

## CONTENTS

|  |         |
|--|---------|
| Introduction .....   | 10-2    |
| Outline Methodology .....  | 10-2    |
| Location & Context Of The Site .....   | 10-4    |
| Development Proposals.....   | 10-5    |
| Sources of Potential Landscape and Visual Effects.....                         | 10-5    |
| Mitigation Measures .....  | 10-5    |
| Policy Context.....  | 10-6    |
| Relevant Planning Policy.....  | 10-6    |
| National Planning Policy Framework.....  | 10-6    |
| West Sussex County Council Minerals Local Plan.....                            | 10-6    |
| Horsham District Council LDF .....   | 10-7    |
| South Downs National Park Partnership Management Plan .....                    | 10-8    |
| Landscape Effects Assessment.....  | 10-9    |
| Landscape Scope .....  | 10-9    |
| Landscape Baseline .....   | 10-9    |
| Landscape Character of the Application Site and its Immediate Surroundings ... | 10-9    |
| Landscape Setting .....  | 10-13   |
| Prediction of Landscape Effects and their relative Importance .....            | 10-16   |
| Summary of Predicted Landscape Effects .....                                   | 10-20   |
| Visual Assessment .....  | 10-20   |
| Scope .....  | 10-20   |
| Visual Baseline.....   | 10-21   |
| Prediction of Visual Effects and their Relative Importance.....                | 10-22   |
| Predicted Residual Visual Effects .....  | 10-25   |
| Summary of Predicted Visual Effects .....                                      | 10-29   |
| Summary .....  | 10-30   |
| Introduction .....   | 10-30   |
| Landscape Effects.....   | 10-30   |
| Visual Effects .....   | 10-30   |
| APPENDIX L/1 – LANDSCAPE AND VISUAL GLOSSARY.....                              | 10-i    |
| APPENDIX L/2 – DETAILED LANDSCAPE AND VISUAL METHODOLOGY.....                  | 10-viii |

## INTRODUCTION

10.1 Landscape and Visual Impact Assessment (LVIA) is defined by the Landscape Institute's 'Guidelines for Landscape and Visual Impact Assessment' (Edition 3 – April 2013), hence forth referred to as the GLVIA3, which states that;

*"LVIA may be carried out either formally, as part of an Environmental Impact Assessment (EIA), or informally, as a contribution to the 'appraisal' of development proposals and planning applications. Both are important and the broad principles and the core of the approach is similar in each case."*<sup>1</sup>

10.2 The assessment contained within this report represents a formal Landscape and Visual Impacts Assessment, and identifies the effects of the proposals on the landscape resource and the views and visual amenity of people in the vicinity. The report is split into eight main sub-sections as follows:

- an **INTRODUCTION AND OUTLINE METHODOLOGY**;
- A review of the **LOCATION and CONTEXT** of the site which help inform the landscape and visual context and the definition of the study area;
- a review of the potential landscape and visual effect sources within the **DEVELOPMENT PROPOSALS**;
- analysis of the **POLICY CONTEXT**;
- **LANDSCAPE EFFECTS ASSESSMENT**; including the identification of landscape receptors, a judgement of value, susceptibility and consequential sensitivity; the magnitude of change and nature of effects would then be ascertained and resultant impacts defined;
- **VISUAL EFFECTS ASSESSMENT**; including the identification of visual receptors, a judgement of value, susceptibility and consequential sensitivity; the magnitude of change and nature of effects would then be ascertained and resultant impacts defined; and
- a **CONCLUSION** on the likely landscape and visual effects of the proposed development.

## Outline Methodology

10.3 Landscape and visual effects are identified through a process of combining receptor value and susceptibility to determine sensitivity and then combining this with assessment of the magnitude of change resulting from the development. Combinations of sensitivity and magnitude determine the importance of individual effects caused by the proposed development. The process of assessing landscape and visual effects is outlined in Table L-1 below; a glossary of terms used, such as value, susceptibility etc is provided in Appendix L/1; and full details of the methodology used in this assessment is contained in Appendix L/2.

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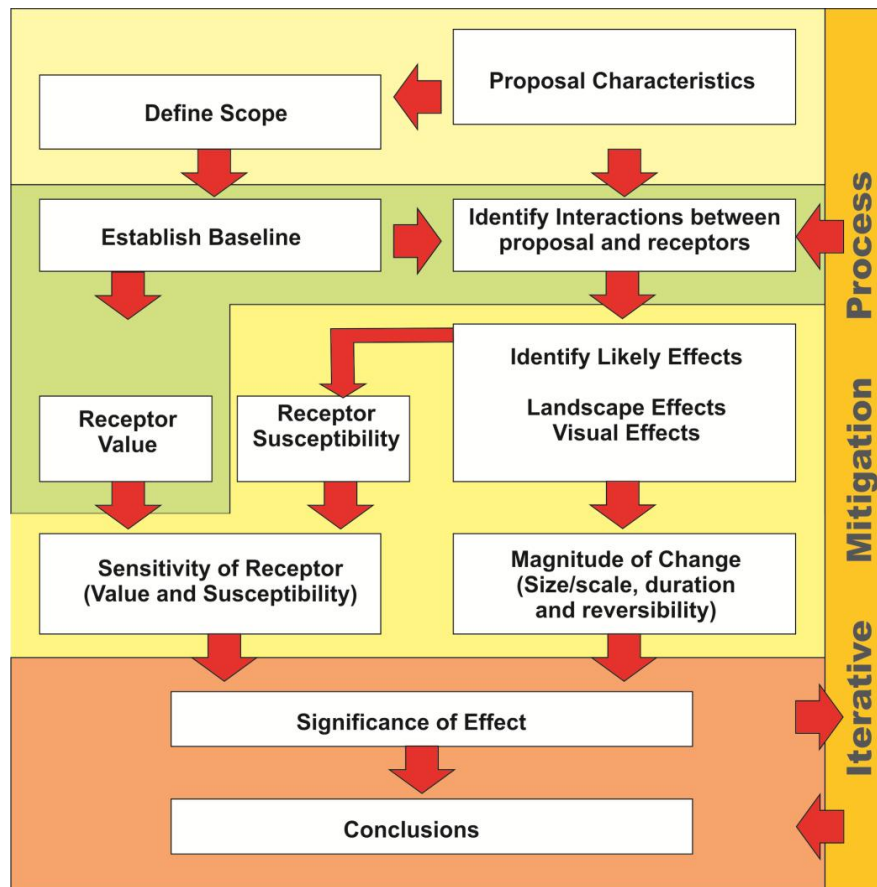
<sup>1</sup> Guidelines for Landscape and Visual Impact Assessment (Third Edition) Paragraph 1.3

10.4 Table L-1 below outlines the general process in assessing landscape and visual effects. It is important to recognise that professional judgement is a very important part of this process:

*“While there is some scope for quantitative measurement of some relatively objective matters, for example the number of trees lost to the construction of a new mine, much of the assessment must rely on qualitative judgements.”<sup>2</sup>*

10.5 It is essential that professional and qualitative judgements are reported in a transparent and clear manner, and that any identified effects are suitably described

**Table L-1  
Outline Landscape and Visual Methodology**



10.6 Primary mitigation can be built into a proposed development as part of an iterative process as identified in Table L/1, whether as part of an LVIA or an appraisal.

<sup>2</sup> Guidelines for Landscape and Visual Impact Assessment (Third Edition) Paragraph 2.23

## LOCATION & CONTEXT OF THE SITE

- 10.7 This section briefly describes the landscape and visual context of the proposed development site. More detailed examination of the landscape in the area and of the visual aspects of the proposal is provided respectively within the 'Landscape Effects Assessment' and 'Visual Effects Assessment' sections of the LVIA.
- 10.8 The proposed development site is located directly north of the A283 and approximately 2km east of the centre of Storrington, in West Sussex. The site comprises of a small active sand pit on which the current planning permission is due to expire and a 2 year extension has been applied for. To the west a larger sand pit is operated by CEMEX, and the two pits merge to form one void as permitted under the existing planning permissions for both sites.
- 10.9 The site is in or near to two National Character Areas (NCAs), as defined by Natural England, namely the South Downs (125) and Wealden Greensand (120) NCAs, with the A283 forming the approximate boundary between them. The site itself lies within the Wealden Greensand NCA to the north of the A283 but its character is influenced by the South Downs NCA directly to the south.
- 10.10 The South Downs form a prominent escarpment to the south rising to over 200m AOD in elevation, running east to west, and with the crest of the ridge approximately 1.5km to the south of the site within the South Downs NCA. The scarp slopes provide a backdrop to the landscape of the Wealden Greensand.
- 10.11 To the north within the Wealden Greensand the ground is generally undulating with shallow valleys and low hills such as Washington Common to the northeast of the site.

### *Extent of Study Area*

- 10.12 The study area is defined by the escarpment of the South Downs to the south, which prevents views to the south beyond the escarpment crest. The undulating ground to the north within the Wealden Greensand NCA limits theoretical views of the site from the north. These factors are illustrated in Figure WP L/1 (Volume 2B - Technical Appendix 10) – Zone of Theoretical Visibility (ZTV) which maps out the visibility of the existing site surface. This Figure is based on a bare earth model of the landscape and does not take account of the screening provided by vegetation and/or built structures, and thus represents the worst case for theoretical visibility at ground level. The proposed development would see fill activities taking place on site, but below the existing levels of the site edge on which the ZTV is based.
- 10.13 The existing quite extensive woodland and hedgerows around the site, which is typical of the extensive woodland and tree cover of the Wealden Greensand NCA, and the presence of nearby settlements would both greatly reduce the actual visibility, compared with that portrayed by the ZTV.

- 10.14 The choice of study area for this LVA and illustrative viewpoints has been guided by this ZTV analysis and covers parts of the South Downs within approximately 2.5km of the site and the adjacent landscape of the Wealden Greensand NCA within approximately 1km.

## DEVELOPMENT PROPOSALS

### The Nature of the Development

- 10.15 Permission already exists for the removal of sand at the site, and extraction has begun. The current base of the workings is at approximately 26m AOD and the current permission allows the extraction of sand down to 17m AOD or the base of the Folkstone Beds.
- 10.16 The existing permission is due to terminate at the end of 2013. An approved restoration plan exists for the site from 1995. Phase 1 of the restoration has been implemented and the scheme is subject to conditions which require Phase 2 of the restoration to be completed two years after the permanent cessation of the workings. The Phase 1 restoration includes restored slopes down into the void in the southern and north western parts of the site.
- 10.17 An LVA has already been written to accompany the planning application for the extension of the working life of Washington Sand Pit by two years. No changes are proposed to the existing permission other than the extension of time in this application.
- 10.18 The following LVIA has been written to accompany a separate planning application and as a chapter of an Environmental Assessment. Relating to the continued extraction of mineral at the site and the importation of inert material to secure the final restoration scheme for the site.

### Sources of Potential Landscape and Visual Effects

- 10.19 Existing site operations would continue including the extraction of sand by mechanical means and transportation of this material from the site via the public road network for a further two years. Restoration works using imported inert materials are proposed for 5 years and would therefore be viewed in parallel with the aforementioned mineral activities for two years, after which time restoration works would continue for a further three years, including movement of material to site, with sequential restoration of the site.

### Mitigation Measures

- 10.20 No additional mitigation proposals are proposed in connection with this application because the site is already well screened to minimize visual effects. Also minimal space exists around the periphery of the site for additional mitigation planting, and part of the application would be the sequential restoration of the site as the desired landforms are achieved, starting in the south west corner and working in a clockwise direction.

## POLICY CONTEXT

### Relevant Planning Policy

- 10.21 Administratively the site is located within the county of West Sussex and district of Horsham, and directly north of the South Downs National Park.
- 10.22 Planning policies relevant to the landscape and visual implications of the proposed development and the receptors identified in the following assessment have been sourced from the following documents;
- National Planning Policy Framework March 2012;
  - West Sussex County Council Minerals Local Plan 2003;
  - Horsham District Council - Local Development Framework to 2018; and
  - South Downs National Park Partnership Management Plan 2014-2019 – Consultation Draft.

### National Planning Policy Framework

- 10.23 NPPF with regard to National Parks and mineral development within them states;

*“as far as is practical, provide for the maintenance of landbanks of non-energy minerals from outside National Parks, the Broads, Areas of Outstanding Natural Beauty and World Heritage sites, Scheduled Monuments and Conservation Areas”*

- 10.24 Although not within the South Downs National Park, Washington Pit lies directly north of the park which also extends to include Washington Common directly east of Washington Pit.
- 10.25 Account should therefore be taken of the parks objectives.

### West Sussex County Council Minerals Local Plan

- 10.26 The Minerals local Plan identifies the following considerations with regard to the proposed development site and its context.

