Bullimores Sand and Gravel Ltd

Collyweston Western Extension, Northamptonshire

VISUAL APPRAISAL ADDENDUM

MAY 2014
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Appendix A: FPCR Response to Comments Note
1.0 INTRODUCTION

1.1 This Visual Appraisal Addendum has been carried out for the proposed western extension to Collyweston Quarry by FPCR Environment and Design Ltd (FPCR). It should be read in conjunction with the Landscape and Visual Impact Assessment study dated August 2013 submitted as part of the planning application.

1.2 This appraisal study has been prepared in response to comments received on the application and feedback from the informal public information exhibition (PIE) held in the Duddington Parish Hall in early March 2014. It specifically addresses concerns raised about the potential views towards the quarrying operations from properties on Green Lane (on the eastern side of Duddington). This addendum also includes a note addressing other relevant matters raised by local residents. This is included at Appendix A.

1.3 FPCR undertook the Landscape and Visual Impact Assessment for the proposed western extension and this remains the principal report that describes and evaluates the likely effects that will arise from the proposals.

1.4 This addendum study has been conducted as follows:

- Review of specific and detailed points raised during the application consultation process and from the PIE.
- Site meeting with Northampton County Council and visit to property on Green Lane (including brief meeting with residents) on 1 April 2014.
- Visual appraisal and analysis of the proposed development from this general location in accordance with the Guidelines for Landscape and Visual Impact Assessment, third edition (GLVIA3 - published by the Landscape Institute and the Institute of Environmental Management and Assessment, in 2013).
- Photographic recording of viewpoints to and from the eastern side of Duddington.
- Cross sectional analysis of the proposed development in relation to the visited property (Note: Other landscape cross sections including between the proposed development and Duddington are included in the full Landscape and Visual Impact Assessment).

2.0 VISUAL APPRAISAL

Baseline Viewpoints

2.1 The baseline visual appraisal has reviewed the nature of the existing views from the identified properties off Green Lane, on the eastern side of Duddington. A baseline analysis of the available views and amenity and is supported by a series of photo viewpoints. These are described below.

Viewpoint 1

2.2 This viewpoint is taken from the garden boundary of the property visited on Green Lane, Duddington on 1 April 2014. The view is looking directly towards the site which lies beyond the intervening field and A43 road corridor. From this position, the view towards the site is along a small shallow valley, which continues to the east of the A43 road corridor.
2.3 From this position, the rising nature of the ground and the existing planting along the road corridor effectively screen any views towards the site and the existing fields to the east of the road corridor. From this position the A43 is situated in a relatively low cutting (estimated to be around 2 – 3 metres below the adjacent field boundaries). Views towards vehicles using the road from this location are possible, although to the north and south of this small shallow valley position the road is in a deeper cutting and vehicles using the road are more effectively hidden from the eastern side of the village.

Viewpoint 2

2.4 This viewpoint is taken from a more elevated position on the public footpath immediately to the south of the property known as Langdale and the end of Green Lane. The A43 road corridor lies beyond the hawthorn dominated hedgerow that stretches across much of the viewpoint. At this point however, the road is in a deeper cutting and therefore vehicles are not visible through or beyond the hedgerow.

2.5 The site lies beyond the road corridor and a corridor or retained farmland and would stretch across much of the viewpoint, although significantly it is not visible due to the nature of the landform and intervening hedgerow and trees.

2.6 This is the same general viewpoint location as Viewpoint A in the Landscape and Visual Impact Assessment.

Viewpoint 3

2.7 This viewpoint is included to illustrate the view south westwards across the village from the same position as Viewpoint 2. It is taken over a stone wall and shows how the land falls towards the west and away from the site. Due principally to the landform characteristics, no views towards the site or the proposed development would be possible from those properties visible in this viewpoint.

Viewpoint 4

2.8 Taken from an elevated position on top of the existing soil storage mound on the western side of the existing quarry, this viewpoint looks directly back towards Duddington. This viewpoint position is situated approximately 6 meters above the natural ground levels. From this position, it is apparent that the vast majority of properties and locations within Duddington are very effectively screened from the site by the nature of the landform and the mature planting along the A43 road corridor and around the eastern edge of the village.

2.9 A small number of properties on Highfield in Duddington are just visible beyond the intervening trees and planting and the single elevated property, known as Robinswood in the north of the village is more clearly visible. Beyond this small number of properties, no others are readily evident.

2.10 In the context of potential views towards the proposed western extension, it must also be noted that the highest part of the proposed quarry extension will sit below this artificially high viewpoint. Consequently, any available views towards the extension operations in this part of the site from Duddington will be very limited.
Viewpoint 5

2.11 This viewpoint is also taken from the top of the existing soil storage mound on the western side of the existing quarry site. The view is however towards the south and includes the existing quarry operations. From this position, it is evident that there is limited potential visibility from the south and south east due to the nearby presence of significant mature woodland. Longer ranging views towards the west and south west across the River Welland valley are however possible.

2.12 Tixover, the A43 and other scattered farming properties are distantly visible from this position. As with Viewpoint 4 and in the context of potential views towards the proposed western extension, it must also be noted that the highest part of the proposed quarry extension will sit below this artificially high viewpoint.

Landscape Cross Section

2.13 The landscape cross section extends from Green Lane in the west up the small shallow valley through the proposed western extension area and up to the existing quarry site. The approximate level of Green Lane at the western side of the section is 50.0 – 53.0 metres Above Ordnance Datum (AOD) and the field boundary on the western side of the road corridor (as visible on Viewpoint 1) lies at approximately 58.0 metres AOD.

2.14 East of the A43 road corridor the site boundary (west) lies at approximately 67.0 metres AOD and the site boundary to the east (which extends into the existing quarry) is at approximately 80.0 metres AOD. The approximate distance from the Green Lane Property (as visited and measured from the house; immediately to the north of Langdale) to the nearest part of the site is approximately 245 metres and to the eastern site boundary it is approximately 460 metres AOD.

2.15 This section line illustrates that even without the intervening mature trees and planting the combination of the existing landform and the soil storage mound to approximately 5 metres high (above existing ground levels), the quarry operations within the site and along this section line would be hidden from view. The indicative line of visibility included on the cross section shows the line of sight from a typical first floor window height. As shown the soil storage mound would act as an effective visual screen to any views from this property through the A43 roadside corridor planting.

Visual Analysis

2.16 The visual impact assessment included within the original Landscape and Visual Impact Assessment details the full appraisal and accords with the GLVIA3 methodology. The results of this original assessment do not vary as a result of this further detailed visual appraisal work, although it does offer an additional detail particularly in relation to views from the eastern edge of Duddington. The following provides a commentary on the results of the further analysis.

2.17 There would be no discernible views from the Green Lane property (Viewpoint 1 and landscape cross section) towards the proposed western quarry extension operations. The nature of the landform and the intervening mature planting along the A43 road corridor combine to form and effective visual screen and barrier to views in this direction. At the time of forming the temporary proposed soil storage bund along the western perimeter of the site, glimpsed and very restricted views through the existing planting (if in winter) towards these works may be possible. However
even in these circumstances the nature and significance of this visual change would be negligible.

2.18 Once in place, this soil storage bund (constructed to approximately 5 metres high along this part of the western site perimeter) would screen any glimpsed or restricted views towards the quarrying operations. Consequently, any visual effects upon this property would be at most negligible.

2.19 Although the adjacent properties on Green Lane were not visited at the same time, the analysis undertaken from the road, public footpath and from looking back towards the site from the existing soil storage bund (Viewpoint 4) indicate that the visual effects for the adjacent properties would be very similar and at most would result in a negligible visual effect.

2.20 As stated in the Landscape and Visual Impact Assessment, at 4.46 "Views towards the operation of the works from properties within Duddington will be limited to only a very small number of properties. This settlement is very effectively screened from the site by a combination of the landform and the mature trees and hedgerows surrounding the village and lining the A43 road corridor. There will be no views towards the works from the nearly all parts of the village and nearly all properties."

2.21 Any potential views towards the operations within the site would be very limited from Duddington. The single property known as Robinswood on the northern elevated edge of the village would have some views between a break in the A43 roadside planting towards the proposed development, yet the soil storage bund along the western side of the site and some additional hedgerow tree planting would assist in limiting the extent of these views. The resultant visual effect upon this property would be minor/ moderate adverse. The only other Duddington properties that may experience any more than a negligible visual effect would be a small number on Highfield and from these the effects would be at most minor adverse.

2.22 As confirmed at 4.46 of the Landscape and Visual Impact Assessment, “For most at Duddington, the resultant visual effect will be none.” This is because there would be no views towards any part of the proposed site or operations.
PHOTO VIEWPOINT 1: View from the eastern edge of Duddington towards the Site

PHOTO VIEWPOINT 2: View from the eastern edge of Duddington towards the Site
PHOTO VIEWPOINT 3: View from the eastern edge of Duddington looking west across Duddington (opposite direction to the Site)

PHOTO VIEWPOINT 4: View from the existing quarry bund looking to the west and north

PHOTO VIEWPOINT 4: Continued
PHOTO VIEWPOINT 5: View from the existing quarry bund looking to the south

PHOTO VIEWPOINT 5: Continued
NOTE: Levels shown are approximate and Above Ordnance Datum. They are based upon topographic survey (where available) and Ordnance Survey.
Bullimores Sand and Gravel Ltd

Collyweston Western Extension, Northamptonshire

Appendix A: Landscape and Visual Note (May 2014)

RESPONSE TO QUERIES AND MATTERS RAISED (Please refer to the Landscape and Visual Impact Assessment (LVIA) report; dated August 2013 Revision B):

1. **Explanation of how the various viewpoints within the LVIA were chosen?**

As indicated at 2.30 and 2.31 of the LVIA;

“A series of viewpoints have also been determined. The viewpoints include:

- Views to aid description of the site itself,
- Public viewpoints, including rights of way and open access land,
- Public locations representing residential areas
- Transport routes

The views also represent what can be seen from a variety of distances from the development, and different viewing experiences.”

The 10 viewpoints included in the LVIA were determined based upon the above recognised approach and include views from representative positions within or close to Duddington, Tixover, Collyweston and surrounding public rights of way and roads with views.

Photomontages have not been prepared for the proposed development. These had not been requested by the local planning authority, Natural England or other consultees as part of the EIA “Scoping” process. It is considered that the use of the viewpoints and other supporting LVIA material is sufficient to be able to evaluate and describe the visual effects arising from the proposals.

2. **Other comment from Duddington resident:**

"I have now had time to undertake a little more research which I believe will raise a few further concerns. In particular I have undertaken my own photographic survey of the village and the surrounding area and I believe that the current proposed extension to the quarry will be clearly visible from Tixover, all main entrances and routes into the village and also from Collyweston. For me and I suspect other villagers and motorists this will cause a significant visual impact and the conservation village of Duddington will be clearly ‘framed’ by the quarry from all approaches across the Welland Valley”.

FPCR Response: The LVIA provides a full assessment of the likely landscape and visual effects arising from the proposed development. In terms of where the proposed development will be visible from, Figure 5 of the report includes a Zone of Visual Influence. This shows the approximate area over which views towards the proposed development will be possible. In the context of the comments above, the ZVI includes the villages and locations referenced (See also 4.24 – 4.27 of the LVIA). The
visual effects upon these receptors and locations are also included within the report (at 4.28 – 4.48 and in Appendix B).
Bullimores Sand and Gravel Ltd

Collyweston Western Extension, Northamptonshire

LANDSCAPE AND VISUAL IMPACT ASSESSMENT

May 2014
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APPENDICES

Appendix A: Landscape Character Assessment – Relevant Published Extracts
Appendix B: Visual Effects Table
1.0 INTRODUCTION

1.1 A comprehensive landscape and visual assessment has been carried out for the proposed extension to Collyweston Quarry by FPCR Environment and Design Ltd (FPCR). This report forms part of the Environmental Statement (ES) and describes and evaluates the effect of the proposed quarry extension on the landscape and visual resources and amenity of the site and its surroundings. It reviews the existing baseline conditions, assesses the potential significant impacts and outlines design and mitigation proposals incorporated as part of the overall proposed development. It has been undertaken within the context of the proposals and development parameters detailed elsewhere within the planning application.

1.2 FPCR are a multi-disciplinary environmental and design consultancy with over 50 years’ experience of architecture, landscape, ecology, urban design, masterplanning and environmental impact assessment. The practice is a member of the Landscape Institute and Institute of Environmental Management and Assessment and is frequently called upon to provide expert evidence on landscape and visual issues at Public and Local Plan Inquiries.

2.0 ASSESSMENT SCOPE AND METHODOLOGY

Principles and Overview

2.1 This Landscape and Visual Impact Assessment has been prepared based upon the Guidelines for Landscape and Visual Impact Assessment, third edition (GLVIA3), published by the Landscape Institute and the Institute of Environmental Management and Assessment, in 2013.

2.2 In summary the GVLIA3 states:

“Landscape and Visual impact assessment (LVIA), is a tool used to identify and assess the significance of and the effects of change resulting from development on both landscape as an environmental resource in its own right and on people’s views and visual amenity.”

2.3 The guidance recognises a clear distinction between the impact, as the action being taken, and the effect, being the result of that action.

2.4 There are two components of LVIA

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

2.5 These two elements are described separately in this report.

2.6 The GLVIA3 recognises that professional judgement is a very important part of LVIA, and states that whilst there is some scope for quantitative measurements of some relatively objective matters, much of the assessment must rely on qualitative judgements.(para 2.23). It also states that in identifying significant effects,

“the need for an approach that is in proportion to the scale of the project that is being assessed and the nature of the likely effects judgement needs to be exercised at all stages in terms of the scale of the investigation that is appropriate and proportional.”(Paragragh 1.17)
2.7 The components of the LVIA include: a project description, baseline studies, identification and description of effects, assessment of the significance of effects and mitigation. This report outlines these components.

2.8 In terms of baseline studies the assessment provides an understanding of the landscape in the area to be affected, its constituent elements, character, condition and value. For the visual baseline this includes an understanding of the area in which the development may be visible, the people who may experience views, and the nature of views.

2.9 The assessment considers direct effects and any indirect, secondary, cumulative, short, medium and long term, permanent and temporary, positive and negative effects of the development.

2.10 The overall significance of effects is determined making judgement about two components;

- Nature of receptor likely to be affected (known by the shorthand “sensitivity”) and;
- Nature of the effect likely to occur (known by the shorthand “magnitude”)

2.11 Judgements on sensitivity are made by considering:

- The susceptibility of the receptor to the type of change arising from the specific proposal; and
- The value attached to the receptor.

2.12 Judgements on magnitude are made by considering:

- The size and scale of the effect – for example, whether there is a complete loss of a particular element of the landscape or a minor change:
- The geographical extent of the area that will be affected; and
- The duration of the effect and its reversibility.

2.13 Consideration of all these criteria feeds into a comprehensive assessment of significance.

2.14 Mitigation includes measures proposed to prevent, reduce and where possible offset any significant adverse effects. Mitigation provided as part of the development is described and is included within the overall assessment of effects

Assessment of Landscape Effects

2.15 GLVIA3 states that “An assessment of landscape effects deals with the effects of change and development on landscape as a resource”. The baseline landscape is described by reference to existing landscape character assessments, and by a description of the site and its immediate context. For this assessments the following existing landscape work has been reviewed;

2.16 A range of landscape effects can arise through development. These can include:

- Change or loss of elements, features, aesthetic or perceptual aspects that contribute to the character and distinctiveness of the landscape
- Addition of new elements that influence character and distinctiveness of the landscape
- Combined effects of these changes

2.17 These are discussed in the assessment.

Susceptibility to change and value of the landscape receptor
2.18 The characteristics of the existing landscape resource are considered in respect of the susceptibility of the landscape resource to the change arising from this development.

