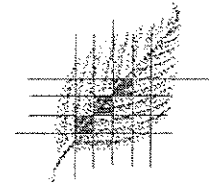
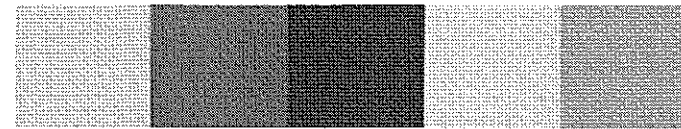


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WOOLERTON DODWELL ASSOCIATES



Fort Wilson Properties

Formation of mounds using inert
construction waste and associated
landscape treatment on land adjacent to
Calder Vale Park, Simonstone

**LANDSCAPE AND VISUAL
IMPACT ASSESSMENT**

NOVEMBER 2011

632/C/R-01

WOOLERTON DODWELL ASSOCIATES
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1 Introduction

- 1.1 This report provides an assessment of the potential landscape and visual effects of new mounds using approximately 26,000 cubic metres of inert waste resulting from excavation activities on Calder Vale Park and associated landscape treatment on greenfield land west of Calder Vale Park, Simonstone
- 1.2 This report is arranged in 5 parts:

Methodology and Information Sources describes the approach to impact assessment and also identifies a range of existing studies that are relevant to the assessment.

Baseline studies that describe the broader and more local landscape context of the site, existing characteristics of the site, landscape and visual character of the local area, and reviews the planning policy context, identifying landscape designations within which the proposal is to be considered.

Description of the mounds and landscape treatment and identification of Potential Landscape Effects: describes the characteristics of the mounds and landscape treatment and identifies elements and characteristics that could cause potential landscape effects, taking into account the various measures proposed as part of the project design in order to mitigate those effects.

Assessment of the Potential Visual Effects identifies potential visual receptors and assesses the potential effects of the mounds and landscape treatment on visual amenity in accordance with the agreed scope of the assessment. Likely significant effects are identified where appropriate.

Summary and Conclusions: as to the effects of the mounds and landscape treatment on the landscape and on visual amenity

2 Methodology and Information Sources

- 2.1 The primary purpose of the assessment is to determine what the likely significant effects of the development would be on the landscape and on visual amenity. Assessment to determine whether effects are likely to be significant or not significant involves the combined consideration of the sensitivity of the landscape or visual receptor to the proposal, and the magnitude of change or scale of the effect that would occur in the landscape or in the view. Each is assessed via a 5 point scale that ranges from high to low. The descriptive criteria used to assess sensitivity and magnitude of change and the approach to assessment of significance are set out in **Appendix 1** to this report.
- 2.2 A Screening Opinion in respect of the mounds and landscape treatment was requested from Lancashire County Council in accordance with the Environmental Impact Assessment (England) Regulations 1999. The Screening Opinion published on 13 October 2011 judged that the proposed development does not fall within the scope of the EIA Regulations and thus the submission of an environmental impact assessment to accompany the application for planning consent is not required. However, the Opinion advised that 'the mounds could have an impact upon the visual amenity of the local area during the construction phase and by their presence in the landscape' and it also noted that 'an assessment of visual impact could satisfactorily be undertaken as part of the normal planning application process.'
- 2.3 There is potential for local residents to be affected by the appearance of the mounds and landscape treatment in views of the local and wider landscape. Consultations were undertaken with Lancashire County Council in September 2011 in order to agree the scope of the assessment and the selection of viewpoints for assessment. This involved submission of details concerning the development, a proposed approach to assessment and a provisional schedule of nine viewpoints proposed for assessment. Following Lancashire County Council Landscape Officer's response on 3 October 2011 and an assessment of the nine viewpoints on site, four of the viewpoints were omitted due to views of the development site being interrupted and screened by woodland and landform. One additional viewpoint was added at the request of the Landscape Officer.
- 2.4 Six viewpoints are proposed that will assist with the assessment of landscape and visual effects. The locations of these viewpoints are all publicly accessible and represent a range of location types and viewing distances. The locations of the viewpoints are illustrated on **Figure 5**.

2.5 The assessment draws on guidance provided by a range of sources, notably:

‘Guidelines for Landscape and Visual Impact Assessment’ (GLVIA) (Landscape Institute and the Institute of Environmental Management and Assessment, second edition 2002.); and

‘Landscape Character Assessment: Guidance for England and Scotland’, (Countryside Agency and Scottish Natural Heritage 2002).

2.6 The assessment process aims to establish the following:

- a clear understanding of the site and its wider landscape setting, identifying its landscape character, value and sensitivity to the development proposed;
- the nature of the development proposals and/or any mitigation measures
- the potential direct and indirect impacts of the proposals on visual receptors and on the local landscape, including changes that would occur in the composition and character of the view; and
- conclusions concerning the residual effects of the landform and landscape treatment proposal.

2.7 In accordance with GLVIA guidance, the baseline against which the impacts of the mounds and landscape treatment site have been assessed is the existing character of the landscape and existing views that are available from within the local area i.e. the status quo.

2.8 The approach to assessment has involved desk study and information review, field study, assessment of landscape character and value, identification of the likely landscape and visual effects or impacts and prediction of their likely magnitude or level of impact according to descriptive criteria.

3 Baseline Studies

Local Context

3.1 The proposed development site forms part of a much wider area in the control of Fort Wilson Properties; of which Fort Vale Engineering Ltd is the principal tenant. It is within the Industrial Foothills and Valleys landscape, specifically character area 6a ‘Calder Valley’, identified by A Landscape Strategy for Lancashire (Lancashire County Council, December 2000).

3.2 It is located on agricultural land comprising predominantly species poor improved grassland to the west of Simonstone Brook on the western flank of the Calder Vale Park industrial site. Approximately 120m to the south west of the development Simonstone Brook confluences with the River Calder. To the north, the boundary of the site is defined by the embankment of the former Blackburn, Burnley, Accrington and Colne Extension Railway. Beyond that lies the village of Simonstone. Open countryside lies to the south along with the Altham Pumping Station and the River Calder. Altham industrial estate lies beyond this. To the west of the application site is agricultural land and Gooseleach Woods, which are also in the ownership of Fort Wilson Properties.

Landscape Character

3.3 A number of published documents assist in an appreciation of the landscape character of the area surrounding the development site. These include:

- Natural England’s Landscape Character Assessment – Character Area 35, Lancashire Valleys; and
- A Landscape Strategy for Lancashire (December 2000).

3.4 The key characteristics of the ‘Lancashire Valleys’ include:

- *The broad valley of the River Calder and its tributaries running northeast/southwest between natural backdrops of Pendle Hill and the Southern Pennines.*
- *Intensely urban character derived from main towns of Blackburn, Accrington and Burnley which have developed rapidly since the industrial revolution.*
- *Remnants of agricultural land fragmented by industry and scattered development.*
- *Field boundaries, regular to the west, irregular to the east, and degraded round the urban areas, formed of hedges with few hedgerow trees and, at higher elevations by stone walls and post and wire fences.*

Local Landscape Character

- 3.5 'A Landscape Strategy for Lancashire' was published by Lancashire County Council in December 2000 and provides the most up-to-date assessment of local landscape character.
- 3.6 The site is located within 'Calder Valley' (6a), a sub-type of 'Industrial Foothills and Valleys', a 'complex transitional landscape of relatively small scale with intensive settlement, a gentle landform and varied vegetation cover'. The sub-type is identified at several locations in Lancashire and its 'key characteristics' as these apply to the landfill site include:
- *Lush, improved pastures utilised for dairy farming as well as sheep grazing*
 - *Hedgerows and post and wire fencing on lower slopes and valley bottom*
 - *Urban fringe land uses such as industrial buildings*
 - *Important wooded element to the landscape*
- 3.7 'The Lancashire Woodland Vision' provides information and guidance regarding new woodland planting and woodland management in the context of A Landscape Strategy for Lancashire. The Vision forms a key strategic document for Lancashire and underpins other major strategies and policies, particularly in relation to the Lancashire Rural Recovery Action Plan, the Northwest Regional Forestry Framework and the Sustainable Communities agenda.
- 3.8 The Vision contains 'A Local Woodland Vision Statement' for the Industrial Foothills and Valley character type which is:
- To develop a well-wooded, functional landscape in and around residential, commercial and industrial developments to improve the image of the area, provide opportunities for outdoor recreation for those who live and work in the area, and enhance environmental quality, particularly along transports corridors.*
- 3.9 Target areas for new woodland are included in the Vision and the Industrial Foothills and Valley character type is identified as having a high capacity for woodland uplift. Woodland planting should be extensive and focused in urban fringe locations and along strategic transport corridors, particularly where there are opportunities to screen unsightly development.

Landscape Planning Policy and Designations

- 3.10 The development plan for Lancashire currently comprises the North-West Regional Spatial Strategy (RSS), the the Joint Lancashire Minerals and Waste Development Framework (MWDF) Core Strategy and Generic Development Control Policies, and/or any adopted Local Development Framework Documents together with National Planning Policy Statements and Guidance.
- 3.11 National policy and guidance is set out in PPS 7 (2004) 'Sustainable Development in Rural Areas'. It emphasises the importance that the Government gives to sustainable development as the core principle underpinning land use planning. Six key principles are identified that are to be applied in combination with all of the policies set out in the PPS. These include:
- (vi) All development in rural areas should be well-designed and inclusive, in keeping and scale with its location, and sensitive to the character of the countryside and local distinctiveness.*
- 3.12 Paragraph 15 notes that '*planning authorities should continue to ensure that the quality and character of the wider countryside is protected and, where possible, enhanced. They should have particular regard to any areas that have been statutorily designated for their landscape, wildlife or historic qualities where greater priority should be given to restraint of potentially damaging development.*'
- 3.13 The proposed development site lies within land covered by the Joint Lancashire Minerals and Waste Development Framework (MWDF) and the saved policies of the Ribble Valley Local Plan. These saved policies will, in due course, be replaced by the Local Development Framework for Ribble Valley which will comprise a number of separate documents of which the most relevant will be the Core Strategy DPD.
- 3.14 The following documents were consulted for relevant policies and/ or guidance relating to the site and surrounding area, and are considered individually below:
- Joint Lancashire Minerals and Waste Development Framework (adopted February 2009);
 - Supplementary Planning Document 'Managing and Minimising Waste in New Developments' (adopted July 2007)
 - Ribble Valley Local Plan (saved policies, September 2007); and

3.15 Policy CS6 of the MWDF Core Strategy promotes waste minimisation and on-site waste management solutions during construction, particularly for the creation of green infrastructure, to minimise the amount of waste taken off-site. The SPD provides additional guidance to ensure applicants for planning permission consider waste minimisation in new developments. It explains the background to sustainable construction and waste management and sets out an approach to implementing Policy CS6 (which superseded Policy 86 of the Lancashire Minerals and Waste Local Plan to which the SPD refers).

3.16 The mounds and landscape treatment site is within an area identified in saved policies ENV3 Open Countryside and ENV4 Green Belt of the Ribble Valley Local Plan. Policy ENV3 states:

'In the open countryside outside the AONB and areas immediately adjacent to it, development will be required to be in keeping with the character of the landscape area. Proposals to conserve, renew and enhance landscape features, will be permitted, providing regard has been given for the characteristic landscape features of the area.'

Policy ENV4 states:

'Within the green belt, as shown on the proposals map, planning permission will not be given, except in very special circumstances, for the erection of new buildings other than for the purposes of agriculture, forestry, essential facilities for outdoor sport and recreation, cemeteries and for other uses of land which preserve the openness of the green belt and which do not conflict with the purposes of the designation.'

