck Tip and Void. The proposed development would result in the removal of a small amount of vegetation and scrub to the south of the site. However, the proposed advance planting and landscape restoration scheme would create approximately 35 hectares of new woodland as well as approximately 2.7 kilometres of new hedgerows. The woodland to be planted during advance planting and restoration would add and enhance the landscape character and setting of the area in accordance with the Countryside Agency and landscape strategy for the 'Limestone Fringe' of Nottinghamshire County Council's Landscape Guidelines. The woodland and hedges would provide a valuable habitat for a variety of species whilst the proposed shallow/ephemeral ponds/wetland areas would provide additional potential habitat for a variety of species, for example amphibians.

Changes in Cultural and Social Factors

- 12.121 No significant cultural or social features would be lost as a result of the proposed development, nor would the setting of any historic sites or landscapes be adversely affected. The restoration proposals allow for the reinstatement of a landscape pattern which is in keeping with that found in the areas surrounding the site.

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Changes in Aesthetic and Perceptual Aspects

- 12.122 The initial site preparation and construction works would result in an increase in movement and variety within the application site. The development proposals allow for the progressive reinstatement and reinforcement of many of the key elements which are characteristic of the surrounding landscape. The planting proposals would help to create a series of enclosed fields typical of the locality, whilst new woodlands would add a sense of enclosure as well as a strong landscape feature in their own right.
- 12.123 The final restoration scheme would transform the existing degradation and engineered form of the colliery spoil on the site, by the reinstatement of a patchwork of woodlands and pasture. The other key alteration would arise from the restoration landform integrating with the natural rolling topography of the adjacent surrounding area.

Summary of Residual Landscape Impacts

- 12.124 In the short term, site preparation works, including the construction of the access road, site offices and garage, cell construction, composting facility and gas engines, would cause an adverse landscape impact, although this must be judged in the context of a site which is already substantially despoiled by mining activities. Throughout the operational life of the application site these impacts would be gradually balanced by the progressive restoration of parts of both the Tip and the Void, although the gas engines and access road would be the principal elements to remain in the long term. Following final restoration, the existing areas of despoilation would be completely transformed to a gently rolling landform with a patchwork of woodlands and pasture which would be wholly in keeping with the local context.
- 12.125 The magnitude of landscape impacts would therefore be low and adverse during the operational phases, and medium and beneficial following final restoration.

Predicted Residual Visual Impacts

Introduction

- 12.126 The potential visual effects of the proposed development on the surrounding landscape, and in particular the views from Principal and Secondary Viewpoints, have been assessed with the aid of plans and site assessment, and are described in detail below.

Magnitude of Visual Impacts

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12.127 For each of the viewpoints the potential magnitude of the residual visual impacts, taking into account the proposed mitigation, is assessed. The magnitude of visual impacts is mainly dependent upon the following factors⁸:

- What proportion of the existing view would change as a result of the development proposals?
- How many features or elements within the view would be changed?
- How appropriate is the proposed development in the context of the existing views?
- How many viewers would be affected by the changes in the view?
- What is the timescale of the proposed development? Also, is it continuous or intermittent?
- What is the angle of the view in relation the main activity of the receptor?

12.128 Permanent, or long-term, development would normally have a higher magnitude of impact than temporary or short-term development. In addition to these factors, which must be judged for each of the viewpoints, the relative size of the Approximate Zone of Visual Influence of the proposed development must also be considered as part of the magnitude of residual visual impact.

12.129 The magnitude of change is categorised as high, medium, low or negligible.

Magnitude of Residual Visual Change for Viewpoints

12.129 The magnitude of change for each viewpoint was assessed for the proposed extraction and restoration.

Principal Viewpoints

12.130 **Viewpoint 1 – Kirkby Lane (B6019) and Kirkby Lane Works.**

During Operations

The foreground of this view would not change. However distant views of operations of Phase 1 (Tip) area of habitat creation and landfilling of Phase 1 may be possible as the advance planting would not have matured. The vast majority of the interior of Bentinck Tip, the proposed compost maturation facility, gas engines, garage, site offices and other features would be screened behind the restored phase 1 landform. Views towards the filling of the Void would be screened by the intervening landform. The magnitude of change that would occur from this view has been assessed as **low** and **adverse**.