2.19 The value of the existing landscape is also considered. GLVIA3 indicates information that contributes to understanding landscape value. This information is set out in paragraph 5.20 of the GLVIA3 and includes:
- Information about areas recognised by statute such as (depending on jurisdiction) National Parks, National Scenic areas, Areas of Outstanding Natural Beauty;
- Information about Heritage Coasts, where relevant;
- Local planning documents, for local landscape designations
- Information on individual or groups of features such as conservation areas, listed buildings, special historic or cultural sites
- Art and literature identifying value attached to particular areas or views
- Material on landscape of local or community interest

2.20 Where there is no clear existing evidence on landscape value, an assessment is made based on the following factors, based on the guidance in GLVIA3;
- Landscape quality (condition)
- Scenic quality
- Rarity
- Representativeness
- Conservation interest
- Recreation value
- Perceptual aspects
- Associations

Magnitude of Landscape Effects

2.21 Each effect on landscape receptors is assessed in terms of size or scale, geographical extent of the area influenced and its duration and reversibility.

2.22 In terms of size or scale the judgement takes account of the extent of the existing landscape elements that will be lost or changed, and the degree to which the aesthetic or perceptual aspects or key characteristics of the landscape will be altered by removal or addition of new elements. This assessment describes scale and size by reference to the terms High Medium and Low .

2.23 The Geographical extent of the effect is described by reference to the site, its immediate context and wider landscape character areas.

2.24 The duration and reversibility of effects are described. In respect of this assessment short term is defined as less than 5 years, medium term 5 to 10 years, and long term 10 to 25 years. As a summary the effects are summarised in the Landscape Effects Table at Appendix A at Year 0 and Year 15
Overall Significance of Landscape Effects

2.25 The overall significance of landscape effects is determined by considering the sensitivity of the landscape receptors and the magnitude of effect on the landscape.

2.26 The landscape sensitivity is determined by considering the susceptibility to change and the value of the landscape receptor. Judgements about the susceptibility to change are recorded on a scale of High, Medium and Low. The value of the landscape is recorded on a scale of National, Regional or Local. The magnitude of landscape change is defined in terms of High Medium Low or negligible effects.

2.27 GLVIA3 notes at paragraph 5.46 that there can be complex relationships between the value attached to landscape receptors, and their susceptibility to change. As an example a nationally valued landscape does not automatically have a high susceptibility to all types of change.

2.28 Final conclusions on the overall significance of landscape effects are drawn from the assessment components described. GLVIA3 notes at paragraph 5.56 that there are no hard and fast rules about what makes a significant effect. However it is reasonable to say that;

- Major loss or irreversible negative effects, over an extensive area, on elements and/or aesthetic and perceptual aspects that are key to the character of nationally valued landscapes are likely to be of the greatest significance;

- Reversible negative effects of short duration, over a restricted area, on elements and/or aesthetic and perceptual aspects that contribute to but are not key characteristics of the character of landscapes of community value are likely to be of least significance and may, depending on the circumstances, be judged as not significant.

- Where assessments of significance place landscape effects between these extremes, judgements must be made about whether or not they are significant, with full explanations of why these conclusions have been reached.

2.29 This assessment includes conclusions on the significance of the landscape effects.

Assessment of Visual Effects

2.30 A series of viewpoints have also been determined. The viewpoints include:

- Views to aid description of the site itself,
- Public viewpoints, including rights of way and open access land,
- Public locations representing residential areas
- Transport routes

2.31 The views also represent what can be seen from a variety of distances from the development, and different viewing experiences.

Sensitivity of Visual Receptors

2.32 It is important to remember that visual receptors are all people. For each affected viewpoint the assessment considers both susceptibility to change in views and the value attached to views.

2.33 The visual receptors most susceptible to change are generally likely to include:

- residents at home
people engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focused on the landscape or particular views;

visitors to heritage assets or other attractions, where views of surroundings are an important contributor to the experience;

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 susceptibility to change. Where travel involves recognised scenic routes awareness of views is likely to be particularly high.

2.34 Visual receptors likely to be less likely to be sensitive to change include:

- People engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the landscape;
- People at their place of work whose attention may be focused on their work or activity, not on their surroundings.

2.35 Judgements about susceptibility to change are recorded in this assessment on a scale of High, Medium and Low.

2.36 Judgements on the value attached to views experienced, takes account of:

- Recognition of the value attached to particular views, for example in relation to heritage assets, or through planning designations
- Indicators of the value attached to views by visitors, for example through appearances in guidebooks or visitor maps.

2.37 Judgements on visual value in this assessment are noted in this assessment in terms of; National, Regional and Local.

Magnitude of the Visual Effects

2.38 Each of the visual effects is evaluated in terms of its size or scale, the geographical extent of the area influenced and its duration or reversibility.

2.39 In terms of size or scale, the magnitude of visual effects takes 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 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;
- 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.
- The geographical extent of the visual effect in each viewpoint is likely to reflect:
- The angle of view in relation to the main activity of the receptor
- The distance of the viewpoint from the proposed development
• The extent of the area over which the changes would be visible.

2.40 As with landscape effects the duration of the effect could be short to long term or permanent and the same definitions apply.

**Overall Significance of Landscape and Visual Effects**

2.41 The final conclusions on significance are drawn from the separate judgements on the sensitivity of the receptors and the magnitude of the effects, allowing a final judgement on whether the effect is significant or not.

2.42 For this assessment the following descriptive thresholds have been used

  - Major – An effect considered very important in the decision process
  - Major/Moderate – An effect that is considered material in the decision process
  - Moderate – An effect that is notable, but not material in the decision process
  - Minor – An effect that will be noticed, but is not relevant to the decision process
  - Negligible – An effect that will be discernible but of very limited consequences that is it not relevant to the decision process

2.43 For this assessment effects of “Major” or “Major/ Moderate” are considered significant in EIA terms.
3.0 EXISTING BASELINE CONDITIONS

Planning Policy Context

3.1 The following considers the relevant planning and legislative framework in the context of landscape and visual issues. Not all policies are referred to or listed in full but those of greatest relevance to the application site and nature of the proposed development are included.

National Planning Policy

National Planning Policy Framework

3.2 The NPPF crystallises the previous national guidance and reiterates the need for enhancing the quality of the built and natural environment. The NPPF seeks to deliver a framework to:

"Contribute to the achievement of sustainable growth".

3.1 Section 11 is concerned with “Conserving and enhancing the natural environment”. The NPPF seeks to conserve and enhance the natural environment – protecting and enhancing valued landscapes, and affording great weight to the protection of areas of natural and scenic beauty.

“The planning system should contribute to and enhance the natural and local environment by: Protecting and enhancing valued landscapes...”

Local Planning Policy


“Objective 10: Conserving and enhancing Northamptonshire’s built and natural environment

Recognise Northamptonshire’s environmental systems and landscape linkages in order to conserve and enhance the built and natural environment through ensuring sensitive working, and where necessary high standards of mitigation of potentially adverse impacts of minerals and waste development”

3.2 This is about ensuring new or extended minerals and waste related uses not only do not damage or destroy the county’s existing environmental and natural assets, but that opportunities are taken (including via restoration) to enhance existing and planned green infrastructure networks and to support the identified landscape character areas of the county.

3.3 At 7.15, the Core Strategy DPD advises that “site-specific Locations for Minerals Development” must address various factors, including the impact upon the landscape, including, “severance of landscape and habitat loss”. They must also address “the scope for landscape, biodiversity and amenity improvements through mineral working and subsequent restoration”

“Policy CS13: Restoration and after-use of minerals and waste development

All minerals and waste related development of a temporary nature must ensure that the site is progressively restored to an acceptable condition and stable landform.”
The after-use of a site will be determined in relation to its land use context, the surrounding environmental character and any specific local requirements, but on the basis that it:

- enhances biodiversity and the local environment and amenity, and
- benefits the local community and / or the local economy.

Sites for mineral extraction in river valleys should not be restored to a predominantly water-based form. Restoration of mineral sites elsewhere in the county to a lower level form will be acceptable if it is able to retain the integrity of the local landscape character and minimises overall traffic movements associated with extraction and restoration of the site.

Northamptonshire Minerals and Waste Development Framework (MWDF) Location for Minerals Development DPD (March 2011)

3.4 No directly relevant landscape or visual policies or other details appear to be contained within this document.

Northamptonshire Minerals and Waste Development Framework (MWDF) Control and Management of Development DPD (June 2011)

“CMD4: Bio diverse habitats and green infrastructure networks of Northamptonshire

3.5 Requirements regarding landscape character to be addressed by proposals for minerals and waste development are detailed in Policy CMD8.

3.6 5.26 of the DPD advises;

“ Strategic site layout can significantly reduce potential impacts on the immediate surrounding area and broader landscape. It can also allow for greater opportunities to incorporate elements of visual interest, reflect local identity in the design, or provide for effective buffers. The provision of landscaping schemes and boundary treatments can contribute positively towards amenity and biodiversity, particularly where they incorporate native species.”

3.7 5.30 of the DPD also advises;

“Proposals for minerals and waste development will need to demonstrate that the development is set in the context of the area in which it is to be sited, including the landscape, streetscape, and the character of existing buildings as appropriate.”

3.8 Policy CMD8 is that most directly relevant to the landscape and visual issues associated with the proposed development. This policy states;

“Policy CMD8: Landscape Character

Minerals and waste development should seek to reflect Northamptonshire’s landscape character. Development should mitigate potentially adverse impacts on the local character and distinctiveness of Northamptonshire’s landscape where necessary during the development, operational life, restoration, aftercare, and after-use. Opportunities for enhancement should be maximised through restoration, aftercare, and after-use.

Proposals for minerals and waste development will be required to undertake a landscape impact assessment (where appropriate) based on the landscape character assessment in order to identify:
• the presence of landscape values (including their nature, extent, and level of importance) and determine any potential impacts,

• any necessary measures to mitigate potentially adverse impacts, and

• opportunities to protect and enhance particular features that create a specific aspect of local distinctiveness or character.

3.9 Policy CMD9 includes reference to historic landscapes. At 5.51 and 5.52 of the DPD under Restoration and After Use the document advises;

“…Restoration should seek to maximise public and environmental benefits whilst also giving consideration to the land use context and local environmental conditions.

After-use with the primary objective of restoration to agriculture, forestry, economic development, and amenity purposes should seek to integrate secondary after-use objectives in order to maximise opportunities. Secondary after-use objectives may include: landscape enhancement, habitat enhancement….etc”

3.10 This highlights the importance and role of the subsequent restoration and aftercare proposals to the overall proposed development.

Rural North, Oundle & Thrapston DPD (July 2011)

3.11 No directly relevant landscape or visual policies or other details appear to be contained within this document.

Landscape Designations and Strategies

3.12 This section considers only the relevant landscape designations and strategies in the context of the landscape and visual issues of the site and development.

Landscape Designations

3.13 No specific landscape designations have been identified within or in close proximity to the proposed site. Published landscape character assessments are considered under ‘Landscape Character and Context’ below.

Landscape and Green Infrastructure Strategies

3.14 This section considers only the relevant landscape designations and strategies in the context of the landscape and visual issues of the site and development.

Northamptonshire Environmental Character and Green Infrastructure Suite, Launched November 2006: Green Infrastructure making the Connection

3.15 This suite of documents provides guidelines to illustrate how development should work with the landscape not against it. The approach is objective rather than providing a judgement of landscape value or quality. This suite of documents is referred to in the adopted Core Strategy GI policy which makes specific provision for the protection of the ‘Sub Regional Green Infrastructure Corridors’ identified within this document.
Topography

3.16 The following should be read in conjunction with Figure 3.

Context – Landform

3.17 The broad topographical context of the site is shaped by the River Nene to the East and the River Welland to the west.

3.18 The area is defined in the North West by a steep scarp slope which overlooks the Welland Valley. A limestone plateau to the north. The Floor of the River Welland to the west is at around 25 – 30 metres Above Ordnance datum (AOD). The scarp is at around 100 – 105 metres AOD.

Local – Landform

3.19 The site is located in the River Welland valley, east of Duddington and west of the Collyweston Great Wood with the Westhay Wood to the South. The land slopes up from the River Welland, from around 25 – 30 metres AOD to around 75-80 metres AOD at the site boundary. There is a ridge of higher ground further to the east at around 100 – 105 metres AOD running broadly north to south.

3.20 The village of Collyweston is located to the north of the site at around 50 – 95 metres AOD. Duddington to the west of the site is situated on the lower valley slopes at around 35 – 60 metres AOD. with the A43 running between Duddington and Collyweston.

3.21 The existing quarry sits to the east of the site on higher ground at around 80 – 85 metres AOD.

Landscape Character and Context

3.22 Landscape Character Assessments have been prepared at National and Countywide scales covering the site and its context. Relevant extracts of the published landscape character assessments are included at Appendix B.

National

3.23 The characterisation of the broad landscape context of the site is set out in Natural England’s National Character Areas (NCA). The site lies in the northern part of the Rockingham Forest NCA (No.92). This NCA encompasses a significant landscape tract stretching in a band South West to North East between Kettering and Stamford. The site lies close to the North point of the area. The following extracts are from the Natural England Key Facts and Data document and are included for general reference to the NCA as a whole.

“…There are no National Parks or Areas of Outstanding Beauty in the NCA…”

“…Rivers have cut into the glacial clay plateau to form the valley of the River Nene to the east and the Welland to the West both of which contain river sands and gravel…”

“…The NCA is a lowland area. The lowest parts of the county (below 10m) are situated along the base of the Nene Valley…”

“…The plateau (and highest point) of the NCA is capped by glacial boulder clay. To the North the land slopes into lower ground where the Jurassic limestones are exposed…”

“…Extensive areas of ancient woodland are a strong and unifying characteristic of this NCA…”
“...The period since the 1970’s has seen an increase in arable cultivation, with corresponding removal of hedges and hedgerow trees giving the open agricultural land an abrupt contrast with the woodland...”

“...A distinct character of the area is stone built, nucleated villages...”

3.24 The Natural England document provides a very broad assessment and appreciation covering a significant landscape tract. In this respect it does not provide details directly relevant to the site or its immediate surroundings, other than to establish the underlying characteristics of the wider landscape. A more detailed and site relevant landscape character assessment is contained within the countywide assessment as outlined below.

**County (Northamptonshire Current Landscape Character Assessment)**

3.25 The Northamptonshire Environmental Character Strategy (ECS) includes a Current Landscape Character Assessment (CLCA) for the County.

3.26 The Landscape Character of the site lies on the north eastern edge of the *Farmed Scarp Slopes*, it borders with *Wooded Limestone Hills and Valleys* as the adjoining Landscape Character Type (LCT). These areas lie respectively within the *Lower Jurassic Geology Landscapes* and *Limestone Landscapes* as defined in the CLCA.

3.27 Northamptonshire County Council has undertaken a landscape assessment covering the County. This fits within the broader Natural England assessment and adopts the Character Area (No. 92) described above. Within this broader assessment the Northamptonshire Assessment identifies a series of more detailed Landscape Character Types (LCT’s). **Figure 2** illustrates the location of the relevant LCT’s

3.28 The site lies within the *Farmed Scarp Slopes* LCT. This is summarised as a “*relatively steep elevated northwest facing scarp slope*.” This LCT covers parts of the landscape to the north and south of the sites location. The specific areas within this LCT are 15c Harringworth to Duddington and 15d Duddington to Easton on the Hill. The most relevant extracts and descriptions for these LCT’s to the site and its context are as follows:

**Geology and Soils**

...To the North, the scarp slopes are increasingly influenced by Oolitic limestones and ironstone, particularly on the upper slopes where these deposits can be seen to extend westwards into the *Wooded Limestone Hills*...

**Hydrology**

...A number of small streams flow off the scarp in to the Welland. These tend to be narrow brooks...