Description of the Mounds and Landscape Treatment Proposal and Identification of Potential Effects

3.17 The proposal is to reuse surplus material that would arise from the construction of Phase 1 and Phase 2 of Fort Vale Properties Calder Vale Park development as fill to create new landform and mounds on the adjacent agricultural land. The construction of both phases of development is expected to generate approximately 26,000 cubic metres of surplus material. The majority of this would be clean inert material resulting from excavation activities including a reduced level dig and site preparation and levelling.

3.18 The proposed mounds have been designed in the context of the amount of surplus material and the existing landform of the agricultural land. It would comprise five gently sloping ridges with their axis generally orientated north-south which would be perceived as subtle changes in the landscape. The ridges will have a maximum elevation of 4 metres above existing ground

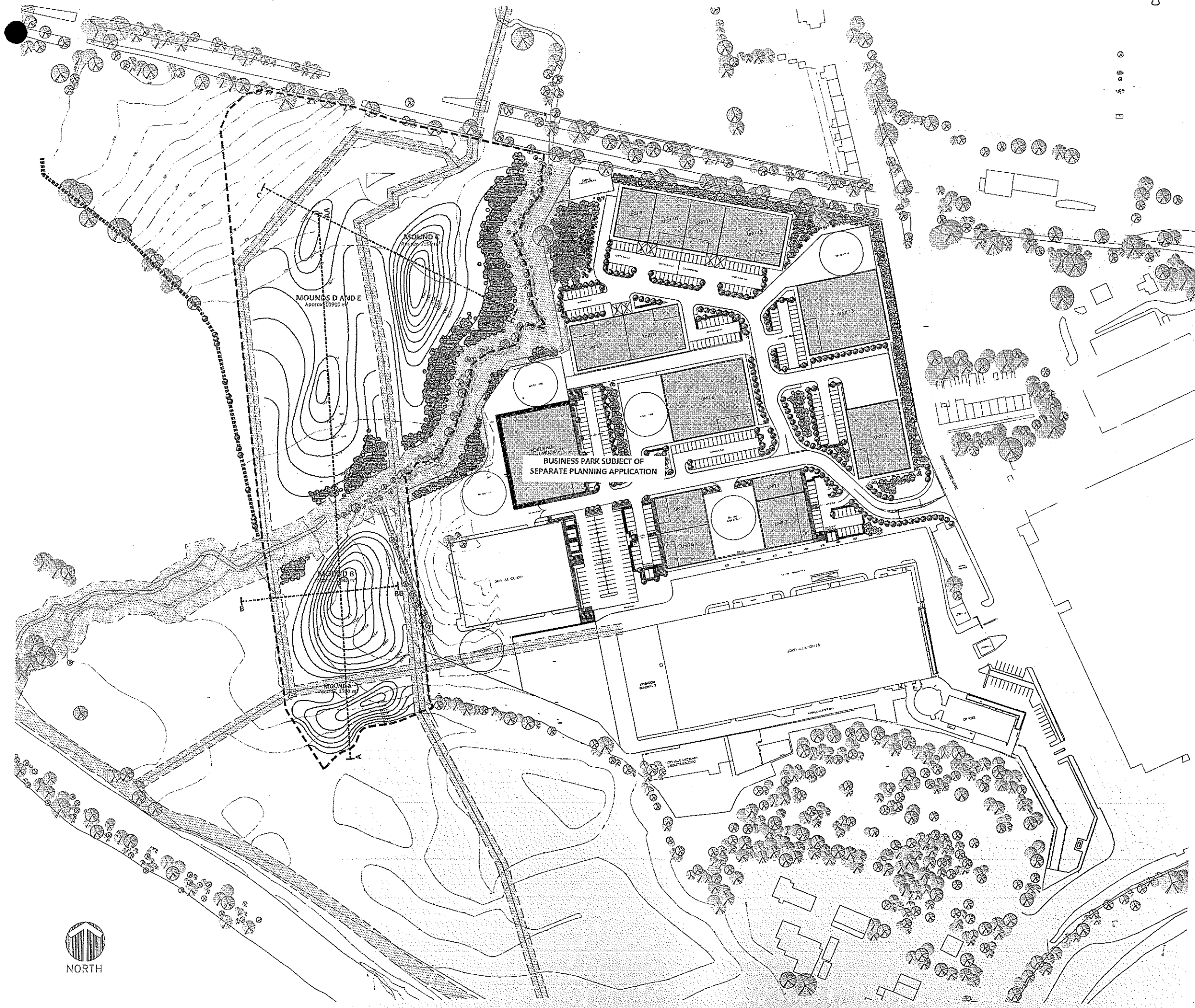
level with a maximum gradient of 1 in 3. The proposed profile and landscape treatment of the new mounds is shown in **Figure 1** – drawing number 632.200 Landscape Masterplan and **Figure 2** – drawing number 632.400 Mound Profiles. The mounds in combination with landscape treatment including woodland planting and hedgerows (as it matures) would screen the Calder Vale Park industrial site to views into the site from the public right of way along the River Calder. The large scale industrial buildings are not in keeping with the landscape character of the agricultural land between the footpath and Calder Vale Park.

3.19 The proposed sequence of working for the landfill scheme is defined on **Figure 3** – drawing number 632.210 Vehicle Haulage Routes and shows mounds A and B being constructed first. This is with the intention of infilling and restoring the phases of the landfill which impact most on sensitive visual receptors i.e. users of the public footpath along the River Calder. The construction of Mounds C, D and E would be effectively screened by the restoration of the previous phases.

3.20 Initial preparation of the Phase 1 area would be to remove surface vegetation by blading off and then to strip the topsoil by earthmoving plant. Stripping would be undertaken by the excavator standing on the surface of the topsoil, digging the topsoil to its maximum depth and loading into site dump trucks. The stripped topsoil would be stockpiled in loose-tipped heaps to a maximum height of 3-4 metres tipped from a dump truck.

3.21 The surplus material would then be loose tipped in heaps from a dump truck starting at the furthest point in the footprint of the proposed mound in Phase 1 and working back toward the access point. When the entire storage area has been filled with heaps, a tracked machine (excavator or dozer) levels them and firms the surface for a second layer of heaps to be tipped. The sequence is repeated until the mound reaches its planned height minus the depth of topsoil to be replaced. A tracked machine compacts and regrades the sides and top of the mound to form smooth gradients to the contours shown in **Figure 4** – drawing number 632.300, Landform Proposals.

3.22 On completion of the mound formation, topsoil would then be stripped from the Phase 2 area and placed to the planned depths on the mound in Phase 1. Again, a tracked machine would compact and regrade the topsoil to sides and top of the mound. The sequence of landfilling



- KEY**
- Section line
(See drawing 632.400)
 - Existing contours
 - Proposed contours
 - Site boundary
 - Existing trees
 - Proposed tree
 - Proposed woodland belts
 - Existing hedgerow
 - Proposed hedge
 - Proposed building
(subject of separate planning application)
 - Easement Locations
 - Other land in control of the applicant



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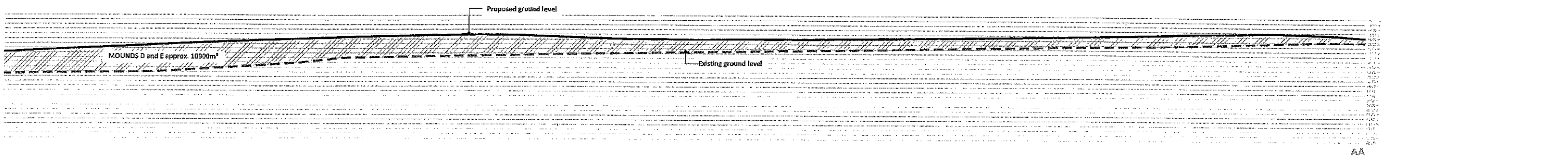
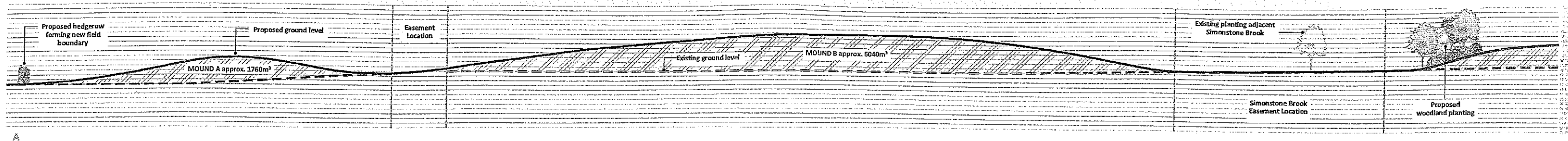
Project
**CALDER VALE PARK MOUND FORMATION AND
LANDSCAPE TREATMENT**
for Fort Wilson Properties

LANDFILL MASTERPLAN

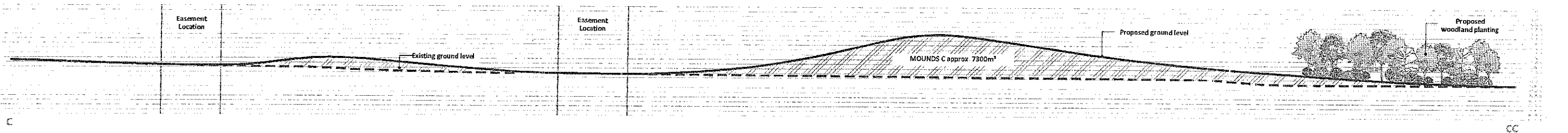
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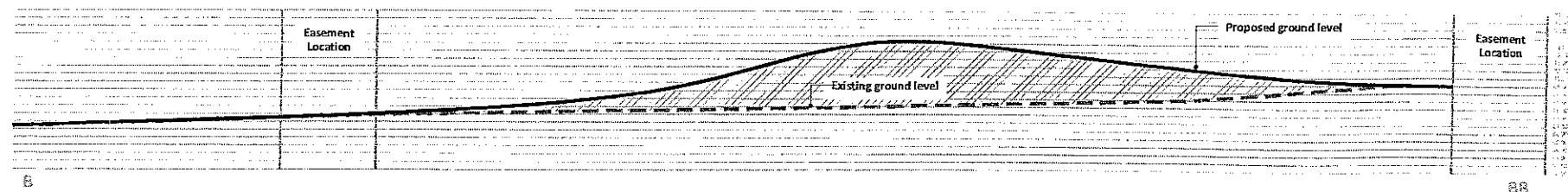
SECTION A - AA



SECTION C - CC



SECTION B - BB



Rev A - Alterations to landform shape



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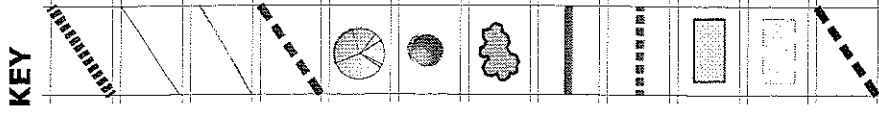
Project

CALDER VALE BUSINESS PARK, SIMONSTONE
for Fort Wilson Properties

DRAFT LANDFORM PROFILES

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Land for Proposals



Project
CALDER VALE BUSINESS PARK, SIMONSTON
for Fort Wilson Properties

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Drawn By.	Checked By.	
SC	DB	

operations would then be repeated for each phase. In the final phase, the topsoil from the stockpile would be placed on the mound to complete the landfill operation.

- 3.23 The landscape masterplan (see **Figure 1**) illustrates the pattern of land use that would be re-established following completion of mound formation operations. This restoration scheme would be implemented in phases corresponding to the completion of the mounds defined in **Figure 3** as the construction of the mounds proceeds. In addition, some woodland and hedgerow planting would also occur in advance of the mound formation operations (to play a mitigating role), whilst other planting would be put in place following the completion of operations.
- 3.24 As each mound is completed, the lowland meadow grass areas indicated as part of the landscape restoration scheme would be seeded in the spring or late summer and managed by cattle grazing. This approach allows the landscape restoration scheme to both provide a mitigation role for the ongoing operations and provides early maturity to the final restoration scheme.
- 3.25 The deciduous woodland planting indicated as part of the landscape restoration scheme would be planted in the next available planting season after completion of the landfill operation.