*“4.4 The Mineral Planning Authority considers that in West Sussex preference should be given to extraction outside areas protected by statutory designation. However, there are areas of more local conservation importance, and other areas of countryside which while having no special protection are enjoyed and valued for their own sake. Nevertheless, these areas would not be afforded the same degree of protection as those with statutory designations.”*

And

**“Policy 19:** *In considering planning applications for mineral extraction attention will be given to the effect upon residential and other amenity, measures to mitigate the impact.”*

10.27 The proposed development site is outside the South Downs National Park but close enough to the boundary to have the potential for indirect effects on the park landscape. The site is within approximately 150m of residential properties to the north making Policy 19 relevant.

10.28 In terms of restoration the Minerals Local Plan states;

**“Policy 20:** *Planning permission for mineral extraction will only be granted where proposals for reclamation would be practical and appropriate for the location, and that reclamation would be completed at the earliest opportunity”*

*“The reclamation of mineral sites can present opportunities to provide new water related features including recreation facilities, landscape enhancement and wildlife habitats. Such opportunities exist at Sandgate Park at Sullington Warren near Storrington.”*

10.29 Washington Pit is part of the Sandgate Park area and thus the above policy is particularly relevant. The Horsham LDF expands on this opportunity as noted below.

### Horsham District Council LDF

10.30 This document identifies a site specific allocation of land covering Washington Sand Pit. The relevant policy (AL 19) states that;

**“POLICY AL 19**

*Sandgate Park, Sullington*

*The Council will seek to secure the Sandgate Park area, as shown on the Proposals Map, for the formation of a Country Park as soon as it is practical to do so, taking into account the requirements for mineral extraction. Proposals that could assist in the formation of the country park will be encouraged. Development proposals not directly associated with mineral extraction that could prejudice the formation of the Country Park will not be permitted.”*

10.31 The area identified covers the majority of the Sandgate Park area of land, to the north of the A 283 between Water Lane to the west and Hampers Lane to the east. This includes the existing CEMEX sand pit as well as the Washington Sand Pit site.

10.32 The supporting text for Policy AL19 states in paragraph 3.68 that;

*“Although sand extraction may continue for many years yet, and probably beyond the plan period, it is essential that the proposed future Country Park use is not prejudiced by development proposals that inhibit its*

*implementation and that provision is made to encourage proposals that could assist in creating a Country Park as soon as it is practicable to do so.”*

And in paragraph 3.65

*“There is scope to create a variety of formal and informal recreation uses following sand extraction at Sandgate Park between Water Lane and Hampers Lane. The grading and landscaping process with respect to lagoons in the east of the site has already begun. These areas could be used for informal recreational purposes as well as fishing and water sports such as windsurfing. There is a need for small campsites for "backpackers" within easy reach of the South Downs Way and also a hostel or "bunkhouse" accommodation, providing simple dormitory and self-catering facilities. It is considered that Sandgate Park could provide such facilities given its proximity to the South Downs Way, just half a mile away. Sandgate Park could also be a suitable location for additional active sports provisions such as football pitches.”*

- 10.33 The intension of Policy AL19 is to absorb Washington Pit into the proposed country park area after its final restoration. Drawing WP L/15 and the accompanying Landscape Restoration Management Plan identifies how the objectives of Policy AL19 have been met in detail. The proposed restoration scheme seeks a balance between enhancing the nature conservation of the site and the public access and enjoyment of it and the wider country park objective. Retained sandstone faces provide valuable habitats for sand martins as well as insects, whilst areas of acid grassland and meadow provide valuable habitats and foraging grounds, as well as visual interest and suitable year round locations for informal recreational activities such as walking and picnicking. The existing local framework of broadleaved woodland is to be reinforced. Footpaths are strategically positioned to allow safe public access to water's edge environments and vehicular movements are to be restricted, save for maintenance access, to the south eastern edge of the site.

## South Downs National Park Partnership Management Plan

- 10.34 The management plan contains a number of general policies of which the most relevant is Policy 1, which states;

*“Policy 1. Conserve and enhance the natural beauty and special qualities of the landscape and its setting, in ways that allow it to continue to evolve and become more resilient to the impacts of climate change and other pressures.”*

- 10.35 Of note in Policy 1 is the reference to setting. The proposed development site is located at the foot of the escarpment and forms a component of the landscape setting for the adjacent section of the National Park. This means giving particular attention to any effects on the character and quality of the landscape setting of the National Park, as well as on views from it.

- 10.36 The management plan refers to mineral development in section 2.10 as follows;



*“The need for new mineral workings is being addressed through the joint minerals and waste local plans that are being developed with the County Councils. ...The plans will all contain policies to ensure that any applications for minerals development within the National Park will include conditions requiring the progressive restoration and aftercare of the site to the highest standard.”*

- 10.37 Mineral related policy is thus generally contained within the West Sussex Minerals Local Plan, as noted above.

## LANDSCAPE EFFECTS ASSESSMENT

### Landscape Scope

- 10.38 As in GLVIA3, assessment of landscape effects deals with the effects of change and development on landscape as a resource. The concern here is with how the proposal will affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character.

- change in and/or partial or complete loss of elements, features or aesthetic or perceptual aspects that contribute to the character and distinctiveness of the landscape;
- addition of new elements or features that will influence the character and distinctiveness of the landscape;
- combined effects of these changes on overall character.

### Landscape Baseline

- 10.39 Study of the existing and developing landscape provides the ‘landscape baseline’ against which changes that may result from the proposed development can be assessed.
- 10.40 The application site covers an area of approximately 6.7 ha, as illustrated by WP L/1. Potential direct landscape effects would only occur within the site itself, and would be judged against the current baseline condition i.e. the permitted quarry development. Potential effects on the wider landscape would result from, any visible changes to the application site that might affect how the overall character of the wider landscape is perceived.

### Landscape Character of the Application Site and its Immediate Surroundings

- 10.41 The following sub-sections provide more detail relating to the characteristics of the application site and its more immediate surroundings. It is important to understand how the site relates to the adjacent landscape to understand how well the development might be absorbed into the landscape in the short-medium-long term.

## *Natural and Semi-natural Characteristics*

- 10.42 As briefly discussed in the Location and Site Context section above the site is located within the undulating landscape of the Wealden Greensand area close to the South Downs escarpment.
- 10.43 The adjacent landscape has an elevation of approximately 59m AOD, with an access track descending down into the pit from the southeast corner of the application site. The base of the pit is currently at 26m AOD and to the west the site merges with the existing lagoons within the adjacent CEMEX sand pit.
- 10.44 The site boundaries to the north, east and south are generally well vegetated with hedgerows and tree growth. A variable density of hedgerows exists within the adjacent landscape, with many small areas of broadleaved woodland. Small areas of heathland are also present and these tend to be more heavily wooded. Overall the local landscape has a well wooded and vegetated appearance within the lowland areas, but becomes open with limited woodland and hedgerows on the more elevated ground rising to the South Downs in the south.
- 10.45 An ecology report for the site has been prepared separately and reference should be made to this document for further details of the on-site vegetation.

## *Cultural and Social Factors*

- 10.46 The site is located within a farmed landscape of mixed arable and pasture, with predominantly small to medium-sized fields.
- 10.47 The site lies between the settlements of Storrington and Washington which are connected by the A283 which runs east to west. To the east the A283 forms a junction with the A24 at Washington; the A24 runs north to south and forms the main route across the South Downs near to the site.
- 10.48 The site has been worked for minerals historically and the latest workings represent the removal of the last areas of workable sand within the site. The active CEMEX Sandgate Quarry site to the west forms part of a larger overall sand pit with the proposed development site. The CEMEX site is largely screened by vegetation, although the plant site buildings and sand stocks are visible above the vegetation from viewpoints in the south and immediate west.
- 10.49 The local area has a legacy of mineral extraction with the following sites present in a band along the line of the A283 to the north of the South Downs including
- a 'Pit (Dis)' or disused pit is marked on the Ordnance Survey 1:25,000 map directly east of Hampers Lane. The southern edge of this site is currently being developed as Milford Grange, a large residential

development, with earth movements and excavations clearly visible through the hedgeline to the east of Hampers Lane;

- A large active sand pit exists to the east of the A24 called Rock Common Sandpit; and
- To the west the disused Chantry Lane Sandpit is present close to Storrington.

10.50 The residential area of Heath Common to the north is set into the wooded landscape to the north of the site. This area has a suburban character with large private houses hidden behind tall hedges and wooded belts, fences and walls.

## *Aesthetic and Perceptual Aspects*

10.51 The aesthetic qualities of the site and adjacent landscape are outlined below in Table L-2.

**Table L-2**  
**Aesthetic Attributes of the Application Site and Adjacent Landscape**

| Aesthetic Factors |   |
|-------------------|---|
| Scale             | The landscape of the site and adjacent areas is generally small scale in nature.  |
| Enclosure         | The existing site is well enclosed and generally screened from the surrounding landscape. The adjacent landscape is also enclosed within the small scale landscape units present, including Milford Grange residential development set within the wooded context. To the north in Heath Common the enclosure and small scale nature of the landscape is extended by the nature of the residential development present. To the west of the site the landscape is more open due to the mineral extraction in Sandgate Quarry. |
| Diversity         | This landscape has a simple rural and relatively undeveloped appearance, save for the influences of emerging residential development at Milford Grange.   |
| Texture           | The texture of the landscape is generally rough with the number of small woodlands and hedgerows and small scale features.  |
| Form and Line     | Form and line of the local landscape is gently undulating; this contrasts with the steep faces and deep hollows of the various mineral pits present where visible.  |
| Colour            | The colour palette varies from the muted greens of pasture to the dark greens of tree cover. Large arable field introduce a light brown colour, reflected in sand deposits visible in the mineral workings.   |
| Balance           | The landscape generally has a balanced rural nature   |
| Movement          | The landscape generally has a still feel with road traffic generally screened by roadside hedgerows.  |
| Pattern           | The landscape pattern is regular and organised within the local landscape.  |

## *Landscape Dynamics and Potential for Landscape Enhancement*

- 10.52 Other future development within the immediate vicinity of the application site is limited by existing planning controls and no major changes to the current baseline landscape are anticipated. As discussed, Milford Grange residential development is under construction to the east of Hampers Lane, but is generally well enclosed by the surrounding woodland framework.
- 10.53 The proposed application would lengthen the working of the site by an additional 5 years and revise the previously permitted restoration scheme.
- 10.54 In general terms some erosion of field boundaries/hedgerows by arable field expansion is present as identified in local character studies.

## *Relationship of the Application Site and Adjacent Landscape*

- 10.55 The existing site is generally separate from the adjacent landscape and landscape character areas and does not form an essential component or key characteristic of the landscape, as perceived from outside the site. Some minor aesthetic issues exist in terms of views into the site from Hampers Lane and 'The Oaks', but these are negligible in terms of influencing the immediate landscape character.
- 10.56 Changes to landscape character within the site are likely to result from topographical changes owing to continued mineral workings and the proposed inert filling, followed by the proposed site restoration. In addition over time the site will change from a working minerals and processing site to a restored rural landscape which would be in keeping with the character of the surrounding landscape and wider country park objectives. Thus in both the short and long term the proposed application would be keeping with current land uses and local character.

## *Landscape Value*

- 10.57 The criteria for assessing 'value' are set out in Appendix L/2, with the table below describing how these criteria have been used to judge the 'value' allocated to the application site and adjacent landscape.

**Table L-3  
Value of the Application Site to the Landscape of the Study Area**

| Landscape Element                                       | Description  |
|---|--|
| Land Use, Conservation Interests and Recreational Value | The application site is currently comprised of the active mineral extraction and has no specific value. The site is however given recreational value as part of the wider country park objectives (refer to Horsham District Council LDF Policy AL19). |
| Perceptual Aspects                                      | The quarry operation is small scale, and is largely hidden from, not just the wider landscape of the study area, but also from the   |

| Landscape Element                       | Description  |
|---|--|
|   | immediate landscape around it, save for the adjacent Cemex site  |
| Landscape and Scenic Quality            | The quality of the worked site is relatively poor in landscape terms and offers little in terms of contribution to its context; although the existing site and peripheral vegetation is important in screening the site. |
| Rarity and Representativeness           | The site is one of a number of sand pits within the area (operational or disused) but is generally smaller than the other pits present.  |
| Landscape Designations and Associations | The application area is not covered by any specific landscape designations.  |
| Scope to Mitigate                       | The surrounding vegetation provides a high level of screening.   |
| <b>Value</b>                            | <b>Low</b>   |

## *Susceptibility to Change and Landscape Sensitivity*

- 10.58 Landscape sensitivity is defined by professional judgement of the interaction between value (addressed above) and landscape ‘susceptibility’ to change as identified in Appendix L/1.
- 10.59 The existing character of the site is poor and insulated from the adjacent landscape. The quality and condition of the site are also poor, with no specific elements on the site of note. The loss of some vegetation within the site may occur through the working process, but the important vegetation around the periphery would be retained.
- 10.60 The application site is comprised of the active mineral extraction, but is subject to a long term planning policy aimed at establishing a country park (Horsham DC Policy AL19). However, the continued working on site for an additional five years, is not in conflict with the long term aim of this policy, since the proposed application would result in the use of inert materials to restore the site such that it integrates with the wider country park recreational and conservation objectives.
- 10.61 The susceptibility of the site to the proposed development is therefore considered low. The overall sensitivity of the site and adjacent landscape to the proposed development is therefore considered to also be Low.