**Woodland and Trees**

...Steeper portions of the scarp slopes are cloaked in woodland and form a dark, textural backdrop to view eastwards for the vale....

**Communications and Infrastructure**

...The road runs at the base of the scarp, defining its lower limit, as is the case between Wakerly and Duddington. Routes also run along the top of the scarp for example the A43 south of Collyweston....
Site Landscape Context

3.29 The site is located immediately to the west of the existing Quarry site and to the east of the village of Duddington and the A43. Existing housing within the village of Duddington lies approximately 200 metres to the west of the site with the A43 running broadly north - south between the village and proposed site. The village of Collyweston lies to the north with Tixover, a further small settlement, to the west and Kings Cliffe to the south. These villages are typically small stone built nucleated settlements and include conservation areas and a mature landscape setting with trees.

3.30 Collyweston Great Wood is situated to the east of the site. This is a National Nature Reserve (NNR) of 155ha. The reserve mainly consists of ancient woodland and is 1km south east of Collyweston and 1km east of Duddington. Further details on the ecological significance of this feature can be found in the ecology report.

3.31 Immediately to the east of the site is the existing quarry. This is situated approximately 500 metres from the edge Duddington Village and vehicular access to it is gained from the A47 to the north. This existing quarrying site sits close to the boundary of The Assarts Woodland.

3.32 West of the site is the village of Duddington which sits on the eastern and lower valley slopes of the River Welland. The river forms the county boundary between Northamptonshire and Rutland. There is a small Cemetery located to the south west of the proposed site. This is accessed directly from the A43 and is surrounded by mature trees and vegetation providing an effective screen from the proposed site area.

3.33 Much of the land surrounding the site and outside of the settlement areas consists of arable farmland and woodland. The Collyweston Great Wood is located to the east and the Westhay Wood sits to the south. The field sizes vary across the landscape with arable fields being generally larger. Mature woodlands are common in the landscape context particularly along the northern edge.

3.34 Other landscape features and areas in the general vicinity of the site include Bedford Purlieus NNR to the east; Wakerly Great Wood to the south west and Wittering Airfield to the north east.

3.35 The Aerial Photograph included at Figure 4 shows the site landscape and its context

Public Access

3.36 There is a network of Public Rights of Way (PROW) in the immediate landscape context of the site. These include a number of bridleways and other defined routes. The Jurassic Way runs from the east, south through the Wakerly Great Wood, up through the Westhay Wood and then along to the south of the site before passing through Duddington. It then continues north past Collyweston. The Rutland Round runs to the east along the River from Wakerly to Duddington and then on to Collyweston.

Site Landscape

3.37 The landscape character of the site is largely defined by the areas of open farmland. Field boundaries contain some mature trees and there is evidence of some rationalisation of field boundaries to create larger fields for agricultural use.
3.38 The existing quarry is located to the east of the proposed site. It is accessed from the A47 further to the north east with a small track leading down to the quarry itself. The northern part of the site has been restored with the central area in progress and the southern end still being worked. There are some small areas of woodland to the north of the site that are to be retained.

3.39 The current bunds are located between the existing and proposed site. Bunds for the proposed site will be located further down the valley for the boundary of the proposed site. They will also be located to the north and south of the site to prevent views from the public right of way and the road.

Visual Receptors and Existing Views

3.40 A detailed visual appraisal has been undertaken for the proposed development. The baseline appraisal seeks to explore the nature of the existing visual amenity of the area and to establish the approximate visibility of the site from any surrounding receptors. This section provides a baseline analysis of the available views and amenity and is supported by a series of photo viewpoints (Figure 5 details the location of the photo viewpoints and Figure 6 details the photo viewpoints).

3.41 An assessment of the visual effects of the proposed development upon the receptors is detailed in the subsequent effects section. The viewpoints are described below.

Viewpoint A

3.42 This viewpoint depicts the view from a public right of way that runs to the west of the village of Duddington. The mature hedgerow and trees shown, border the A43 and screen the village from the road. The site sits on slightly higher ground between the road and the existing quarry site. Access to the site is further up the valley via the A47.

Viewpoint B

3.43 Taken from the east side of Tixover, this image shows the approximate view from the dwellings that front onto the eastside of the settlement. Tixover is located slightly lower within the valley; the image shows the location of the proposed site and the location of the existing site. Due to the nature of the typography, the existing site sits further up the hill towards the skyline and so is not visible. The slope where the new site will be situated falls away towards Tixover and so there will be some visibility of the new quarry from this location.

Viewpoint C

3.44 This viewpoint is taken from Kingscliffe Road. This road leads out of Collyweston towards the south east to connect with the A47. There are some dwellings situated along this road facing east. The proposed site is located lower within the valley and so the typography prevents a direct visual connection.

Viewpoint D

3.45 The Jurassic Way runs within the proximity of the site. To the south west of the site the track runs within a relatively enclosed corridor, the path is boarded by tall hedgerow and trees to either side. This image shows the view at the point before the path leads into the Westhay Wood. The path sits lower within the landscape and is also screened by further woodland at this point.
Viewpoint E

3.46 This viewpoint is taken from a further right of way that runs in closer proximity to the site. To the west, the vegetation and trees that border the A43 are shown, this screens the road. The land then slopes up out of the valley and the existing quarry boundary can be seen to the west. The proposed quarry bunds will edge this part of the site.

Viewpoint F

3.47 On the opposite side of the valley at approximately the same height, the Rutland Round passes through farmland. From this image the site can be seen towards the skyline. There are some existing mature hedgerows and trees along the perimeter and further bunds will also be located around the proposed site. The immediate landscape is predominantly open farmland with Westhay Wood and the Collyweston Great Wood to the rear of the site forming the skyline.

Viewpoint G

3.48 The A43 runs in an enclosed cutting between the village of Duddington and the proposed site. There is dense perimeter planting to the road edge and this provides a significant screen between the village, road and site. Access to the site is not directly from this road. Several rights of way run across this road further towards the south.

Viewpoint H

3.49 North east of Duddington is a roundabout that connects the A43 and A47. The A47 runs broadly east to west providing the access route to the quarry. The land slopes upwards to the east and the sites location can be seen on this image. Further to the east along the A47 there is hedgerow and trees that boarder the site. The proposed area sits back from the edge of the road and a bund will be located around the perimeter of the site.

Viewpoint I

3.50 Taken from the A43 rising out of the valley to the south east, this image shows the location of the site. The road has some hedgerow and mature trees to its boarders and so the site is intermittently visible from this level within the valley.

Viewpoint J

3.51 From a similar direction this image is taken from the A47 past Tixover in an easterly direction. This location is almost directly across the valley from the proposed site and therefore shows an expansive view of the valley. The existing site is not visible but due to the typography there will be some visibility of the proposed site at this location.
4.0 ASSESSMENT OF EFFECTS

Operational Effects

4.1 Details of the operation and phasing of the project are included elsewhere within the planning submission.

4.2 Throughout the course of the operation, the approaches and methodologies adopted will endeavour to minimise any unnecessary effects upon the environment and surrounding receptors. For example, the location, extent and timing of the perimeter mounding and screen fencing would all take these issues into account. Combined with effective project management and close liaison and communication with all of the relevant authorities and the local community, the potential effects of construction would be mitigated and minimised. It is anticipated that the construction working methods would adopt best practices wherever practicable.

Landscape Effects

4.3 The predicted landscape and visual effects are considered with reference to the identified receptors. The implications of these effects upon the relevant policies are discussed following the assessment of effects upon the receptors.

Landscape Character Assessments

4.4 The operation of the proposed development would not have any significant effects on the relevant landscape types and character areas identified in the published national and countywide landscape character assessments. This generally reflects the scale of these published assessments, which encompass significant landscape tracts and the relatively localised landscape influence that the construction of the proposed development would have on these broad areas.

4.5 The Farmed Scarp Slopes LCT is characterised as having limited settlements, generally found on the fringes of the landscape spilling over from neighbouring ‘upland’ landscapes and extending up from the adjacent lowland vale. As a result of the existing quarry at this location there is already a level of operation ongoing. Existing operations will continue to be restored as work commences on the western extension.

4.6 At a localised level there would be some landscape effects as described below, yet more broadly these would have no significant bearing on the underlying characteristics of the Farmed Scarp Slopes LCT.

4.7 At the height of activity, the operation of the site will result in a minor adverse effect upon the localised landscape character of this LCT, though for the wider and more removed parts of this LCT and for the other surrounding published landscape character areas and types the construction effects would be negligible during the operations.

Local and Site Landscape Character

4.8 The landscape character of the site would change markedly during the operational period. The existing farmland would be progressively worked and some hedgerows within the site boundary removed to facilitate the operations. However, the presence of the existing works immediately to the east of the site will in part lessen the influence of the proposal over the local landscape.
4.9 There will be some initial construction to create the perimeter mounds along the western, northern and southern edges of the site. These landscape features will effectively replace the existing bunds that are situated along the western edge of the current operation on the higher ground immediately to the east of the site. Beyond the site boundary, the effects upon local landscape character would generally dissipate quickly.

4.10 The most significant changes arising to the site’s landscape character during the extension process would result from the removal of the existing planting and vegetation and the modifications to the landform. The majority of the land to be used for the extension is currently used as agricultural farmland with some field boundary hedgerow and trees. The mature hedgerow and trees to the most westerly part of the fields are not within the site boundary and so these will all be retained.

4.11 At the height of activity, construction will result in a minor/ moderate adverse effect upon the site’s landscape character. Once the land is restored after the extraction is complete there will be no adverse effect upon the site’s landscape character.

Landscape Features:

4.12 **Landform:** The working arrangement for the quarrying are detailed elsewhere within the planning submission. As part of the site operations, the site landform would be progressively changed. These changes to the landform of the site would be significant on a site wide scale, yet more broadly the effects on the landform and characteristics of this part of the River Welland valley will be more limited.

4.13 The proposed perimeter bunds will appear as localised and temporary landform features that would have a localised a temporary effect. However, the nature of this effect would be lessened in part by the presence of the existing perimeter mounds (to the current quarrying works), which would be replaced by the proposed mounds introduced to the perimeter of the site.

4.14 As large parts of the existing site have previously been worked or developed and it already includes previous landform changes of a similar scale and character the significance of the effect upon the site’s landform/ topography would not be significant. It has been assessed as moderate adverse at a localised scale.

4.15 **Woodland, Trees and other Vegetation:** As part of the extension proposals some field boundaries that include hedgerow and trees will be removed. These are limited to the east side of the current fields included within the proposed site. The hedgerow lengths to the west of the boundary will be retained. Once the extraction period has come to an end, the removed hedgerow and trees will be reinstated with some additional lengths of hedgerow and additional hedgerow trees also being introduced.

4.16 Immediately to the west of the boundary, existing trees and other vegetation and habitats would be conserved and appropriately protected if needed during the course of the operations. These extend through to the more mature and visually prominent trees close to the A43 and other trees and habitats in this area to the west of the site. Details of those to be removed or retained are included within the Arboricultural Survey which is included as part of the Ecology appendices.

4.17 The resultant significance of the effect upon the existing woodland, trees and vegetation on the site has been assessed as minor adverse.
4.18 **Water Features and Watercourses**: There are no water features or watercourses within or close to the boundary of the proposed site. The resultant significance of the construction effect upon these landscape features has therefore been assessed as none.

4.19 **Land Use**: The majority of the physical landscape resource to be lost during construction would be agricultural farmland. The land will however be reverted to agricultural farmland once the extraction period is complete. The resultant effect has been assessed as minor adverse in land use terms during the operational period.

4.20 **Public Rights of Way (PROW), Footpaths and Public Access**: Extraction works on the site would result in some physical disruption to the PROW that extends along the eastern edge of the site. This PROW and connecting PROW from the west will be diverted around the western boundary of the site during the course of the operations. This temporary arrangement is shown on drawing no. HPL/COLLY/002

4.21 The diversion of the route would not make any significant difference to the current situation. All connections will be maintained and the route will continue to extend alongside an active quarrying site but separated by a perimeter mound. In this regard the physical change to the route will be minimal.

4.22 The resultant significance of the effect upon the existing PROW routes has been assessed as negligible/minor adverse. The visual effects on users of the route are assessed in the visual effects section.

**Visual Effects**

4.23 A comprehensive visual appraisal of the proposed development has been undertaken to determine the potential effects upon surrounding receptors. This has considered the specific effects arising during both the operational phase and post restoration. Appendix B includes the full visual effects schedule and Figure 5 details the location of the visual receptors. The description of existing views is outlined earlier in this chapter and the accompanying photo viewpoints (Figure 6) should also be referenced.

**Zone of Visual Influence (ZVI):**

4.24 The Zone of Visual Influence (ZVI) (**Figure 5**) is the area from within which any part of the proposed development would be potentially visible. It should be noted however, that the ZVI is not an indicator of the level of significance of the impact on the view but simply, the potential extent of visibility. In this instance, it may be that only the very highest part of the site may be visible but that all of the rest of the scheme would not.

4.25 The ZVI for the proposed development has been prepared based upon site based analysis, detailed topographical survey and cross sectional information. Although it is approximate, it is sufficiently well researched and accurate to be representative of the potential visible extent of the proposals. There could however, be some locations (beyond the extent of the ZVI shown) that could have potential views to part(s) of the development. Equally, there could be some limited locations shown within the ZVI that would not experience any views to the resultant development. The overriding purpose of the ZVI is to enable an understanding and appreciation of the likely visible extent of the proposed development to be gained.
4.26 The ZVI of the proposed site is primarily contained by the nature of the surrounding local topography and mature woodland. Distant views from some limited positions close to the Wakerley may also be possible as shown on Figure 5, yet these would not result in any significant visual effects.

4.27 Overall, the ZVI of the proposed development is considered to be contained to the north and west due to the combination of the local topography and surrounding mature woodland and trees beyond the site boundary. The zone generally extends North West across the valley and includes Tixover and the edge of Collyweston. The vast majority of Duddington is excluded from the ZVI due to the nature of the topography and the presence of a large number of mature trees and hedgerows that separate the village and site.

**Effects upon Visual Receptors**

4.28 The effects of the proposed development upon visual receptors are set out in the Visual Effects Schedule (Appendix B).

**Settlement and Properties – Summary**

4.29 As demonstrated by the ZVI shown on Figure 5, there are no large areas of settlement or large numbers of properties that would have views towards the proposed development. The number of properties with any views would be limited to a relatively small number located in a number of different directions around the site.

4.30 A small number of properties in Tixover face east towards the site and as a result of the topography of the site will have partial views of the development. There are some areas of mature trees that provide partial cover and once the perimeter bunds are in location these will provide a further screen. Some operations in the south of the site will however, be visible from this location.

4.31 From Tixover Grange there is also potential for some limited views of the site. Tixover Grange is located across the A47 from Tixover at approximately the same distance away from the proposed site.

4.32 On Kingscliffe Road there are a small number of properties that face south towards the site. The land in front of these houses falls away towards the site with some mature trees and hedgerow in between. As a result of this there is little or no potential for the site to be seen from this point. The effects are assessed as negligible or none from this location.

4.33 From the east side of Duddington there are virtually no views towards the site. The A43 lies within a relatively deep cutting between the settlement and the site and includes mature trees and hedgerow to both sides. This existing mature planting and that within and surrounding the properties of Duddington provide an effective visual barrier and screen towards the proposed development. With the exception of a handful of properties, all other properties and locations within this hamlet would have no views towards the proposed development. If visible the effects will be at worst minor/ moderate adverse, yet for nearly all properties and locations with the settlement there will be no views and therefore no visual effects.

