PINS document reference 5.4.14.1

APPENDIX ES14.1

LANDSCAPE AND VISUAL IMPACT ASSESSMENT

EAST NORTHANTS RESOURCE MANAGEMENT FACILITY, STAMFORD ROAD, NORTHAMPTONSHIRE

PROPOSED DEVELOPMENT CONSENT ORDER APPLICATION FOR THE ALTERATION AND CONSTRUCTION OF HAZARDOUS WASTE AND LOW LEVEL RADIOACTIVE WASTE FACILITIES

Landscape and Visual Impact Assessment

September 2021

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DB Landscape Consultancy

Foreword

This report was produced by DB Landscape Consultancy Ltd. (DBLC) for Augean South Ltd. (hereafter referred to as the applicant) for the specific purpose of accompanying a proposed development consent order application for the alteration and construction of hazardous waste and low level radioactive waste facilities at the East Northants Resource Management Facility (ENRMF), Stamford Road, Northamptonshire.

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1 Executive Summary

Baseline Context and Proposed Development, including Mitigation Measures

1.1 The Proposed Development extends across the existing ENRMF landfill and land to the immediate west and northwest (i.e. the proposed western extension area) which consists of gently sloping agricultural land with a hedgerow dividing the northern and southern areas. Collyweston Great Wood, designated Ancient and Semi Natural Woodland (ASNW), a National Nature Reserve (NNR), Site of Special Scientific Interest (SSSI) and Special Protection Area (SPA) is located to the immediate north of the existing Site, and to the east of the northern part of the western extension area. The Assarts woodland (part of Fineshade Wood) bounds the Site to the west with open agricultural land to the south and southeast, characterising the wider landscape in these areas.

1.2 The Site is not located within a designated landscape and lies within local Landscape Character Area (LCA) 11a: King's Cliffe Hills and Valleys, which typifies the agricultural nature of the proposed western extension area but not the existing ENRMF landfill, which is largely disturbed and industrial in character. It is noted that the Site, as well as Collyweston Quarry located approximately 470m to the west, is located within an Area of Tranquillity, a local designated area as defined by Policy 3: Landscape Character in the North Northamptonshire Joint Core Strategy 2011 – 2031.

1.3 Visibility of both the existing ENRMF landfill and the proposed western extension area is relatively limited due to the good screening provided by the large woodland blocks to the immediate north and to the west, beyond the proposed western extension area, combined with a lack of either residential properties or publicly accessible locations such as roads or Public Rights of Way (PROW) to the south or east. In liaison with Northamptonshire County Council, thirteen representative viewpoints were selected, each one of which is presented on two A3 sheets at Appendix A (a single 'frame' view and a panoramic 'context' view). These show views from PRoW, and locations on roads in close proximity to properties, or other facilities/places of work. In addition, three viewpoint locations

(Viewpoints 3, 9 & 13) have been selected for the production of existing/proposed photomontage images, representing the Proposed Development during the Mineral Extraction and Landfilling stage and then again at the 10 Years Post Restoration stage (Appendix A).

1.4 In terms of the planning context, as well as policies within the National Planning Policy Framework (NPPF, February 2019) and the National Policy Statement for Hazardous Waste (2013), relevant policies from the Northamptonshire Minerals and Waste Local Plan (adopted July 2017) include Policy 18: Addressing the Impact of Proposed Minerals and Waste Development, Policy 20: Natural Assets and Resources, Policy 21: Landscape Character and Policy 24: Restoration and After-Use. Two policies from the North Northamptonshire Joint Core Strategy 2011- 2031 (adopted July 2016) are also relevant, including Policy 3: Landscape Character and Policy 19: The Delivery of Green Infrastructure.

1.5 The Proposed Development has been separated into two distinct stages: the Mineral Extraction and Landfilling stage, incorporating various types of works such as soil stripping/stockpiling, mineral extraction, the construction of landfill cells and placement of waste to create the restoration landforms. The 10 Year Post Restoration stage represents the Site once the grassland areas, ponds, woodlands, scrub planting and hedgerows have developed and the Site is being used by members of the public walking along the footpath routes.

1.6 The Proposed Development would permanently affect the landform of the proposed western extension area due to progressive mineral extraction and subsequent landfilling works and would result in changes to the approved restoration landform across the existing ENRMF landfill, in order to merge with the new landform to the west. In addition, the agricultural land, an approximate 0.55 hectare (ha) area of mixed scrub (heathland and shrub) and the dividing hedgerow with mature oak tree across the central part of the proposed western extension area would be lost, although all soils stripped would remain on Site and utilised in Site restoration. Mitigation would also include advance planted hedgerows with trees in the following locations: the western and northern sides of the northern part of the western extension area, where the existing hedges

would be gapped up and/or reinforced with new site-side hedgerow planting; double hedgerows along both sides of the 20m wide corridor or land to be retained along the route of the water pipelines and a hedgerow along the eastern side of the southern part of the western extension area. Further mitigation would include the sequence of working the western extension area, which would be from north to south as far as the mixed scrub (heathland and shrub) area (to allow progressive, early restoration of the northern part of the western extension area, to re-connect the woodland blocks), then south to north and the use of best practice soil handling procedures.

1.7 Furthermore, in terms of long term mitigation, Site restoration would result in a notable increase in areas of woodland blocks, scrubby planting and hedgerows with trees across the proposed western extension area whilst there would also be an overall net gain of hedgerows & trees across the existing ENRMF landfill, compared to the approved restoration scheme, which is the baseline situation for this part of the Site. In addition, there would be a net gain in neutral/calcareous grassland areas and also the length of new permissive paths which may be extended to provide links with surrounding footpaths (subject to agreement) and also establish circular routes for users. In addition, several individual ponds would be incorporated into the restored landscape. The overall net gain in vegetation and other landscape features would result in significant long term biodiversity and nature conservation enhancements and would provide mitigation for the permanent loss of agricultural land.