After Final Restoration

Following the completion of operations the final restoration of the Bentinck site would see the establishment of significant areas of woodland, hedgerows and pasture. As a consequence, the site would be become

⁸ Guidelines for Landscape and Visual Impact Assessment (Second Edition) Paragraph 6.29

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assimilated into its surroundings. The magnitude for change from this view has been assessed as **medium** and **beneficial**.

12.131 **Viewpoint 2 – Laburnum Avenue, Bentinck Town.**

During Operations

Again, the foreground of this view in the short term would not change as a result of the development proposals. Potential views of infilling into the Tip from phases 2 to 5 and parts of the proposed compost maturation facility, gas engines, garage, site offices and other features would be screened by the restoration landform, and then by the advance planting, within the restored phase 1. Views towards the filling of the Void would be screened by the intervening landform. The magnitude of change that would occur from this view has been assessed as **low** and **adverse**.

After Final Restoration

The restored site would consist of a gently undulating landform covered by woodland and pasture, which would be in character with its rural surroundings. The magnitude of change from this view has been assessed as **medium** and **beneficial**.

12.132 **Viewpoint 3 – Public Right of Way, adjacent to the North-West boundary of site.**

During Operations

Much of the existing Tip is already screened by the intervening landform, and the majority of operations on the Tip and parts of the proposed compost maturation facility, gas engines, garage, site offices and other features would be screened by the landform created in Phase 1. Operations within the Void would be screened by the intervening landform. The magnitude of change that would occur from this view has been assessed as **medium** and **adverse**.

After Final Restoration

The final restoration allows for all of the currently exposed colliery spoil to be replaced by pasture, hedgerows and wooded slopes. The site would consequently be well assimilated into the surroundings. The magnitude of change has been assessed as **low** and **beneficial**.

12.133 **Viewpoint 4 – Public Right of Way accessed via Arthur Green Avenue, Kirkby Woodhouse.**

During Operations

Phase 1 operations on the Tip and parts of the proposed compost maturation facility, gas engines, garage, site offices and other features would be initially visible from this viewpoint. Once the phase 1 landform has been completed and advance planting has become established phases 2 to 5 would be mostly screened. Views of operations within the Void would be largely screened by the intervening landform, although it would be possible to see some landfill operations once these reach the rim of the Void. The

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magnitude of change that would occur from this view has been assessed as **medium** and **adverse**.

After Final Restoration

A patchwork of woodlands and pasture fields would be visible in the middle ground of the view. The magnitude for change from this view has been assessed as **medium** and **beneficial**.

12.134 **Viewpoint 5 – Public Right of Way, adjacent to The Gables, Kirkby Woodhouse.**

During Operations

Landfill operations in the Void in Phases 4 and 5 would be partly visible in the middle distance beyond pasture, hedgerows and woodland. Parts of the proposed compost maturation facility, gas engines, garage and site offices and other operations on the Tip would be visible, particularly in phases 2 and 5. The magnitude of change that would occur from this view has been assessed as **low** and **adverse**.

After Final Restoration

Proposed pasture and woodland would be visible in the distance and the new landform and woodland would form the skyline. The magnitude for change from this view has been assessed as **medium** and **beneficial**.

12.135 **Viewpoint 6 – Salmon Lane.**

During Operations

Whilst the foreground of this view would remain unchanged, the eastern end of the uppermost areas of landfilling within the Void would be visible to the right of the woodland within the SSSI. All other views of landfilling phases, operations in the Tip area and the proposed compost maturation facility, gas engines, garage, site offices and other features would be screened by intervening landform and both existing and proposed vegetation. The magnitude of change that would occur from this view has been assessed as **low** and **adverse**.

After Final Restoration

The foreground of this view would remain untouched. New woodlands would be established on the eastern boundary of the site and would become visible adjacent to the SSSI. The magnitude for change from this view has been assessed as **medium** and **beneficial**.