4.34 Wakerley has some properties that may also have views towards the site. The village sits approximately 3.9km away from the site so any views should be also be restricted and distant resulting in a negligible effect.
Public Rights of Way (PROW) and Other Footpaths etc - Summary

4.35 A PROW extends along the east side of the proposed site. This will be diverted as part of the works around the proposed sites boundary. Views of the site are currently possible from this location however, once the bund is constructed around the perimeter of the site this will be effective in screening views towards the operations. Views into and towards the majority of the site from this route will not be possible however, a view right up to the bunds will be visible with them becoming less intrusive as the vegetation grows up and around them. Upon restoration of the proposed site, the route will be restored and the bunds removed. With suitable attention to these landscape proposals the visual effects need not be significant. The visual effects upon users of this route are predicted to be at worst, moderate adverse improving to minor beneficial.

4.36 Extending along the south edge of the site is the Jurassic Way. Views towards the proposed site would not be possible from this route. It passes through a cutting in the landscape with mature trees and hedgerow to both sides. As the route progresses towards the woodland area it moves out of the cutting and the trees become less dense providing a view back to the north. At this point however, the views are restricted by Gore piece (woodland) and so there are no views available from the Jurassic Way at this point of the site. The visual effects upon users of the route are predicted to be negligible or none.

4.37 Within Duddington there is a PROW that passes to the east of the village between the most easterly line of properties and the A43. As with the properties in Duddington itself the PROW is protected from any views of the site by the cutting the road sits in and its mature tree boundaries to either side. The visual effect from this route is also considered to be negligible or none.

4.38 North West of the site approximately 2.4km from the site, the Jurassic Way and Rutland Round pass through farmland on the opposite side of the valley. From this location the topography of the land will allow some views of the proposed site. The significance of the visual effects upon these locations will however be reduced due to the effective screening of views by the proposed bunds. The predicted visual effects upon users of these routes would be minor adverse.

Other Receptors Summary

4.39 Users of the A43 heading in a north east direction will experience some intermittent views of the site. Users would experience a negligible or minor adverse visual effect as they travel along the road. There are however mature hedgerows and areas of roadside planting that will prevent views at most points along the route. Views would be generally towards the perimeter mounding along the south western part of the site.

4.40 The A47 will also provide road users with some intermittent views towards the site. As the road travels eastwards there is an opportunity for views from the higher parts of the road where the road faces the site directly across the valley. Once the road begins to drop back down into the valley the site becomes more filtered and less visible. The road user would experience a minor adverse visual effect at the most visible point along this stretch of the road. Elsewhere the effect upon the road user would be negligible or none, where the workings would be screened entirely in the lowest parts of the valley.

4.41 The A47 and A43 meet at a roundabout located just to the north east of Duddington. This location lies just to the North West corner of the proposed site. At this point the land rises up from road level providing the road user with an opportunity for a view of the north part of the site. The land then falls away again, resulting in the rest of the site moving out of view. The bunds once built will
provide some mitigation for the views from this point resulting in the effect on the user being a minor adverse visual effect. All road locations will improve to negligible once the site is restored.

Visual Effects Summary

4.42 Given the nature of the proposed development, the visual effects arising during the operational phase would vary. Early construction of the perimeter mounding would be carried out and will be followed by the progressive quarrying of the site. The visual effects arising from the operation of the site upon the surrounding visual receptors are detailed in the accompanying visual effects schedule (Appendix B).

4.43 Many of the more distant receptors or those with more limited views towards the site may only be able to glimpse part of the construction activity for the short period of time whilst this phase is completed. During the operational phase the visual receptors will have differing degrees of views towards the workings, although for some the extent of the view will be very limited. Once the operational phase is completed, the land will be restored to principally farmland.

4.44 The significance of the visual effects for all of these receptors would vary during the course of construction and is likely to commence with a relatively greater change as some of the soils are stripped and the perimeter mounds formed. With the perimeter mounding in place and following the establishment of some ground flora over this outer screening feature, the visual effects will generally lessen for most receptors.

4.45 Those receptors likely to experience the most notable adverse effects during construction will comprise the immediately surrounding and diverted PROW. In terms of views from properties and settlement, there will be no major or moderate adverse visual effects. The clearest views from these types of receptor will be experienced by some properties facing east in Tixover. The significance of the visual effects upon these receptors has been assessed as minor/moderate adverse at the height of the bund construction activity. It should however be noted that these effects would be temporary and once this initial work is completed the effects would be lessened and minor adverse for the duration of the operations.

4.46 Views towards the operation of the works from properties within Duddington will be limited to only a very small number of properties. This settlement is very effectively screened from the site by a combination of the landform and the mature trees and hedgerows surrounding the village and lining the A43 road corridor. There will be no views towards the works from the nearly all parts of the village and nearly all properties. Where there is a glimpse towards the site, the resultant visual effect will be minor/moderate adverse at worst. For most at Duddington, the resultant visual effect will be none.

4.47 There will be no discernible effects upon the Cemetery which lies on the eastern side of the A43 close to the southern edge of Duddington. Views towards the scheme from Collyweston will be similarly limited. With the exception of partial and distant views from a handful of properties on the southern edge of this village there would be no views towards the scheme.

4.48 Overall, the operational effects on the surrounding visual receptors will vary from negligible to moderate adverse with the receptors with the closest and clearest views towards the construction activity experiencing the most significant visual effects at the peak of construction activity.

Post Operational (Restoration Phase) Effects
This section details the landscape and visual effects arising from the restoration of the site. The assessment is based upon the Landscape Restoration Plan contained in the planning submission (Drawing No. 5526-L-02 Rev C) and forming part of the planning application.

Landscape Effects

The predicted effects are considered with reference to the published landscape character assessments, local landscape character and site specific landscape features and components.

Landscape Character Assessments:

The restored landscape will have no effect upon the relevant landscape types and character areas identified in the national and countywide landscape character assessments. Returning the landscape to agriculture and restoring the former hedgerows and trees will effectively return the landscape to its existing condition and characteristics.

Upon completion, the proposed development will be returned to arable farmland with hedgerow and trees reinstated and some additional grassland and scrub introduced. The landform will also be returned to reflect its existing sloping form, albeit that there may be some minor variations.

Upon completion, the proposed development would result in no effect upon the landscape character of this localised part of the Farmed Scarp Slopes LCT. For the other surrounding published landscape character areas and types the effect would also be none.

Local Landscape Character:

The existing landscape character of the site is predominantly farmland with some mature hedgerow and trees. Once the land is restored the hedgerow and trees will be reinstated and the previous character restored.

Whilst the character of the sites landscape would be altered during the construction and extraction phase, this will be a temporary change. The restored site landscape will essentially reflect the existing landscape except that there will be some minor and localised beneficial and longer term effects arising from the increased lengths of hedgerows, additional hedgerow trees, wider grassland margins to the eastern side of the site; and inclusion of some additional grassland and woodland edge planting to the north. Coupled with these localised measures, the application of a suitable landscape maintenance regime; including for new infill planting to the retained site hedgerows will all offer sympathetic and low key landscape improvements.

Overall, the resultant significance of landscape effect upon the local landscape character of the site and its immediate context would be minor beneficial in the longer term.

Landscape Features:

Landform: Upon completion of the restoration proposals, there will be no discernible or significant change to the landform of the site. The effect therefore will be none.

Woodland, Trees and other Vegetation: There will be some new hedgerows, hedgerow trees and other habitats established as part of the landscape restoration proposals. These will represent an improvement to the existing site planting and habitats. In the longer term this will constitute a minor beneficial effect.
4.59 **Water Features and Watercourses:** There are no water features or watercourses within or close to the boundary of the proposed site and none are proposed as part of the landscape restoration proposals. Consequently, the effect on these landscape features will be none.

4.60 **Land Use:** The majority of the physical landscape resource to be lost during the period of operations will be arable farmland. However, this will be restored upon completion, albeit that the overall total area of farmland will be marginally reduced to provide for the additional landscape and habitat areas.

4.61 The resultant effect has been assessed as negligible as the land use will be restored once the extraction process is complete.

4.62 **Public Rights of Way (PROW), Footpaths and Public Access:** All PROW will be restored along their existing alignments as part of the landscape restoration proposals. The existing PROW that is diverted around the western side of the site will be reinstated after the site is restored. There are no other changes or alterations to any footpaths, cycle paths or bridleway routes.

4.63 The landscape effects of the development are summarised below:

**Table 1 Landscape Character Effects – Summary Table**

<table>
<thead>
<tr>
<th>Landscape Receptor</th>
<th>OPERATION Significance of Landscape Effect (FPCR Assessment)</th>
<th>RESTORATION Significance of Landscape Effect (FPCR Assessment)</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Landscape Character Assessment: Rockingham Forest NCA (No.92)</td>
<td>Negligible</td>
<td>None</td>
</tr>
<tr>
<td>County Landscape Character Assessment: Landscape Character Types (LCT) Farmed Scarp Slopes</td>
<td>Minor Adverse (localised to the site)</td>
<td>None</td>
</tr>
<tr>
<td>FPCR Local and Site based Landscape Assessment: Local Landscape Character Site based Local Landscape Character</td>
<td>Minor/ Moderate Adverse</td>
<td>Minor Beneficial</td>
</tr>
<tr>
<td>FPCR Local and Site based Landscape Assessment: Landscape Features Landform/ Topography</td>
<td>Moderate Adverse (localised to the site)</td>
<td>None</td>
</tr>
<tr>
<td>Woodland, Trees and Vegetation</td>
<td>Minor Adverse</td>
<td>Minor Beneficial</td>
</tr>
</tbody>
</table>
4.64 The restoration phase aims to return the land to its previous use with no lasting or altering effect on the topography or quality of the land.

4.65 New trees, shrubs and hedgerow plants will be planted as part of the restoration. These will be native, indigenous and appropriate to the landscape character of the wider area and would offer valuable localised landscape and ecological benefits. The restoration phase also seeks to make some level of improvement with the addition of further habitat types and vegetation. Further details on the landscape design and mitigation proposals are included in Section 5.0.

4.66 Overall, the landscape effects of the development would generally vary between minor/ moderate adverse and minor beneficial throughout the course of the scheme and its restoration. These varying landscape effects reflect the different phases of development on the sensitivities of the site’s landscape character and related features. The adverse effects would significantly reduce after the initial construction phase and in the longer term due to the restoration and maturing of the landscape.

**Visual Effects**

4.67 The visual effects of the proposed restoration scheme are detailed in Appendix B.
5.0 LANDSCAPE STRATEGY, DESIGN AND MITIGATION

Introduction

5.1 The existing landscape and its context have been considered by the assessment and planning process. This has extended from a preliminary landscape and visual appraisal through to the production of the Landscape Restoration plan. This iterative process has sought to minimise any potential adverse landscape and visual effects or other adverse environmental effects arising as part of the scheme proposal. At the same time it has also sought to maximise any potential landscape or other environmental benefits in the longer term and to ensure that the restored landscape assimilates appropriately with its setting.

Objectives

5.2 The key objectives of the Landscape Restoration plan draw upon the LVIA undertaken and the issues and considerations highlighted as part of the consultation process to date. They are summarised as follows:

- Respect existing local landscape character and utilise this to inform the layout and design of the development and landscape proposals;
- Conserve landscape features and characteristics and use these to inform and reinforce the unique character of the proposed development;
- Provide new native planting and habitats as part of a thorough and long term approach to the growth and management of the overall landscape framework; and
- Minimise any potential adverse landscape or visual effects through the application of best practice design principles and careful attention to design through all stages of the development process.

Landscape and Mitigation Design Proposals

5.3 Underpinning the development and refinement of the landscape and mitigation design proposals is a thorough understanding of the existing site environment and its context. This appreciation has informed the planning and restoration of the proposed development and has similarly shaped the Overall Landscape Restoration proposal (Figure 7). Landscape cross sections depicting the site in relation to Duddington and the River Welland valley to the west of the site are also included (Figure 8).

5.4 The principal features of the landscape proposals are detailed below:

Conserved Trees, Planting and other Habitats

5.5 Whilst the majority of the existing trees and other planting across the site will be removed to facilitate implementation of the earthworks, some existing trees, tree groups and other planting and habitats will be conserved to the west of the site. Once the extraction phase has been completed the removed trees and hedgerow will be replanted.

5.6 In addition to the replacement of the planting that was lost initially there is a proposal to create a woodland edge area with scrub planting to the north of the site and a grassland margin to the eastern boundary of the site where the PROW will pass through the restored farmland.
Perimeter Landscape Framework and Corridors

5.7 To the perimeter of the site, a bund will be constructed to mitigate the views where possible from the surrounding areas. These will become covered in vegetation over time and sit more comfortably within the landscape. They will be removed once the quarry has finished extracting material.

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5.8 The existing PROW that was relocated for the proposed site will be returned to its original position. This sits to the east of the site and will be sited within a grassland margin to the restored fields. There are also two short lengths of PROW that cross the farmland to meet the path in the east and these will also be restored along their existing alignment.

Landscape Management and Maintenance

5.9 All of the landscape areas and features would be managed and maintained in the long term. This would be achieved through the implementation of a comprehensive landscape maintenance regime, to ensure the successful establishment and continued thriving of the Landscape Restoration proposals.
6.0 ASSESSMENT OF RESIDUAL AND CUMULATIVE EFFECTS

Landscape and Visual Residual Effects

6.1 The residual effects consider the effects after the incorporation of mitigation measures. In the context of the landscape and visual impact assessment, many of these measures are incorporated as an integral part of the scheme. This iterative process has resulted in the proposed development being designed and modified to take account of the surveys and assessments undertaken. This has enabled the extent and scale of the potential adverse effects to be continually appraised as part of the evolving scheme design.

6.2 The design approaches adopted have included measures to avoid, reduce or remediate potentially significant adverse effects arising from the proposed development. Primary measures adopted as part of the proposals have considered many aspects, including, the location, extent and siting of the development.

6.3 Other additional measures considered have included the restoration of ground levels and planting. In this regard, the potential effects of the proposed development have been mitigated and minimised throughout the design process and consequently at the outset of the development the residual effects would reflect those described in the preceding Operational and Post Operational Effects section.

6.4 In the longer term, all of the effects would reduce through the maturing of the Landscape Restoration proposals and other existing conserved planting.

Cumulative Landscape and Visual Effects

Approach:

6.5 The Guidelines for Landscape and Visual Impact Assessment, third edition (GLVIA3) advises;

“Of greater importance for LVIA are the cumulative landscape and visual effects that may result from an individual project that is being assessed interacting with the effects of other proposed developments in the area…

..Cumulative effects assessment can be relevant to any form of development”

6.6 The Cumulative landscape and visual effects arise as a result of a number of different factors and combined changes. These generally fall into two categories;

- Cumulative effects arising from a range of developments, occurring at different locations. Separately, such individual projects may not create an unacceptable degree of adverse impact but collectively the results may potentially be significant - simultaneous effects

- Cumulative effects caused by the proposed development in conjunction with other developments that occurred in the past, present or are likely to occur in the foreseeable future - successive effects

6.7 As identified in the first point above, cumulative or combined effects are principally those that are likely to arise when the development is considered in relation to other foreseeable developments either located in the immediate vicinity or that have a relationship with a similar environmental resource. Individually, the impact of a development may be of minor magnitude but when
combined with the impact from other developments could increase the overall significance of an effect on an environmental resource.

6.8 Cumulative effects require an understanding of the capacity of the receiving environment and whether critical thresholds would be exceeded by the combination of projects. Geographical limits and time implications are more important in assessing the cumulative effects than in assessing the specific environmental effects of the proposed development. Administrative boundaries are less important than those relating to the natural environment eg. watersheds.

6.9 The results of this process should enable the minerals planning authority and other stakeholders to ensure that the potential effects of this and future developments are collectively understood and assessed.