Potential Effects on Landscape Receptors (features and character)

1.8 It is considered that in the long term the Proposed Development would result in a number of positive effects on landscape receptors across the overall Site. The landscape character of both the northern and southern parts of the proposed western extension area would benefit from the changes to the landscape, predominantly the woodland blocks and scrubby planting which, along with the hedgerows with trees, would help to visually and physically link the mature woodlands surrounding the proposed western extension while the neutral/calcareous grassland would provide more open areas, contributing more

biodiversity value than the existing agricultural land. Overall effects on hedgerow vegetation following Site restoration would be Significant and beneficial, with a slight net gain for the overall amount of woodland and scrubby vegetation.

1.9 In addition, the long term tranquillity of the Site would be protected and would be punctuated only by members of the public accessing the permissive path routes and occasional maintenance vehicles and works activity, which is considered entirely appropriate in this rural location. The long term tranquillity of the surrounding land, including those areas designated for their ecological value (e.g Collyweston Great Wood) and PRoW would also be maintained by the Proposed Development. The proposed individual ponds would also offer more nature conservation value than the baseline landscape and the presence of a net increase in proposed permissive path length would make the land more valuable from a recreational perspective, allowing the public to enjoy the more varied topography, views from the upper slopes, woodland and glades amongst the grassland areas, as well as potential improved links to existing footpaths further to the west (subject to agreement).

1.10 However it is acknowledged that there would be unavoidable and Significant adverse effects on landscape topography across the proposed western extension area during the Mineral Extraction and Landfilling stage, as the proposals would be a clear departure from the baseline situation. The permanent nature of the topographical changes would mean that at the 10 Years Post Restoration stage, effects would remain adverse compared to the baseline, but Significance would be reduced due to the mitigating effects of the vegetation and grassland cover, which would help integrate the landform with the surroundings. Effects on the topography of the existing ENRMF landfill would be limited when compared to the baseline.

1.11 In addition, there would be unavoidable and Significant adverse effects on the character and tranquillity of the northern part of the proposed western extension area during the working phases. This is partially due to its physical and visual separation from the existing ENRMF landfill, meaning it is not as adversely affected by the landfill when compared to the southern part of the proposed

western extension area. The southern part of the western extension area would also receive adverse effects on its character and tranquillity, but the greater influence of the adjacent existing ENRMF landfill would reduce the significance of effects.

Potential Effects on Visual Amenity

Residents

1.12 It is considered that the only Significant adverse visual effects on residents (classed as medium - highly sensitive) would be experienced from locations at Westhay Lodge and at The Barn, to the southeast of the Site, at specific times during the temporary (though long term) landfilling works. This would be as the restoration landform is constructed in the southern part of the proposed western extension area, and progressively rises up above the eastern boundary hedgerows. Views of these works would be in addition to any visible works within the existing ENRMF landfill, although at that point it is estimated that most of the southern side of the landfill would be restored with grassland and woodland/scrub vegetation developing well. Notwithstanding that, the works would extend visual disturbance for a longer duration than currently permitted. However, virtually all works in the northern and central part of the western extension area would be screened by the existing ENRMF landform, as would works along the western edge of the southern part of the western extension area, once the eastern edge had been raised to a sufficient level. Therefore, Significant visual effects on residents at Westhay Lodge and The Barn would be evident but would be limited in scale and total duration, as a proportion of the overall works associated with the landfilling stage of the Proposed Development.

1.13 Residents at Westhay Cottages along Stamford Road, opposite the eastern boundary of the existing ENRMF landfill, are not likely to experience notable differences in the emerging restoration landform at the eastern end of the Site, as views are effectively screened by the mature boundary hedgerow across the road from the windows. These residents would not be able to see any works in the proposed western extension area but the duration of works at the Site would be extended, which would cause effects of Minor Significance.

1.14 The Proposed Development would have minor or negligible effects on the very few other residents that may be able to partially glimpse the construction works within the southern part of the proposed western extension, such as those at St Johns Wood Farm, approximately 2.35km to the southeast. There are no views of the Site from any properties within Kings Cliffe or Duddington, so the Proposed Development would have no direct effect on any residents within these settlements.

PRoW Users, Road Users and People at their Place of Work

1.15 While there are several PRoW within the surrounding landscape, only one approximately 52m long stretch of Footpath MX15, approximately 120m to the west, has good, clear and relatively close views of the existing ENRMF landfill. All other routes that have partial glimpses of the existing Site are either in excess of approximately 900m away, have very limited, barely glimpsed views or don't have any views at all due to a combination of intervening landform, vegetation and/or distance.

1.16 It is considered that users of Footpath MX15 at the location represented by Viewpoint 3 would receive Significant though transitory visual effects during the Mineral Extraction and Landfilling stage. However, these fleeting views would only be experienced for the relatively short duration that the western sides on Phases 20 and 21 would be being landfilled. At all other times, Significance would be reduced.

1.17 There would be no Significant visual effects on any other PRoW users as a result of the Proposed Development during the operational stage, although the scheme would result in various minor visual disturbance to users of PRoW, largely within the undulating and open agricultural landscape to the southeast of the Site. Following restoration and integration of the Site with the surroundings, there would be no Significant visual effects, although for receptors in closer proximity to the Site (i.e., those at Viewpoints 3, 4 and 12) the slopes of the restoration landform would be apparent, albeit with grassland and woodland/scrub & hedgerow vegetation also evident.