## **Landscape Setting**

- 10.62 Within the study area for the proposed development the following specific landscape receptors have been identified;
- South Downs National Park;

- National Trust Land at Washington Heath and Sullington Warren;
  - Little Thatcham Registered Park and Garden;
  - Scheduled Ancient Monuments at Sullington Warren; and
  - Scheduled Ancient Monuments along the crest of the South Downs.
- 10.63 These receptors are marked on Figure WP L/2 Landscape Receptors; along with the path of the South Downs Way which is considered in the visual effects assessment section of this LVIA.
- 10.64 In addition to specific landscape receptors the landscape effects assessment section considers the effects on landscape character. In the case of the proposed development the West Sussex Landscape Character Assessment (2003) has been used as illustrated on Figure WP L/3 Landscape Character Areas.
- 10.65 The proposed development site is located within the 'Storrington Woods and Heaths' LCA WG7, but is adjacent to the 'Central Scarp Footslopes' LCA WG8 along the development sites southern boundary. The former area is characterised by low wooded ridges of oak-birch woodland as well as smaller broadleaved woodland blocks, patches of heathland amongst small to medium sized pastures and arable fields, narrow winding lanes, sand quarries and an extensive network of rights of way. However, there is a notable decline in woodland and hedgerow management in the area and increased pressures for development around the key settlements such as Storrington, as well as localised intrusion caused by the sand quarrying operations. As such the landscape guidelines for the area state that the mosaic of woodland and heathland habitats be conserved and that any new development be well integrated into the landscape.
- 10.66 The Central Scarp Footslopes Landscape Character Area is similarly described but is seemingly more intimate in character with narrow winding lanes, small settlements and clusters of properties and linear belts of woodland. Modern farming practices and the influences of horsiculture have led to a partial degradation of this landscape, i.e. poor hedgerow management and loss of hedgerow trees further emphasised by the emergence of inappropriate developments. As such the landscape management guidelines for this area seek to conserve and maintain the open character of the scarp slopes and views to and from them through the careful integration of new developments and appropriate woodland and hedgerow management.
- 10.67 The aforementioned study has been used as it covers the entire study area and identifies the main landscape characteristics present. A more detailed landscape character assessment has been completed for the South Downs National Park, but given the limited nature of effects identified it was decided against using this study.
- 10.68 Policy AL19 of Horsham District Council is important as the proposed development site lies within this allocated area of the landscape and direct impacts on this policy therefore need to be addressed. Figure WP L/4 illustrates the landscape context and the extent of the site and the Policy AL

19 area. Other policies/guidance are addressed through the assessment of effects on landscape character areas.

- 10.69 The 'Value' and 'Susceptibility to Change' of the potential receptors are considered when identifying the relative 'Sensitivity' to the development proposals and these are summarised in Table L/4 below. The method of assessing value and susceptibility is detailed in Appendix L/2 Detailed Methodology and examined below.
- 10.70 The landscape receptors identified above may also attract visitors who will have sensitivity to changes in their visual amenity. Such aspects are examined in the Visual Effects Assessment section.
- 10.71 Table L-4 below summarises the assessed levels of sensitivity for the identified landscape receptors.

**Table L-4 Potential Landscape Receptors**

| POTENTIAL RECEPTOR                                      | LOCATION       | DISTANCE (KIM) | VALUE  | SUSCEPTIBILITY TO CHANGE   | SENSITIVITY   |
|---|----------------|----------------|--|--|---------------|
| <b>Landscape and Landscape Related Designations</b>     |                |                |  |  |               |
| South Downs National Park                               | South and East | n/a            | High – Nationally designated landscape (immediately south of site) | Low due to nature of proposals, intervening vegetation and woodland screening          | <b>Medium</b> |
| Washington Heath  | East           | 0.5            | High – Part of National Park and also locally valued landscape     | Low due to nature of proposals, intervening vegetation and woodland screening          | <b>Medium</b> |
| Sullington Warren                                       | West           | 1.0            | Medium – Locally valued landscape                                  | Negligible due to nature of proposals and intervening landscape                        | <b>Low</b>    |
| <b>Cultural / Historic Designations</b>                 |                |                |  |  |               |
| <i>Scheduled Ancient Monuments at Sullington Warren</i> | West           | 1.1            | High – Nationally designated ancient monument                      | Negligible due to nature of proposals, surrounding woodland and intervening vegetation | <b>Low</b>    |
| <i>Little Thatcham</i>                                  | North          | 1.6            |  | ZTV indicates no visibility possible   | <b>N/A</b>    |
| <b>Landscape Character Areas</b>                        |                |                |  |  |               |
| <i>WG7 Storrington Woods and Heaths</i>                 | n/a            | n/a            | High   | Low  | <b>Medium</b> |
| <i>WG8 Central Scarp Footslopes</i>                     | South          | n/a            | High   | Low  | <b>Medium</b> |

| POTENTIAL RECEPTOR                         | LOCATION | DISTANCE (KMI) | VALUE                                | SUSCEPTABILITY TO CHANGE   | SENSITIVITY |
|--|----------|----------------|--------------------------------------|--|-------------|
| SD3 Central Downs                          | South    | 1.0            | High                                 | Low  | Medium      |
| LW7 Wiston Low Weald                       | East     | 2.4            | ZTV indicates no visibility possible |  | N/A         |
| LW5 Southern Low Weald                     | North    | 2.2            | ZTV indicates no visibility possible |  | N/A         |
| <b>Specific Site Based Planning Policy</b> |          |                |                                      |  |             |
| Policy AL19                                | n/a      | n/a            | High                                 | Low (extension of working period but resulting in restoration scheme conducive with policy objectives) | Medium      |

## Prediction of Landscape Effects and their relative Importance

10.72 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 potential changes can be made to identify any important effects.

### *Magnitude of Landscape Change*

10.73 The magnitude of landscape impacts depends upon the following factors<sup>3</sup>:

- The scale or degree of change to the existing landscape resource;
- the nature of the change caused by the proposed development (for example, beneficial or adverse); and
- the timescale, or phasing, of the proposed development

10.74 The magnitude of change is categorised as substantial, moderate, slight or negligible.

### *Changes in Natural Characteristics*

10.75 The proposed development would see the importation of inert material on site in parallel with the continued working of the sand resources on site for 2 years, involving the deepening of the pit from 26m AOD to approximately 17m AOD. Inert materials would continue to be progressively used to backfill the site for a further three years starting in the south west corner and working

<sup>3</sup> Guidelines for Landscape and Visual Impact Assessment (Second Edition) Paragraphs 7.19



clockwise around the site. The land would be raised to between 36m AOD at its western edge, to 57m AOD along the existing site boundary at the southern edge. The site would be seeded and planted as per the proposed restoration scheme (drawing WP L/15 in Volume 2B - Technical Appendix 10), and so although permanent in nature, restoration works would integrate the site into its setting without issue. The development proposals are small scale over a limited geographical extent.

### *Changes in Cultural and Social Factors*

- 10.76 The baseline study identifies the value of the site as an integral part of the Sandgate Country Park (Policy AL19 of Horsham District Council LDF). As such the restoration scheme recognises this policy and the value the site has as a local recreational resource. The proposed development would delay the restoration of the site by a further five years but the resulting scheme is deemed more appropriate to the objectives of the country park.

### *Changes in Aesthetic and Perceptual Aspects*

- 10.77 The key changes to the aesthetics of the site would be caused by the importation of inert material on site seen in parallel to the deepening of the pit which is considered to be short term and neutral since similar activities already take place. However, the extension of time over which activities would take place would result in an increased duration of effects from site traffic as it exits the site onto the A283; this is perceived as adverse. However, the proposed final restoration of the site would be of long term benefit.

### *Landscape Character, Classification and Evaluation*

- 10.78 The processing of, and backfilling of the quarry with inert material prior to its final restoration would not detrimentally affect any of the key characteristics of the identified local character areas, and the perception of the change would be negligible owing to the largely enclosed nature of the site. In the long term the proposed restoration scheme would comply with the West Sussex County Council Landscape Guidelines through enhancement of the existing woodland framework and its appropriate management, as well as the careful consideration of the integration of new features into the existing landscape.

### *Summary of Magnitude of Landscape Change*

- 10.79 Consideration of the above factors has resulted in the identification of an overall low (and neutral to beneficial) magnitude of change as a result of the continued working and resultant restoration of the quarry.

## Potential Landscape Effects

- 10.80 The potential landscape effects are determined by a combination of the magnitude of the potential impact and the sensitivity of the landscape setting to change. Thus, a landscape effect of slight magnitude may nevertheless be assessed to have a moderate effect in a highly sensitive landscape.
- 10.81 Having identified the important impacts likely to be caused by the proposed development, consideration has to be given to the nature of the effects caused. For example a screen bank preventing views of a development can have just as high a magnitude of change and thus impact as a view of a development itself. However, the nature of the impact will be very different; one will involve views of a bank of grass and/or trees, the other maybe an open view of a scrap yard.
- 10.82 The landscape sensitivity to the proposed development and the likely magnitude of change have been assessed previously for both the local landscape and the site itself. Cross referencing these 'Sensitivity and Magnitude of change gives the results shown below in Tables L-5 and L-6.

**Table L-5  
Importance of Landscape Impacts to the Site and Adjacent Landscape**

| Sensitivity | Magnitude of Change | Importance of Impact | Description   |
|-------------|---------------------|----------------------|---|
| Low         | Low                 | <b>Low</b>           | While the development proposals would alter how the quarry is restored, and the length of time over which it is restored this is unlikely to have an adverse effect on the landscape of the site or adjacent landscape. The final restoration of the site will be beneficial. |

- 10.83 The nature of effects on the wider landscape of the application would be minimal owing to the enclosed nature of the site. In the short term the continuation of operations on site would be broadly similar to that seen at present although extended over a longer period of time. However, the restoration of the site would assist in the long term in assimilating the site into its otherwise rural setting and improve perceptions of the site.
- 10.84 Having identified the landscape sensitivity (of the site and adjacent landscape, and the landscape character area within the local landscape) an assessment can be made of potential landscape effects by use of the previously measured sensitivity and magnitude of change. This assessment is recorded in Table L-6 below.

**Table L-6**  
**Importance of Impacts on Landscape Receptors**

| POTENTIAL RECEPTOR                                      | LOCATION       | DISTANCE (KM) | SENSITIVITY | MAGNITUDE OF CHANGE   | RESULTANT LANDSCAPE EFFECT |
|---|----------------|---------------|-------------|---|----------------------------|
| <b>Landscape and Landscape Related Designations</b>     |                |               |             |   |                            |
| South Downs National Park                               | South and East | n/a           | Medium      | Negligible due to screening and limited perception  | Minor                      |
| Washington Heath  | East           | 0.5           | Medium      | Negligible due to screening and limited perception  | Minor                      |
| Sullington Warren                                       | West           | 1.0           | Low         | Negligible due to screening and limited perception  | Negligible                 |
| <b>Cultural / Historic Designations</b>                 |                |               |             |   |                            |
| <i>Scheduled Ancient Monuments at Sullington Warren</i> | West           | 1.1           | Low         | Negligible to none due to screening and limited perception  | Negligible                 |
| <b>Landscape Character Areas</b>                        |                |               |             |   |                            |
| <i>WG7 Storrington Woods and Heaths</i>                 | n/a            | n/a           | Medium      | Negligible due to screening and limited perception  | Minor                      |
| <i>WG8 Central Scarp Footslopes</i>                     | South          | n/a           | Medium      | Negligible due to screening and limited perception  | Minor                      |
| <i>SD3 Central Downs</i>                                | South          | 1.0           | Medium      | Negligible due to screening and limited perception  | Minor                      |
| <b>Specific Site Based Planning Policy</b>              |                |               |             |   |                            |
| <i>Policy AL19</i>                                      | n/a            | n/a           | Medium      | Slight due to delay in permitted restoration, although this is accepted in policy description and resultant restoration scheme presents long term benefits. | Moderate/ minor            |

10.85 The effects on landscape receptors and landscape character would be minimal largely due to the insulated nature of the site from the adjacent landscape.