Inter Project (Simultaneous) Effects

6.10 There are a number of quarries either currently in operation, worked out or planned to come forward in the general locality. These include Cross Leys Quarry (worked out), Thornaugh I (worked out), Cook’s Hole (recently commenced), Thornaugh II (worked out) and Thornaugh IIb (to be worked) within Peterborough and located along the A47 to the east of the site and Wakerley Quarry to the south west. King’s Cliffe Landfill Site, King’s Cliffe Industrial Estate and Stonehill Quarry are also located to the east/south east of the application proposal. None of these planned or proposed schemes are situated within the Zone of Visual Influence (ZVI) of the Western Extension proposal and consequently, there would be no cumulative visual effects. In landscape terms, the location of these proposals in the much wider context of the site also means that any effects on the landscape would be none or negligible.

6.11 The existing quarrying site immediately to the east of the site will however remain active for a period of time whilst works on the proposed Western Extension are commencing. Consequently, this arrangement has the potential for some cumulative effects.

6.12 During the overlap in operations of the existing operations and those for the proposed western extension, the most notable potential effects are likely to arise during the stripping of the soils on the proposed site and the formation of the perimeter mound around the western and southern edge of the extension. During this period, elements of both the existing and proposed site would be potentially visible from receptors to the west and south west of the site. These would include distant views from properties and locations at Tixover and intermittent views from the approaching A43 from the south west.

6.13 Given the already distant and restricted nature of the views from these locations and receptors and that in terms of the presence of the combined proposals within these views they will not differ significantly from the proposed development alone, the cumulative effects have been assessed as negligible or minor adverse at worst.

6.14 From the visual receptors generally to the north and north west of the site, views towards both of the working operations are likely to be more limited and it is predicted that there would be few positions where clear views towards both would be possible. For road users close to the A43/ A47 roundabout elements of both schemes would be potentially visible during the formation of the perimeter mounding close to this part of the site. The only visible element of the current proposal is however the perimeter mound to this scheme which will be removed as part of the Western Extension proposals. The cumulative effect upon these road users would be negligible.
6.15 In landscape terms, the primary effect would be that elements of both the current and the Western Extension project would be operational at the same time and therefore this would potentially increase the total area of disturbed land, pending the full restoration of the current scheme. However, this effect would not be significant as the current proposal is being progressively restored and it is anticipated that at least a half of the existing site would be restored prior to the commencement of operations within the Western Extension area. Consequently the overall area of operational land would not be significantly different from the current workings on site or from when the proposed extension is fully operational and the current scheme has been restored.

6.16 The combined projects are most likely to be perceived in both landscape and visual terms as a single working operation and overall the cumulative simultaneous effect would be negligible.

**Successive Effects**

6.17 In the context of these effects, the current quarrying operations immediately to the east of the site are considered to have some effect although the cumulative effect of these workings are also considered above. In successive terms, the Western Extension proposal would be perceived as extending the timescale of quarrying operations at this general location. Whilst the combined effect of the proposed and current operations would not have a discernible effect, the successive change would potentially increase some of the cumulative visual effects due to the extended duration of operations.

6.18 The nature of this change would have the greatest effect upon those visual receptors with the clearest views towards both sites. This would comprise the public rights of way closest to the site and in particular the public footpath that extends along the western side of the current working site and that to be diverted as part of the proposed development. The cumulative successive effect upon these rights of way would be minor adverse for those rights of way with the clearest views and negligible for all others.

6.19 In landscape terms, the successive effect would arise from the extended time period over which there would be change to the character of the site and local landscape. The nature of the landscape change would not differ, it would just be the duration of the effects of the quarrying operations at this location. The Western Extension proposal would not however, introduce a different type or nature of development but would essentially be the same as currently operational immediately to the west of the site. The successive landscape effect would be negligible or minor adverse at worst.

6.20 Overall, there would be no significant adverse cumulative landscape or visual effects.
7.0 SUMMARY AND CONCLUSIONS

7.1 The site is located immediately to the west of the existing and active Collyweston Quarry site. It also lies approximately 200m from the edge of Duddington to the west, with the A43 is running broadly north – south between the village and the site. The A47 extends close to the northern edge of the site. Collyweston Great Wood and other mature areas of woodland lie to the east and south, with farmland also located across these mid eastern slopes of the River Welland. The small settlements of Collyweston, Tixover, Wakerley and Barrowden lie within the broader context of the site. The landscape character of the site’s context is rural.

7.2 The site landscape is predominately farmland with some hedgerows and trees and with a gentle aspect towards the west. The site occupies the mid eastern valley slopes of the River Welland but is situated below the relatively higher slopes of the restored land and wooded areas to the east. The existing quarry occupies this relatively more elevated position. Access to the existing quarry is currently from the A47. Access to the proposed site is understood to be via the existing site.

7.3 The landscape character of the site is largely defined by its agricultural use, its sloping topography and the wider influences of the existing quarry, the River Welland valley and the surrounding woodland, farmland and scattered settlements.

7.4 The landscape proposals will assist in mitigating some of the adverse landscape and visual effects of the development and also provide some local and longer term landscape benefits. The use of bunds to mitigate during the extraction process will provide some partial screening. The restoration of the landscape with some additional planting and habitats will also provide ecological benefits to the land.

7.5 The resultant landscape character effects arising from the proposed development would vary between negligible (for the effects upon the very broad landscape character areas) to minor/moderate adverse (for the operational effects upon the site’s landscape character). The specific effects of the proposed development upon landscape features within the site would vary between negligible and moderate adverse during construction and between minor adverse and moderate beneficial upon completion of the proposals. The local beneficial effects upon the landscape character and features would increase over time with the maturing and management of the conserved and restored landscape strategy proposals.

7.6 The sloping topography and presence of surrounding mature woodlands will effectively combine to screen the proposed development from much of its wider context. Notably, there would be generally limited views from any areas of settlement or properties. In fact, the number of properties with any views towards the proposals would be confined to a small number located on the edges of some of the surrounding settlement areas. The Zone of Visual Influence (ZVI) for the proposed development demonstrates that the potential visibility of the proposals does not encompass any significant areas of settlement although it does stretch across the River Welland valley.

7.7 Where visible from other receptors, the effects of the proposed development would vary depending on the nature and extent of the existing views towards the site and the development. The most notable visual effects would be experienced by users of some of the surrounding PROW’s and Tixover. It should however, be noted, that from the majority of the surrounding area there would be no, limited or partial views only towards the proposed development. From the
clearest views from these receptors, the visual effects would be at worst, moderate adverse at the height of the operational activity. At other times and from other receptor positions, these effects would be reduced and from other surrounding receptors the resultant visual effects would be principally minor adverse or negligible.

7.8 Upon completion, the visual effects would also vary with no receptors experiencing any adverse effects. In the longer term, any visual effects would be further lessened and improved with the maturing of the planting and landscape proposals.

7.9 In cumulative effects terms, the only identified relevant project is the current quarrying operation that lies immediately to the east of the site. Other known and relevant proposed or committed projects lie beyond the Zone of Visual Influence and would therefore not result in any cumulative effects. The effects arising in conjunction with the existing operation are not considered to be significant, yet there may be some localised minor adverse effects upon users of the public rights of way in the immediate vicinity of the site and upon the local landscape character of the site and its immediate surrounds due to the duration of the combined operations.

7.10 Overall, the landscape and visual effects of the proposed development are considered to be predominantly localised and contained. The most notable landscape effects arise from changes to the landscape character of the site and its local context and from the loss of a relatively small number of trees and vegetation. In visual terms, the effects are contained, although there would be some notable yet short term adverse effects upon the immediately adjoining PROW. Similarly, these adverse effects will only occur for the duration of the operations and following the landscape restoration of the site there will be no visual effects once the planting and habitats establish and mature.

7.11 The proposed development is not considered to give rise to any effects that should preclude it on landscape and visual grounds. Subsequent attention and management of the landscape restoration proposals would however be important to ensure that the effects are minimised and the identified opportunities for localised enhancement are maximised as part of the restoration process.
Figure 2

**LANDSCAPE CHARACTER AREAS AND TYPES**

The Landscape Character of Northamptonshire:
(NCA 92) Rockingham Forest

- Character Type: Broad River Valley Floodplain
- Character Type: Farmed Scarp Slopes
- Character Type: Limestone Plateau
- Character Type: Wooded Limestone Hills and Valleys

The Landscape Character of Rutland:
(E) Welland Valley

- Character Type: Middle Valley East
- Character Type: Ridges and Valleys
- Character Type: Chatter Valley
- Character Type: Ketton Plateau

Note:
Boundaries are approximate and based upon the detail contained within the relevant published assessments and guidelines.

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**NOTES:**

1. The ZVI provides a representative area from within which, part(s) of the proposed development would be visible. Given the nature of the existing site and surrounding landscape this can only be approximate and should only be used as a guide in understanding the potential visible extent of the proposals.

2. The ZVI for the proposed development has been prepared upon computer modelling 3D data, site based analysis and cross sectional information.

3. Other location beyond the ZVI could potentially have view to part(s) of the proposed development. However, where present these would be distant and/or would not result in any significant adverse effect.

**KEY:**

- **Site Boundary**
- **Photo viewpoint locations (with reference)**
- **Zone of Visual Influence (ZVI)**
- **Approximate Extent (see below notes)**
- **Visual Receptor (with reference)**

**NOTES:**

1. The ZVI provides a representative area from within which, part(s) of the proposed development would be visible. Given the nature of the existing site and surrounding landscape this can only be approximate and should only be used as a guide in understanding the potential visible extent of the proposals.

2. The ZVI for the proposed development has been prepared upon computer modelling 3D data, site based analysis and cross sectional information.

3. Other location beyond the ZVI could potentially have view to part(s) of the proposed development. However, where present these would be distant and/or would not result in any significant adverse effect.
PHOTO VIEWPOINT A: View east from the right of way near Duddington across towards the A43 and site.

PHOTO VIEWPOINT B: View east from houses facing the site at Tixover.
PHOTO VIEWPOINT C: View south towards site from Kingscliffe Road, Collyweston.

PHOTO VIEWPOINT D: View north east from Jurassic Way towards the site just before it enters the Woodland.
PHOTO VIEWPOINT E: View north east from the public right of way towards the south end of the site.

PHOTO VIEWPOINT F: View south east from public right of way on the other side of the valley.
PHOTO VIEWPOINT G: View north of A43 from next to Duddington Village

PHOTO VIEWPOINT H: View south east from A43 & A47 roundabout
PHOTO VIEWPOINT I: View north east from A43 looking back towards the site from ridge of hill.

PHOTO VIEWPOINT J: View east looking back towards the site from ridge of hill.
Central/ Western/ Eastern Site areas
Conserved hedgerow and trees
Proposed hedgerow and trees (Planted or to be planted)
Public Rights of Way (within the site)
Restored Farmland
Proposed Grassland Field Margins
Restored Contours

Central permission boundaries MINVOC (North) & 13/00120/ MINVOC (South)
Eastern Permission Boundary EN/96/1279C
Western Application Boundary

KEY:
- Proposed grassland, scrub and woodland edge planting
- Restored farmland
- Planting test beds
- Restored land
- Retained hedgerow and trees
- Public Rights of Way

The Assarts
Grassland margin (approx 5-15m) to field edge to incorporate public right of way

Restored farmland
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w: www.fpcr.co.uk

Masterplanning
Environmental assessment
Landscape design
Urban design
Ecology
Architecture
Arboriculture

Bullimores Sand and Gravel
Collyweston Quarry
Northants

COLLYWESTON OVERALL LANDSCAPE RESTORATION PLAN

May 2014
5526-L-03 - C
Existing Site

Bullimores Sand and Gravel
Collyweston Quarry
Northants
J:5500/5526/LANDS/LVIA/LVIA FIGURES

LANDSCAPE SECTIONS

1:2500@A1
July 2013

5526-L-03

N

PLAN NOT TO SCALE

NOTES:
1. All levels shown are approximate and indicative. Final levels and elevations to be confirmed.
2. Indicative buildings shown are also approximate.
3. Details to be confirmed in construction.

AREA ONE

AREA TWO

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Rockingham Forest

Key Characteristics

- Undulating landform rising to prominent scarp along edge of Welland Valley in Rockingham Forest.
- Large woodlands on higher ground enclose the landscape.
- High historic and nature-conservation interest in woodlands.
- Remnants of unimproved grassland throughout, with limestone heaths and fragments of acid bogs in the Soke of Peterborough.
- Foreground views are occupied by large arable fields with low hedges.
- Large mature landscape parks and country houses.
- Dry stone walls around villages, becoming more common in open countryside in Soke of Peterborough.
- Nucleated villages often in sheltered streamside locations.
- Distinctive buildings constructed in local stone: ironstone in west, limestone in east.
- Undisturbed, deeply rural quality despite nearby towns and adjoining trunk roads.
- Prominent, disused ironstone quarries (gullets) and abandoned second world war airfields.
- A sharp transition between the countryside and the main towns of Kettering, Corby and Peterborough (lying just outside the area) which have developed rapidly in recent years.

Landscape Character

The area is defined in the north-west by a steep scarp which overlooks the Welland valley and decreases to much more gentle landforms around the northern edge of the Soke of Peterborough. To the south-east, it is bordered by the Nene valley and, to the east, by the urban edge of Peterborough. In the south-west it ends against the open clay vales of Northamptonshire and the town of Kettering. It comprises two culturally distinct sub-units, the Rockingham Forest and Soke of Peterborough, which nevertheless share many similar physical characteristics. The Rockingham Forest area takes its title from the royal hunting forest that existed across the area from the 11th to 19th centuries. The Forest’s modern extent is defined by a combination of these former legal boundaries and its physical characteristics. The Soke of Peterborough was also a distinct administrative area for many centuries and this title is conveniently used here to define the physically distinctive countryside to the west of Peterborough.

Separated today by the A1 corridor, the Rockingham Forest and Soke of Peterborough areas are unified by the common west/north and east/south boundaries of the respective Welland and Nene rivers. The areas also share similar geology and architecture and have much more in common with each other than their neighbouring landscapes. Extensive areas of ancient woodland are a particularly strong unifying characteristic.
Although the landform of Rockingham Forest is essentially a broad, low, undulating ridge falling away from the northern scarp, the highest points are capped by glacial boulder clay and it is here that the surviving ancient woodlands lie, emphasising the relief. Extensive woodlands like Wakerley, Geddiston Chase and Fernym are prominent features on the skyline. To the north, the land slopes into lower ground where the Jurassic limestones, including the Cornbrash, are exposed and river gravels are present towards Peterborough and the Nene valley. Here there are varied remnants of semi-natural vegetation like the limestone heaths of Castor Hanglands and the species-rich limestone grassland of Barnack Hills and Holes lying over abandoned medieval quarries for the famous Barnack Stone. However, here too, there are frequent ancient woodlands. Many are of high nature-conservation interest and are attractive landscape features in their own right. They were formerly extensively coppiced and small-leaved lime is a particular feature of the eastern woods.

Within the forest the woodlands are generally separated by large fields, mainly in arable use, which generally have low hedges and intermittent trees. However, there are also more enclosed areas of pasture with a better hedge structure, particularly in the valleys, as well as areas of dry stone walls. The Soke of Peterborough has many low hedges and wide horizons and areas with dry stone walls. Apart from the woodlands, the main tree cover comes from the frequent large historic parks like Rockingham, Deene, Drayton and Boughton with attractively sited mansions of the 17th to 19th centuries. Settlements generally lie off the boulder clay, along the valleys. Here, more easily cultivated land is exposed and typically there is a more intimate character than in the surrounding open countryside. The settlements are surrounded by small pasture fields, more robust hedgerows and occasional stone walls. Older buildings are generally of the creamy-grey limestone in the east and are often roofed with the distinctive Collyweston

Character Area 92
Rockingham Forest

<table>
<thead>
<tr>
<th>Area 92 boundary</th>
<th>Adjacent Area</th>
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</thead>
<tbody>
<tr>
<td>Motorway</td>
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</tr>
<tr>
<td>B Road</td>
<td>County boundary</td>
</tr>
<tr>
<td>District boundary</td>
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</tr>
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Slate. In the west, ironstone is common. There is relatively little modern development within and around the villages, even in those settlements near the edge of Peterborough. They are served by minor country roads with the typical wide verges of the enclosure period, which often follow circuitous routes so that many areas are very remote and deeply rural.