12.136 **Viewpoint 7 – Boggs Farm, Salmon Lane.**

During Operations

Landfill operations within phases 1 to 3 and parts of the proposed compost maturation facility, gas engines, garage, site offices and other features would be visible from this perspective whilst the proposed woodland planting on the site boundary becomes established. However, the majority of Phases 4 to 7 would be largely screened by the proposed planting, which would have achieved a height of approximately 1 to 2 metres after 4 to 5 years. Views of

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operations on the Tip, would be almost entirely screened from this perspective. The magnitude of change that would occur from this view has been assessed as medium to **high** and **adverse**.

After Final Restoration

The restored Bentinck Void would be viewed from this location as a new wooded skyline with pasture, hedgerows and woodland forming a balanced element. The magnitude for change from this view has been assessed as **high** and **beneficial**.

12.137 **Viewpoint 8 – Public Right of Way adjacent to the M1.**

During Operations

Glimpsed views of Phases 4 to 7 of the landfill within the Void would be visible through existing vegetation to the east of the M1, although the movement of vehicles on the proposed access road would be largely screened by existing vegetation. Operations on the Tip, the proposed compost maturation facility, gas engines, garage, site offices and other features would be screened from this perspective. The magnitude of change that would occur from this view has been assessed as **low** and **adverse**.

After Final Restoration

Like viewpoint 7, the view after restoration would be of a new wooded skyline with pasture, hedgerows and woodland forming a balanced element. The magnitude for change from this view has been assessed as **low** and **beneficial**.

Secondary Viewpoints

12.138 **Viewpoint A – Bentinck Town (B6019).**

The vast majority of the interior of Bentinck Tip and Void and the majority of main operations (including the proposed compost maturation facility, gas engines, garage, site offices and other features) would remain screened behind the intervening landform. Distant views of operations of Phase 1 Works area of habitat creation and landfilling of Phase 1 may be possible through intervening vegetation as the advance planting would not have matured. The final restoration of the site would see the establishment of significant areas of woodland, hedgerows and pasture. The magnitude of change that would occur from this view has been assessed as **low** and **adverse** during operation and **low** and **beneficial** after restoration.

12.139 **Viewpoint B – Kirkby Lane Bridge over M1 Motorway.**

All views of operations of Bentinck Tip and Void together with restoration would be completely screened by the existing embankment of the M1. The magnitude of change that would occur from this view has been assessed as **negligible** during operation and **negligible** after restoration.

12.140 **Viewpoint C – Salmon Lane Road Bridge (north-east).**

Like viewpoint B views of operations of Bentinck Tip and Void together with restoration would be screened by the existing vegetated embankment of the

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M1. The magnitude of change that would occur from this view has been assessed as **negligible** during operation and **negligible** after restoration.

12.141 **Viewpoint D – Salmon Lane Road Bridge (south-east)**

Views of operations on Bentinck Tip and Void would be completely screened. However, views of the proposed private access road to Bentinck Tip and Void would be visible through vegetation to the east of the M1. Ultimately the access road would be returned to agricultural land after Bentinck Tip and Void operations have finished. The magnitude of change that would occur from this view has been assessed as **medium** and **adverse** during the operation of the access road and **negligible** after restoration.

12.142 **Viewpoint E – Salmon Lane looking south.**

Views of operations of Bentinck Tip and Void and restoration would be completely screened due to angle of view. However, views of the proposed private access road to Bentinck Tip and Void would be visible to the right of the panorama over an existing mature hedgerow and other vegetation. Ultimately, the access road would be returned to agricultural land after Bentinck Tip and Void operations have finished. The magnitude of change that would occur from this view has been assessed as **medium** and **adverse** during the operation of the access road neither **negligible** after restoration.

12.143 **Viewpoint F – Public Right of Way adjacent to the A608.**

Views towards Bentinck Tip and Void would be screened by intervening vegetation and landform. Views towards the proposed access road would be partially screened by the proposed screen bund and planting. Ultimately, the access road would be returned to agricultural land after Bentinck Tip and Void operations have finished. The magnitude of change that would occur from this view has been assessed as **medium** and **adverse** during operation and **negligible** after restoration.