4 Assessment of Potential Landscape and Visual Effects

Potential Landscape Effects

- 4.1 The mounds and landscape treatment would be constructed within improved farmland. With respect to landscape fabric, there would be a loss of grass cover to allow the construction of the mounds and approximately 485 m of haulage track (4.5m wide with passing places) for dump truck runs. These direct effects on landscape fabric are judged to be of low magnitude and would not result in a significant change in existing landscape resources. They are also temporary and fully reversible as topsoil removed to build the mound would be used to restore the site and access tracks back to agricultural use.
- 4.2 There will also be some indirect effects on the landscape beyond the site involving effects on landscape character and quality arising from the use of earthmoving plant during the mound construction operation. Effects would be due primarily to the noise and movement of earthmoving plant and the physical change in the appearance of the landscape arising from the mound construction operation, and would last for approximately three months.
- 4.3 The local landscape of Calder Valley south of Simonstone is considered to be of **medium-low** sensitivity to the proposed mounds and landscape treatment. It is a non-designated landscape with a gentle landform and varied vegetation cover. It has a weak landscape structure with few trees, gappy hedges and post and wire fences and is partly degraded with frequent detractors including pylons and industrial buildings. As such, it is potentially tolerant of significant changes.
- 4.4 The proposed mounds will elevate the existing levels by no more than 4 metres and be graded to fit with the existing landform. At close range, within 0.2km or so of the site, the alteration to existing baseline character during the construction of the mounds and landscape treatment would be noticeable (**medium** magnitude of change), leading to effects of **moderate/ slight adverse** significance that would be significant over a short term/temporary period of three months. Effects on the wider landscape of the Calder Valley would be lower in magnitude and not significant.

Potential Visual Effects

- 4.5 The approach to assessment of visual effects involves the identification of the likely effects of the proposed mounds and landscape treatment on views from the selected viewpoints, and assessment of likely effects on views from these viewpoints, in order to draw conclusions concerning the significance of visual effects within the wider area.
- 4.6 The main sources of visual effects arising from the mounds and landscape treatment would be the elevation of the ground and introduction of woodland as new features in the view. The likely magnitude or level of effect is considered in relation to the sensitivity of the visual receptor to the landform and landscape treatment.
- 4.7 GLVIA advises at paragraph 7.36 that in evaluating visual effects, the magnitude of visual change is described by reference to the scale of change in the view, the degree of contrast or integration of any new features, the duration and nature of effects, the angle of view in relation to the main activity of the receptor, viewing distance and the extent of the area over which changes would be visible. The visual effects of the mounds and landscape treatment will generally reduce with increasing viewing distance. As distance increases, the relative size of the mounds reduces and a broader area is viewed in which peripheral landscape features occupy more of the view and so compete for the attention of the viewer.
- 4.8 At any given distance, the magnitude of visual effects will vary according to a range of factors, including the proportion of the mounds and landscape treatment that may be visible and its position in the view, the presence of other features in the view that draw the eye, and the extent to which views of the mounds and landscape treatment from the viewpoint in question are obstructed or filtered by intervening landform or by landscape elements such as trees, woodlands, hedgerows or by built structures. The criteria used to assess magnitude of predicted visual effects are set out in Appendix 1.

Assessment of Effects on Landscape and Views from Selected Viewpoints

- 4.9 The Tables that follow describe the views available from each of the six representative viewpoints selected for assessment. **Figure 5** indicates the locations of the viewpoints. For

each viewpoint, **high** sensitivity is ascribed to receptors that include local residents and those engaged in outdoor recreational pursuits and whose attention is focussed on the landscape.

- 4 10 The views are illustrated in **Figures 6-11**, which present an indication of the extent of the mounds and landscape treatment on a photograph of the existing view from each viewpoint. Details including the OS grid reference for the viewpoint are included on each Figure.

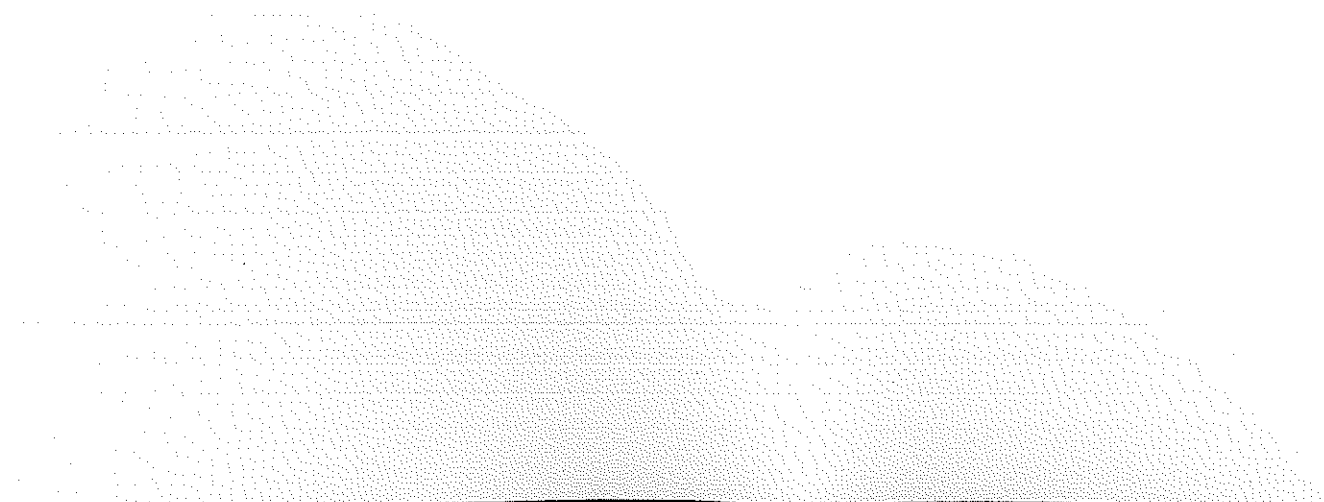
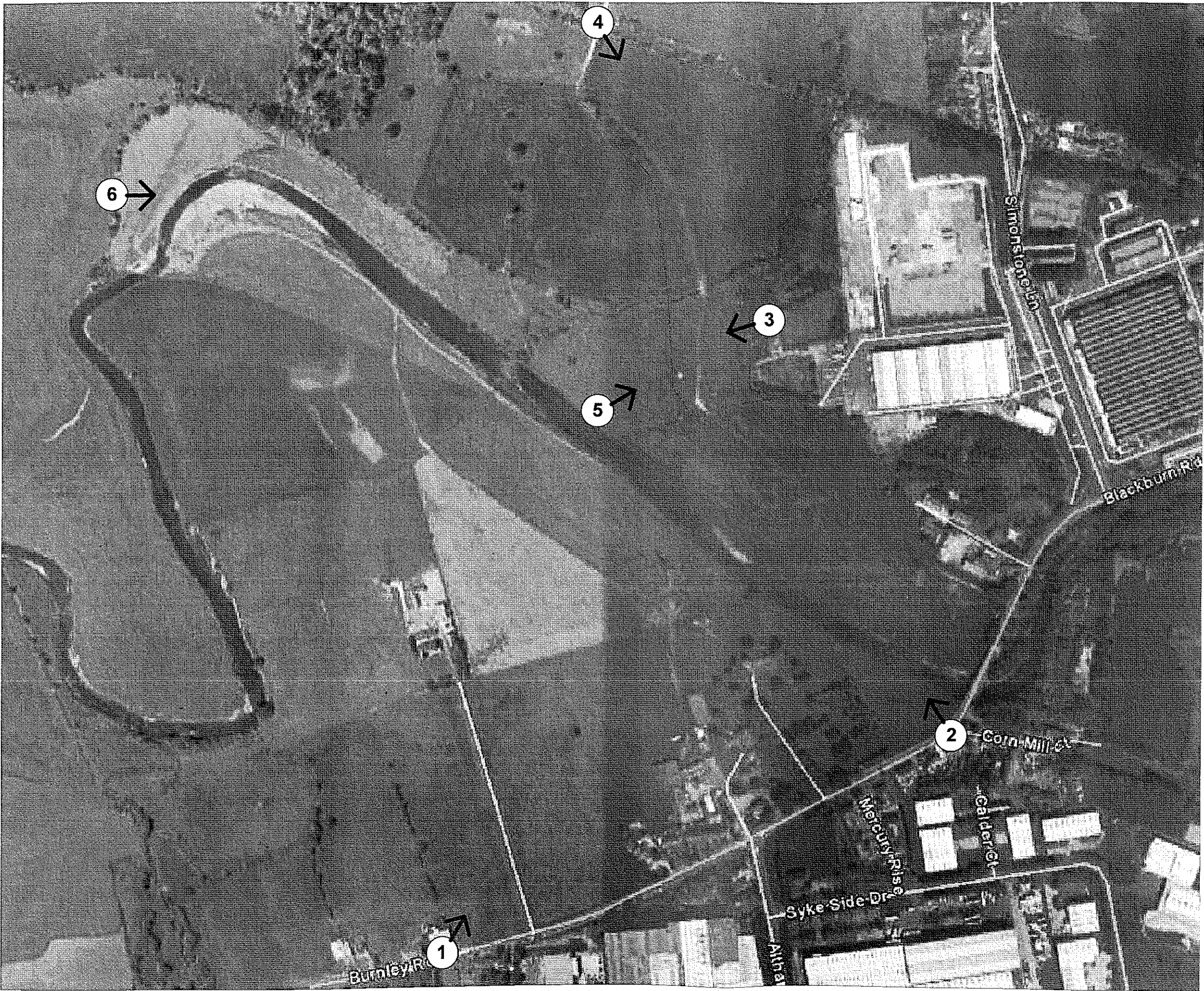


Figure 5 Viewpoint location plan



5 Photograph viewpoint

Application site boundary



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Project

Viewpoint Location Plan

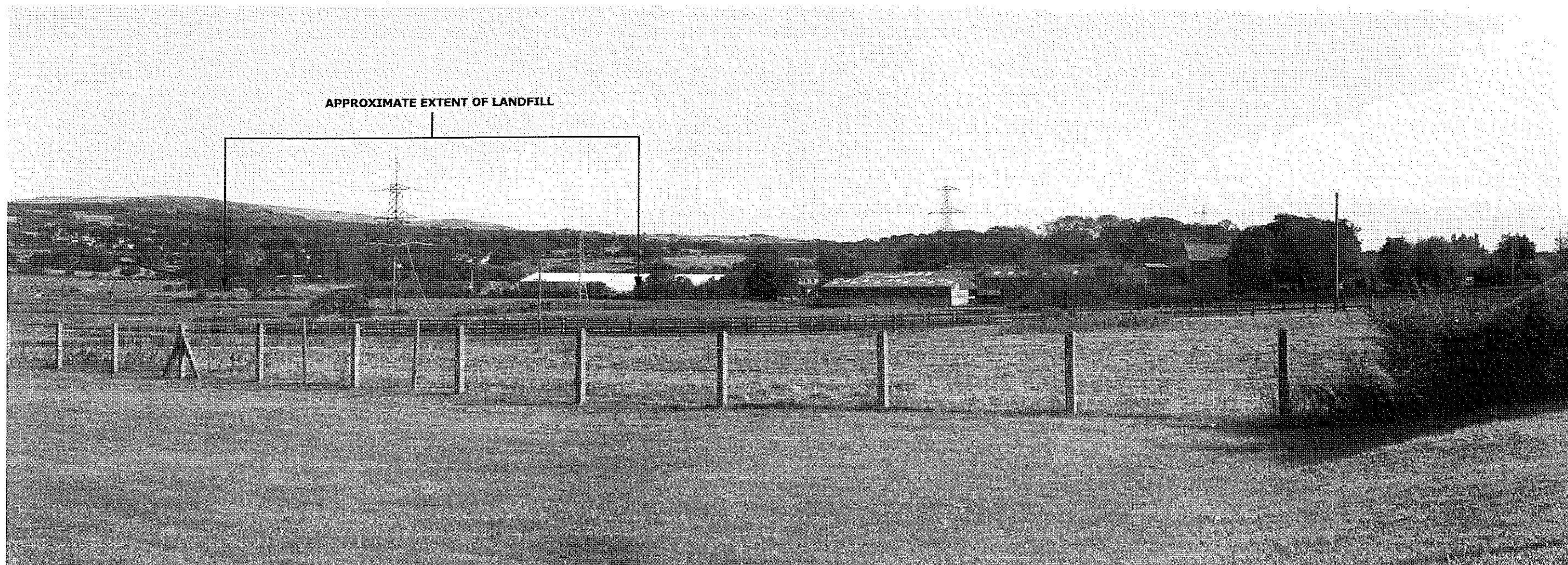
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Figures 6 -11

VIEWPOINT PHOTOGRAPHS AND IMPACT TABLES

Viewpoint 1: View from Altham Ambulance Station

Easting: 376846; Northing: 432777
Distance to application site: 0.6 km
Direction of view: North east



Description of existing view

An agricultural landscape dominated by improved pasture set within the broad open River Calder valley and influenced by a number of detractors including pylon lines, fences, farm buildings, an industrial unit and the settlement of Simonstone; an open undulating and rolling lowland topography with woodland blocks and many hedges and hedgerows.