Within the Forest, there is some variation in character. In the south there are enclosed wooded valleys with limestone and ironstone villages. The landform is quite steep and woodlands are of moderate size tending to cling to the valley sides or crown the ridges, with large-scale arable areas forming a backdrop above. In the valley floors, trees line the watercourses and views are contained by vegetation and landform. To the north, the landscape is on a larger scale and is almost exclusively woodland and arable. There are frequent views to the south but few to the north since the crest of the ridge above the Welland valley is almost continuously lined with woodland. There are patches of dry stone walls and isolated farmsteads.

Much of the Rockingham Forest is a mosaic of arable farmland with large to medium sized hedges. The large and significant woodlands are often found on the slightly thinner soils of the crests and ridges of the rolling landform.

A stronger distinction can be made between the Forest and the Soke of Peterborough, where the landform is lower and very gently rolling. The farming pattern is more mixed. There are both hedges and dry stone walls and the rectilinear pattern of parliamentary enclosure is very obvious. The woodlands provide enclosure but also frame long distance views, as they do in the Forest. At the southern edge, the area merges with the gravels of the Nene valley and low-lying grasslands and streamside pollards are present.

**Physical Influences**

The scarp and ridge which form the Rockingham Forest comprises mainly Jurassic limestones of the Great Oolite, including Blisworth Limestone and Cornbrash. Along the river valleys, the Lincolnshire Limestone and Northampton Sand of the Inferior Oolite are exposed or near the surface. The Northampton Sand contains substantial deposits of ironstone. The higher ground is capped with boulder clay (glacial till) which gives rise to heavy intractable soils unattractive for cultivation. In the north, within the Soke of Peterborough, the land flattens out. Cornbrash and river gravels predominate near the surface, and the western margin of the area is strongly influenced by the alluvial clays and gravels along the Nene valley.

The ironstone deposits have been mined for centuries, most recently as strip mines, resulting in deep linear quarries known as ‘gullets’, surrounded by extensive areas of spoil.

At the southern edge of the Forest, the Ise valley drains southwards towards the Nene. Harper’s Brook drains south-eastwards across the area. Willow Brook, arising near the steep north-west escarpment, winds across the Forest to the Nene, to which shallow streams also flow within the Soke of Peterborough.

**Historical and Cultural Influences**

During the Neolithic and Bronze Age the freely draining soils of the valleys were cleared of woodland. There were significant settlement and ritual sites on the edge of the area within the Nene valley and the Soke around Fengate. Settlement and agriculture penetrated into the heart of the Forest along the Willow Brook. The Iron Age and Roman periods saw extensive settlement on the heavier claylands with the development of a major iron industry within the Forest. There was also a substantial Roman settlement at Castor where Ermine Street and King Street, which are still prominent landscape features today, meet. Substantial areas were cleared of woodland and large villas like Weldon and Barnack were established.

Woodland spread again after the Romans left and Saxon settlements lay mainly around the edge of the area as royal or former royal manors controlling the central woodlands. Indeed, the pattern of principal settlements lying around the edge of the Forest has persisted to the present day and the centre of the area remains sparsely settled. On the north-eastern edge, Meadhampstead, later to become Peterborough, was the site of one of the major monasteries of early Anglo-Saxon England. In the late Anglo-Saxon period there was again a period of expansion and clearance. Limestone was quarried in the northern part of the area, not least to produce the Saxon churches like Wittering and Barnack. In the Anglo-Saxon period, Barnack stone was transported, by waggons and boats, as far south as Strethall in north-west Essex, Milton Bryant in Bedfordshire and Walton in Hertfordshire. By the early post-Conquest period most of the area had become royal forest and when the
bounds were first recorded in the late 13th century they stretched from the gates of Northampton to the gates of Stamford. By this time, following centuries of clearance, much of the land was in agricultural use in open fields surrounding nucleated villages. There were also isolated farmsteads cut out of the woodland and there were extensive areas of waste and common, particularly in the north east.

In the high Middle Ages, ironworking re-emerged as a major activity supported by one of England’s largest charcoal industries. Limestone quarrying at Barnack and elsewhere proceeded apace. Barnack Stone and Weldon Stone became some of the most prized building materials of medieval England. The principal small towns, like Oundle and Kettering, lay in the valleys at the edge but there were lesser towns and market areas like Kings Cliffe and Brigstock nearer the centre. Royal and private deer parks developed. In many cases these formed the basis of the post-medieval landscape parks and country houses like Milton, Boughton and Apethorpe. The latter has been described as ‘the most stately and coherent Jacobean piece in the county’.

The landscape of open fields and commons remained across much of the area until the 19th century although there were localised enclosures from the 16th century onwards, as around Milton. The iron industry petered out in the post-medieval period but, by the 1850s, the arrival of the railways led to the excavation of a chain of quarries from Blisworth near Northampton to Stamford and the rapid development of the towns of Corby and Kettering, as well as large villages on the edge of the Forest and clearance of some of the remaining woodland. In the present century, the industry has become centred in Corby. Although the steelworks closed in the 1970s, and the ironstone working has ceased, the tubeworks continue to operate. Industrial expansion based on a different range of industries took place at Peterborough, followed by the post-war development of a new town. This period has also seen an increase in arable cultivation, with corresponding removal of hedges and loss of hedgerow trees giving the open agricultural land an abrupt contrast with the woodland.

The last change would have intrigued John Clare, the 18th century poet born at Helpston who recorded the loss of the open field landscape in a unique way:

‘Fence meeting fence in owners little bounds
Of field and meadow, large as garden-grounds
In little parcels little minds to please,
With men and flock imprisoned at ease.’

Buildings and Settlement

The older vernacular buildings and smaller manor houses are usually built of stone from the immediate locality, with a gradual change from creamy-grey limestone in the east to brown ironstone around Corby. Many of the lesser buildings are of rubble or simple dressed stone construction, in contrast to the smaller manor houses and often imposing churches with their towers and spires. Although most of the more conspicuous elements of the latter date from the 13th to 15th centuries, there are significant earlier buildings in the east. Brick is used on the more recent buildings. Reddish colours are typical of the settlements around the edge of the Forest but, towards Peterborough, yellow Flettons are sometimes a striking contrast. Roofing materials are equally varied, with thatch, Collyweston Slates, red orange and buff clay pantiles and Welsh slate. Characteristically many of the roof pitches are steep to accommodate thatch and the heavy Collyweston Slate. The latter gives rise to some of the most attractive groups of buildings in the locality such as the estate village with distinctive hipped roofs at Deene.

The older village centres usually have simple buildings of rectangular plan set parallel to the line of the single main street, giving a pleasant fit to the landscape. Their uniformity of character is often the result of estate ownership. At the edges of the area the village character is more influenced by high density post-war housing. The towns of Corby, Kettering and Peterborough have extensive areas of 19th and early 20th century brick buildings with large modern industrial buildings and out of town shopping development on their outskirts. Peterborough’s edge, however, is well-integrated with the substantial woodlands and extensive new town planting. Although the towns are served by trunk roads, the villages are linked by tortuous minor roads and this contributes to the remote character of much of the Forest. The A14 is the most conspicuous of recent roads and other prominent 20th century features include the extensive areas of the Corby iron and steel works and the second world war airfields.

The area contains many outstanding country houses, including Rockingham Castle, Deene Hall, Milton,
Drayton, Apethorpe and Boughton, with imposing fabric ranging from the 16th to the 19th centuries. Set within substantial parklands, they tend to have sheltered, rather than dramatic, settings.

Land Cover

Slightly more than 10 per cent of the area is occupied by woodlands and scrub. Many are ancient former coppice woods with a wide range of species. Small leaved lime is a particular feature in the east and the extensive glacial till woodlands are characterised by ash, hazel and field maple. There is some difficulty in separating primary from ancient secondary woodland within the forest, complicated by the rich pattern created by the formerly extensive grazing. Where patches of old grassland survive they are of particular value. In some cases the deciduous woodland has been converted or partially converted to coniferous woodlands and in others wholly new coniferous woodlands have been planted. Much recent planting has been on the reclaimed ironstone workings and the large estates such as Boughton.

Other areas of semi-natural vegetation include the important conservation grassland and scrublands at Castor Hanglands and the species-rich limestone grassland at Barnack Hills and Holes. There are patches of unimproved or semi-improved grassland, often marked by ridge and furrow and small areas of wetland on the valley floors. Unrestored ironstone gullets and spoil heaps and limestone quarries are also significant features, for example, north of the A14/A510.

However, most of the land is in agricultural use with a predominance of arable. Hedges are often low and hedgerow trees are localised in distribution, with willow pollards along the stream sides and wetter areas. Locally, and particularly in the north, there are areas of dry stone walls.

The Changing Countryside

- Most of the remaining coppice woodlands are falling into neglect because costs, lack of markets and deer damage prevent positive management.
- Other ancient woodland sites have been converted to mainly conifer high forest in recent years, though they retain some remnant flora and preserved archaeological features.
- The area’s recent woodlands include a high proportion of even-aged, mixed and conifer woodland nearing maturity.
- Many of the area’s older grasslands have been lost in recent times through improvement and cultivation and those that remain are consequently of increased importance.
- The historic parklands are designed landscapes from the 16th to 18th centuries and many are in need of appropriate restoration to a consistent design plan.
- Wet meadows, pollards and ponds are locally important riparian features that are becoming increasingly rare within the area’s river valleys.
- Hedgerow removal and neglect has changed the field patterns and is having a significant impact on landscape character. This is compounded by the continued loss of hedgerow trees.
- Locally prominent stone walls face dereliction or have been inappropriately restored.
- Other linear features such as green lanes, railway lines and small streams and ditches connect different habitats to provide important visual links across the landscape which benefit wildlife and provide public access opportunities.
- Redundant quarries including unrestored ironstone gullets and spols, limestone quarries and gravel pits provide localised landscape and wildlife opportunities.
- Many of the area’s traditional, stone farm buildings are redundant and in need of repair.
- The distinctive character of the area’s stone built and nucleated villages is very vulnerable to intrusive new development on their edges.

Shaping the Future

- The Rockingham Forest Trust has initiated a range of projects and studies in the area in line with an overall vision of restoring the Forest landscape through the conservation, enhancement and appropriate extension of natural habitats and landscape features. It is important
that this work continues as a pre-requisite to promoting
general good practice and as part of management
planning for specific sites.

- Management considerations can be conveniently divided
into three:

i) Conservation of Traditional Features and Habitats
- Developing and promoting mechanisms for cost-effective
ancient woodland management and restoration within
ancient woodland sites;
- Preparing and implementing historic parkland restoration
plans;
- Conserving unimproved grasslands, meadows and other
habitats through village landscape appraisals and other
pro-active management;
- Identifying and conserving priority stone walls;
- Controlling development and promoting good building
design practice within village environments.

ii) Enhancement of Agricultural Landscape
- Managing recent woodlands for multiple benefits;
- Planting new woodlands in strategic locations to
accentuate wooded appearance of landscape, link existing
habitats, screen development and provide community
access;
- Recreating other habitats such as limestone grassland on
set-aside land;
- Conserving and enhancing the best-preserved networks
of hedgerows and establishing hedgerow trees in suitable
locations;
- Managing and establishing green corridors, including
ditches, headlands and green lanes, as visual and wildlife
links across arable areas;
- Optimising multiple benefits from potential new crops
such as short rotation coppice;
- Restoring and re-using redundant farm buildings.

iii) Recreation in Developed Landscapes
- Maintaining and managing redundant quarries for
landscape and nature conservation;
- Enhancing airfields through woodland planting to
heighten status as memorials, improve access and screen
development.

Selected References

Northamptonshire County Council (1989), *Nene Valley Management Plan Earls Barton to Wellingborough*.
Cambridgeshire County Council, *Landscape Guidelines*.

The Rockingham Forest is relatively lightly settled, the villages are small and compact and the buildings, walls and associated features are characterised by a large percentage of local limestone building stone and tiles.
CURRENT LANDSCAPE CHARACTER ASSESSMENT

Legend

- Northamptonshire County Boundary
- Bedfordshire and Cambridgeshire Claylands
- Colwaydons
- Dunsmore and Feltwell
- High Leicestershire
- Leicestershire Yales
- Northamptonshire Uplands
- Northamptonshire Vales
- Rockingham Forest
- Yardley-Watford Ridge

NORTHAMPTONSHIRE CURRENT LANDSCAPE CHARACTER ASSESSMENT

Figure 2 - Countryside Character Areas
11. WOODED LIMESTONE HILLS AND VALLEY

CHARACTER AREAS

11a  King’s Cliffe Hills and Valleys

KEY CHARACTERISTICS

- A series of broad valleys and broad low hills, dipping gradually to the east;
- limited long distance views due to screening effect of landform and woodland blocks;
- Willow Brook provides the main drainage feature, dammed in a number of places to form a series of lakes with other minor tributaries also draining the area;
- predominance of arable land with areas of improved pasture and calcareous grassland frequent along watercourses;
- arable fields frequently large in scale, whilst grazed pastures and calcareous grassland are generally smaller in scale;
- fields a mixture of regular and sub regular shapes enclosed mainly by low to medium height well trimmed hedgerows with infrequent hedgerow trees;
- limited limestone walls evident across the landscape;
- significant woodland cover of varying composition with large areas designated as ancient woodland;
- villages of varying size generally located on lower slopes adjacent to watercourses; elsewhere, the area is thinly settled with farms and individual dwellings;
- country houses and gardens, although limited, are important features in the landscape; and
- communication routes principally confined to minor roads connecting small settlements and individual dwellings, and frequently aligned adjacent to watercourses.
LOCATION AND INTRODUCTION
The Wooded Limestone Hills and Valleys comprise an area of undulating transitional landscape in the north of the county between the open agricultural farmland of the Limestone Plateau, and the Wooded Clay Plateau associated with Rockingham Forest. The valley of the Willow Brook, a tributary of the Nene, is the dominant landscape feature, above which rise a series of broad low wooded hills that act as watersheds between the numerous streams that drain into the Willow Brook.

The landscape extends as far south as Deene Park, beyond which the Willow Brook's two principal tributaries flow into the neighbouring Ironstone Quarried Plateau. To the northwest, the land falls steeply along the stretch of Farmed Scarp Slopes between Wakerly and Duddington. To the southeast the land falls again, this time more gently, forming the Limestone Valley Slopes that border the Nene.

The landscape is sparsely settled, the main village being King's Cliffe, situated along the valley of the Willow Brook, and Yarwell and Nassington, both of which overlook the Nene valley. As a result of the sparse settlement pattern, the landscape retains a strong agricultural character, with arable farmland the predominant land use on the hills and valley slopes, and pasture along the valley floor and close to woodlands.

The sense of elevation and enclosure varies dramatically across the landscape. Some areas on the fringes of the area afford long distance views over the surrounding lowlands. Within valleys and deep undulations, however, and where significant woodlands screen long and middle distance views, an intimate human scale landscape is perceived.

PHYSICAL INFLUENCES
Geology and Soils
The action of the Willow Brook and its tributaries has exposed the underlying rocks. More elevated areas are underlain by the Upper and Lower Lincolnshire Limestone Formation rocks of the Inferior Oolite, and in other areas by Blisworth Limestone Formation rocks of the younger Great Oolite Group. Oxford Clay Formation, the youngest rocks of the Jurassic period, is also evident on higher elevations and fringing the Wooded Clay Plateau. The action of the Willow Brook and its tributaries has eroded through and exposed a succession of Great and Inferior Oolite rock formations so the sequence from the youngest Oxford Clay capping to isolated outcrops of Grantham Formation sandstone, siltstone and mudstone and Northampton Sand Formation Ironstone are evident within the valley slopes. Drift deposits are not common in the landscape. Alluvium is present along the course of the Willow Brook, however, and glacial till is also evident as isolated patches on higher areas of land. The most significant area lies on the hills to the northwest of King's Cliffe, where the poorly drained soils are cloaked in large areas of woodland.