1.18 The Proposed Development would result in a Significant net increase in the length of new permissive path routes to be created as part of the restoration works, which would be a notable benefit of the scheme.

1.19 The Proposed Development would cause no Significant effects on visual amenity for road users or people at their place of work.

Conclusion

1.20 It is concluded that the Proposed Development would provide substantial long term net gains for habitat creation and enhancement (see the Biodiversity Net Gain (BNG) report for further information) while maintaining and contributing positively to landscape character and levels of tranquillity once restoration works had been completed and the vegetation had matured. Changes to topography from very gently sloping agricultural fields to mounded landforms extending up to a max height of approximately 98.5m AOD would be permanent and immediately evident within the proposed western extension area. However, the landforms would integrate well with the existing ENRMF landfill and visually compliment it due to the scale of the landforms proposed. The proposed height increase on the existing ENRMF landfill would be accommodated as part of the wider scheme and would not be visually apparent, especially when vegetation matures. There would be positive improvements to public access provided by permissive paths across the restored Site which could link with existing PRoW to the west, subject to agreement.

1.21 However it is acknowledged that during the approximately 20 year extension of working that the Proposed Development would require, a number of temporary effects on landscape receptors and visual amenity of a Significant nature would occur. These would not last for the whole 20 years but would be evident at certain times during the operational works. There would be Significant effects on landform, character and tranquillity within the northern part of the western extension area at various times, with effects of lower significance estimated for the southern part of the extension area, as it is already adversely influenced to some extent by the existing ENRMF landfill. Effects on landscape features would include removal of approximately 510m hedgerows, two mature trees and the

mixed scrub (heathland and shrub) area totalling approximately 0.55ha, none of which is considered to be Significant in the context of their modest landscape value and quality.

1.22 Similarly, there would be Significant effects on a very limited number of residents (at Westhay Lodge and The Barn to the southeast of the Site) and PRoW users (Walkers on a c. 52m stretch of Footpath MX15 to the west) but these too would only be evident for temporary periods during the 20 year duration of the proposed Development. At all other times, and for all other visual receptors within the surrounding c. 3.0km radius study area, effects would not be Significant.

2 Introduction

Appointment and Scope of Work

2.1 DBLC has been appointed by the applicant to undertake a Landscape and Visual Impact Assessment (LVIA) report to accompany a development consent order application for the alteration and construction of hazardous waste and low level radioactive waste facilities at the East Northants Resource Management Facility (ENRMF), Stamford Road, Northamptonshire.

2.2 The scheme would extend the current resource management operations into land to the immediate west/northwest and is referred to as the Proposed Development in this report. The land on which the Proposed Development would be located is referred to as the Site, which includes both the existing ENRMF landfill operation and the proposed western extension area.

2.3 The red line application boundary around the Site extends over a total area of approximately 58.54 hectares (ha) as indicated on Figure 1: Visual Context (Appendix A) and includes the existing ENRMF landfill operation. The existing ENRMF landfill is approximately 31.76ha and the proposed western extension covers an area of approximately 26.78ha. The approximate location of the centre of the proposed western extension area is at the following six figure grid reference: E: 500347, N: 300038.

2.4 The report has been prepared by David Brittain CMLI MIQ who has experience in preparing LVIAs in relation to proposed developments of this type.

Document Structure

2.5 The structure of this report has been split into the following sections:

- Executive Summary (Section 1)
- Introduction (Section 2)
- Methodology (Section 3)
- Landscape and Visual Context (Baseline), including Existing Landscape Character Assessments (Section 4)

Planning Context: Landscape Designations and Policies (Section 5)

- Project Description and Proposed Mitigation Measures (Section 6)

- Assessment of Landscape and Visual Effects (Section 7)
- Assessment of Cumulative Landscape and Visual Effects (Section 8)
- Accordance of Proposed Development with Planning Policy (Section 9)
- Appendices (Appendix A: Figures 1 - 38, Appendix B: Glossary)

2.6 The Methodology section is based on principles and recommendations included within the Guidelines for Landscape and Visual Impact Assessment (GLVIA3, Third Edition, 2013).

2.7 The Landscape and Visual Context section provides a description of the existing baseline characteristics that establish the character of the Site and surrounding landscape, as well as the visibility of the Site. The section includes consideration of existing landscape character assessments (LCAs) that are relevant to the Site and the locality.

2.8 The Planning Context section considers relevant landscape (and landscape related) designations and also national, county and district/parish level planning policies.

2.9 The Project Description and Proposed Mitigation Measures section outlines the nature of the Proposed Development and the key sources of potential landscape and visual effects. The section also considers measures that have been included within the design of the Proposed Development in order to minimise/reduce potential landscape and visual effects, or to mitigate likely effects identified, as the design and planning of the scheme has progressed.

2.10 The Assessment of Landscape and Visual Effects section analyses the Sensitivity of the landscape and visual receptors to the Proposed Development and considers the Magnitude of Effects that the Proposed Development would be likely to cause. An indicative Significance of Effects level is then established for the receptors, with explanation text added as necessary. A Significance level of Moderate - Major or Major is indicative of a *Significant* effect in the context of Environmental Impact Assessment.

2.11 The Assessment of Cumulative Landscape and Visual Effects section identifies other relevant developments of a similar nature and/or scale as the Proposed

Development within the study area. The section goes on to assess whether the effects of the Proposed Development, in combination with the other development(s), would cause Significant additional adverse effects on landscape or visual receptors.

2.12 The Accordance of Proposed Development with Planning Policy section summarises how the Proposed Development accords with selected key polices from national and local policy documents.