Receptor type and sensitivity

Landscape: Type 6A: Calder Valley (host landscape type); **Medium/ Low** sensitivity to the landfill and landscape treatment
Visual: **Low** sensitivity of working environment at Altham Ambulance Station

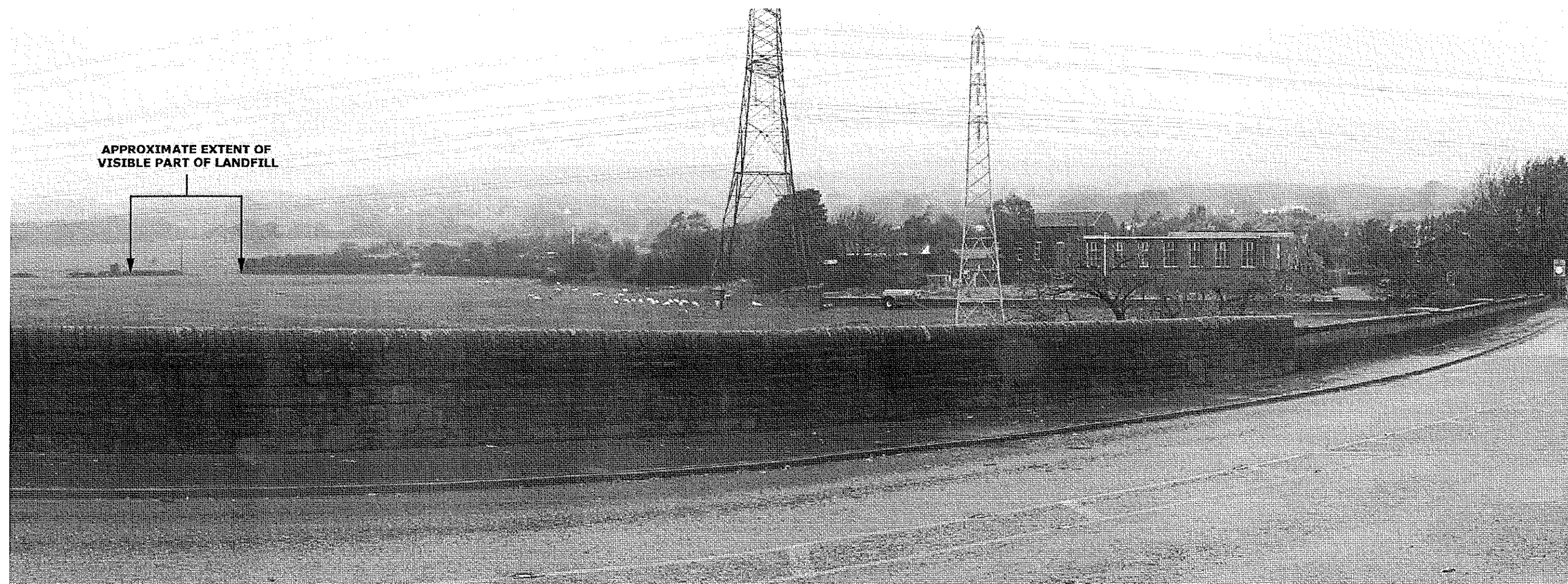
LANDSCAPE	Construction Phase	Operational Phase Year 1	Operational Phase Year 10
Nature of impact	Temporary (approximately 3 months) subtle changes to the fabric of the landscape due to loss of species poor grazed improved pasture. Temporary (approximately 3 months) changes to the character of the landscape due to changes in topography created by Mounds A, B, D and E.	Subtle changes to the character of the landscape due to: - changes in topography (a maximum of 4 metres above the existing ground level) created by Mounds A, B, D and E ; and - new woodland and hedge planting (initial planting size 40 -60 cm height). Mounds A, B, D and E would enhance the existing undulating and rolling topography. A 1.5 metre high cattle/ rabbit proof fence to protect the new woodland planting would not be an uncharacteristic feature of the landscape.	Subtle changes in the character of the landscape due to: - changes in topography (a maximum of 4 metres above the existing ground level) created by Mounds A, B, D and E ; and - new woodland and hedge planting (tree height approximately 6 metres); Mounds A, B, D and E would slightly elevate the existing undulating topography to a degree that at a distance of 0.6 km the changes would be difficult to distinguish and seen as a small proportion of a wider landscape. Woodland and hedge planting would provide additional and characteristic elements in the landscape.
Magnitude of impact	Medium	Low	Medium
Significance of impact	Moderate/ Slight adverse	Slight/ Negligible beneficial	Moderate/ Slight beneficial
VISUAL	Construction Phase	Operational Phase Year 1	Operational Phase Year 10
Nature of impact	Temporary (approximately 3 months) subtle changes in the visual appearance of the landscape due to: - phased removal of topsoil from an area to accommodate Mounds A, B, D and E which is currently pasture resulting in a colour change from green to brown; - alteration of topography created by Mounds A, B, D and E; and - movement of site plant and machinery.	Subtle changes in the visual appearance of the landscape due to: - changes in topography (a maximum of 4 metres above the existing ground level) created by Mounds A, B, D and E ; and - new woodland and hedge planting (initial planting size 40 -60 cm height). Mounds A, B, D and E would elevate the existing undulating and rolling topography to such a degree that at a distance of 0.6 km the changes would be difficult to read and seen as a small proportion of a wider landscape. A 1.5 metre high cattle/ rabbit proof fence to protect the woodland planting would be visible but not an uncharacteristic feature of the landscape.	Subtle changes in the visual appearance of the landscape due to: - changes in topography (a maximum of 4 metres above the existing ground level) created by Mounds A, B, D and E ; and - new woodland and hedge planting (tree height approximately 6 metres). Mounds A, B, D and E would be integrated into the existing undulating topography to a degree such that at a distance of 0.6 km the changes would be difficult to distinguish in the wider landscape. Hedgerow planting would interrupt view of Mounds A and B. Woodland copse would interrupt view of Mounds D and E.
Magnitude of impact	High	Low	Medium
Significance of impact	Moderate adverse	Negligible beneficial	Slight beneficial

Viewpoint 2: View from residential properties on Riverbank Terrace

Easting: 377389; Northing: 433016

Distance to application site: 0.4 km

Direction of view: North west



Description of existing view

An predominantly agricultural landscape dominated by pasture with large fields partially enclosed by hedgerow remnant; a flat open and expansive topography forming part of the River Calder floodplain; prominent pylon line and industrial buildings; extensive woodland on elevated land rising northwards from the River Calder and some isolated trees in hedgerows.

Receptor type and sensitivity

Landscape: Type 6A: Calder Valley (host landscape type); **Medium/ Low** sensitivity to the landfill and landscape treatment

Visual: **High** sensitivity of occupants of residential properties

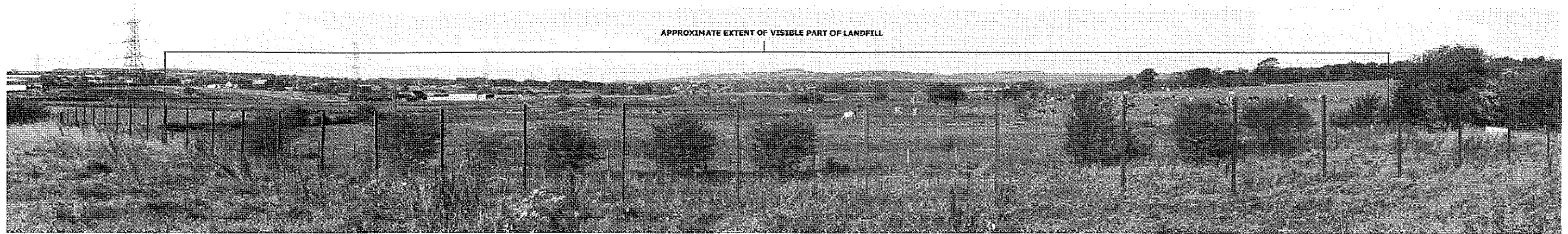
LANDSCAPE	Construction Phase	Operational Phase Year 1	Operational Phase Year 10
Nature of impact	Temporary (approximately 3 months) subtle changes to the fabric of the landscape due to loss of species poor grazed improved pasture. * Temporary (approximately 3 months) changes to the character of the landscape due to changes in topography created by Mounds A and B.	Subtle changes in the character of the landscape due to: - changes in topography created by Mounds A and B (a maximum of 4 metres above the existing ground level); and - new woodland and hedge planting (initial planting size 40 -60 cm height). Mounds A and B would elevate the existing undulating and rolling topography. A 1.5 metre high cattle/ rabbit proof fence to protect the woodland planting would not be an uncharacteristic feature of the landscape.	Subtle changes in the character of the landscape due to: - changes in topography created by Mounds A and B (a maximum of 4 metres above the existing ground level); and - new woodland and hedge planting (tree height approximately 6 metres); Mounds A and B would be integrated into the existing undulating and rolling topography.
Magnitude of impact	Medium	Low	Medium
Significance of impact	Moderate/ Slight adverse	Slight/ Negligible beneficial	Moderate/ Slight beneficial
VISUAL	Construction Phase	Operational Phase Year 1	Operational Phase Year 10
Nature of impact	Temporary (approximately 3 months) subtle changes in the visual appearance of the landscape due to: - phased removal of topsoil from grassland area to accommodate Mounds A and B which is currently pasture resulting in a colour change from green to brown; - alteration of topography created by Mounds A and B; and - movement of site plant and machinery.	Subtle changes in the visual appearance of the landscape due to: - changes in topography created by Mounds A and B (a maximum of 4 metres above the existing ground level) partially obscured by existing woodland on the south boundary of Calder Vale Park; and - new hedgerow planting (initial planting size 40 -60 cm height). Mounds A and B would elevate the existing undulating and rolling topography to such a degree that at a distance of 0.4 km the changes would be difficult to read and seen as a small proportion of a wider landscape. A 1.5 metre high cattle/ rabbit proof fence to protect the hedgerow planting would be visible but not an uncharacteristic feature of the landscape.	Subtle changes in the visual appearance of the landscape due to: - changes in topography created by Mounds A and B (a maximum of 4 metres above the existing ground level) partially obscured by existing woodland on the south boundary of Calder Vale Park; and - new woodland and hedge planting (tree height approximately 6 metres height); Mounds A and B would be integrated into the existing undulating and rolling topography to such a degree that at a distance of 0.4 km the changes would be difficult to distinguish and would be seen as a small proportion of a wider landscape. Hedgerow planting would interrupt view Mound A.
Magnitude of impact	Medium	Low	Medium
Significance of impact	Substantial adverse (and significant)	Moderate beneficial	Substantial beneficial

Viewpoint 3: View from within Calder Vale Park

Easting: 377193; Northing: 433435

Distance to application site: 0.015 km

Direction of view: West



Description of existing view

A large scale agricultural landscape with large fields partially enclosed by remnant hedgerows; an undulating open and expansive landform subtly falling in elevation southwards to the River Calder floodplain; wide view of the Calder Valley; prominent pylon line and farm buildings; prominent boundary fence to Calder Vale Park.