Landform
Landform features within the landscape vary and are a direct result of erosion by the principal watercourses that flow through the landscape, creating broad valleys between areas of upstanding landform. The principal watercourses comprise the Willow Brook, and two other valley formations that drain the landscape northwards to the Welland and southwards to the Nene. Broad, low hills form watersheds between these wide shallow valleys and rise to a maximum elevation of 100m ASL on the fringes of the Ironstone Quarried Plateau. The most prominent landform feature, however, is the wooded ridgeline that lies to the northwest of King's Cliffe. At a more local scale, 'Cliffe' refers to the steep slope adjacent to the Willow Brook that marks the outcrop of the Upper Lincolnshire Limestone. Land dips gradually eastwards and the lowest points in the landscape lie along the valley of the Willow Brook and bordering the Nene floodplain to the south of Wansford.

Landform features, whilst not dramatic, offer a striking contrast to neighbouring plateau areas and steeper landform associated with the Limestone Valley Slopes and the Farmed Scarp Slopes landscape character types.
### Hydrology
The main drainage feature in the Wooded Limestone Hills and Valleys is the Willow Brook. This originates on the Ironstone Quarried Plateau to the east of Corby and flows around the northern extent of the Wooded Clay Plateau in a wide shallow valley into the Nene at Elton. It has been dammed to form lakes at a number of locations on its course, notably at Apethorpe Park and Deene Park where water bodies form part of the designed parklands. To the north of the Willow Brook is a tributary of the Welland that also originates on the Ironstone Quarried Plateau. It flows northwards, separated from the Willow Brook by a low watershed. In the east of the landscape, two tributaries of the Nene rise in the landscape and flow a short distance in wide shallow valleys.

There are few other hydrological features of note in the landscape. A small number of ponds are evident, although their impact on local landscape character is limited. Although some appear to be natural, others appear to have been established in former quarry workings, such as the water bodies to the south of Old Sulehay Forest.

### Land Use and Land Cover
Arable cultivation predominates across the Wooded Limestone Hills and Valleys, with large fields of both arable cereals and horticulture, often regular or sub regular in shape and dominating a number of views possible from more elevated hills in the landscape. Long distance views, although apparent across the area are in places restricted by significant woodland blocks on the horizon. Despite the predominance of arable land, smaller fields of improved pasture and unimproved calcareous grassland are frequent along watercourses on gently sloping landform and surrounding village settlement. Calcareous grassland is particularly frequent to the east of the landscape type east of Apethorpe. Improved pastures surrounding villages and farmsteads are often grazed by horses, with associated features such as jumps being prominent in the farmed landscape.

### Woodland and Trees
Woodland is a significant characteristic of the character type, in particular along the northern edge where extensive woodland blocks are associated with the ancient Rockingham Forest. Ancient woodlands are common in this landscape, again predominating on the northern edge and to the east. The largest woodland to the west, Wakerley Great Wood, is ancient with a mosaic of larch stands, oak, ash, a stand of ancient Scots pine, and birch scrub woodland. A hazel coppice under storey is prominent under areas of oak. A way marked trail leading from the woodland car park follows the medieval boundary of Wakerley Great Park, remnants of the 13th Century deer park. The woodland, managed by the Forestry Commission is not only a valuable recreational resource with orienteering, footpaths and picnic areas, but it also contains rich and diverse archaeological remains. The oldest features are two rare Bronze Age cairns. To the east of Wakerley Great Wood, Westhay Wood is also ancient with adjoining woodland to the north and northwest managed by the Forestry Commission, again allowing parking facilities and public rights of way. Both of these two woodlands comprise a mix of broadleaved, coniferous and mixed woodland, with areas of young trees. In contrast, Collyweston Great Wood, the third largest woodland is located on the northern boundary of the character type and consists largely of broadleaved ancient woodland. Other woodlands vary in size and shape, although the majority are broadleaved with only occasional small copses that are coniferous. Watercourses are frequently well wooded, contributing to overall woodland cover in the landscape. Hedgerow trees are limited, however, although those that do exist are mature and commonly include species of oak and ash.
A number of villages are scattered throughout the Wooded Limestone Hills and Valleys. They vary in size from moderately sized villages to smaller hamlets containing only occasional dwellings. In general, they tend to be located on lower slopes above watercourses. Village morphology varies, however, with linear settlements, including Bulwick, Blatherwyke and Yarwell, aligned along a single road, whilst settlements such as King’s Cliffe and Nassington, aligned at the intersection of a number of roads.

King’s Cliffe is a particularly notable stone village, with nearly all of the properties constructed in the locally quarried warm golden King’s Cliffe Stone.

Beyond the villages, the landscape is thinly settled with numerous 19th Century farmhouses, frequently stone built, although a number are of more recent construction. The position of farms and dwellings vary with some located adjacent to roadsides passing through the landscape, and others, located at the end of minor tracks accessed via the main arterial road.
There are a number of visible historic features evident across the Wooded Limestone Hills and Valleys, the main areas of interest being Deene Park and Apethorpe Hall. Deene Park, a Grade II registered historic park and garden located at the most southern point of the landscape covers an area of approximately 375 hectares. It is a largely 16th Century house incorporating a medieval manor, built around a courtyard. A manor was in existence at Deene, however, at the time of the Domesday Book in 1086. Remains of early formal gardens can be found surrounding the house, along with a landscaped park containing a notable collection of trees. Apethorpe Hall, a Grade I listed country manor house located in the village of Apethorpe, is a late 15th Century building. The former Cliffe Park, which was Crown property until 1517 and later owned by the Cecils of Burghley, is also of note. Located adjacent to the Willow Brook near King’s Cliffe, the park included a number of quarries which provided an important source of the Freestone.

Further evidence of past settlement within the landscape includes limited areas of ridge and furrow scattered throughout the landscape. Two Bronze Age cairns are also located within the extensive area of Wakerley Great Wood.

Field sizes vary across the landscape, with those under arable cultivation generally being larger in scale, whilst fields of improved pastures and calcareous grassland frequently smaller in size, creating a more intimate character, and often surrounding village settlement. The combination of regular and sub regular fields creates a landscape that has a strong and uniform pattern. Field boundaries are generally defined by low to medium height, regularly trimmed hawthorn hedgerows that are well maintained with few gaps. Hedgerow trees are extremely limited across the landscape. Where they do exist, however, they are mature species including oak and ash. Although limited within the area, there are a number of limestone walls providing important features within the landscape.

The Wooded Limestone Hills and Valleys contain a network of relatively minor roads, with a section of the A43(T) providing the only main road passing through the landscape. Roads frequently align with watercourses, although they also cross them at right angles providing bridging points where settlements have developed, for example at Blatherwyke and Bulwick. Many roads are sinuous narrow country lanes with grass verges bordered by hedgerows connecting small settlements and dwellings. A limited section of Roman Road is evident to the northeast of King’s Cliffe, although the majority is contained within the adjoining Limestone Plateau.

Whilst infrastructure developments are generally limited within the landscape type, a dismantled railway passes almost across the entire width of the Wooded Limestone Hills and Valleys. Entering the landscape north of Nassington, the railway passes north of King’s Cliffe, through Westhay Wood, and beyond onto the Farmed Scarp Slopes.

Recreational opportunities are generally limited across the landscape with a number of public rights of way, including stretches of the Jurassic Way, on the eastern boundary and passing through woodland on the northern edge. Areas of woodland within this area are managed by the Forestry Commission, and open to the public by permission of the landowner. Beyond this, Deene Park provides the only other recreational facility.
AESTHETIC AND PERCEPTUAL QUALITIES
The landscape is characterised by a strong and uniform pattern of hedged fields and woodland, which frequently results in a simple character. Where particularly long distance views are possible, an open and expansive character prevails. Such views are frequently restricted by landform and vegetation, however, thus reducing the large scale character of the landscape.

LOCAL DISTINCTIVENESS, LANDSCAPE CONDITION AND LANDSCAPE CHANGE
The Wooded Limestone Hills and Valleys are a distinctive landscape. The pattern of areas of ancient woodland, interspersed with arable farmland and pasture along watercourses, are evocative of the area’s history, forming part of the Royal Hunting Forest established by William the Conqueror.

The landscape is generally in good condition, with generally well maintained and managed hedgerows and areas of woodland. Hedgerow and field trees, principally oaks, are of local importance and contribute to the landscape type’s well treed character within areas where arable farmland is the predominant land use. Parklands, and the influence these have on the surrounding landscape in the form of woodlands, increased tree cover, and estate village architecture, are also an important factor contributing to the landscape’s visual appeal.

A number of field and hedgerow trees are showing signs of maturity. In subsequent years, their loss would represent a significant change in the character of the landscape, and lead to these intensively farmed landscapes losing a great deal of their distinctive character.

The undulating character of the landscape and relatively high woodland cover and strength of character combine to create a robust rural landscape that has some capacity to accommodate development and change, as illustrated by the landfill site on former clay pits to the south of Collyweston Great Wood, which has only limited impact on local character.

11a  King’s Cliffe Hills and Valleys
The King’s Cliffe Hills and Valleys Character Area is the only landscape character area associated with the Wooded Limestone Hills and Valleys landscape character type within the county. The descriptions above therefore apply to this single character area.
CHARACTER AREAS

15a Hothorpe Hills to Great Oxendon
15b Cottingham to Harringworth
15c Harringworth to Duddington
15d Duddington to Easton on the Hill

KEY CHARACTERISTICS

- Relatively steep elevated northwest facing scarp slope;
- Sense of elevation with dramatic panoramic views over the Welland to neighbouring Leicestershire and Rutland;
- Relief often makes the scarp slopes poorly suited to arable farming although gentler slopes are often cultivated;
- Limited areas of calcareous and neutral grassland and linear belts of woodland mark particularly steep slopes;
- Distinct break of slope and steep landform often marks a clear transition with neighbouring upland landscapes;
- Gentler landform on lower slopes;
- Limited settlement, generally found on the fringes of the landscape spilling over from neighbouring ‘upland’ landscapes and extending up from the adjacent lowland vale;
- Where present, neat hedgerows emphasise landform features;
- Widespread ridge and furrow evident in areas of permanent pasture; and
- Castles sited to exploit strategic positions overlooking the vale.
LOCATION AND INTRODUCTION

The farmed scarp slopes border the Welland floodplain and Broad Unwooded Vale which themselves mark the county’s northwestern boundary between Husbands Bosworth and Tinwell, a distance of approximately 27 km. This linear landscape extends to a maximum width of just 1.3 km, and forms a low but dramatic landscape feature that acts as a backdrop to lowland landscapes bordering the Welland.

The landscape is formed from a range of geological formations ranging from a predominance of limestone in the north to mudstones to the south in the vicinity of Market Harborough. The strong landform feature has formed as a result of riverine erosion by the Welland. It defines the boundary between the elevated landscapes of the Clay Plateau, Wooded Clay Plateau, Ironstone Quarried Plateau and Wooded Limestone Hills and Valleys to the east, and the lowland riverine landscapes bordering the Welland. Whilst a clear break of slope is sometimes evident at the top of the slope, field boundaries rarely run along it, but instead roll over the crest and blur the transition. The landform is gentler at the foot of the scarp, and the transition between neighbouring types is further blurred by fields occupying both the vale and scarp.

PHYSICAL INFLUENCES

Geology and Soils

Various geological formations are exposed on the scarp slopes. The southern stretch of scarp (the Hothorpe Hills) is comprised of Dyrham Siltstone and Whitby Mudstone Formations. These Lias Group rocks are extensive in the locality and present below extensive drift deposits on the clay plateau to the east, and underlie the lowland vale to the west. To the north, the scarp slopes are increasingly influenced by Oolitic limestones and ironstone, particularly on the upper slopes where these deposits can be seen to extend westwards into the Wooded Limestone Hills and Valleys. Lower slopes mirror the geology of the vale, with softer mudstones forming a gentler scarp.

Drift geology is not widespread and deposits of glacial till tend to be localised and restricted to elevated portions of the scarp fringing the uplands, where they are more extensive.

Soils across the Farmed Scarp Slope vary, but largely comprise a mosaic of slowly permeable, seasonally waterlogged, clayey soils. Small pockets of shallow, well drained brashy calcareous fine loamy soils over limestone are also evident. The most northern of the Farmed Scarp Slopes is characterised by well-drained brashy fine and coarse loamy ferruginous soils over ironstone, with a linear band of slowly permeable seasonally waterlogged clayey soils.

Landform

The scarp represents an abrupt face and rises in a concave profile from the low flat landscapes bordering the Welland. The scarp varies in height from between 180 and 90m ASL in the south, where it fringes the Broad Unwooded Vale and between 120 and 20m ASL in the north where it directly borders the floodplain of the Welland. The steeper portions of the scarp tend to be located at the top of the slope, becoming gentler on the lower slopes where the scarp merges into the lowland landscapes bordering the river. Slope profiles tend to be smooth, particularly where permanent pasture cloaks the hillside. The presence of localised hummocky land, such as that to the south of Gretton, is distinctive and perhaps indicative of slippage.

Hydrology

There are few significant hydrological features along the scarp, with streams tending to flow eastwards off the neighbouring uplands to the Nene catchment. However, a small number of streams flow off the scarp into the Welland. These tend to be narrow brooks, often visible in the landscape as a linear band of trees or vegetation and as a ‘dip’ in the convex profile of the scarp slope.

Land Use and Land Cover

Land use varies across the scarp slopes, often reflecting local landform conditions. Permanent pasture and woodland tend to be located on the steeper more marginal land with arable farming occupying gentler slopes capable of cultivation. In many instances fields roll over the break of slope from the neighbouring uplands and extend from the neighbouring lowland riverine landscapes, resulting in a blurring of the transition between neighbouring landscape types across the scarp slopes.

Woodland and Trees

Steep portions of the scarp slopes are cloaked in woodland and from a dark, textural backdrop to views eastwards from the vale. The influence of woodlands on the neighbouring plateau is also important where they line the top of the scarp slopes and increase the perceived height of the scarp, and therefore its visual prominence. Trees and hedgerows are also important, emphasising landform features and creating visual cohesion across the landscape.
Buildings and Settlement

The scarp slopes are thinly settled, with only a small number of villages entirely located within them. Examples include Rockingham, which follows the east-west orientated road up the lower slopes of the escarpment to the west of Corby, and Harringworth, which follows the road that runs along the base of the scarp to the east of the Welland Viaduct. The periphery of a number of other settlements is also evident. These tend principally to be located on the neighbouring ‘upland’ landscapes, such as Collyweston and Gretton, and spill down onto the slopes.

Only a small number of farms and houses are present beyond these villages, giving wide areas of the landscape a rural agricultural character. Where present, dwellings tend to be roadside dwellings occurring either singly or in a small cluster of two or three dwellings.

Heritage Features

The principal heritage features on the scarp slopes are medieval fortified sites, located on the elevated land to take advantage of strategic points in the landscape that afford wide views over the surrounding vale. The most well known is Rockingham Castle, originally a Norman stronghold strengthened over successive centuries and converted into a comfortable house in the Tudor period. The gardens surrounding the house are registered Grade II*. These represent an early formal garden with later additions and landscape park. The gardens to the west and south of castle were laid out in the 16th Century, with 17th and 19th Century additions. The park was originally established as a deer park in the 13th Century or earlier, and then enlarged in 1485, and landscaped in the 18th Century. A second Norman stronghold on the scarp is the impressive Motte and Bailey to the northeast of Sibbertoft which survives today as earthworks.