2.13 The Appendices to the LVIA include the following:

Appendix A: Figures:

- Figure 1: Visual Context
- Figure 2: Landscape Character Areas
- Figure 3: Landscape Context
- Figures 4 – 29: Viewpoints 1 to 13 (Single frame view and context panorama)
- Figures 30 – 38: Existing and Proposed Photomontages (Viewpoints 3, 9 and 13)

Appendix B: Glossary

3 Methodology

Introduction

3.1 Guidance for the undertaking of this Landscape and Visual Impact Assessment has been sourced from the Guidelines for Landscape and Visual Impact Assessment[1].

3.2 Landscape effects are the predicted effects on the landscape features and landscape character, jointly referred to as the landscape 'receptors'. These effects could include direct, physical changes to the landscape features/elements but also includes aesthetic, perceptual and experiential aspects of a landscape which may contribute to the existing landscape character.

3.3 Visual effects are the predicted changes to a view and on the general visual amenity experienced by people (visual receptors). Typically, the various visual receptor groups may comprise residents, the users of PRoW, users of recreational facilities, pedestrians and the users of a variety of forms of transport such as bicycles and horses or the drivers and passengers of vehicles, including trains.

3.4 LVIA can be undertaken as part of a formal Environmental Impact Assessment (EIA) which is underpinned by EU Directive 2011/92/EU, where the regulations in Annex IV point 4 require that a final judgement is made about whether or not each effect is likely to be 'Significant'. Alternatively, LVIA can be applied informally to non EIA projects as a contribution to the 'appraisal' of development proposals.

3.5 The general approach used establishes the 'Landscape and Visual Context' (i.e. Baseline) of the study area (Site and surrounds) against which the potential landscape and visual effects of the development proposals can be identified, described and assessed. The approximate 3.0km radius study area selected is based on desk study and fieldwork. A Zone of Theoretical Visibility (ZTV) map is shown on Figure 1: Visual Context.

[1] GLVIA, third edition, published April 2013 by the Landscape Institute and Institute of Environmental Management and Assessment

Landscape and Visual Context (Baseline)

Introduction

3.6 Establishing the landscape baseline is a process of *"desk study and fieldwork to identify and record the character of the landscape and the elements, features and aesthetic and perceptual factors which contribute to it. The process should also deal with the value attached to the landscape".*

3.7 Landscape receptors are defined on page 36 of the GLVIA3 as including *"the constituent elements of the landscape, its specific aesthetic or perceptual qualities and the character of the landscape in different areas."*

3.8 Visual receptors are defined by the GLVIA3 as *"the people who will be affected by changes in views or visual amenity at different places"*. These can include individual or groups of residents, people working in the area, people passing through the area using various forms of transport, people visiting the area and people engaged in recreation or leisure pursuits in the area.

3.9 Similarly, the visual baseline should *"establish the area in which the development may be visible, the different groups of people who may experience views of the development, the viewpoints where they will be affected and the nature of the views at those points. Where possible it can also be useful to establish the approximate number of different groups of people who will be affected by the changes in views or visual amenity".*

3.10 The visual baseline is established by a combination of desk study, 'visibility mapping' using manual techniques as well as digital approaches such as production of a ZTV model and fieldwork. Representative viewpoints from where changes to the view may be experienced as a result of the proposed development are identified through this process and the nature of the viewpoint locations, the views themselves and the respective receptors summarised. Single frame images and panoramic context photographs from each viewpoint are taken and presented with this information.

3.11 The process is undertaken to determine the baseline against which the development proposals are to be compared and to establish the importance of the

constituent parts of the landscape and factors affecting the potential visibility of the proposed development. This provides information against which the Sensitivity, Magnitude of Effects and subsequently the Significance of Effects can be assessed. From this, it is then possible to make a judgement in determining the planning application on whether or not the effects identified are of a high enough level to be considered 'Significant'.

Landscape Character Assessment

3.12 Existing landscape character assessment studies are considered as part of the baseline work, in order to gather information about the intrinsic character of the Site and its surrounds. Studies at a number of scales are referenced including the national level assessment of National Character Areas (NCA's) by Natural England and also County or District level landscape character studies.

3.13 Landscape character assessment is also undertaken on a more localised level if necessary and a description of the landscape characteristics can be provided in relation to the Site itself and immediate surrounds.

Landscape Designations and Policies

3.14 The baseline study also identifies national and local landscape designations, usually contained in the relevant Development Plan Documents. Whilst local designations are generally not supported in national planning policy, they can reflect the value of a particular landscape to the local population. Landscape related planning policies from relevant Development Plan Documents are also referred to and how the Proposed Development accords with them is considered in order to enable a critical comparison between the likely effects of the proposals and the aspirations/aims of the policies.

Landscape Value

3.15 Establishing the value of the potentially affected landscape at the baseline stage will help inform later judgements about the Significance of Effects. GLVIA3 states the following:

"Value can apply to areas of landscape as a whole or to the individual elements, features and aesthetic or perceptual dimensions which contribute to the character of a landscape. Landscapes or their component parts may be valued at the community, local, national or international levels"

3.16 Existing national level landscape designations relating to the site and surrounds are identified if applicable (i.e. National Parks, Areas of Outstanding Natural Beauty) as well as other national level 'landscape related' designations (i.e. Listed Buildings, Registered Parks and Gardens). In addition, regional and/or locally based indicators of landscape value are established that may include Areas of Great Landscape Value (AGLV), Tree Preservation Orders or Conservation Areas. The presence of long distance footpaths or National Trails can also indicate landscape value in an area.