## Summary of Predicted Landscape Effects

- 10.86 The nature of this application, which is for the continuation of mineral extraction and importation of inert material on site to be used for the subsequent phased restoration of the site would see an extension of the duration of working on site by an additional 5 years, but such operations would be similar in nature to existing and as such there will be no direct effects on the landscape setting in the wider area. No new important elements of the landscape will be lost and because of the screening effects of trees and woodlands close to the site, the proposals will have no influence, either direct or indirect on the character of the landscapes within which the site is situated in the short term. However the extension of time would lead to a slight effect at the site itself due to the delay in restoration.
- 10.87 The proposed restoration scheme would see some selective thinning of woodland at the south eastern corner of the site to accommodate a new parking area, as well as additional landform abutting the Cemex lake at the western edge of the site, but the scheme is largely contained within the existing framework of woodland at the site periphery, and uses existing features, e.g. access, carefully within the design. Therefore, the final restoration would be of moderate/minor benefit to the character of the wider landscape, assisting with the implementation of Policy AL19.
- 10.88 In comparison with the current permitted restoration plan, the proposed restoration generally increases the area of grassland within the site at the expense of the lake area. This allows greater scope for picnic areas and creates a larger more sheltered recreation area at the base of the access road ramp. This area has the potential to be developed as a small camping area, an objective identified in Policy AL19.
- 10.89 Appendix L/2 indicates the approach to identifying significance (i.e. either Major or Major/moderate effects are considered to be significant). In the case of this LVIA no significant landscape effects have been identified.

## VISUAL ASSESSMENT

### Scope

- 10.90 “An assessment of visual effects deals with the effects of change and development on the views available to people and their visual amenity”, (“Guidelines for Landscape and Visual Impact Assessment”, Third Edition).
- 10.91 The scope of this study deals with the proposed continuation of mineral extraction and importation of inert material for the restoration of the site which; will be consequently delayed by a further five years as a result. The importation of inert material would initially be undertaken in parallel with the 2 year extension of the working of mineral resources on the site. The proposed restoration works would then continue for a further 3 years on the site,

extending the timescales for operations on the site. Restoration will be phased in across 5 years as backfill material allocated).

## *ZTV and Field Work Analysis*

- 10.92 The study area is defined by the extent of visibility for the site. Figure WP L/1 (Volume 2B - Technical Appendix 10) indicates the maximum theoretical visibility of the existing site area within the surrounding area and has been used for the purposes of this assessment since the proposed development would only alter the landform below the upper limits of the site periphery as currently mapped for the ZTV. Assessing effects on views and visual amenity requires an appraisal of which people in this area will actually have views of the proposal.
- 10.93 Field work identifies the importance of the woodland and vegetation cover within the local landscape, this greatly limits visibility within the areas identified as having the theoretical potential for views. Visibility is generally restricted to the immediate surroundings and boundaries of the development site, and limited to glimpsed views through the boundary vegetation. The one exception is views from the west within the adjacent CEMEX Sandgate Quarry, where the open landscape caused by mineral extraction allows views into the site. However beyond the boundaries of the site additional hedgerows and woodland create an ever increasing layering of screening vegetation which prevents more distant views. The one exception is views from the South Downs where elevation allows viewers to look down onto the Washington Pit site. However from that direction the peripheral vegetation along the southern boundary of Washington Pit prevents views of the quarry. The value of this vegetation is indicated in Viewpoint G where disturbance in the Tamdown 'Works' site directly east of Hampers Lane is visible, although Washington Pit is not.
- 10.94 The 'Visual Receptors' identified within the baseline study as having the potential for glimpsed views of the proposed development are described below in the visual baseline section.

## **Visual Baseline**

- 10.95 Field work has been undertaken to examine and refine the choice of viewpoints resulting in choice of ten final viewpoints whose positions have been added to Figure WP L/1. These viewpoints have been chosen to represent visual receptors either directly or to indicate the type of visual effect anticipated. The viewpoints are listed in Table L-7 and shown on Drawing WP L/1 (Volume 2B - Technical Appendix 10).
- 10.96 The first six viewpoints relate to local views from around the boundary of the proposed development site. Due to the presence of boundary vegetation views from these locations are generally restricted to glimpses through vegetation. These views are likely to be worse in winter when vegetation is at its most transparent.

- 10.97 Views from more distant viewpoints are prevented due to the increasing layering of intervening vegetation within the low lying Wealden Greensand landscape within which the site is located.
- 10.98 However, the increased elevation of views from the south within the South Downs National Park gives greater scope for uninterrupted views towards the proposed development site. Visual receptors within the National Park include users of local footpaths and bridleways, and users of specific recreational facilities such as the South Downs Way long distance route. Four viewpoints have therefore been chosen to reflect the nature of potential views for viewers within the National Park.

### Prediction of Visual Effects and their Relative Importance

- 10.99 The full methodology used to assess the visual receptors can be found in Appendix L/2; this sets out how 'value' and 'susceptibility to change' can be correlated to establish the sensitivity of a given viewpoint; as illustrated by Table L-1. The key factors used to determine the 'value' of a visual receptor may include whether it is from a heritage asset or area designated under planning, and for views which may have a particular value associated to them by visitors or cultural association. With regards to 'susceptibility to change' this is mainly a function of the occupation or activity of people experiencing the view, and the extent to which their attention or interest may be drawn. More 'susceptible' visual receptors would include; local residents, people engaged in outdoor recreation such as users of public rights of way / long distance routes and visitors to heritage assets / other attractions. The 'susceptibility' of those using modes of transport on either road or rail would very much depend on the nature views, the awareness of scenic quality being seen as much higher for certain sections of route.
- 10.100 Viewpoints from within the area of residential properties to the north of the proposed development site (around Heath Common) are considered to have a medium value for their residents. This is partly based on the aspirations of Policy AL19 and value within adjacent National Trust landscapes and the National Park area at Washington Common. However, views are generally limited due to tall hedgerows and fencing within the residential area and no specific views of noted value are present. The susceptibility of views to the proposed development is considered medium due to the enclosed nature of the properties.
- 10.101 Properties on the south edge of the residential area have the potential for views of the site where intervening vegetation is thin or absent. Viewpoint A (The Oaks) represents the worst case view anticipated and is the only such view identified during field work.
- 10.102 Field work indicates that visitors to Washington Heath and Sullington Warren would most likely be screened from the proposed development entirely. This is also true for viewers visiting the Scheduled Ancient Monuments present at

Sullington Warren. Viewpoint F is taken from the edge of Sullington Warren and illustrates the intervening vegetation and features.

- 10.103 As previously identified no views would be possible for visitors to the Historic Park and Garden at Little Thatcham to the north.

### *Viewpoint Photographs*

- 10.104 As part of the assessment process field work and photography was undertaken on 27/07/2013 and 02/10/13. Weather conditions were recorded as being clear with good visibility; and suitable for the purposes of assessment fieldwork and taking viewpoint photography.
- 10.105 Viewpoints photographs were taken using a digital camera (Nikon D90s) using a 35mm lens; this combination represents the equivalent of a 52.5mm lens used on an optical film based camera. A number of frames were taken in portrait format for each viewpoint and stitched together using Adobe Photoshop software to create a single panoramic photograph. The resultant photographs are illustrated in Figures WP L/5 – L/14 and were used to assess landscape and visual effects caused by the proposed development. The viewpoint photographs have been scaled to match the actual view on the ground. To achieve this effect the viewer should hold the photograph at a distance of 300mm from his/her eye. The viewpoint positions are listed below in Table L-7 and illustrated on Figures WP L/5 to WP L/14 (Volume 2B - Technical Appendix 10).

**Table L-7**  
**Viewpoints Location and Nature.**

| ID | Viewpoint Name                               | Easting | Northing | Elevation (mAOD) | Distance to site | Notes  |
|----|--|---------|----------|------------------|------------------|--|
| A  | The Oaks, Hampers Lane                       | 510788  | 114072   | 54.99            | 70m              | Back garden of private property                              |
| B  | Southern Water Pumping Station, Hampers Lane | 510850  | 113898   | 53.41            | 20m              | View illustrating peripheral site vegetation                 |
| C  | Cadrona, Hampers Lane                        | 510839  | 113809   | 55.04            | 10m              | View illustrating peripheral site vegetation                 |
| D  | Bus Stop, Washington Road (A283)             | 510806  | 113664   | 56.72            | 20m              | View looking across A 283 to site entrance and Hampers Lane  |
| E  | Gateway, Washington Road (A283)              | 510546  | 113769   | 57.83            | 5m               | View from gate near to south western corner of site          |
| F  | CEMEX Plant Site Entrance, Water Lane        | 509939  | 114166   | 58.69            | 675m             | View illustrating screening from Water Lane area             |
| G  | South Downs Way, Barnsfarm Hill              | 510667  | 112337   | 159.60           | 1.3km            | Elevated view descending from South Downs on South Downs Way |
| H  | South Downs Way, Sullington Hill             | 509452  | 111759   | 188.46           | 2.3km            | Framed view looking along valley from South Downs            |
| I  | Bridleway, Chantry Hill                      | 508618  | 112218   | 187.75           | 2.5km            | View from South Downs  |
| J  | Bridleway, Kithurst Hill                     | 508486  | 112608   | 178.91           | 2.6km            | View from Cross Dyke on South Downs                          |

Note - All photographs taken with a Nikon D90s digital camera with a 35mm lens (52.5mm equivalent)



## Predicted Residual Visual Effects

- 10.106 The prediction of impacts on visual amenity involves the identification of viewpoint value, susceptibility to change caused by the development and the magnitude of actual change.
- 10.107 The value of the view is identified by factors identified in Appendix L/2, which include its value in relation to specific views and/or the value of the view to visitors. Susceptibility to visual change is linked to the activity of the viewer, thus someone at work is less susceptible than residents or visitors studying the landscape/view. Value and susceptibility are combined to measure sensitivity to the proposed development.
- 10.108 In order to judge the magnitude of visual change resulting from the proposed development factors such as; scale, the loss or addition of features in the view, changes in its composition, degree of contrast, timescale and extent all must be considered.
- 10.109 The magnitude of change can then be correlated with the aforementioned sensitivity to establish the 'predicted residual visual effects'.
- 10.110 The potential visual effects of the proposed development on the surrounding landscape, and in particular the views from the identified viewpoints, have been assessed with the aid of plans and computer models, and are described in detail below

### *Viewpoint A – The Oaks, Hampers Lane (see Drawing WP L/5)*

- 10.111 This viewpoint is located at a private residence off Hampers lane. Normally viewpoint photography is restricted to areas of public access, and a photograph was being taken of the potential view of Washington Pit from the public road outside this property. The owner of The Oaks returned home and informed the assessor of a view from her garden and offered to allow access.
- 10.112 The view from this viewpoint looks across the intervening field (which forms part of the Horsham Policy AL19 area) to the proposed development site. Recent workings, including the removal of sand from a previously restored area are clearly visible in the western section of the development site. The deeper extractions and eastern section of the site are screened by the landform and adjacent vegetation.
- 10.113 The value of the view from this location is considered high as it adds to the landscape setting of the property in question. The susceptibility of the viewer at Viewpoint A to the proposed development is also considered to be high due to the residential nature of the view, resulting in a high sensitivity to the proposed development for this particular viewpoint.

- 10.114 Whilst the upper sandstone face will be retained as part of the proposed restoration scheme as a suitable sand martin and insect habitat, overtime the sandstone will weather and lose some of its brightness, further assisted by regeneration of scrub vegetation which will be monitored. Further still, the progressive restoration of the site will see the northern boundary of the site reinforced with additional broadleaved planting which will largely screen the existing view into the site in the middle ground in the longer term. The wooded framework will be reinforced and views directed to towards Barnsfarm Hill which breaks the skyline in the centre background of the view.
- 10.115 In advance of the proposed woodland planting maturing there may be glimpsed views of earth movements and associated machinery within the site from this viewpoint in the short term, however this will be little different from historic activities on site and within a small part of the view. As such, the scale, contrast and nature of the change would be slight/moderate resulting in a Moderate effect on visual amenity. The effect in the short to medium term would be neutral, whilst in the longer term would be beneficial.