Beyond these evocative sites, the landscape represents a relatively rich area of ridge and furrow, its survival here having much to do with the steepness of land precluding intensive and destructive modern agricultural methods, which elsewhere in the county have destroyed this finite resource. As such, much of what remains lies below permanent pastures on steeper stretches of the slopes around villages.

Boundaries and Field Patterns

Field sizes and shapes vary considerably across the landscape, reflecting localised variations in landform. As a rule, larger fields tend to be located on land that is more elevated with gentle gradients rolling over from the neighbouring landscapes and rising up the gentle lower slopes from the riverine landscapes below the scarp. These are principally used for arable cultivation. Small and medium sized fields are also evident, with smaller fields creating intricate patterns on steeper slopes. Fields tend to be either regular or sub regular in shape although a predominance of geometric fields is evident north of Duddington.

Field boundaries are generally defined by hedgerows, although these are in various states of repair. Along some stretches, hedges are low and well clipped; elsewhere they appear dense, of moderate height, and slightly rambling with frequent hedgerow trees. Along some stretches, particularly in areas used for grazing, hedges are gappy and reinforced with post and wire fences. Where hedgerows form a continuous network, they emphasise landform features, divide the face of the scarp into a patchwork of fields, and offer a textural backdrop to foreground views. Where large fields predominate, the unity of land cover, as either permanent pasture or arable farming, creates a simple backdrop to views from neighbouring riverine landscapes. These fields appear to have never been subdivided although in places hedgerow removal and field amalgamation does appear to have taken place.
Communications and Infrastructure

Communication routes tend to comprise narrow country lanes linking villages in the riverine landscapes to the west, to those to the east of the scarp. The orientation of these routes varies. In many instances, routes take a direct route up the slope, as is the case between Theddingworth and Sibbertoft. These are sometimes steep and enclosed by tall hedgerows. Elsewhere, however, the road runs at the base of the scarp, defining its lower limit, as is the case between Wakerly and Duddington. Routes also run along the top of the scarp, for example the A43 south of Collyweston. They also follow the gentle gradients on the mid slope, as occurs between Harringworth and Wakerly, from where fine views over the Welland are possible to the surrounding countryside, and to the Welland Viaduct.

Whilst not characteristic of the scarp as a whole, the railway line is a prominent feature of the landscape to the west of Gretton. Here, the impressive late Victorian Welland Viaduct extends across the Welland valley, with the rail line taking a long route across the gradient of the scarp, gradually rising up the 60m of slope across a distance of 5 km. To take account of local variations in landform on the scarp, its route includes a series of cuttings and embankments before entering the Corby Tunnel at the top of the scarp.

Recreation

There are few recreational opportunities on the scarp slope. The Jurassic Way runs along the slopes of the scarp between Rockingham and Gretton, and again criss crosses the slopes to the north, offering walkers fine views over the Welland to the surrounding landscape. The Hereward Way also runs up the escarpment to the north and east of Easton on the Hill.

Beyond these promoted walks, only a limited number of footpaths offer access to the scarp slopes.

AESTHETIC AND PERCEPTUAL QUALITIES

The Farmed Scarp Slopes form a dramatic and relatively prominent landscape feature adjacent to the low, riverine landscapes that border the Welland. When viewed from these lowlands, the scarp face forms a backdrop to foreground views, although the form this takes varies according to local variations in land cover. Where woodland cover dominates, the backdrop is dark and textured, a stark contrast to the relatively intensively farmed landscapes bordering the river. Texture and pattern is also created by the many hedgerows that divide some stretches of the slopes into a neat patchwork of fields, which in places emphasise landform features. Where no hedgerows are present in the view, and agricultural land use is of one type, a simple unified backdrop is apparent. Where permanent pastures are extensive, earthwork features such as ridge and furrow, hummocky land caused by slippage, and the terraces below Rockingham Castle are all clearly visible and add significantly to local character.

Wide views across the surrounding landscape are possible from many locations on the upper slopes of the scarp. These views encompass the course of the River Welland and its floodplain and beyond to the far slopes of the valley. Prominent buildings and structures gain visual prominence in these views, the Welland Viaduct and windmill between Morcott and Barrowden being two examples. The latter forms a prominent eye catcher on the distant horizon.

LOCAL DISTINCTIVENESS, LANDSCAPE CONDITION AND LANDSCAPE CHANGE

The scarp is a distinctive and instantly recognisable landscape. Whilst not particularly high or steep, it offers a striking contrast to the more subtle landform features elsewhere in the county.

The mixed farming economy has necessitated the retention and maintenance of the hedgerow network and as such, field boundaries are generally in a good condition and add much to the perceived intactness and good condition of the landscape. These are an integral part of the landscape, offering texture and pattern on stretches of the highly visible scarp slopes. Where hedgerow decline is in evidence, a neglected character persists and although generally localised, the high visibility of the landscape increases their impact.

Despite the steepness of slopes, arable farming is relatively widespread. Any expansion in this would create further potentially extensive areas of monochrome fields, mirroring the character of the valley slopes to the north. Such changes would disturb the varied character of these slopes and threaten surviving areas of ridge and furrow.

Woodlands are generally in a good condition. Any change or reconfiguration of the woodlands would be widely visible from the lowlands.
Significant features in the landscape include the Grade II* listed Rockingham Castle, situated on the upper slopes within the heart of Rockingham hunting country, overlooking the village of Rockingham and surrounding floodplain landscape. The castle was built on the orders of William the Conqueror, on a commanding hill site previously occupied by Iron Age, Roman and Saxon tribes. It became a popular retreat for royalty and, today, holds many artefacts associated with its royal occupants. It was converted into a private residence in 1553 and bought by Sir Lewis Watson in 1619, whose family still own it to today. 18 acres of formal and wild gardens surround the castle. Those to the south and west were laid out in the 16th Century, with 17th and 19th Century additions. The surrounding parkland landscape, thought to date from the 13th Century deer park, was enlarged in 1485 and again in the 18th Century. Numerous fields of ridge and furrow are also scattered along the slopes.

The Farmed Scarp Slopes between Harringworth and Duddington begin at a height of 40m ASL, adjacent to the River Welland, rising steadily to a height of around 100m ASL on the edge of the Ironstone Quarried Plateau and Wooded Limestone Hills and Valleys. Southeast of Shotley, however, the slopes reach a height of 110m ASL. Rising from the floodplain landscape, the slopes are orientated towards the river providing long distance views over Leicestershire.

A combination of regular shaped large and medium to large scale arable and pastoral fields characterise the landscape. Predominating in the northeastern section are arable cereals and horticulture, with improved pastures around Wakerley. Southwest of Turtle Bridge, improved pastures with areas of calcareous grassland predominate, however, with only occasional arable fields. Woodland cover is extremely sparse, limited to only four small copses, the most significant of which is Wakerley Oaks, comprising a broadleaved ancient woodland on the southern boundary.

Settlement in the character area is sparse, including the two villages of Harringworth and Wakerley and the hamlet of Shotley. Harringworth and Wakerley, both linear villages, have developed along the lower valley slopes adjacent to the River Welland, with the church spire at Wakerley forming a prominent local feature. Beyond this, the landscape retains a sparsely settled rural character with only isolated dwellings located along the main road connecting Harringworth and Wakerley. Located on the mid slope, this road provides the only access to this central area of the Farmed Scarp Slopes. However, a number of minor roads descend the valley slopes to provide access to village settlements. Southwest of Harringworth, a limited section of the railway line between Corby and Oakham is evident, along with a dismantled railway line north of Wakerley. Pedestrian access is also limited to occasional footpaths, the most significant being the Jurassic Way located around the settlements on the slopes.

Although landmarks in the character area are limited, the Welland Viaduct located in the adjacent River Welland Broad River Valley Floodplain is a prominent feature. Beyond the county boundary, a windmill southeast of Morcott also provides a prominent feature and focal point.
15d Duddington to Easton on the Hill

Stretching from Duddington to Easton on the Hill, this is the most northerly section of the Farmed Scarp Slopes within the county. The Duddington to Easton on the Hill Character Area is also the lowest of the Farmed Scarp Slopes, rising from a height of approximately 20m ASL adjacent to the River Welland to between 80m and 85m ASL adjacent to the Wooded Limestone Hills and Valleys and Limestone Plateau. Although the steepness of the slopes varies, in general they shelve gently towards the floodplain landscape.

Despite the sloping landform, soils in the area are productive with the landscape characterised by a predominance of arable horticulture with scattered fields of arable cereal. Improved pastures are sparse, often grazed by sheep and located mainly on Easton Hillside between areas of woodland planting, and around the settlement of Easton on the Hill. Occasional fields of neutral and calcareous grassland are also found in similar locations. Although fields are mainly regular in shape, a significant proportion is also geometric, following the contours and emphasising the sloping landform. woodland cover, although sparse, nevertheless contributes to local landscape character. Woodlands are confined mainly to broadleaved copses on the northern edge of the character area around Easton Hillside with one broadleaved woodland at Dottrell Hill Plantation. Typically, these woodlands occupy the lower and mid slopes, although Wotherope Groves and Pit Holes combine to create the largest woodland block within the area, extending onto the upper valley slopes. Small broadleaved copses are also evident on the mid slope north of Collyweston. Woodland around Tinwell Crossing is the only ancient woodland in the area. Despite limited woodland cover within the character area, woodland in the surrounding Wooded Limestone Hills and Valleys creates prominent horizon features.

Typical of the landscape type, settlement on the Duddington to Easton on the Hill Character Area is limited, confined to the two villages of Duddington and Collyweston. The linear village of Duddington has developed along the lower and mid slopes, whilst Collyweston is clustered around the junctions of a number of roads on the upper slopes, adjacent to the Limestone Plateau. The village is often screened from view on the lower slopes due to surrounding vegetation. Beyond this, a rural character prevails with only occasional isolated dwellings, most notably Keeper’s Lodge and a single dwelling on the mid slope south of Collyweston. Communication routes are limited, with minor roads providing access to villages, including Ketton Road cutting across the sloping landform to the village of Collyweston. This is concealed, however, by surrounding hedgerows. There are also a limited number of main roads in the character area, including small sections of the A47(T) and A43, which also forms the eastern boundary. Although pedestrian access is limited across the sloping landform, sections of the Macmillian Way, Jurassic Way and Hereward Way descend the valley slopes.

Local landmarks are extremely limited, although Collyweston Church is prominent on the horizon. Beyond the character area, works associated with the quarry at Ketton are a prominent feature in the surrounding landscape.
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<td></td>
<td>Overall Significance of Effect at Year 15</td>
<td>Major Moderate Minor Negligible None</td>
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1. **Duddington Village**
   - Medium/ High
   - Local
   - 200m
   - None/ Glimpse
   - Transient
   - Low
   - The Village of Duddington has limited views to the east. The A43 runs along the east of the village within a relatively significant cutting. The edge of the road has mature trees and hedgerow which provide a substantial barrier between Duddington and the proposed site and limits the potential for any views towards the site. Existing views from the village are generally restricted in this general direction, with the majority of residential properties facing into the village. Properties that have a rear aspect to the east are generally surrounded by mature trees. The combination of different areas of planting in this area and the falling nature of the landform, provide an effective screen to the length of the site. A very small number of properties (predicted to be 2 or 3) may have restricted views to the perimeter mound but with the exception of the single property in the very north of the settlement (Robinswood) no direct views to the working operations are predicted. From the single property (Robinswood) restricted/ glimpsed views to the very highest parts of the active site may be possible subject to the planting and management of the existing and new intervening trees and hedgerows.

2. **Tixover**
   - Medium/ High
   - Local
   - 1.5Km
   - Partial
   - Transient
   - Low/ Medium
   - Tixover is located to the west across the valley. There are a small number of properties that face east towards the location of the proposed site. As a result of the valleys topography, the existing site sits on the mid and higher valley slopes close to the horizon line in front of the Collyweston Great Wood. In these views the proposed development if likely to be perceived distantly as a relatively small but potentially active element in front of a backdrop of the mature woodland. The proposed site is located down the hillside from the existing operational site, where the land begins to fall away. The current view is dominated mainly by open farmland; although there are some strong field boundaries across the valley with mature hedgerow and trees that provide some screening of the site.

3. **Collyweston (Kingscliffe Road)**
   - Medium/ High
   - Local
   - 1.4Km
   - Glimpse
   - Transient
   - Low
   - Collyweston lies to the north of the site. There are a small number of properties that are located along Kingscliffe Road that are slightly higher than the site and face south west, back towards the sites proposed location. Access to the site is from the A47 which runs between the existing quarry and the village of Collyweston. The land falls away slightly at this point so the proposed area is mostly hidden from view. The current view is mostly restricted to the neighbouring field and a small band of mature trees that line the field boundary. There may be glimpses possible from this area but in general the views will be very restricted.
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<tr>
<th>No.</th>
<th>Location</th>
<th>Height</th>
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<tr>
<td>4</td>
<td>Tixover Grange</td>
<td>Medium/ High</td>
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<td>1.5Km</td>
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<td>5</td>
<td>Jurassic Way (Public Right of Way) (South of Site)</td>
<td>High</td>
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<td>200m and approx. 1.5 – 2.5km</td>
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<td>Public Right of Way (Footpath)</td>
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<td>Runs along Boundary</td>
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<td>7</td>
<td>Public Right of Way (Footpath) (Westhay Wood; The Assarts)</td>
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<td>450m</td>
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<td>9</td>
<td>Public Right of Way (Footpath)</td>
<td>Medium/ High</td>
<td>Local</td>
<td>200m</td>
<td>None/ Glimpse</td>
<td>Transient</td>
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Tixover Grange is located across the A47 from Tixover at approximately the same height and distance from the proposed site. There are a small number of properties located here. Some properties may have restricted views of the site operations although in the main it is anticipated that the majority of properties at this location would not experience any views towards the workings. This is due to a combination of the topography of the land and intervening mature trees and vegetation. Any views would be distant and filtered, with the scheme forming a small element in the view.

At its closest, the Jurassic Way sits approximately 200m to the south of the site. At this point the route is located within a significant cutting with mature trees and hedgerow to both sides. This restricts any available views towards the site and the proposed working operations. The Gore Piece area of woodland also provides a screen between the route and the site where the route emerges from cutting. The view of the site is therefore restricted entirely along this stretch of the Jurassic Way. From north of Tixover Grange distant and restricted views towards the proposed development would be possible from a stretch of the route leading northwards towards Geeston.

The current Right of Way runs from the A43 at the south end of Duddington eastwards and around the perimeter of the existing site. Existing views from the way allow the user to see across the areas of farmland to the north and south, therefore the proposed site is likely to be visible from this right of way. The path currently runs directly alongside the boundary for the proposed area and will need to be diverted in some areas to allow for the development. During the active period of the quarry however the views will be restricted by the proposed bunds that will be constructed around the site. After the quarry has been restored the footpaths will be reinstated to pass through the original farmland route.

The Assarts area of woodland runs close to the boundary of the current site. The area for the proposed site is located further down the valley where the land falls away. Due to this the views from the woods and any public rights of way within the woods will be restricted and limited. The existing site which sits between the proposed site and this location will be restored and so will significantly improve the current view from this area.

The public rights of way that run through the immediate vicinity of the quarry both existing and proposed will run along the boundary to the north, west and south. During its use, the quarry boundary will have bunds located along its entirety with the public footpaths running along their outer edge. This will restrict views of the proposed site itself. The bunds will also be increasingly covered with vegetation and improve the boundary edge.

This Public Right of Way runs along the edge of the Village of Duddington to the east. The proposed site sits to the east with the A43 running between the two. The road has a significant planted edge to each side with mature trees that create a substantial visual barrier. The road also sits within a cutting that has its lowest point centrally as it passes Duddington. This prevents views across the road and would restrict any visual
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