Landscape Quality

3.17 GLVIA 3 defines landscape quality as *"A measure of the physical state of the landscape. It may include the extent to which typical character is represented in individual areas, the intactness of the landscape and the condition of individual elements."*

Site Visibility Study

3.18 The visibility of the Site is considered through reference to Ordnance Survey plans, aerial imagery and/or fieldwork to help determine the visual baseline. The initial desktop consideration of the Site and surrounds covered an area of approximately 3.0km radius, which was verified during fieldwork. Close range views were judged to be within 300m of the Site, mid-range from 300m – 1.5km and long range views at a distance of over 1.5km.

3.19 Eleven viewpoints have been included in the assessment and consideration of these includes potential impacts on different visual receptor types such as residents, users of PRoW and road users, as necessary. Photographic images included as part of this section, (refer to Figures 4 to 25, Appendix A) were taken in winter 2020 using a Nikon D5300 digital Single Lens Reflex (SLR) camera with a fixed 35mm lens (which is broadly equivalent to a 52.5mm focal length in 35mm

film format). Panoramic context views were stitched together using PT Gui Pro software.

Assessment of Landscape and Visual Effects

Describing Landscape Effects

3.20 Once the baseline information has been gathered, this can be combined with understanding of the Proposed Development to identify and describe the potential effects on the 'landscape receptors' (i.e. local and wider level landscape character and key characteristics as defined in Landscape Character Assessments, individual features such as hedgerows or woodlands, PRoW and/or aesthetic/perceptual aspects). Effects on the receptors at different stages of the development are important to identify, as are the types of effects if relevant (i.e. direct/indirect, secondary, cumulative, short/medium/long term, temporary/permanent, beneficial/adverse).

3.21 GLVIA3 states that effects are likely to include:

- "Change *in and/or partial or complete loss of elements, features or aesthetic or perceptual aspects that contribute to the character and distinctiveness of the landscape;*
- *Addition of new elements or features that will influence the character and distinctiveness of the landscape; and*
- *Combined effects of these changes on overall character*"

Describing Visual Effects

3.22 As with landscape effects, once the baseline information has been gathered, this can be combined with understanding of the Proposed Development to identify and describe the potential effects on the visual receptors. Again, it is important to identify the visual effects at different stages of the development and the type of effect that would be experienced by the receptor/s.

3.23 GLVIA3 states the following issues regarding effects on views should be considered, (though there may be others):

- **"***The nature of the view of the development, for example a full or partial view or only a glimpse;*
- *The proportion of the development or particular features that would be visible (such as full, most, part, none);*
- *The distance of the viewpoint from the development and whether the viewer would focus on the development due to its scale and proximity or whether the development would be only a small, minor element in a panoramic view;*
- *Whether the view is stationary or transient or one of a sequence of views, as from a footpath or moving vehicle; and*
- *The nature of the changes, which must be judged individually for each project, but may include, for example, changes in the existing skyline profile, creation of a new visual focus in the view, introduction of new man-made objects, changes in visual simplicity or complexity, alteration of visual scale and change to the degree of visual enclosure".*

3.24 In addition, seasonal differences in effects arising from the varying degree of screening and/or filtering of views by vegetation at different times of the year need to be considered.

Assessing the Significance of Landscape and Visual Effects

Introduction

3.25 Separate judgements about the Sensitivity of the landscape and visual receptors and the Magnitude of Effects need to be combined to allow a final judgement to be made about the Significance of Landscape and Visual Effects and, from that, whether any particular effects are considered high/important enough to be 'Significant' or not, as required by the EIA Regulations.

3.26 The sub-section below outlines the methodology for assessing Sensitivity of both landscape and visual receptors while the subsequent sub-section considers assessment of Magnitude of Landscape and Visual Effects. The methodology for assessing the Significance of Landscape and Visual Effects is then presented.

Sensitivity of Landscape Receptors

3.27 As defined in GLVIA3, Sensitivity of landscape receptors is assessed by taking the following factors into account:

- "Susceptibility *… of the landscape to change – the ability of the landscape receptor (overall character, individual feature or particular aesthetic/perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies; and*
- *Value of the landscape receptor/s – established during the baseline study, covering the value of the Landscape Character Types or Areas based on review of designations or, in their absence, judgements based on criteria that can be used to establish landscape value. In addition, the value of individual contributors to landscape character such as key elements or features within the landscape, or notable aesthetic/perceptual qualities".*

3.28 It is important to note that sensitivity of the landscape resource should not be recorded as part of the baseline but should be considered as part of the assessment of effects. This is because landscape effects are particular to both the specific landscape in question and the specific nature of the Proposed Development. Table M1 below sets out and explains criteria used to assess Sensitivity of the landscape:

Table M1: Explanation of Rating Criteria for Sensitivity of Landscape Receptors

Sensitivity Rating	Typical Criteria	
	Susceptibility of Landscape to Change	**Value of Landscape Receptors**
High	Overall Character: A landscape of particularly distinctive character or highly valued for its scenic quality or rarity. A landscape where the intrinsic character may be susceptible to slight changes Individual Elements or Features: Unique or rare landscape features are evident within the study area and if removed or altered the effect would be immediately noticeable. Aesthetic or Perceptual Aspects: The landscape, or parts of it, has a particularly notable or special quality, especially in terms of wildness and/or tranquillity	Designations Designated landscapes such as World Heritage Sites, National Parks, AONB's, AGLV's. Or undesignated but value perhaps expressed through existing landscape assessment, planning policy, non-official publications or through demonstrable use by the public Other Criteria Indicating Value High levels of tranquillity, remoteness/wildness, scenic beauty High local consensus on value of the landscape Acknowledged cultural associations related to the landscape Landscape or parts of it well used for conservation interests
Medium	Overall Character A landscape of reasonably valued characteristics of medium importance, scenic quality or rarity. A landscape that may be reasonably tolerant to moderate changes without adversely affecting its intrinsic character Individual Elements or Features: Reasonable quality landscape features are evident within the study area and if removed or altered the effect may be noticeable Aesthetic or Perceptual Aspects: The landscape has a reasonable aesthetic and perceptual quality, but is not especially wild and/or tranquil	Designations Landscapes which are not considered as having a particularly notable quality requiring designation or other form of expression but that nevertheless may be reasonably valued locally for recreation and amenity Other Criteria Indicating Value Moderate levels of tranquillity, remoteness/wildness, scenic beauty Possibly some local consensus on value of the landscape Possibly some cultural associations related to the landscape Landscape may be used for some conservation interests
Low	Overall Character A landscape of lower importance which is not particularly valued for its quality, scenic beauty or rarity or is degraded and is tolerant of	Designations Areas identified as having limited or no redeeming features or being degraded, possibly identified for improvement or even recovery through planning policy

	change which would likely improve its character Individual Elements or Features: Few or no landscape features of particular note or quality are evident within the site and if removed or altered the effect is not likely to be noticed Aesthetic or Perceptual Aspects: The landscape does not have a particularly notable or special aesthetic quality and is not considered wild and/or tranquil	Other Criteria Indicating Value Low levels of tranquillity, remoteness/wildness, scenic beauty No or very small local consensus on value of the landscape No cultural associations related to the landscape Landscape not used for some conservation interests

Sensitivity of Visual Receptors

3.29 As defined in GLVIA3, Sensitivity of visual receptors (person or group of people likely to be affected at a specific viewpoint) is assessed by taking the following factors into account:

- "Susceptibility *of visual receptors to change – This is mainly a function of the occupation or activity of people experiencing the view at particular locations and the extent to which their attention or interest may therefore be focused on the views and the visual amenity they experience at particular locations. Visual receptors most susceptible to change are likely to include:*

- *Residents at home;*
- *People, whether residents or visitors, who are engaged in outdoor recreation, including the use of public rights of way, whose attention or interest is likely to be focused on the landscape and on particular views;*
- *Visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience;*
- *Communities where views contribute to the landscape setting enjoyed by residents in the area;*
- *Travellers on recognised scenic routes where awareness of views is likely to be particularly high*

Visual receptors likely to be less sensitive to change include:

- *Travellers on road, rail or other transport routes where the main reason for the journey is to get from A to B with relatively minor interest in the surrounding landscape;*
- *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, and where the setting is not important to the quality of working life (although this is not always the case); and*

• *Value attached to views – judgements should also be made about the value attached to the views experienced. This should take 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 on tourist maps, provision of facilities for their enjoyments (i.e. car parks, interpretation boards etc.) and references to them in literature or art".*

3.30 Table M2 below sets out and explains criteria used to assess Sensitivity of visual receptors:

Table M2: Explanation of Rating Criteria for Sensitivity of Visual Receptors

Sensitivity Rating	Typical Criteria	
	Susceptibility of Visual Receptors to Change	**Value Attached to Views**
High	Residents where direct views from rooms/gardens can be gained; Communities where views contribute to the landscape setting enjoyed by residents in the area; and People using recognised National Trails or Long Distance Footpaths whose attention or interest is largely focused on the landscape and/or on particular views	Views within and towards designated landscapes such as World Heritage Sites, National Parks, AONB's or AGLV's. Or undesignated but value perhaps expressed through existing landscape assessment, planning policy, non-official publications or through demonstrable use by the public. Particularly good views identified by tourist literature, guidebooks, the presence of viewpoints/seating, car parks, interpretation boards.

		Particularly good or recognised views from National Trails or Long Distance Footpaths
Medium	Visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience; Travellers on recognised scenic routes where awareness of views is likely to be reasonably high; and Public Rights of Way with reasonable landscape interest used primarily for travelling between locations and general outdoor recreation	Views within landscapes which are not considered as having a particularly notable quality requiring designation or other form of expression but that nevertheless may be reasonably valued locally for recreation and amenity.
Low	People engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the landscape; Travellers on road, rail or other transport routes where the main reason for the journey is to get from A to B with no or little interest in the surrounding landscape; and People at their place of work whose attention is focused on their work or activity, not on their surroundings, and where the setting is of little importance to the quality of working life.	Views within areas identified as degraded or having limited redeeming features. Areas where tolerance to change is reasonably or very high

Magnitude of Landscape Effects

3.31 As defined in GLVIA3, each effect on landscape receptors should be assessed in terms of the following factors, where relevant:

- *<u>Size or scale</u> – how these would affect change in the landscape that is likely to be experienced as a result of each effect. Judgements should take account of the following:*
- *The extent and proportion of existing landscape elements that would be lost and the contribution of that element to the character of the landscape;*
- *The degree to which aesthetic/perceptual aspects of the landscape are altered either by removal of existing components of the landscape or by addition of new ones;*

- *Whether the effect changes the key characteristics of the landscape, which are critical to its distinctive character.*

- *Geographical extent – distinct from size or scale of the effect, in general effects may have an influence at the following scales: site level, immediate setting of the site, landscape type/character area or on a larger (i.e. multi LCA) scale.*
- *Duration and reversibility of the landscape effects – duration can be judged on a scale ranging from short to medium to long term (for instance), and then whether the various effects identified are temporary or permanent. If temporary, are the effects partially or fully reversible? The timescales involved and reasons why they have been selected also need to be stated".*