### *Viewpoint B – Southern Water Pumping Station, Hampers Lane (see Drawing WP L/6).*

- 10.116 Viewpoint B on Hampers Lane represents views for road users. Hampers Lane is a private road, although appears to be a frequently used cut through for cars and had a busy nature when surveyed at approximately 12:00 on Saturday 27th July 2013, as well as 10.30am on 2nd October, 2013. The value of views from Hampers Lane are considered to be low as the lane itself is largely enclosed by vegetation, directing ones view down the road in the direction of travel. As such the susceptibility of users is considered to be medium, due to the use of the road as a transportation corridor. The resultant sensitivity is thus considered to be medium/low.
- 10.117 The location of the viewpoint represents a glimpsed view through the roadside vegetation and also illustrates the boundary vegetation to the northern edge of the proposed development site. No views of the site are possible due to screening vegetation and therefore **no change** to the visual amenity would occur.

### *Viewpoint C – Cadrona, Hampers Lane (see Drawing WP L/7).*

- 10.118 Viewpoint C on Hampers Lane has a similar viewpoint value to Viewpoint B but has a high susceptibility as it represents views from the grounds of the residential property called Cadrona. This results in a medium sensitivity to the proposed development.
- 10.119 The existing view has glimpses through the boundary vegetation, and in winter time these glimpses are likely to be more open and more of the site visible. These glimpses occur for various sections of Hampers Lane from near the pumping station (Viewpoint B) to the junction with the A 283.

- 10.120 The proposed development would include views of the passage of vehicles entering the site and descending to the existing stockpile and weighbridge area. The proposed visual change would be in the retention of these views for a further 5 years,. Glimpsed views of the processing and infilling of the site with inert material to final restoration levels will be discernible. The proposed restoration scheme would see the area in the view restored to acid grassland and utilised as a summer camping/informal recreation area. As such the proposed visual change is assessed as slight/moderate, giving rise to a Moderate effect on the visual amenity of residents at Cadrona. as they enter or exit their property.
- 10.121 Mitigation of these views might be possible through the implementation of vegetation management, along the Hamper Lane site boundary, and further reinforcement of vegetation along the edges of Hamper Lane.

### *Viewpoint D – Bus Stop, Washington Road (A283) (see Drawing WP L/8).*

- 10.122 Viewpoint D is taken from the A283 which has no specific value in terms of its view towards the site and thus a value of low is considered appropriate. Travellers on this main road and people waiting for a bus would however have a medium susceptibility to the proposed development, i.e. those people waiting for a bus more likely to take in their surroundings; resulting in a medium/low sensitivity to change caused by the proposed development.
- 10.123 The proposed continuation of working on site for 5 years would not be visible from this location. However the passage of vehicles entering and exiting the site would be visible, although not dissimilar to those under the existing permission. The scale of vehicle movements would be restricted and not in contrast with the adjacent busy junction and A283. In addition this effect would only last for the 5 year period. Following restoration of the site the existing haul road will remain insitu for public and maintenance access. A new car park will be located just in from the site entrance on the left, but would be largely screened, although less so in the winter months, by the mature boundary vegetation. The overall magnitude of change is assessed as slight/moderate, resulting in a **Moderate/minor** effect.

### *Viewpoint E – Gateway, Washington Road (A283) (see Drawing WP L/9).*

- 10.124 Viewpoint E represents views from the A283 which has no specific value for viewers and thus a value of low. Travellers on this main road would have a medium susceptibility to change caused by the proposed development; resulting in medium/low sensitivity.
- 10.125 The proposed continuation of working on site for 5 years, would be glimpsed by traffic passing this location; which represents the clearest view of the

extraction area from the A283. However the degree of change discernible would depend on traffic conditions and the speed at which cars travel along this road, views largely experienced by passengers able to take in their surroundings. The scale of change visible would be very small and would not contrast with the existing mineral workings glimpsed from this position in the short term. In the longer term the proposed restoration scheme for the site would mature, thus closely assimilating the site with its surroundings, through the greening of exposed sand faces and re-profiling in the middle ground of the view. The overall magnitude of change is assessed as slight, resulting in a **Minor** effect.

### *Viewpoint F – CEMEX Plant Site Entrance, Water Lane (see Drawing WP L/10).*

- 10.126 Views from the area of Viewpoint F are screened by the intervening CEMEX sand pit and adjacent vegetation. No views are anticipated from this area at present, although after restoration of the CEMEX site and removal of its plant site glimpsed distant views may exist along the valley into the Washington Pit site in the distance. The value of the view is considered low at present but may rise in the future, dependant on the nature of Cemex's restoration proposals in accordance with the Sandgate Country Park proposals (Policy AL19 Horsham District Council LDF). The susceptibility of viewers will vary between residents whose properties back on to the western edge of the Cemex site off Water Lane, but whose views are largely enclosed by a woodland setting, and road users whose views are largely directed north south up Water Lane and away from the site. As such a worst case sensitivity of medium is considered possible after the CEMEX site restoration works have been completed.
- 10.127 The magnitude of visual change is considered to be slight/moderate. The long term intention is that the proposed restoration of the Washington Pit site will merge with the restoration of the CEMEX site to form an integrated part of the wider Sandgate Park Country Park. The impact of the latter on this view would be beneficial.
- 10.128 The overall effect on visual amenity for viewers is considered to be **Moderate/minor**.

### *Viewpoints G to J - South Downs National Park*

- 10.129 The general value attached to views from the South Downs National Park are considered to be medium due to the wide open views northwards across the Wealden Greensand to the North Downs in the distance, and the strong contrast with the lowland views; where views are usually limited to short distances.
- 10.130 The susceptibility of views from the National Park is high due to the attention of viewers being on the landscape and the general views present. Thus the

## LANDSCAPE & VISUAL 10

overall sensitivity of viewers within the National Park to the proposed development is considered to be high/medium.

- 10.131 The scale of the site in views from the National Park is small, and actual visibility of the proposed development would be minimal if any. The minimal perceived changes would not contrast with the existing views, which already include more clearly visible mineral sites. No long term changes are likely to be perceived given the screened nature of the site. Overall the magnitude of change is considered to be negligible.
- 10.132 Considering the above the effect of the proposed development on all of these viewpoints is assessed to be **Negligible**.

### Summary of Predicted Visual Effects

**Table L-8**  
Summary of predicted Visual Effects

| VIEWPOINT | SENSITIVITY     | MAGNITUDE OF CHANGE | RESULTANT VISUAL EFFECT |
|-----------|-----------------|---------------------|-------------------------|
| A         | High            | Slight/Moderate     | Moderate                |
| b         | Medium/<br>Low  | No Change           | No Change               |
| C         | Medium          | Slight              | Moderate                |
| D         | Medium/Low      | Slight/Moderate     | Moderate/<br>Minor      |
| E         | Medium/Low      | Slight              | Minor                   |
| F         | Medium          | Slight/Moderate     | Moderate/<br>Minor      |
| G-J       | High/<br>Medium | Negligible          | Negligible              |

- 10.133 The nature of this application, which is for the continuation of mineral extraction and the importation of inert material to restore the site over a 5 year period means that in the short term there will be little change to the visual amenity of the viewers where glimpsed views into the site are afforded. The site is largely enclosed within a wooded context and as such glimpsed views into the site are restricted from the CEMEX site to the west and A283, and the immediate site boundary to the east off Hampers Lane. In the long term, the proposed reinforcement of existing woodland at the site periphery, as well as the shallow re-profiling and seeding of existing vertical sand faces will help to further assimilate the site into its surroundings and be of benefit to the local landscape character and perceptions of it.

- 10.134 Appendix L/2 indicates the approach to identifying significance (i.e. either Major or Major/moderate effects are considered to be significant). In the case of this LVIA no significant visual effects have been identified.

## SUMMARY

### Introduction

- 10.135 A landscape and visual appraisal of the proposed development has been completed in accordance with accepted guidance and methodology contained in Appendix L/2. A study of the landscape and visual components of the site and the local area was undertaken through desktop study and fieldwork. This study identified the main landscape and visual receptors and resulted in a baseline appraisal, against which the existing and proposed landscape and visual impacts could be assessed. The main landscape and visual implications of the development and their predicted effects were then identified.

### Landscape Effects

- 10.136 Direct landscape effects caused by the proposed development are minimal given that it is already an operational site. No new elements of the landscape will be lost and because of the screening effects of trees and woodlands close to the site, the proposals will have no influence, either direct or indirect on the character of the landscapes within which the site is situated.
- 10.137 Perceived landscape effects outside the site are also limited due to the enclosed nature of the site and screening provided by the peripheral vegetation.
- 10.138 The extension of operations on site for a further 5 years would have a slight adverse effect on the wider landscape in terms of HGV movements to and from the site, however this would not be permanent. Wider effects on the landscape would be Moderate/minor in the worst case; in relation to Policy AL 19 and relates to the delay in implementing restoration of the full site and the long term aspirations of that policy. However, in the long term the proposed development would result in a restoration scheme which matures to adequately reflect the objectives of the aforementioned policy.
- 10.139 In the case of this LVIA no significant landscape effects have been identified.

### Visual Effects

- 10.140 The viewpoint analysis demonstrates that the proposed development would have a minimal visual effect across the study area, due to vegetative screening. This effect would be limited to the extension of glimpsed views of continuing operations on site over an additional 5 year period, and includes

## LANDSCAPE & VISUAL 10

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views of the phased restoration of the site, at which time the resultant landform and vegetation will closely assimilate with the surrounding area.

10.141 The most notable effects would be:

- the glimpses through peripheral vegetation from Cadrona/Hampers Lane (Moderate);
- the effects visible from The Oaks (Moderate); and
- potential views from other properties to the northwest of the Oaks with similar open aspects (worst case Moderate).

10.142 Visual effects on other viewers within the vicinity of the site would be Moderate/minor or minor in nature and largely neutral during working of the site but neutral to beneficial following the long term establishment of the proposed restoration scheme.

10.143 Visual effects on users of the South Downs National Park to the south would be negligible if perceivable.

10.144 In the case of this LVIA no significant visual effects have been identified.

## APPENDIX L/1 – LANDSCAPE AND VISUAL GLOSSARY

|                                     |   |
|-------------------------------------|---|
| <b>Aesthetic Aspects -</b>          | <p>The key aspects of the landscape which contribute to its appearance (previously composition), such as:</p> <ul style="list-style-type: none"><li>• scale</li><li>• enclosure</li><li>• diversity</li><li>• texture</li><li>• form</li><li>• line</li><li>• contour</li><li>• balance</li><li>• movement</li><li>• pattern.</li></ul> |
| <b>Analysis (Landscape):</b>        | <p>The process of breaking the landscape down into its component parts to understand how it is made up.</p>   |
| <b>Analysis (Visual):</b>           | <p>The process of identifying the nature of visibility in an area, which is determined through topographic analysis.</p>  |
| <b>Assessment (Landscape):</b>      | <p>An umbrella term for description, classification and analysis of landscape.</p>  |
| <b>Baseline:</b>                    | <p>The landscape and visual character of the study area as it exists at the commencement of the assessment process – i.e. prior to the development proposal under consideration.</p>  |
| <b>Biodiversity</b>                 | <p>The concept of variety in all species of plants and animals.</p>   |
| <b>Classification:</b>              | <p>A process of sorting the landscape into different types using selected criteria, but without attaching relative values to the different types of landscape.</p>  |
| <b>Constraints map;</b>             | <p>Map showing the location of important resources and receptors that may form constraints to development.</p>  |
| <b>Countryside:</b>                 | <p>The rural environment and its associated communities (including the coast).</p>  |
| <b>Cultural and social factors:</b> | <p>The elements of the landscape which are the result of human activity, e.g.:</p> <ul style="list-style-type: none"><li>• Land use management</li><li>• Character of settlements and buildings</li></ul>   |



- Pattern and type of fields and enclosures
- Rights of way /footpaths
- Artistic/literary associations

**Cumulative Effects:** Effects arising from the additional changes to the landscape or visual character caused by a proposed development in conjunction with other developments (associated with it or separate to it).

**Digital Terrain Model (DTM):**

Computer generated 3 dimensional model based on contour data and/or aerial survey of ground surface (e.g. Ordnance Survey *Profile data*). Often utilised as a basis for visibility modelling over large areas.

**Digital Surface Model (DSM):**

Computer generated 3 dimensional model based on aerial survey of ground surface, tree canopies, built structures etc.). Often utilised as a basis for visibility modelling where the effects of intervening structure and/or vegetation need to be incorporated.

**Diversity:** Where a variety of qualities or characteristics occur.

**Effect:** The result of an impact on a landscape or visual receptor.

**Element:** A component part of the landscape (e.g. roads, hedgerows, woods)

**Enhancement:** Landscape or visual improvement through restoration, reconstruction or creation.

**Environmental Fit:** The relationship of a development to identified environmental opportunities and constraints in its setting.

**Field Pattern:** The pattern of hedges and walls that define fields in farmed landscapes.

**Geographical Extent:** The area over which the landscape effects are likely to be felt; this can be 'Site Level', the 'Immediate Setting' of the Site, at the Scale of a Landscape Character Area / Landscape Character Type or on a larger scale i.e. several LCAs / LCTs.