Receptor type and sensitivity

Landscape: Type 6A: Calder Valley (host landscape type); **Medium-low** sensitivity to the landfill and landscape treatment

Visual: **Low** sensitivity of working environment at Fort Vale Engineering

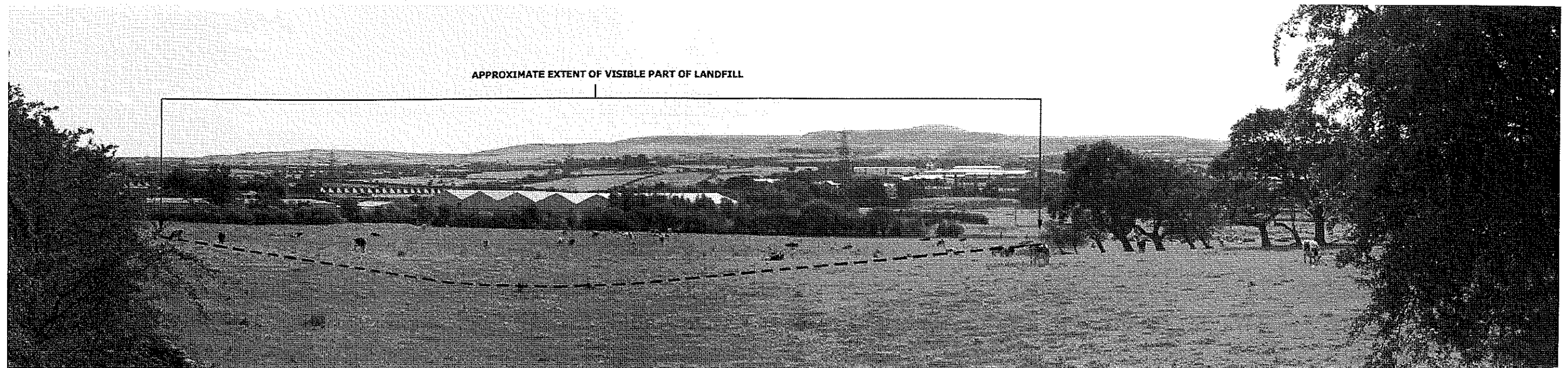
LANDSCAPE	Construction Phase	Operational Phase Year 1	Operational Phase Year 10
Nature of impact	Temporary (approximately 3 months) changes to the fabric of the landscape due to loss of species poor grazed improved pasture. Temporary (approximately 3 months) changes to the character of the landscape due to: - changes in topography created by Mounds A and B; and - adverse impacts on aesthetic and perceptive attributes (predominantly tranquility).	Changes in the character of the landscape due to: - changes in topography (a maximum of 4 metres above the existing ground level) created by Mounds A and B; and - new woodland on site boundary and hedge planting (initial planting size 40 -60 cm height). The landfill would elevate the existing undulating and rolling topography. A 1.5 metre high cattle/ rabbit proof fence to protect the woodland planting would not be an uncharacteristic feature of the landscape.	Changes in the character of the landscape due to: - changes in topography (a maximum of 4 metres above the existing ground level) created by Mounds A and B; and - new woodland and hedge planting (tree height approximately 6 metres); Mounds A and B would integrate into the existing undulating and rolling topography. Woodland planting would increase tree cover and provide additional and characteristic elements in the landscape.
Magnitude of impact	Medium	Medium/Low	Medium
Significance of impact	Moderate/ Slight adverse	Slight beneficial	Moderate/ Slight beneficial
VISUAL	Construction Phase	Operational Phase Year 1	Operational Phase Year 10
Nature of impact	Temporary (approximately 3 months) changes in the visual appearance of the landscape due to: - phased removal of topsoil from grassland area to accommodate Mounds A and B resulting in a colour change from green to brown; - changes in topography created by Mounds A and B; and - movement of site plant and machinery.	Changes in the visual appearance of the landscape due to: - changes in topography (a maximum of 4 metres above the existing ground level) created by Mounds A and B; and - new woodland and hedge planting (initial planting size 40 -60 cm height). Mounds A and B would elevate the existing undulating and rolling topography to a degree that at close distance the changes would be read and seen as the foreground of a wider landscape. A 1.5 metre high cattle/ rabbit proof fence to protect the woodland planting would be visible but not an uncharacteristic feature of the landscape.	Changes in the visual appearance of the landscape due to: - changes in topography (a maximum of 4 metres above the existing ground level) created by Mounds A and B; and - new woodland and hedge planting in foreground (tree height approximately 6 metres); Mounds A and B would integrate with the existing undulating and rolling topography to a degree that at close distance the changes would be distinguishable and seen in the foreground of a wider landscape. Mounds A and B would interrupt view of the wider landscape from Calder Vale Park.
Magnitude of impact	High	Medium/Low	Medium
Significance of impact	Moderate adverse (and significant)	Slight/ Negligible beneficial	Slight beneficial

Viewpoint 4: View from Bridge over dismantled railway (part of farm track)

Easting: 377422; Northing: 433083

Distance to application site: 0.12 km

Direction of view: South east



Description of existing view

An agricultural landscape dominated by pasture with large fields partially enclosed by hedgerow remnant; an undulating open and expansive landform subtly falling in elevation southwards to the River Calder floodplain; wide view towards the hills forming part of the Forest of Rossendale; industrial and commercial buildings are a dominant element and are significant detractors; woodland belt to Calder Vale Park boundary.

Receptor type and sensitivity

Landscape: Type 6A: Calder Valley (host landscape type); **Medium-low** sensitivity to the landfill and landscape treatment

Visual: **High** sensitivity of users of public footpath

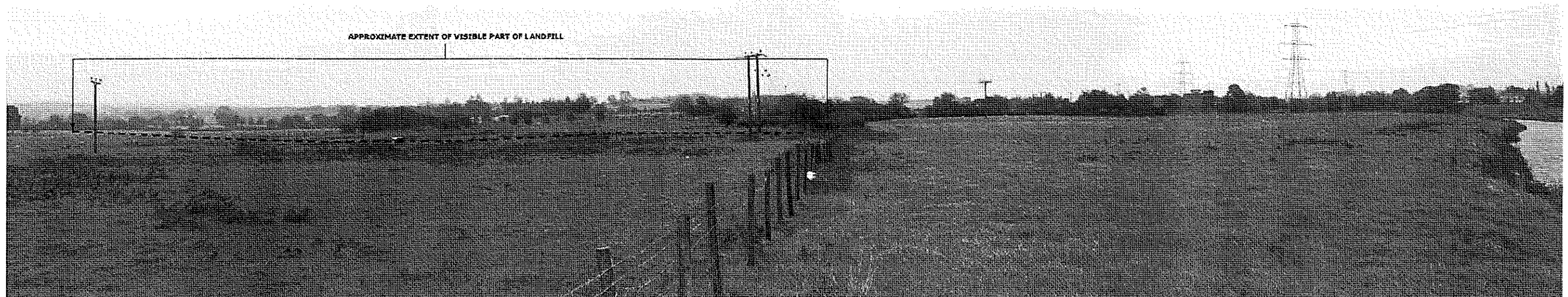
LANDSCAPE	Construction Phase	Operational Phase Year 1	Operational Phase Year 10
Nature of impact	Temporary (approximately 3 months) changes to the fabric of the landscape due to loss of species poor grazed improved pasture while mounds are constructed. Temporary (approximately 3 months) changes to the character of the landscape due to: - changes in topography created by Mounds C, D and E; and - adverse impacts of construction activity on the aesthetic and perceptive attributes (predominantly tranquility).	Changes to the character of the landscape due to: - changes in topography created by Mounds C, D and E (a maximum of 4 metres above the existing ground level); and - new woodland to supplement existing woodland along Simonstone Brook and hedge planting (initial planting size 40 -60 cm height). Mounds C, D and E would elevate the existing undulating and rolling topography. A 1.5 metre high cattle/ rabbit proof fence to protect the woodland planting would not be an uncharacteristic feature of the landscape.	Changes in the character of the landscape due to: - changes in topography created by Mounds C, D and E (a maximum of 4 metres above the existing ground level); and - new woodland and hedge planting (tree height approximately 6 metres); Mounds C, D and E would integrate with the existing undulating topography. Woodland planting would increase tree cover and provide additional and characteristic elements in the landscape.
Magnitude of impact	Medium	Medium/Low	Medium
Significance of impact	Moderate/ Slight adverse	Slight beneficial	Moderate/ Slight beneficial
VISUAL	Construction Phase	Operational Phase Year 1	Operational Phase Year 10
Nature of impact	Temporary (approximately 3 months) changes in the visual appearance of the landscape due to: - phased removal of grassland to accommodate Mounds C, D and E from an area which is currently pasture resulting in a colour change from green to brown; - changes in topography created by Mounds C, D and E; and - movement of site plant and machinery.	Changes in the visual appearance of the landscape due to: - changes in topography created by changes in topography created by Mounds C, D and E (a maximum of 4 metres above the existing ground level); and - new woodland and hedge planting (initial planting size 40 -60 cm height). Mounds C, D and E elevate the existing undulating and rolling topography to such a degree that at close distance the changes would be read and seen as a as the foreground of a wider landscape. A 1.5 metre high cattle/ rabbit proof fence to protect the woodland planting would be visible but not an uncharacteristic feature of the landscape.	Changes in the visual appearance of the landscape due to: - changes in topography created by changes in topography created by Mounds C, D and E (a maximum of 4 metres above the existing ground level); and - new woodland and hedge planting (tree height approximately 6 metres); Mounds C, D and E would integrate with the existing undulating topography to a degree such that at close distance the changes would be distinguishable and viewed as the foreground of a wider landscape. Woodland planting would interrupt and partially screen views of Calder Vale Park buildings.
Magnitude of impact	High	Medium/ Low	Medium
Significance of impact	Very Substantial adverse (and significant)	Substantial/ Moderate beneficial	Substantial beneficial

Viewpoint 5: View from stile on public right of way (FP50)

Easting: 377019; Northing: 433330

Distance to application site: 0.1 km

Direction of view: East



Description of existing view

An agricultural landscape dominated by pasture with large fields partially enclosed by remnant hedgerows; a rolling open landform subtly falling in elevation southwards to the River Calder; view towards the hills forming part of the Forest of Pendle; extensive woodland on elevated land rising northwards from the River Calder and some isolated trees in hedgerows; overhead power lines, pylons and post and wire fences are significant detractors in the landscape.