Summary of Residual Visual Impacts

12.144 Areas where there is most potential for a significant cumulative impact include:

- Views from the public right of way adjacent to the north-east boundary of the site, see principal viewpoint 3;
- Views from the eastern-side of the Tip and Void (on the fringes of Kirby Woodhouse and Annesley Woodhouse) such as principal viewpoints 4 and 5;
- Views from Boggs farm and users of Salmon Lane, including principal viewpoints 6 and 7 and secondary viewpoints D and E;
- Views of the proposed private access road to Bentinck Tip and Void from public right of way to the north of the A608, see secondary viewpoint F.

12.145 The overall magnitude of change that would occur from the above viewpoints has been assessed as **medium and adverse** during operation and **medium and beneficial** after restoration.

Potential Significance of Landscape and Visual Impacts

Assessment of the Significance of Impacts

12.146 The potential significance of landscape and visual impacts is determined by a combination of the magnitude of the potential impact and the sensitivity of the landscape setting to change. These two variables can be correlated as illustrated in Table 12/4, below. Thus, a landscape impact of low magnitude may nevertheless be assessed to have a moderate impact in a highly sensitive landscape, such as an AONB.

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Table 12/4
Principles of Assessing Significance of Landscape and Visual Impacts

Sensitivity	Negligible	Low	Medium	High
Magnitude				
Negligible	Negligible Impact	Negligible/ Slight Impact	Slight Impact	Slight/Moderate Impact
Low	Negligible/ Slight Impact	Slight Impact	Slight/ Moderate Impact	Moderate Impact
Medium	Slight Impact	Slight/ Moderate Impact	Moderate Impact	Moderate/ Substantial Impact
High	Slight/ Moderate Impact	Moderate Impact	Moderate/ Substantial Impact	Substantial Impact

- 12.147 The above consideration of the sensitivity of the receptors with the magnitude of the potential impacts provides an overall assessment of the potential significance of impacts. However, this process is not a quantitative process; there is not an absolute scoring system. Instead, the correlation of the two factors, although reflecting recognised features and methods of working outlined in this report, is in the end a matter of professional judgement.
- 12.148 Table 12/5, below, provides a brief definition of the full range of significance criteria. It must be emphasised that both landscape and visual impacts can be either adverse or beneficial in nature.

Table 12/5
Significance Criteria for Landscape and Visual Impact

Significance	Definition
Negligible	The proposed scheme is appropriate in its context. It may be difficult to differentiate from its surroundings and would affect very few or no receptors
Slight	The proposed scheme would cause a barely perceptible impact, and would affect few receptors.
Moderate	The proposed scheme would cause a noticeable difference to the landscape, and would affect several receptors.
Substantial	The proposed scheme would completely change the character and/or appearance of the landscape for a long period of time or permanently. It would affect many receptors

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Potential Significance of Landscape Impacts of the Proposed Development

- 12.149 The sensitivity of the landscape was summarised in Table 12/2. It was noted that whilst there are landscape designations immediately adjacent to the site, the site itself is despoiled and anomalous in the local landscape context. The sensitivity of the site was therefore assessed as being low.
- 12.150 The magnitude of the potential landscape impacts were described from 12.116 to 12.125. It was noted within this section that the development proposals would result in short term adverse impacts due to the removal of some of the SINC and the establishment of several new structures, such as the access road, haul roads, compost maturation facility and gas engines, site office, weighbridge and garage. These impacts would gradually be mitigated as both the Tip and the Void were progressively restored (although the gas engines and access road would remain in the long term). The restoration scheme would create an undulating landform and allows for the addition of approximately 35 hectares of new woodland as well as approximately 2.7 kilometres of new hedgerows. Once these elements become fully established, they would not only serve to assimilate the new landform of Bentinck Tip and Void into its context, but would also help to strengthen the existing landscape fabric.
- 12.151 The magnitude of landscape impact would therefore be low and adverse in the short term, and medium and beneficial in the medium to long term.
- 12.152 **The overall significance of landscape impacts is therefore slight and adverse in the short term and slight/moderate beneficial following final restoration.**