**Geographic Information System:**

Computerised data base of geographical information that can easily be updated and manipulated.

**Horizontal Angle Subtended:**

The angle measured in degrees from the left most visible part to the right most visible part of any development.

# LANDSCAPE & VISUAL 10

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|                                  |   |
|----------------------------------|---|
| <b>Key characteristics</b>       | The elements of the landscape and/or their inter relationship which form the defining components of the landscape   |
| <b>Impact:</b>                   | The change arising for a landscape or visual receptor as a result of some form of alteration to the baseline.   |
| <b>Indirect Impacts:</b>         | Impacts on the environment, which are not a direct result of the development but are often produced away from it or as a result of a complex pathway. Sometimes referred to as secondary impacts.   |
| <b>Landcover:</b>                | Combination of land use and vegetation that covers the land surface.  |
| <b>Landform:</b>                 | See Topography.   |
| <b>Landscape:</b>                | Human perception of the land conditioned by knowledge and identity with a place.<br><br>An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors;   |
| <b>Landscape Capacity:</b>       | The degree to which a particular landscape character type or area is capable of is able to accommodate change without unacceptable adverse effects on its character. Capacity is likely to vary according to the type and nature of the changes being proposed. The capacity of the landscape is derived from a combination of Landscape Character Sensitivity, Visual Sensitivity and Landscape Value. |
| <b>Landscape Character:</b>      | The distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and how this is perceived by people. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement. It creates the particular sense of place in different areas of the landscape.  |
| <b>Landscape Character Type:</b> | A landscape type will have broadly similar patterns of geology, landform, soils, vegetation land use, settlement and field pattern discernible in maps and field survey records.  |
| <b>Landscape Fabric:</b>         | Physical elements of the landscape or development site.   |
| <b>Landscape Factor:</b>         | A circumstance or influence contributing to the impression of the landscape (e.g. scale, enclosure, elevation).   |
| <b>Landscape Feature:</b>        | A prominent eye-catching element or landmark (e.g. church spire, wooded hilltop).   |
| <b>Landscape Impact</b>          | The change in the elements, characteristics, qualities and overall character of the landscape as a result of development.   |

# LANDSCAPE & VISUAL 10

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**Landscape Effect:** The consequence of change in the elements, characteristics, qualities and overall character of the landscape as a result of development. These effects can be positive, neutral or negative.

**Landscape Evaluation** The process of attaching value (non-monetary) to a particular landscape, usually by the application of previously agreed criteria, including consultation and third party documents, for a particular purpose (for example, designation or in the context of an assessment).

**Landscape Quality (or Condition):** based on judgments about the physical state of the landscape and about its intactness. Also relates to the state of repair of individual features and elements which make up character in any one place.

**Landscape Resource:** The combination of elements that contribute to landscape context, character and value.

**Landscape Sensitivity (to a specific type of change):**

The extent to which a landscape can accept change of a particular type and scale and is assessed in relation to the following:

- Existing land use;
- Pattern and scale of the landscape, including simplicity/complexity;
- Landscape quality or condition including presence of any detracting features;
- The nature of views – visual enclosure/openness of views, scale of views;
- Value placed on the landscape – which may be expressed through designation; and
- Scope of mitigation, which will be in character with the existing landscape..

**Landuse:** The primary use of land, including both rural and urban activities.

**Landscape Value:** The relative value or importance attached to a landscape (often as a basis for designation or recognition), which expresses commonly held national or local perception of its quality, special qualities and/or scenic beauty, tranquillity or wildness and cultural associations.

**Magnitude of landscape change:**

A measure of the amount of change to the landscape that would occur as a result of proposed development, generally based on the **scale** or degree of change to the landscape resource, the **nature** of the effect and its

**duration.** This is based on a combination of largely quantifiable parameters, such as:

- the distance to proposed development;
- its visible extent;
- degree of contrast with context;
- extent to which proposed development would be visible, and
- duration of an impact.

**Magnitude of visual change:**

A measure of the amount of change to the visual context that would occur as a result of a proposed development. This is generally based on:

- the scale of change to the view with respect of the loss or addition of features in the view and changes in its composition, including the proportion of the view that would be occupied by the proposed development;
- the degree of contrast or integration of any new features of changes in the landscape with the existing or remaining landscape elements and characteristics in terms of form, scale, mass, line, height, colour and texture;
- duration and nature of the change, whether temporary or permanent, transient or persistent, etc.;
- the angle of view in relation to the main activity of the receptor(s);
- distance of the viewpoint from the proposed development; and
- extent of the area over which the changes would be visible.

**Methodology:**

The specific approach and techniques used for a given study.

**Mitigation Measures,**

Measures including any process, activity or design process to avoid, reduce, remedy or compensate for adverse landscape and visual impacts of a development. Mitigation can also apply to the amelioration of existing adverse effects associated with existing developments/features in the landscape.

**Natural Factors:**

The natural elements of the landscape which contribute to its character, e.g.

- Geology

- Soils
- Landform
- River and drainage pattern.

**Perception (of Landscape):**

The psychology of seeing and possibly attaching value or meaning to the landscape.

**Perceptual Aspect:**

Elements of the landscape which evoke a response to the senses, such as;

- Wildness
- Remoteness
- Sense of security
- Tranquillity
- Exposure.

**Persistent View:**

A view which is obtained over a continuous period of time.

**Precautionary Principle:**

Principle applied to err on the side of caution where significant/important environmental damage may occur, but where knowledge on the matter is incomplete, or when the prediction of environmental effects is uncertain.

**Proportionality:**

The scope of the assessment is to be 'proportional' to the nature of the development and potential degree /scale of impacts.

**Receptor:**

Physical landscape resource, special interest or individual or group experiencing view liable to change as a result of the proposed development.

**Receptor Location:**

Location occupied by identified receptors.

**Residual Effects:**

Effect of development after mitigation proposals are taken into account.

**Scoping:**

The process of identifying likely significant/important effects of a development on the environment – which may be carried out in a formal or informal way.

**Significant Effect:**

An effect which is considered by the assessor to be "significant" in terms of the Environmental Impact Assessment Regulations which require the identification of significant effects.

**Susceptibility to Change:**

This is a judgement on the ability of a defined landscape or visual receptor to accommodate the proposed development without undue negative consequences.

**Transient View:**

A view which obtained momentarily, as part of a sequence of views, e.g. from a car travelling along a road.

# LANDSCAPE & VISUAL 10

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|  |  |
|--|--|
| <b>Value (Landscape):</b>                    | The relative value that is attached to different landscapes by society. A landscape may be valued by different stakeholders for a whole variety of reasons.  |
| <b>Vertical Angle Subtended:</b>             | The distance measured in degrees from the base to the top of any proposed development as seen from a particular location.  |
| <b>Visual Amenity:</b>                       | The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, visiting, travelling through or taking part in recreational activity within an area.  |
| <b>Visibility Analysis:</b>                  | The process of identifying theoretical (based on digital modelling) and/or actual predicted areas from where any given development may be seen.  |
| <b>Visual Effect:</b>                        | The consequence of change in the appearance of the landscape as a result of development, which may be positive or negative.  |
| <b>Visual Impact:</b>                        | The change in the appearance of the landscape and nature of views which may be adverse or beneficial.  |
| <b>Visual Envelope:</b>                      | The extent of potential visibility to or from a specific area or feature.  |
| <b>Viewpoint Sensitivity:</b>                | <p>The extent to which a view would be altered by change of a particular type and scale, assessed in relation to the following:</p> <ul style="list-style-type: none"><li>• Location and land use (receptor activity) at the viewpoint or context of the view;</li><li>• Landscape character and quality at the viewpoint;</li><li>• Landscape character and quality of the intervening landscape;</li><li>• Importance of the view (which may be determined with respect to its popularity or number of affected people, its appearance in guidebooks, on tourist maps and the facilities provided for its enjoyment and references to it in literature and/or art.</li></ul> |
| <b>Visualisation:</b>                        | Computer generated simulation or photomontage or other technique to illustrate how the proposed development would appear.  |
| <b>Zone of Theoretical Visibility (ZTV):</b> | The area predicted to have views of a proposed development on the basis of a digital terrain model or digital surface model, which may/may not take account of landcover features.   |
| <b>Zone of Visual Influence:</b>             | The area within which a proposed development will be visible   |

## APPENDIX L/2 – DETAILED LANDSCAPE AND VISUAL METHODOLOGY

- 1.1 The format of this assessment is based on guidelines produced by the Countryside Agency and Scottish Natural Heritage (“Landscape Character Assessment Guidance”, 2002) and the Landscape Institute and Institute of Environmental Management and Assessment (“Guidelines for Landscape and Visual Impact Assessment”, Third Edition, 2013). The assessment is also in accordance with the requirements of the Town and Country Planning (Environmental Impact Assessment) Regulations (1999).

### Field Observations

- 1.2 Field observations were planned for periods of good visibility where ever possible, by reference to weather forecasts.
- 1.3 The landscape and visual receptors identified by the desktop review were further investigated by fieldwork. This included recording landscape and visual elements through photographs and assessing their potential sensitivity to the proposed development.
- 1.4 Photographs were taken using either a Nikon D90 digital camera. Where viewpoints consisted of more than one frame, the relevant frames were merged together using Photovista software (version 1.3.2). Photographs were taken wherever possible with the sun behind the viewer.
- 1.5 Where photographs were used for visual assessment they were reproduced with a viewing distance. To match the size of the elements within the photograph to elements in the actual view, the photograph should be viewed at the stated distance.
- 1.6 Access to private properties and third party land was not obtained. However, it is considered that this has not prevented the accurate assessment of potential landscape and visual impacts and the identification of appropriate mitigation measures. Where views from private land and dwellings have been considered of high importance, potential impacts have been assessed through the use of the computer model, map data and details of the proposals.

### Technical Difficulties

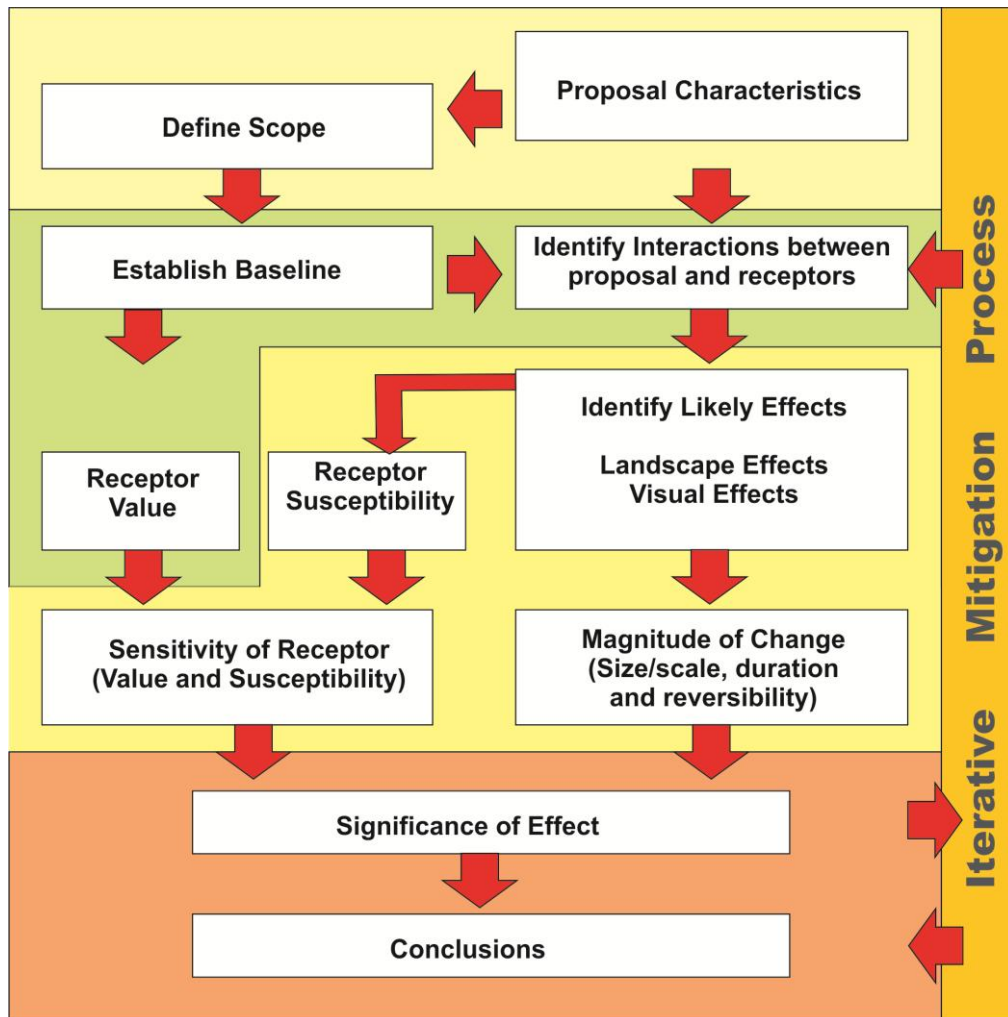
- 1.7 No technical difficulties were encountered in assessing the landscape and visual impacts of the proposed development during the field observations or office based assessment procedures.