Receptor type and sensitivity

Landscape: Type 6A: Calder Valley (host landscape type); **Medium-low** sensitivity to the landfill and landscape treatment

Visual: **High** sensitivity of users of public footpath

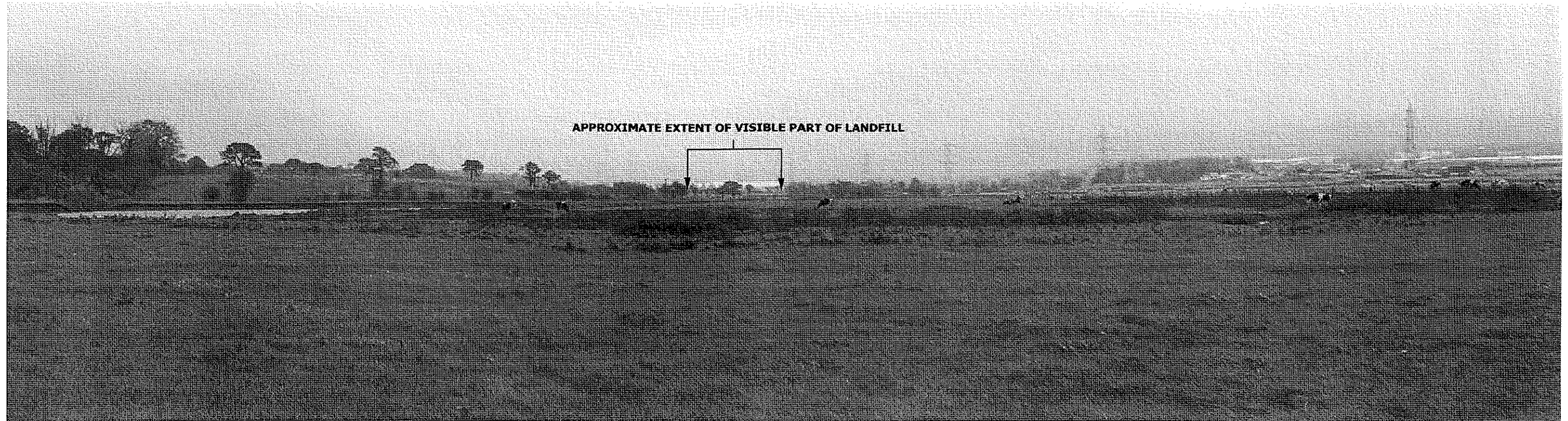
LANDSCAPE	Construction Phase	Operational Phase Year 1	Operational Phase Year 10
Nature of impact	Temporary (approximately 3 months) changes to the fabric of the landscape due to loss of species poor grazed improved pasture Temporary (approximately 3 months) changes to the character of the landscape due to: - changes in topography created by Mounds A, B, C, D and E; and - adverse impacts on aesthetic and perceptive attributes (predominantly tranquility).	Changes to the character of the landscape due to: - changes in topography (a maximum of 4 metres above the existing ground level) created by Mounds A, B, C, D and E; and - new woodland and hedge planting (initial planting size 40 -60 cm height). Mounds A, B, C, D and E would elevate the existing undulating and rolling topography. A 1.5 metre high cattle/ rabbit proof fence to protect the woodland planting would not be an uncharacteristic feature of the landscape.	Changes in the character of the landscape due to: - changes in topography (a maximum of 4 metres above the existing ground level) created by Mounds A, B, C, D and E; and - new woodland and hedge planting (tree height approximately 6 metres); Mounds A, B, C, D and E would integrate with the existing undulating topography. Woodland planting would increase tree cover in the landscape.
Magnitude of impact	Medium	Medium/Low	Medium
Significance of impact	Moderate/ Slight adverse	Slight beneficial	Moderate/ Slight beneficial
VISUAL	Construction Phase	Operational Phase Year 1	Operational Phase Year 10
Nature of impact	Temporary (approximately 3 months) changes in the visual appearance of the landscape due to: - phased removal of topsoil from grassland to accommodate Mounds A, B, C, D and E which is currently pasture resulting in a colour change from green to brown; - changes in topography created by Mounds A, B, C, D and E; and - movement of site plant and machinery.	Changes in the visual appearance of the landscape due to: - changes in topography (a maximum of 4 metres above the existing ground level) created by Mounds A, B, C, D and E; and - new woodland and hedge planting (initial planting size 40 -60 cm height). Mounds A, B, C, D and E would elevate the existing undulating and rolling topography to a degree that at a relatively close distance the changes would be read and seen in the foreground of a wider landscape. A 1.5 metre high cattle/ rabbit proof fence to protect the woodland planting would be visible but not an uncharacteristic feature of the landscape.	Changes in the visual appearance of the landscape due to: - changes in topography (a maximum of 4 metres above the existing ground level) created by Mounds A, B, C, D and E; and - new woodland and hedge planting (tree height approximately 6 metres); Mounds A, B, C, D and E would integrate with the existing undulating and rolling topography to a degree such that at a relatively close distance the changes would be difficult to distinguish and be seen in the foreground of a wider landscape.
Magnitude of impact	High	Medium/ Low	Medium
Significance of impact	Very Substantial adverse (and significant)	Substantial/ Moderate beneficial	Substantial beneficial

Viewpoint 6: View from stile on public right of way (FP52)

Easting: 376465; Northing: 433568

Distance to application site: 0.65 km

Direction of view: East



Description of existing view

A low lying, flat floodplain of the River Calder; open agricultural landscape dominated by improved pasture; view towards the hills forming part of the Forest of Rossendale; woodland on elevated land rising northwards from the River Calder and some isolated trees in hedgerows; industrial and commercial land use; prominent pylon line.

Receptor type and sensitivity

Landscape: Type 6A: Calder Valley (host landscape type); **Medium-low** sensitivity to the landfill and landscape treatment

Visual: **High** sensitivity of users of public footpath

LANDSCAPE	Construction Phase	Operational Phase Year 1	Operational Phase Year 10
Nature of impact	Temporary (approximately 3 months) subtle changes to the fabric of the landscape due to loss of species poor grazed improved pasture. Temporary (approximately 3 months) subtle changes to the character of the landscape due to: - changes in topography created by Mounds A and B; and - adverse impacts on aesthetic and perceptive attributes (predominantly tranquility).	Subtle changes to the character of the landscape due to: - changes in topography (a maximum of 4 metres above the existing ground level) created by Mounds A and B; and - new woodland and hedge planting (initial planting size 40 -60 cm height). Mounds A and B would elevate the existing undulating and rolling topography. A 1.5 metre high cattle/ rabbit proof fence to protect the woodland planting would not be an uncharacteristic feature of the landscape.	Subtle changes in the character of the landscape due to: - changes in topography (a maximum of 4 metres above the existing ground level) created by Mounds A and B ; and - new woodland and hedge planting (tree height approximately 6 metres); Mounds A and B would integrate with the existing undulating topography. Woodland planting would increase tree cover in the landscape.
Magnitude of impact	Medium/ Low	Low	Medium
Significance of impact	Slight adverse	Slight/Negligible beneficial	Moderate/ Slight beneficial
VISUAL	Construction Phase	Operational Phase Year 1	Operational Phase Year 10
Nature of impact	Temporary (approximately 3 months) minor changes in the visual appearance of the landscape due to: - phased removal of topsoil from grassland area to accommodate Mounds A and B resulting in a colour change from green to brown; - changes in topography created by Mounds A and B; and - movement of site plant and machinery.	Minor changes in the visual appearance of the landscape due to: - changes in topography (a maximum of 4 metres above the existing ground level) created by Mounds A and B; and - new woodland and hedge planting (initial planting size 40 -60 cm height). Mounds A and B would elevate the existing undulating and rolling topography to such a degree that at a distance of 0.65 km the changes would be difficult to read and seen as a small proportion of a wider landscape. A 1.5 metre high cattle/ rabbit proof fence to protect the woodland planting would be visible but not an uncharacteristic feature of the landscape.	Minor changes in the visual appearance of the landscape due to: - changes in topography (a maximum of 4 metres above the existing ground level) created by Mounds A and B; and - new woodland and hedge planting (tree height approximately 6 metres); Mounds A and B would integrate with the existing undulating topography to such a degree that at a distance of 0.65 km the changes would be difficult to distinguish and seen as a small proportion of a wider landscape. Woodland planting would interrupt and partially screen views of Calder Vale Park buildings.
Magnitude of impact	Low	Low	Medium
Significance of impact	Moderate adverse (not significant)	Moderate beneficial	Substantial beneficial

5 Summary and Conclusions

Landscape character

- 5.1 The site is on low-lying agricultural land located north of the River Calder and immediately adjacent to the west of Calder Vale Park in Simonstone. It is dominated by pasture with large fields partially enclosed by hedgerow remnant. Overhead power lines, pylons and post and wire fences are significant detractors in the landscape.
- 5.2 The proposed development is for 26,000 cubic metres of inert material arising from the development of the Calder Vale Business Park to be used to form five gently sloping mounds in the context of the existing landform of the agricultural land. The mounds would elevate the existing landform by a maximum of 4 metres run approximately in a north-south direction.
- 5.3 Given the site conditions as described in paragraph 4.3, it is concluded that the landscape context for the mounds and landscape treatment should be considered as having a **medium/ low** sensitivity to change.
- 5.4 The assessment of effects on landscape concluded that there will be physical effects on landscape fabric due to site clearance activities and on landscape character due to noise generated by earth moving plant during the mound construction period. The magnitude of impact is considered to be **medium** but of **moderate/ slight** adverse significance because the effects will be temporary.
- 5.5 When the site is operational i.e. back to use as pasture, effects on character would be limited. Landscape treatment of the mounds would be grass cover suitable for grazing which in Year 1 would reinstate a key characteristic of the landscape. This would be complemented by the strategic planting of new hedgerows and woodland planting which within 7 years would visually contain Calder Vale Business Park as well as increase general biodiversity in the area. The magnitude of impact is considered to be **medium** but of **moderate/ slight** beneficial significance in the longer term.
- 5.6 Due to the low intrinsic landscape quality of the site, the site's location adjacent to the existing Calder Vale Park industrial site and the undesignated status of the land itself, it is concluded that the development of the site will not give rise to any significant harmful effects

on local landscape character. Indeed, after a period of time, the introduction of new woodland belts will make a positive contribution and result in beneficial effects on character.

Visual assessment

- 5.7 The visual assessment concluded that during the mound construction period, the principal effect on visual amenity would result from a change in the appearance of the landscape arising from site clearance activities. From four of the six viewpoints the magnitude of impact would be **high**. Due to the **high** sensitivity of two of the receptors at viewpoints on public footpaths, this would result in **very substantial** adverse and significant change on a temporary basis.
- 5.8 When the site has been restored and back to use as pasture, the magnitude of change in existing views will either be **low** or **medium/ low** in Year 1. This would result in **substantial/ moderate** beneficial and significant impacts on two of the receptors class as being of **high** sensitivity due to the enhancement of the existing landform, a key characteristic of the landscape. As new woodland and hedgerow planting becomes established, effects on visual amenity would be **substantial** beneficial due to the screening of the existing industrial

REFERENCES:

'Guidelines for Landscape and Visual Impact Assessment' (GLVIA) (Landscape Institute and the Institute of Environmental Management and Assessment, second edition 2002).