3.32 Table M3 below sets out and explains criteria used to assess Magnitude of Landscape Effects:

Table M3: Explanation of Rating Criteria for Magnitude of Landscape Effects

Magnitude of Effects Rating	Typical Criteria			
	Size or Scale of the Landscape Effects	Geographical Extent of the Landscape Effects	Duration of the Landscape Effects	Reversibility of the Landscape Effects
Large	Total loss of or major alteration to key elements/ features/characteristics of the baseline, i.e. pre-development landscape and/ or introduction of elements considered to be totally uncharacteristic when set within the attributes of the receiving landscape	Effects noticeable within site, immediate/wider surrounds and possibly across the wider LCA area/multi LCA area	Long term (6+ years) or permanent	Effects long term or permanent and irreversible
Medium	Partial loss of or alteration to key elements/ features/characteristics of the baseline, i.e. pre-development	Effects noticeable within site, immediate/wider surrounds	Medium term (3 – 6 years)	Effects temporary (medium term)

	landscape and/ or introduction of elements that may be prominent but may not be substantially uncharacteristic when set within the attributes of the receiving landscape			and partially reversible
Small	Minor loss of or alteration to key elements/ features/characteristics of the baseline, i.e. pre-development landscape and/ or introduction of elements that are not noticeably uncharacteristic with the surrounding landscape	Effects noticeable within the site only and possibly immediate surrounds to a small extent	Short term (6 months – 3 years)	Effects temporary (short term) and fully reversible
Negligible/No Change	Very minor/barely perceptible loss of or alteration to key elements/ features/characteristics of the baseline, i.e. pre-development landscape and/ or introduction of elements that are largely characteristic with the surrounding landscape	Effects noticeable within the site only, or distinct parts of it	Very short term (0 – 6 months)	Effects temporary (very short term) and fully reversible

Magnitude of Visual Effects

3.33 As defined in GLVIA3, each of the visual effects identified should be evaluated in terms of the following factors, where relevant:

- *<u>Size or scale</u> – judging the magnitude of the visual effects identified needs to take account of:*
- *The scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the proposed development;*

- *The degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of form, scale and mass; line, height, colour and texture;*
- *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'.*

- *Geographical <u>extent</u> – this will vary with different viewpoints and 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 and the extent of the area over which the changes would be visible.*
- *<u>Duration and reversibility of visual effects</u> – as with landscape effects, these are separate but linked criteria. Similar considerations apply to visual as well as landscape effects.*

3.34 Table M4 below sets out and explains criteria used to assess Magnitude of Visual Effects:

Table M4: Explanation of Rating Criteria for Magnitude of Visual Effects

Magnitude of Effects Rating	Typical Criteria			
	Size or Scale of the Visual Effects	**Geographical Extent of the Visual Effects**	**Duration of the Visual Effects**	**Reversibility of the Visual Effects**
Large	Where the proposals would be readily apparent due to loss of and/or addition of features to the existing view, which would be intrusive; Large proportion of the view occupied by the proposed development; High degree of contrast between the development and the existing landscape features/character	Direct angle of view for the visual receptor/s; Receptor close to the development (within 200m); Wide extent of area over which the changes would be visible	Long term (6+ years)	Effects long term ort permanent and irreversible
Medium	Where proposals would form a visible and recognisable new development but where it is not unduly intrusive within the overall view; Medium proportion of the view occupied by the proposed development; Medium degree of contrast between the development and the existing landscape features/character	Somewhat offset angle of view for the visual receptor/s; Receptor mid distant from the development (200m – 500m); Average extent of area over which the changes would be visible	Medium term (3 – 6 years)	Effects temporary (medium term) and partially reversible
Small	Where proposals constitute only a minor component of the wider view, which the casual observer could miss or where awareness does not overly affect the quality/amenity of the view;	Indirect angle of view for the visual receptor/s; Receptor far from the development (500m – 1km); Small extent of area over which the changes would be visible	Short term (6 months – 3 years)	Effects temporary (short term) and fully reversible

	Low proportion of the view occupied by the proposed development; Low degree of contrast between the development and the existing landscape features/character			
Negligible/No Change	Where proposals constitute only a barely visible component of the wider view, which the casual observer is likely to miss or where awareness hardly affects the quality/amenity of the view; Very small proportion of the view occupied by the proposed development; Barely any contrast between the development and the existing landscape features/character	Indirect angle of view for the visual receptor/s; Receptor very far from the development (over 1km); Very small extent of area over which the changes would be visible	Very Short term (0 - 6 months)	Effects temporary (very short term) and fully reversible

Assessing Significance of Landscape and Visual Effects

3.35 As mentioned above, Significance of Landscape and Visual Effects is assessed by combining Sensitivity to the Proposed Development with Magnitude of Effects to allow a final judgement to be made regarding Significance and, from that, whether the level of a particular effect is 'Significant' or not, as required by the EIA Regulations.

3.36 Table M5 below provides an indicative matrix to guide what Significance of Effects is likely to occur when ratings for Sensitivity and Magnitude of Effects are combined, although professional judgement supported by written explanation is also required to provide a rationale for the Significance level selected. Ratings in red bold (Major or Moderate – Major) are likely to be a material consideration in the decision-making process.