### Methodology - Introduction

- 1.8 This appendix expands on the summary contained in Section 6.1 of the main LVIA report and provides full details of the methodology used and how this has been applied for this assessment.

1.9 Figure LA-1 is reproduced below from the main LVIA text for reference purposes and illustrates the outline assessment process for both landscape and visual effects. The following text provides additional detail on the stages and assessment process used in this LVIA.

**Table LA-1  
Outline Landscape and Visual Methodology**



## Methodology - Proposal Characteristics

1.10 Full details of the proposed development are included in the development chapter of the assessment and are illustrated on the drawings associated with that chapter.

1.11 A review of the proposed development and identification of aspects that may cause landscape and visual effects are included in Section 6.2. The drawings cross referenced for this purpose and other sources of information used to



define the extent and nature of the development are also listed in that section.

## Methodology - Scoping

- 1.12 The scope of the LVIA is addressed in Section 2.0. The information sourced in Section 3.0 on the proposed development is used to help identify the potential extent of landscape and visual effects.
- 1.13 The information on the development has been combined with desk study, consultations with the competent authority and a review of planning policy to identify the following;
- sources of information;
  - the extent of the landscape effects study area and visual effects study area;
  - the anticipated effects that may occur;
  - the main receptors to be considered;
  - the extent and level of detail appropriate for the baseline studies;
  - methods to be used in assessing importance;
  - approach to assessment of cumulative effects; and
  - relevant policy considerations.
- 1.14 The desk study work included the following elements:
- a Zone of Theoretical Visibility (ZTV) study;
  - a search for designated landscapes and other relevant designations such as those relating to ecological and historic receptors which may attract visitors and thus a concentration of visual receptors;
  - a map search for landscape and visual receptors;
  - a review of existing landscape character studies; and
  - identification of other development that may cause cumulative effects when considered in conjunction with the proposed development
- 1.15 An initial desk exercise was undertaken to identify the extent of the area to be studied and identify potential landscape and visual receptors within the area. This work was undertaken using, online interactive maps prepared by local planning authorities and other online resources. The size and type of project was considered in setting the size and extent of the study area, the aim being to ensure all landscape and visual receptors likely to experience more than negligible impacts were included.
- 1.16 In the case of waste and mineral development no specific guidance exists to define the size and extent of potential study areas. Professional judgement, experience and liaison with the local authority where practical has been used in defining the study area for the Landscape and Visual assessment.

- 1.17 Once the study area was defined, a more detailed desk review of the local landscape was undertaken to identify potential landscape and visual receptors and plan the scope and extent of the assessment and necessary field work. This study was based on the following information:
- 1:25,000 Ordnance Survey (OS) map;
  - OS Profile topography data;
  - site survey and topographical data;
  - the location and extent of landscape and visual receptors as identified at (<http://www.natureonthemap.naturalengland.org.uk/home.htm>); the new MAGIC web site;
  - development proposals; and
  - computer analysis of the above.
- 1.18 General and local guidance documents used for this study are referenced in the main text.
- 1.19 Planning policies considered particularly relevant to the proposed development in terms of landscape and visual impacts are summarised in Section 4.0, and should be placed in the context of the wider policy review included with the planning application documents.
- 1.20 The study area defined by the scoping process has been reviewed to define the nature of the landscape components present and identify the context of the proposed development and potential landscape and visual effects. This process leads into the definition of the baselines for both the landscape and visual study areas and helps to identify interactions between the proposed development and receptors at a broad level, initiating the iterative assessment process at an early stage. The establishment of the baseline for both landscape and visual receptors leads into the assessment of value for both aspects.
- 1.21 Examination of the interactions between the proposed development and receptors leads into the establishment of susceptibility of the individual receptors to the proposed development and the likely effects that may occur.
- 1.22 The current guidance on landscape character assessment 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.

### **Methodology – Zone of Theoretical Visibility**

- 1.23 A Zone of Theoretical Visibility study was conducted for the proposed development area to help identify areas sensitive to visual impacts. This study used the measurement of the vertical subtended angle for its methodology. This method is explained below and illustrated in Figure LA-2.

- 1.24 When a Target Area (red) is observed from a Viewpoint (A or B) its apparent height can be measured in the form of degrees, to give a Subtended Vertical Angle.
- 1.25 The use of the Subtended Vertical Angle in formulating a Zone of Visual Influence (ZTV) has the benefit of automatically reducing values to reflect the distance from the Target Area, and partial screening by intervening landforms. Generally the further the viewpoint is from the Target Area the smaller the Subtended Vertical Angle, reflecting the effect of distance on visual impacts.

**Figure LA-2  
SUBTENDED VERTICAL ANGLE**



- 1.26 Thus in the example section above Viewpoint A experiences a higher subtended angle due to proximity to the red target area. Viewpoint B has a lower subtended angle due to greater distance from the target area and partial screening by intervening landform.
- 1.27 If the Subtended Vertical Angle is measured from a series of grid points for a particular Target Area, the resultant data can then be used to generate contours. Each contour level representing a certain vertical angle, and thus potential level of visibility.
- 1.28 The subtended vertical angle method of calculating ZTVs using LSS digital terrain modelling software has been proven by field investigation on numerous sites to be an accurate method of predicting areas of potential visibility for on-site investigation.
- 1.29 However, the computer generated ZTV study is undertaken use a bare earth landform to give the worst case scenario. In reality any built structures (settlements, walls etc) or areas of vegetation (woodland, scrub and hedgerows) will reduce the actual visibility of the target area. Therefore it is necessary to carry out fieldwork to validate the results of the ZTV.
- 1.30 A basic 3D computer model of the proposed development was prepared to carry out the ZTV and this was used identify potential visual change for each of the identified viewpoints.

## Methodology – Landscape Value

1.31 Landscape value is established as part of the baseline description. Value can apply to areas of landscape as a whole, or to the individual elements, features and aesthetic or perceptual dimensions which contribute to the character of the landscape. Landscape value can be defined by<sup>4</sup>:

- designations;
- planning policy;
- status of individual or groups of landscape features;
- cultural values attached to specific areas/views; and
- landscapes of local and/or community interest.

1.32 Landscape value can also be identified through reference to specific attributes of the landscape including, but not restricted to<sup>5</sup>:

- landscape quality;
- scenic quality;
- rarity;
- representativeness;
- conservation interests;
- recreational value;
- perceptual aspects; and
- associations.

## Methodology – Landscape Susceptibility

1.33 Landscape susceptibility is defined by the ability of the landscape receptor to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or achievement of landscape policies and strategies. Existing landscape sensitivity and capacity studies for the general type of development proposed may be a useful guide but cannot provide a substitute for the individual assessment of susceptibility of the receptors in relation to the specific development proposal.<sup>6</sup>

## Methodology – Landscape Sensitivity

1.34 Landscape sensitivity is defined by professional judgement of the interaction between value and susceptibility to change. Table LA-2 below indicates how value and susceptibility to change can be correlated, however in reality the interaction is more complex and reasoned justification for the assessment of the sensitivity for each receptor is included in the LVIA text.

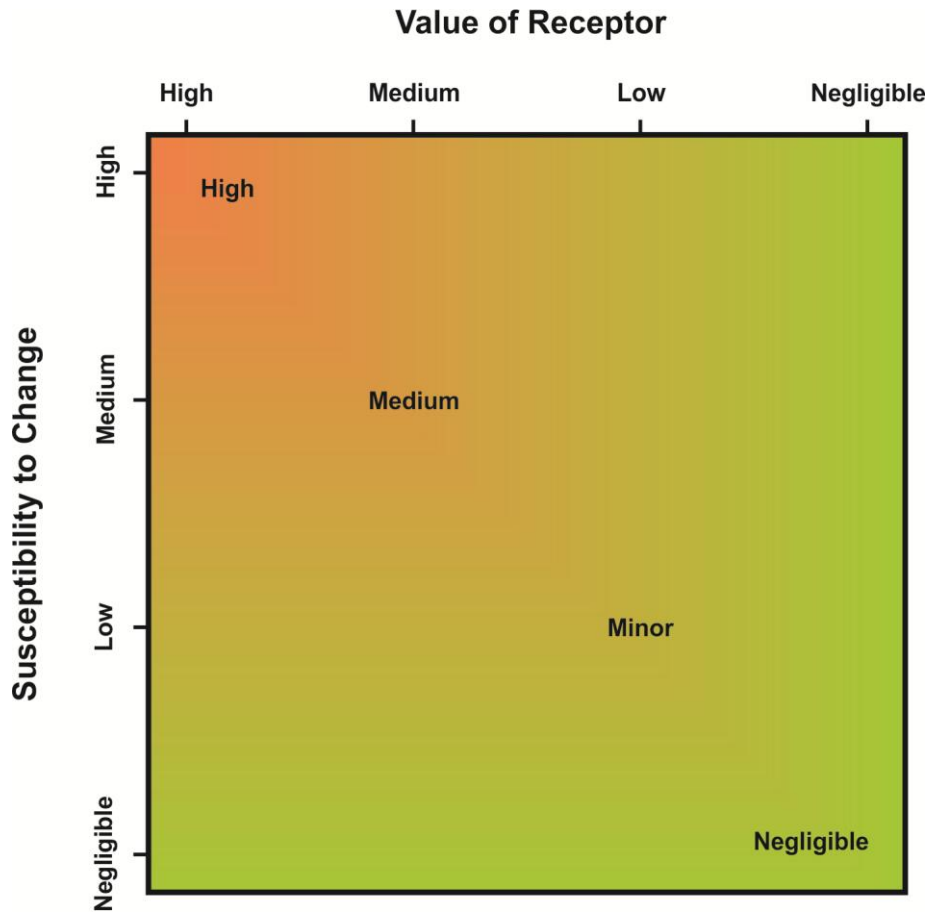
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4 Guidelines for Landscape and Visual Impact Assessment (Third Edition) Paragraph 5.2

5 Guidelines for Landscape and Visual Impact Assessment (Third Edition) Box 5.1

6 Guidelines for Landscape and Visual Impact Assessment (Third Edition) Paragraph 5.41

**Table LA-2 – Determination of Sensitivity**



### Methodology – Landscape Magnitude of Change

1.35 The magnitude of change is defined as substantial, moderate, slight or negligible. The level is assessed in terms of <sup>7</sup>:

- the size or scale of the landscape change caused by the proposed development;
- the geographical extent over which landscape change will occur; and
- the duration and reversibility of the landscape change.

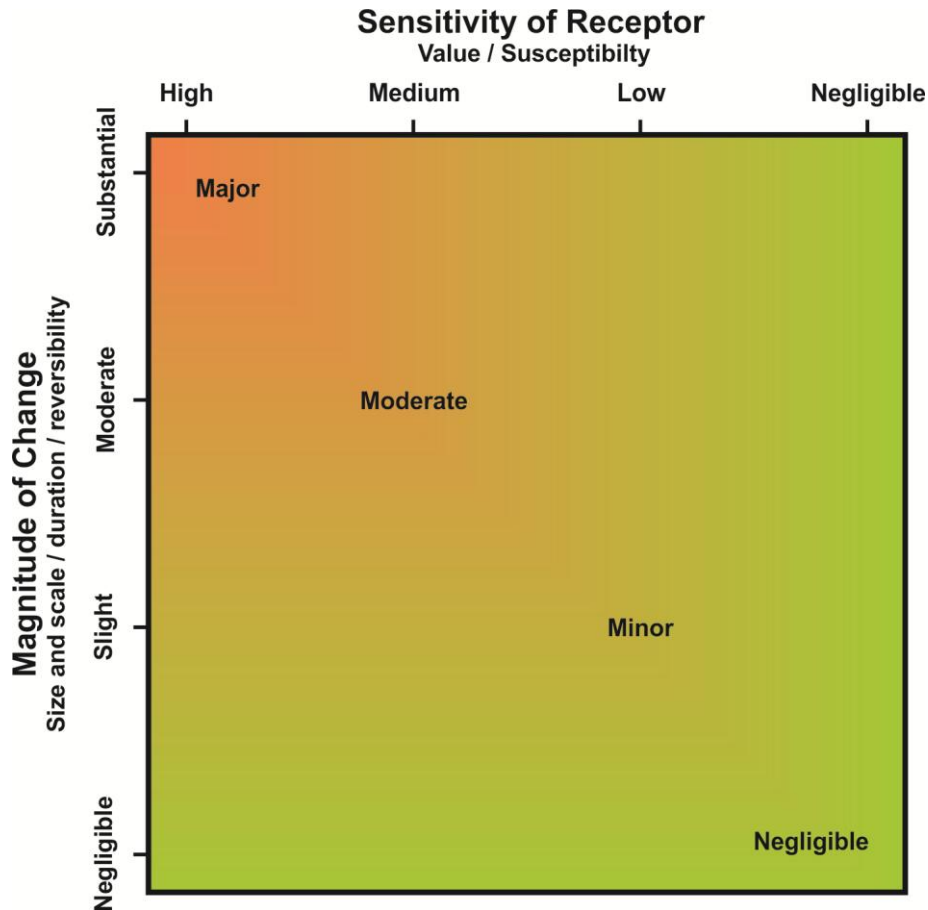
### Methodology – Importance of Landscape Effects

1.36 The importance of landscape effects is defined by a professional judgement based on the combination of landscape sensitivity to the type of development proposed and the anticipated magnitude of landscape change caused by the proposed development. Table LA-3 below is used to guide this judgement

<sup>7</sup> Guidelines for Landscape and Visual Impact Assessment (Third Edition) Paragraph 5.48 – 5.52

only; reasoned written assessment is included for each receptor in the main LVIA text.