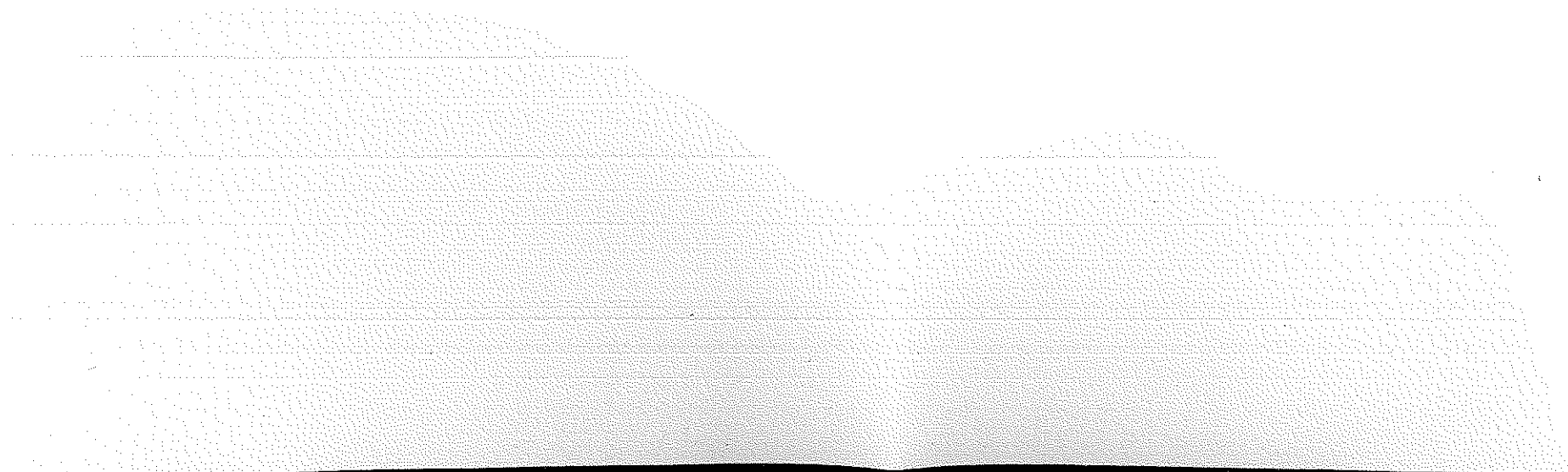
'Landscape Character Assessment: Guidance for England and Scotland', (Countryside Agency and Scottish Natural Heritage 2002).

Countryside Character Volume 2: North West

'A Landscape Strategy for Lancashire - Landscape Character Assessment' (Lancashire County Council, December 2000)

Planning Policy Statement 7 (PPS 7) 'Sustainable Development in Rural Areas'

Woolerton Dodwell Associates
Landscape and Visual Impact Assessment Methodology



INTRODUCTION

The assessment process aims to establish the following:

- A clear understanding of the site and its wider landscape setting, identifying its landscape character, value and sensitivity to the development proposed;
- the nature of the development proposals and or any mitigation measures
- the potential direct and indirect impacts of the proposals on the landscape resource (i.e. landscape elements and character)
- the potential impacts on visual receptors
- conclusions concerning the residual effects of the development proposal

The process follows a standard approach:

- Establishment of existing baseline conditions i.e. the character, quality and value of the landscape resource, and preliminary identification of the type and location of visual receptors;
- Description of the proposal including any preliminary measures included to mitigate potential impacts;
- Assessment of the sensitivity of the landscape resource and of visual receptors to the development as proposed;
- Identification of potential impacts on the existing baseline i.e. on the landscape resource and on visual receptors through desk study (including the use as appropriate of OS plans, ZTVs, photographs and wireline diagrams) and through field appraisal;
- Prediction/quantification of changes to the existing baseline i.e. the magnitude of effects and assessment of their significance on the landscape resource and on visual receptors;
- Identification of further mitigatory and/or enhancement measures if practicable.

The approach and methodology used in this assessment are based on a synthesis of guidance offered by a range of sources, tailored to the requirements of the project. The following publications are of particular relevance:

- 'Guidelines for Landscape and Visual Impact Assessment' (GLVIA) (Landscape Institute and the Institute of Environmental Management and Assessment, second edition 2002.);

- The Guidelines for Environmental Impact Assessment (2004) Institute for Environment Management and Assessment;
- 'Landscape Character Assessment: Guidance for England and Scotland', (Countryside Agency and Scottish Natural Heritage 2002);
- Landscape Character Assessment Guidance for England and Scotland: Topic Paper 6 – Techniques and Criteria for Judging Capacity and Sensitivity Countryside Agency (now Natural England) /SNH
- Landscape Institute Advice Note 01/11 - Photography and photomontage in landscape and visual impact assessment (February 2011)

Landscape and visual effects of development are key aspects for assessment through the EIA process. Landscape and visual effects are assessed through separate but linked procedures. The assessment of potential impacts on the landscape concern effects on an environmental resource i.e. the landscape. This underpins the assessment of visual effects, which are assessed as an interrelated effect on populations.

GLVIA advise at page 12 that;

"Landscape effects derive from changes in the physical landscape, which may give rise to changes in its character and how it is experienced. This may in turn affect the perceived value ascribed to the landscape. The description and analysis of effects on a landscape resource relies on the adoption of certain basic principles about the positive (or beneficial) and negative (or adverse) effects of change in the landscape. Due to the inherently dynamic nature of the landscape, change arising from a development may not necessarily be significant.

Visual effects relate to changes that arise in the composition of available views as a result of changes to the landscape, to people's responses to the changes, and to the overall effects with respect to visual amenity.'

ASSESSMENT OF THE LANDSCAPE BASELINE

The assessment of the landscape baseline draws upon a desk study of previously published regional

and local studies and on fieldwork within the local area. It considers the individual elements and features that make up the landscape and their value and importance, and the characteristics that derive from individual elements or combinations of elements that make a particular contribution to the character of an area. It also analyses the way in which these elements combine in distinctive and recognisable patterns of landform, land cover, land use and built development to create the character of the landscape. These represent landscape receptors that may be directly or indirectly affected by the proposal. Any special value or importance ascribed to the landscape and particular cultural and ecological interests and associations etc should also be established.

Landscape Character Assessment and Evaluation

Analysis of the baseline information enables descriptions to be prepared of the existing landscape character of the site and surrounding area, including a classification, as appropriate, of the landscape into distinctive types or areas which share common features and characteristics. This may take account of or adapt from other landscape character assessments prepared for the area.

The relative value of a landscape needs to be considered as part of the assessment process. Assessment of landscape quality currently combines judgements concerning the physical state/strength of landscape structure, character/intactness of a landscape, together with judgements on the condition or state of repair of individual features or elements that contribute to character. However, other considerations may also be of relevance such as distinctiveness, sense of place, appropriateness of management, and the presence of features worthy of conservation. Landscape value is concerned with the relative value or importance attached by the community or by society as a whole to different landscapes, which expresses national or local consensus, because of its quality, special qualities (such as scenic beauty, tranquillity, wildness, cultural and ecological associations).

A landscape of high quality is frequently also a highly valued landscape. However, it is important to recognise other possibilities, including landscapes of lower quality in a broad context that may be highly valued locally. 'Landscape Character Assessment: Guidance for England and Scotland' (2002) contains current Countryside Agency / Scottish Natural Heritage advice as follows:

'In a policy context the usual basis for recognising certain highly valued landscapes is through the application of a local or national landscape designation. Yet a landscape may be valued by different communities of interest for many different reasons without any formal designation, recognising for example, perceptual aspects such as scenic beauty, tranquillity or wilderness;

special cultural associations; the influence and presence of other conservation interests; or the existence of a consensus about importance, either nationally or locally'.

Landscape quality and value are among the factors that feed in to the subsequent evaluation of the sensitivity of a landscape to accommodate change arising from a particular development, without detrimental effects on character. Landscape sensitivity is discussed further below.

Sensitivity of the Landscape Resource

The sensitivity of the landscape resource to the proposed development will vary with existing land use, the pattern and scale of the landscape, visual enclosure/openness of views and distribution of visual receptors, the scope for mitigation that would be in character with the landscape, and the value placed on the landscape by local communities and by society in general. Evaluation of sensitivity will reflect the quality, value, contribution to landscape character of key elements or characteristics of the landscape, and the extent to which they can be replaced or substituted.

The sensitivity of landscape receptors reflects a combination of landscape quality and value. Current advice suggests that landscape quality is based on judgements about the physical nature of the landscape and its state or condition, including the degree to which it may be regarded as intact from visual, ecological and functional perspectives. For example, a landscape of distinctive character in which patterns of elements and features are largely intact is considered to be of higher quality and consequently of higher sensitivity than one in which key features have been disrupted or lost, or where features have been introduced that are considered detrimental to inherent character.

Sensitivity is not absolute but is likely to vary according to the existing landscape, the nature of the proposed development and the type of change being considered. The revised 'Guidelines: Landscape and Visual Impact Assessment' (GLVIA) note at paragraph 7.16 that '*the determination of the sensitivity of the landscape resource is based upon an evaluation of each key element of the landscape likely to be affected. The evaluation will reflect such factors as its quality, value, contribution to landscape character, and the degree to which a particular element or characteristic can be replaced or substituted.*'

The document Landscape Character Assessment Guidance for England and Scotland: Topic Paper 6 – Techniques and Criteria for Judging Capacity and Sensitivity (Countryside Agency (now Natural England) /SNH) provides further guidance on the assessment of sensitivity.

Landscape *value* is concerned with the *relative value* attached to different landscapes, and is often associated with a landscape designation. 'Landscape Character Assessment: Guidance for England and Scotland' (2002) contains current Countryside Agency / Scottish Natural Heritage advice as follows:

'In a policy context the usual basis for recognising certain highly valued landscapes is through the application of a local or national landscape designation. Yet a landscape may be valued by different communities of interest for many different reasons without any formal designation, recognising for example, perceptual aspects such as scenic beauty, tranquillity or wilderness; special cultural associations; the influence and presence of other conservation interests; or the existence of a consensus about importance, either nationally or locally'.

The higher the value of a landscape resource (in its own right as a component of character, or in terms of designation) the higher its level of sensitivity.

The level of sensitivity assessed for individual landscape receptors reflects a particular combination of quality, value, and contribution to landscape character as evaluated for each individual receptor. The following descriptors are intended to indicate the overall approach to the classification of relative landscape sensitivity:

High sensitivity landscapes

e.g. Internationally designated/ recognized landscape/ feature important / highly valued components of the landscape or landscapes of particularly distinctive character and without detracting features, vulnerable to relatively small changes

High/Medium sensitivity landscapes

e.g. Nationally designated/ recognised landscape/ feature. Strong landscape structure, distinctive characteristics, patterns, balanced combinations of landform and land cover with some detracting features and tolerant of some change

Medium sensitivity landscapes

e.g. County/locally designated/ recognized landscape/ feature. Recognisable landscape structure, characteristics, patterns and combinations of landform and land cover moderately valued characteristics with some detracting features and reasonably tolerant of changes

Medium/Low sensitivity landscapes

e.g. Non-designated landscape but locally valued components/ features. Weak landscape structure, partly degraded with frequent detractors and potentially tolerant of significant changes

Low sensitivity landscapes

e.g. Non-designated landscape, very weak or degraded structure, extensive detracting features and tolerant of substantial change

In terms of landscape character, judgements concerning the likely sensitivity of the local landscape to the changes which would result from the development, and its ability or *capacity* to accommodate the development, derive from the assessments made of landscape character, quality and value. Consideration must therefore be given to the capacity of the site and the wider landscape to accommodate the development. *Landscape Character Assessment: Guidance for England and Scotland'* (2002) contains current Countryside Agency/ Scottish Natural Heritage advice as follows:

'Landscape capacity refers to the degree to which a particular landscape character type or area is able to accommodate change without significant effects on its character, or overall change of landscape character type. Capacity is likely to vary according to the type and nature of change being proposed.'

The revised 'Guidelines: Landscape and Visual Impact Assessment' (GLVIA) published jointly by the Institute of Environmental Assessment and the Landscape Institute note at 2.28 that '*landscapes vary in their capacity to accommodate different types of development. Sensitivity is thus not absolute but is likely to vary according to the existing landscape, the nature of the proposed development and the type of change being considered.'*

ASSESSMENT OF EFFECTS

Development has potential to affect the landscape and visual resource in three main ways. These are:

- the direct physical effect that the development would have on the fabric of the site, such as the removal of trees, walls or other landscape elements

- the effect that the development would have on the landscape character of the site and surrounding area due to changes that would occur in the composition of the landscape as a result of the presence of the development. The changes or impacts are assessed in relation to identified landscape character types and designated areas and features of landscape value; and
- the effect that the development would have on views from within the study area, including changes that would occur in the composition and character of the view. The changes or impacts are assessed in relation to the viewpoints identified within the study area, which have been selected to represent a range of location types and viewing distances.