Potential Significance of Visual Impacts of the Proposed Development

- 12.153 The sensitivity of viewpoints was described in paragraphs 12.67 to 12.94. It was noted that a number of clear views exist from the north, east and south of the application site. It was also highlighted that a large proportion of the application site is visually unattractive with potential to reduce the existing visual impact by the long term restoration of the site. The overall sensitivity of the principal viewpoints was therefore assessed as being Medium.
- 12.154 The magnitude of the potential visual impacts at each of the viewpoints was described from 12.126 to 12.145. For most of the viewpoints, the magnitude (and nature) of the visual impacts would change over time. There would be a short term medium adverse impact for some of the locations during the initial phases of development. However, these impacts would gradually become beneficial once the first phases of progressive restoration have successfully established (although the gas engines and access road would remain in the long term). The final restoration of the restored Tip and Void would create visual benefits, transforming the existing anomalous landform and exposed colliery spoil into a more appropriate, undulating landform restored to pasture and woodland.

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12.155 The overall magnitude of the principal viewpoints would therefore be medium and adverse in the short term, and medium and beneficial in the long term.

12.156 The significance of the visual impacts in respect of each principal viewpoint during operations is summarized in Table 12/6 and following restoration in Table 12/7 below.

Table 12/6
Significance of Visual Impact on Principal Viewpoints During Operations

Viewpoint	Sensitivity	Magnitude of adverse change during operations	Significance of adverse impact during operations
1	Low	Low	Slight Impact
2	Medium	Low	Slight/Moderate
3	High	Medium	Moderate/Substantial
4	Medium	Medium	Moderate
5	Medium	Low	Slight/Moderate
6	Low to Medium	Low	Slight/Moderate Impact
7	Medium to High	High	Moderate/Substantial
8	Low	Low	Slight Impact

Table 12/7
Significance of Visual Impact on Principal Viewpoints Following Restoration

Viewpoint	Sensitivity	Magnitude of beneficial change during operations	Significance of beneficial impact during operations
1	Low	Medium	Slight/Moderate
2	Medium	Medium	Moderate
3	High	Low	Moderate
4	Medium	Medium	Moderate
5	Medium	Medium	Moderate
6	Low to Medium	Medium	Slight/Moderate Impact
7	Medium to High	High	Moderate/Substantial
8	Low	Low	Slight Impact

12.157 The overall significance of visual impacts is therefore moderate adverse in the short term and moderate beneficial following final restoration.

Summary and Conclusions

12.158 This section sets out the findings of the landscape and visual assessment which has been carried out in accordance with the latest national guidelines. The assessment has also been used to form the design parameters for the landscape restoration scheme and also the proposed mitigation measures during the operational phases.

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- 12.159 In addition to basing the landscape restoration scheme upon the findings within this landscape and visual assessment, there have also been a number of existing appraisals which have informed the design process, In particular, care has been taken to address the landscape issues identified in the Nottinghamshire County Council Landscape Guidelines.
- 12.160 The application site is within the Green Belt and has within its boundary a Site of Importance for Nature Conservation. The site is also located adjacent to two Mature Landscape Areas and two Sites of Special Scientific Interest. However due to previous extraction, a majority of the application site consists of degraded land and is therefore of low sensitivity to the type of development which is proposed,
- 12.161 The application site is visible from a limited number of rights of way, residential properties and public highways to the north, east and south. At present these views are adversely affected by the exposed colliery spoil and the steep landforms, both of which are anomalous in the local context.
- 12.162 The development proposals would cause short term adverse landscape and visual impacts due to the establishment of the site infrastructure, compost maturation facility and gas engines and the first phases of infilling on both the Tip and the Void. However, both developments have been designed so as to minimise landscape and visual impacts during operations, including the construction of screen bunds along the access road and the provision of a broad, landscaped screen bank, which constitutes the first phase of works on the Tip. Most significantly, both the Void and the Tip are progressively restored throughout the operational life of the site (although the gas engines and access road would remain in the long term).
- 12.163 After final restoration, the entire site would be restored to an undulating landform with a mixture of agricultural and ecological after-uses including pasture, woodland and wetlands. This scheme would therefore result in significant landscape and visual benefits when compared with the existing landscape.