**Table LA-3 – Residual Landscape and Visual Effects**



## Methodology – Visual Baseline

1.37 The visual baseline and viewpoints are identified through the use of:

- ZTV studies, which indicate the extent of theoretical visibility;
- desk top survey to identify screening by vegetation/built development;
- identification of specific visual receptors;
- consultation at scoping; and
- site survey work to check and inform the above.

1.38 The visual baseline examines the following issues<sup>8</sup>:

- the type and relative numbers of people (visual receptors) likely to be affected, making clear the activities they are likely to be involved in;

<sup>8</sup> Guidelines for Landscape and Visual Impact Assessment (Third Edition) Paragraph 6.24

- the location, nature and characteristics of the chosen representative, specific and illustrative viewpoints, with details of the visual receptors likely to be affected at each;
  - the nature, composition and characteristics of the existing views experienced at these viewpoints, including direction of view;
  - the visual characteristics of the existing views, for example the nature and extent of the skyline, aspects of visual scale and proportion, especially with respect to any particular horizontal or vertical emphasis, and any key foci;
  - elements, such as landform, buildings or vegetation, which may interrupt, filter or otherwise influence the views.
- 1.39 Viewpoints can be representative of different types of visual receptor, specific identified viewpoints, illustrative to demonstrate specific issues, or sequential to assess changes along a given route.
- 1.40 Visual receptors identified as unlikely to experience significant/important visual effects either at the scoping stage or in establishing the baseline should not be included in detailed reporting but should be noted, with reasons given for their exclusion.<sup>9</sup>

## Methodology – Value Attached to Visual Receptor

- 1.41 The value attached to views is determined by<sup>10</sup>:
- the value attached to particular views such as views from heritage assets or through planning designations; and
  - indicators of the value attached to views by visitors and through cultural associations.

## Methodology – Susceptibility of Visual Receptor

- 1.42 The susceptibility of visual receptors to change caused by the proposed development is mainly a function of the occupation or activity of people experiencing the view at particular and the extent to which their attention or interest may therefore be focused on the views and the visual amenity they experience at particular locations.
- 1.43 The visual receptors most susceptible to change are generally likely to include:
- residents at home;
  - people, whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focused on the landscape and on particular views;
  - visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience;

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<sup>9</sup> Guidelines for Landscape and Visual Impact Assessment (Third Edition) Paragraph 6.24

<sup>10</sup> Guidelines for Landscape and Visual Impact Assessment (Third Edition) Paragraph 6.37

- communities where views contribute to the landscape setting enjoyed by residents in the area.

Travellers on road, rail or other transport routes tend to fall into an intermediate category of moderate susceptibility to change. Where travel involves recognised scenic routes awareness of views is likely to be particularly high.

## **Methodology – Visual Sensitivity**

- 1.44 Table LA-2 above indicates how value and susceptibility to change are correlated to determine landscape sensitivity and is equally relevant for the determination of visual sensitivity.

## **Methodology – Visual Magnitude of Change**

- 1.45 Judging the magnitude of the visual effects identified needs to take account of:
- the scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the proposed development;
  - the degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of form, scale and mass, line, height, colour and texture; and
  - the nature of the view of the proposed development, in terms of the relative amount of time over which it will be experienced and whether views will be full, partial or glimpses.

## **Methodology – Importance and Nature of Effects**

- 1.46 The potential importance of landscape or visual impacts is determined by a combination of the magnitude of the potential impact and the sensitivity of the receptor to change. These two variables can be correlated as illustrated in Table LA-3. Thus, an impact of low magnitude may nevertheless be assessed to have a moderate impact for a highly sensitive receptor.
- 1.47 Table LA-3 is not used as a prescriptive tool, and the methodology and analysis of potential effects at any particular location must allow for the exercise of professional judgement. In some instances a particular parameter may be considered as having a determining effect on the analysis.
- 1.48 Where the landscape or visual effect has been classified as Major in a LVIA, this is considered to be equivalent to a significant effect as referred to in the EIA Regulations based on the above noted definitions of receptor sensitivities and magnitudes of change. Other classifications are considered to be not significant. In a Landscape and Visual Appraisal judgements are made on the importance of the effect and not its significance.



- 1.49 Table LA-4 below provides a general written description of the level of effect anticipated for each importance criteria. This is a general description which provides a comparative guide only, but is useful in putting any effects in context.

**Table LA-4**  
**Importance Criteria for Landscape and Visual Impact**

| Importance        | Definition  |
|-------------------|---|
| <b>Negligible</b> | The proposed scheme is appropriate in its context. It may be difficult to differentiate from its surroundings and/or would affect very few or no receptors            |
| <b>Minor</b>      | The proposed scheme would cause a barely perceptible impact, and would affect few receptors.  |
| <b>Moderate</b>   | The proposed scheme would cause a noticeable difference to the landscape, and would affect several receptors.   |
| <b>Major</b>      | 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 |

- 1.50 The nature of the effects identified can be temporary, long term or permanent and beneficial, neutral or adverse.
- 1.51 Throughout the LVIA, the effects of the proposed development on landscape character (out with the effects on landscape fabric and character identified within the proposed Site boundary) have been assessed in relation to the key characteristics of each landscape character area predicted to have visibility of the proposed turbines and therefore potentially impacted by the proposed development. The aim is to provide an objective assessment of the relationship between the proposed development and the landscape in which it would be located and seen.
- 1.52 It is considered that the effects on landscape character arising from the introduction of large scale operations and developments into a rural landscape are likely to be adverse. However, it is important to consider the nature of the proposed change in the context of the key characteristics of the landscape and the extent to which these may be more, or less, sensitive to change of the nature associated with the defined development and accordingly, more, or less, able to accommodate the predicted changes.
- 1.53 In relation to the effects of development on visual amenity, there is a wide spectrum of opinion regarding the nature of effects (beneficial, neutral or adverse) on visual amenity has been made in this assessment.
- 1.54 A site visit to assess the baseline conditions and take photographs locations which illustrate the type of view from the identified receptors was carried out as identified in the main chapter text. Weather forecasts were consulted prior to field work and the site visit planned for suitable weather conditions.

## Methodology – Mitigation

- 1.55 In accordance with the EIA Regulations, measures proposed to prevent/avoid, reduce and where possible offset or remedy (or compensate for) any significant adverse landscape and visual effects should be described. In practice such mitigation measures are now generally considered to fall into three categories<sup>11</sup>:
- standard construction, design and operational management practices for avoiding and reducing environmental effects;
  - primary measures, developed through the iterative design process, which have become integrated or embedded into the project design;
  - secondary measures, designed to address any residual adverse effects remaining after primary measures and standard construction practices have been incorporated into the scheme.
- 1.56 Some likely significant/important adverse landscape and visual effects can be prevented or avoided through careful planning, siting and design. In many cases time and costs may be reduced if significant/important environmental constraints can be identified and avoided during the early stages of scheme development. This may be achieved by the selection of a site that can more readily accommodate the proposed development or through innovative design within the selected site.
- 1.57 The primary mitigation measures and the construction and operational management practices should ideally be included in the project description/specification (and also in the design and access statement for the project). So too should the possible effects identified early on and the design responses that have been introduced, for example modifications to siting, access, layout, buildings, structures, ground modelling and planting. It can be expected that both these types of mitigation measure will definitely be implemented as they are to be an integral part of the scheme. They could therefore be secured by a condition relating to any permission granted.
- 1.58 Secondary mitigation measures are those that are not built into the final development proposals and are considered in relation to the assessment of the landscape and visual effects of the scheme as the means of addressing the significant/important adverse effects identified. As they are not incorporated in the scheme being assessed, there will need to be careful consideration of how they can be secured. In an ideal world, applying Landscape and Visual Impact Assessment as an iterative planning and design tool would allow all necessary and desirable mitigation to be incorporated into the project design, such that secondary mitigation should not prove necessary. This will not always be possible but that should not discourage the landscape professional from trying to achieve such an outcome.
- 1.59 The three forms of mitigation to address significant/important adverse effects form what has been termed the 'mitigation hierarchy' and good practice

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<sup>11</sup> Guidelines for Landscape and Visual Impact Assessment (Third Edition) Paragraph 4.21

should aim to achieve mitigation at the highest possible level in this hierarchy. The ideal strategy is one of prevention/avoidance. If this is not possible, alternative strategies, first of reduction and then of offsetting/remediating (or compensating for) the effects, may need to be explored, depending on individual circumstances.

## Cumulative Effects

- 1.60 Assessment of cumulative effects is required both by the EIA and the SEA Directives and by the associated Regulations. Cumulative effects have been defined in a broad generic sense as 'impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project'<sup>12</sup>.
- 1.61 The study area for cumulative landscape effects is defined by either the landscape character area within which the site is located, the use of ZTV studies, or a reasoned area potentially derived from scoping and/or consultation.
- 1.62 Cumulative landscape effects can occur to the fabric, aesthetic aspects and overall character of the landscape<sup>13</sup>. The approach to assessing the importance of cumulative landscape effects should be guided by the same principles as the approach to the initial project assessment<sup>14</sup>.
- 1.63 The cumulative effects for the proposed development have been assessed in the relevant sections on the Landscape Assessment and Visual Assessment.

## Viewpoint Photographs

- 1.64 The photographs for the various viewpoints have been scaled to match the size of components within the actual view when viewed from the stated viewing distance. The process of achieving this is detailed below.
- 1.65 Firstly the size of the printed image required to match the scale of elements within the actual view is calculated using the formulae below.

$$\frac{\text{Viewing Distance}}{\text{Focal Length of Lens}} = \text{Magnification Factor for negative/camera sensor}$$

- 1.66 The camera used is a Nikon D90s with a fixed lens of 35 mm (this being the digital equivalent of a 52.5 mm optical camera lens). The result of the formulae is 8.5715 as shown below.

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12 Guidelines for Landscape and Visual Impact Assessment (Third Edition) Paragraph 7.1

13 Guidelines for Landscape and Visual Impact Assessment (Third Edition) Paragraph 7.25

14 Guidelines for Landscape and Visual Impact Assessment (Third Edition) Paragraph 7.27

$$\frac{300\text{mm}}{35\text{mm}} = 8.5715 \text{ (Magnification Factor)}$$

- 1.67 The magnification factor is applied to the 23.6 mm by 15.8 mm camera sensor of the Nikon D90s to give a printed single frame size of 202.2874 x 135.4297mm.

$$8.5715 \times 23.6 = 202.2874\text{mm}$$

$$8.5715 \times 15.8 = 135.4297\text{mm}$$

- 1.68 The photograph was taken in portrait format and therefore the printed height of the image needs to relate to the 202.2874mm measurement.
- 1.69 A number of individual photograph frames were stitched together (using Adobe Photoshop CS4) to create a panoramic view that reflects the context of the view at the viewpoint. The height of the individual frame within this panorama has been scaled to 202.2874mm to match the identified height for the set viewing distance (300mm) within the drawing package used to produce the viewpoint drawings (Coreldraw X5).
- 1.70 The excess image to the top, bottom and sides of the panoramic view have been clipped to preserve the scaling factor but allow the drawing to be positioned within the A3 photographic viewpoint sheet.