This approach to assessment of effects on the landscape involves the identification of the likely landscape effects of the development proposals and prediction of their likely magnitude or level of impact according to descriptive criteria. The likely magnitude or level of effect is considered in relation to the sensitivity of the landscape to the development as proposed. This enables conclusions to be drawn concerning the overall significance of the effects, including whether they may be regarded as equivalent to likely significant effects i.e. **significant** or **not significant** when discussed in terms of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999. Different criteria are used to assess sensitivity and magnitude of change in respect of landscape effects and visual effects. These are described below.

LANDSCAPE EFFECTS

Two main types of potential landscape effects are considered:

- Effects on landscape fabric, that is the direct impacts of the development on the physical fabric of the landscape through losses of or additions to the range of elements (e.g. forestry, pasture, trees, hedgerows) that together make up the landscape;
- Effects on landscape character, that is the indirect effects of the development on the character, quality and value of the landscape resource and the way in which it is experienced. Effects occur due to changes in the composition of the landscape as a result of the presence of the development, and are assessed in relation to identified landscape character types and designated areas and features of landscape value.

Magnitude of Effects

As GLVIA notes (paragraph 7.19), there is no standard methodology for quantifying the scale or **magnitude** of relative effects on the landscape. However, assessments are usually based on consideration of the scale or degree of change in the landscape resource, the nature of the effect and its duration. The criteria used in this assessment to assess magnitude of predicted effects on the landscape resource are set out below:

Magnitude of effect	Examples of magnitude
High	Major alteration to or loss of key landscape features or elements of the baseline that are important to character, introduction of features/elements totally uncharacteristic or uncharacteristic of the area
High/Medium	Major alteration to or loss of one or more key landscape features or elements of the baseline that are important to character resulting from the development, introduction of features/elements substantially uncharacteristic of the area
Medium	Noticeable alteration to or loss of one or more key landscape features or elements of the baseline that are important to character, introduction of features or elements that are not substantially uncharacteristic of the area
Medium/Low	Minor alteration to or loss of one or more key landscape features or elements of the baseline that are important to character, introduction of features or elements that are characteristic or not uncharacteristic of the area
Low	Very minor alteration to or loss of to one or more key landscape features or elements of the baseline that are important to character, introduction of features or elements that are characteristic or not uncharacteristic of the surrounding landscape

Assessment of Significance

The assessment of significance of effects on landscape fabric and on landscape character is based on the combined consideration of all of the factors considered in assessing the sensitivity of the receptor and the magnitude of change upon it. For physical effects on landscape fabric, this includes the value and quality of the landscape element, the extent to which it would be altered or removed, and the

potential for/appropriateness of mitigation. For indirect effects on landscape character, the factors considered include quality, value, and existing landscape character, physical separation (intervening distance) between the development and the receptor and the extent to which the receptor would be affected.

The following matrix is a graphic representation of the approach to assessment of significance based on a combined consideration of the sensitivity of the receptor and the magnitude of change upon it. The matrix is a general guide to the assessment process; it should not be regarded as prescriptive. Those effects judged by the assessor to be of 'very substantial', very substantial– substantial', 'substantial' or 'substantial-moderate' significance may be regarded as analogous with '*likely significant impacts*' as referred to in the Environmental Impact Assessment (England and Wales) Regulations 1999.

	<i>Magnitude of Change</i>				
	High	High/ medium	Medium	Medium/ Low	Low
High	Very Substantial	Very Substantial/ Substantial	Substantial	Substantial/ Moderate	Moderate
High/Medium	Very Substantial/ Substantial	Substantial	Substantial/ Moderate	Moderate	Moderate/ Slight
Medium	Substantial	Substantial/ Moderate	Moderate	Moderate/ Slight	Slight
Medium/Low	Substantial/ Moderate	Moderate	Moderate/ Slight	Slight	Slight / Negligible
Low	Moderate	Moderate/ Slight	Slight	Slight / Negligible	Negligible
<i>Receptor sensitivity</i>					

VISUAL EFFECTS

Potential visual effects concern the effects that the development may have on views from within the study area, including changes that would occur in the composition and character of the views of visual

receptors such as local residents and those viewing the site from roads, amenity locations and other recreational resources in the vicinity. Visual effects have been predicted by reference to the likely appearance of the development in the landscape using computer-generated photomontages of the proposed development when viewed from the selected viewpoints, and field assessment of the local landscape.

The approach to assessment of visual effects involves the identification of the likely effects of the development proposals on views and prediction of their likely magnitude or level of impact according to descriptive criteria. The likely magnitude or level of effect is considered in relation the sensitivity of the visual receptor to the development proposal. This enables conclusions to be drawn concerning the overall significance of the impacts, including whether such impacts may be regarded as equivalent to likely significant effects when discussed in terms of the Environmental Impact Assessment (England and Wales) Regulations 1999.

Magnitude of Effects

There is no standard methodology for quantifying the scale or magnitude of visual effects. GLVIA advises at paragraph 7.36 that in evaluating visual effects, the magnitude of visual change is described by reference to the scale of change in the view, the degree of contrast or integration of any new features, the duration and nature of effects, the angle of view in relation to the main activity of the receptor, viewing distance and the extent of the area over which changes would be visible.

The factors that influence the visual effects of development fall into five main categories. These are:

- The attributes of the landscape in which the development is sited i.e. the presence or absence of landscape features and the scale/ enclosure of the landscape within the field of view;
- The design (including materials) and siting of the development itself;
- The atmospheric conditions prevalent at the time of viewing;
- The distance of the viewer; and
- The perceptions of the viewer.

There is general agreement that the visual impact of development reduces with increasing viewing distance. The magnitude of visual impact at any given distance will vary according to a range of factors, including the scale and massing of the development, the presence of other features in the view that draw the eye, and the extent to which views of the development from the viewpoint in question are

obstructed or filtered by intervening landform or by landscape elements such as trees, woodlands, hedgerows or by built structures.

Atmospheric conditions may also affect the extent to which a development may be visible in the view. Comments concerning visibility conditions and viewing distance reflect the following Meteorological Office guidance¹

<u>Visibility Conditions</u>	<u>Visibility distance bands</u>
Thick Fog	0m to 199m
Very Poor	1000m to 1700m
Poor	1800m to 3500m
Moderate	3600m to 7km
Good	8km to 17km
Very Good	18km to 35km
Excellent	35km plus

The relationship between viewing distance and field of view is an important consideration, and one that affects the proportion of a field of view that is occupied by a development in relation to other features. As distance increases, the relative size of the development reduces and a broader area is viewed in which peripheral landscape features occupy more of the view and so compete for the attention of the viewer.

The criteria used in this assessment to assess magnitude of predicted visual effects are set out below:

Magnitude of effect	Examples of magnitude
High	Major permanent/long term change in the existing view, change very apparent involving high level of change in character and composition of baseline i.e. pre-development view
High/Medium	Major-medium permanent/long term change in the existing view, change apparent involving high –medium level of change in character and composition of baseline i.e. pre-development view
Medium	Medium permanent/long term change in the existing view,

¹ Pers Comm. Charlie Stewart of the Meteorological Office to Ian Ibbotson of Key 3D Ltd, 4 March 2005

	change noticeable involving medium level of change in character and composition of baseline i.e. pre-development view
Medium/Low	Medium-minor permanent/long term change in baseline i.e. pre-development view - change will be distinguishable involving medium-low level of change in character and composition of baseline i.e. pre-development view
Low	Minor permanent/long term change in baseline i.e. pre-development view - change will be distinguishable from the surroundings whilst composition and character of view, although altered will be broadly similar to pre-change circumstances.

The Sensitivity of Visual Receptors

The sensitivity of visual receptors varies according to the location and context of the viewpoint, the expectations and occupations or activity of the receptor and the importance of the view (GLVIA paragraph 7.31). These factors may be expressed in terms of:

- **The value of the view/viewpoint** – which reflects the intrinsic character and scenic qualities of its location and context. Where recognised through the designation of an area (such as a National Park or AONB), value is increased, while the presence of detracting features in a view will generally reduce value. Higher value view/viewpoints are likely to be more sensitive to change;
- **The importance of the viewpoint** – as indicated by some form of recognition, for example as noted in a guide book, marked on a map or indicated on the ground by a sign or other visible feature. The provision of facilities e.g. seating, parking, footpath may also indicate a location of higher importance. Views gained from locations where people gather in the outdoors may also be of higher importance.
- **The nature of the viewer** and their expectations, occupations and activities when experiencing the view. High sensitivity viewers/viewpoints include those where the attention of users may be focussed on the landscape e.g. from public rights of way and other outdoor recreational facilities, and from residential properties. Viewers in cars and trains are considered to be of relatively lower sensitivity due to the transient moving nature of the view

The levels of sensitivity assessed for individual visual receptors reflect a particular combination of these factors as evaluated for individual receptors. Views from residential properties have been included in

the 'high' sensitivity category for the purposes of impact assessment as they represent an important aspect of the visual amenity of local people. However the key issue is whether the proposal would unacceptably affect amenities and the existing use of land and buildings which ought to be protected in the public interest.

The following descriptors are intended to indicate the overall approach to the classification of the relative sensitivity of visual receptors:

High sensitivity visual receptors

residential properties, public rights of way and other outdoor recreational facilities where the attention of users may be focussed on the landscape.

High/Medium sensitivity visual receptors

minor roads, lanes by users travelling through the local area at slower speeds.

Medium sensitivity visual receptors

'A' and 'B' roads routes by users travelling through or past the local area at speed; outdoor sporting and recreational facilities; outdoor working environments.

Medium/Low sensitivity visual receptors

Motorways and trunk roads

Low sensitivity visual receptors

industrial plants, working environments (indoor), prisons

Assessment of Significance

The assessment of significance of visual effects is based on the combined consideration of all of the factors considered in assessing the sensitivity of the receptor and the magnitude of change in the view.

The following matrix is a graphic representation of the approach to assessment of significance based on a combined consideration of the sensitivity of the receptor and the magnitude of change upon it. The matrix is a general guide to the assessment process; it should not be regarded as prescriptive.

Those effects judged by the assessor to be of 'very substantial', very substantial– substantial', 'substantial' or 'substantial-moderate' significance may be regarded as analogous with 'likely significant impacts' as referred to in the Environmental Impact Assessment (England and Wales) Regulations 1999. Effects of 'moderate' significance have some potential to represent 'likely significant impacts'

depending on local circumstances.

	Magnitude of Change				
	High	High/ medium	Medium	Medium/ Low	Low
High	Very Substantial	Very Substantial/ Substantial	Substantial	Substantial/ Moderate	Moderate
High/Medium	Very Substantial/ Substantial	Substantial	Substantial/ Moderate	Moderate	Moderate/ Slight
Medium	Substantial	Substantial/ Moderate	Moderate	Moderate/ Slight	Slight
Medium/Low	Substantial/ Moderate	Moderate	Moderate/ Slight	Slight	Slight / Negligible
Low	Moderate	Moderate/ Slight	Slight	Slight / Negligible	Negligible
Receptor sensitivity					

Cumulative Effects

Cumulative landscape and visual effects are those that result from additional changes to the landscape or to visual amenity caused by the proposal in conjunction with other developments.

Generally, the approach to assessment of cumulative effects is the same as for the assessment of site specific landscape and visual effects, in that the significance of landscape and visual effect is determined by assessing the sensitivity of the landscape or visual receptor, and the magnitude of change. The resulting level of effect may be described as 'not significant' or 'significant' in terms of the EIA regulations.