Table M5: Matrix to Indicate Significance of Landscape or Visual Effects

			Sensitivity to the Proposed Development		
			High	**Medium**	**Low**
Magnitude of Effects	**Adverse**	**Large**	**Major**	**Moderate – Major**	Moderate
		Medium	**Moderate – Major**	Moderate	Minor - Moderate
		Small	Moderate	Minor - Moderate	Minor
	Negligible/No Change		Negligible/ None	Negligible/ None	Negligible/ None
	Beneficial	**Large**	**Major**	**Moderate – Major**	Moderate
		Medium	**Moderate – Major**	Moderate	Minor - Moderate
		Small	Moderate	Minor - Moderate	Minor

3.37 Table M6 below sets out and explains what each Significance of Effects level indicates for both landscape and visual effects, although as stated above, further explanation is usually necessary in order to clarify why the particular rating has been selected. It is important to note that Significance of Effects can be adverse.

Table M6: Explanation of Rating Criteria for Significance of Landscape or Visual Effects

Significance of Effects Level	Landscape Effects	Visual Effects	Importance in Decision Making Process
Major Adverse	Changes that would result in a considerable and distinct deterioration of the existing landscape character and/or features	Changes which are considered to result in a considerable and distinct deterioration in the existing view	These effects are considered to be SIGNIFICANT. They are likely to be material in the decision-making process
↕	Changes that would result in a noticeable though not defining deterioration of the existing landscape character and/or features	Changes which are considered to result in a noticeable though not defining deterioration in the existing view	These effects may be reasonably important or notable but are not likely to be key decision-making factors. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effects on a particular receptor
Minor Adverse	Changes that would result in a slight deterioration of the existing landscape character and/or features	Changes which are considered to result in a slight deterioration in the existing view	These effects may be raised as local factors. They are unlikely to be of importance in the decision-making process
Negligible/ None	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error	These effects are not considered to be notable or important in the decision-making process
Major Beneficial	Changes that would result in a considerable and distinct improvement of the existing landscape character and features	Changes which are considered to result in a considerable and distinct improvement in the existing view	These effects are considered to be SIGNIFICANT. They are likely to be material in the decision-making process
↕	Changes that would result in a noticeable though not defining improvement of the existing landscape character and features	Changes which are considered to result in a noticeable though not defining improvement in the existing view	These effects may be reasonably important or notable but are not likely to be key decision-making factors.
Minor Beneficial			

	Changes that would result in a slight improvement of the existing landscape character and features	Changes which are considered to result in a slight improvement in the existing view	These effects may be raised as local factors. They are unlikely to be of importance in the decision-making process

Methodology for Assessment of Cumulative Effects

3.38 It is proposed that the cumulative assessment section utilizes the same baseline 'Sensitivity' ratings for landscape character and visual receptors as included within the LVIA. However, in order to place a value on the Cumulative Magnitude of additional effects on landscape receptors or visual amenity caused by the Proposed Development in conjunction with the existing ENRMF landfill and other related developments within the surrounding land (i.e. the cumulative changes), a new set of Cumulative Magnitude rating criteria is required, as in Table M7 below.

3.39 Table M8 further below sets out and explains what each Significance of Cumulative Effects rating indicates for landscape receptors and visual amenity. Significance of Cumulative Effects is rated by combining Sensitivity to the Proposed Development with Magnitude of Cumulative Effects, using the same indicative matrix included in the main LVIA Methodology. However, as stated above, further explanation is usually needed in order to clarify why the particular rating has been selected.

3.40 The essential purpose of these criteria ratings is to assess the Significance of cumulative/combined effects caused by the addition of the Proposed Development to the existing landscape. The purpose is not to assess the effects of the Proposed Development in isolation – that information has already been included elsewhere within the LVIA and is subtly different from this section.

Table M7: Matrix to Indicate Magnitude of Cumulative Landscape and Visual Effects

Cumulative Magnitude of Effects	Landscape Rating Criteria	Visual Rating Criteria
Large	Where the additional effects on landscape character caused by the Proposed Development in combination with the existing baseline would be very noticeable/dominant and on a reasonably large scale	Where the additional visual change caused by the Proposed Development in combination with the existing baseline would be apparent or very apparent and would affect the overall impression of the view
Medium	Where the additional effects on landscape character caused by the Proposed Development in combination with the existing baseline would be noticeable but not dominant	Where the additional visual change caused by the Proposed Development in combination with the existing baseline may be apparent but would not be unduly intrusive within the overall view
Small	Where the additional effects on landscape character caused by the Proposed Development in combination with the existing baseline would be relatively small and not immediately apparent	Where the additional visual change caused by the Proposed Development in combination with the existing baseline would only constitute a minor change to the view which the casual observer might miss altogether
Negligible/ No Change	Where the additional effects on landscape character caused by the Proposed Development in combination with the existing baseline would be very small and barely perceptible	Where the additional visual change caused by the Proposed Development in combination with the existing baseline is likely to be missed altogether due to distance, topography or intervening elements

Table M8: Explanation of Significance of Cumulative Landscape and Visual Effects

Significance of Cumulative Effects	Landscape Rating Explanation	Visual Rating Explanation
Major	The combined effects on landscape character caused by the addition of the proposed development to the baseline situation would be at variance with many key characteristics of a highly valued and high quality landscape	The combined visual impact caused by the addition of the proposed development to the baseline situation would be immediately apparent and possibly dominates the view
Moderate - Major	The combined effects on landscape character caused by the addition of the proposed development to the baseline situation would be relatively large, with many long-term effects on medium sensitivity landscape or smaller, short tern effects on highly sensitive landscape	The combined visual impact caused by the addition of the proposed development to the baseline situation would be somewhat apparent and has a negative impact on the view
Moderate	The combined effects on landscape character caused by the addition of the proposed development to the baseline situation would be reasonably noticeable. There would be some adverse changes to medium sensitivity landscape or small, temporary changes to highly sensitive landscape	The combined visual impact caused by the addition of the proposed development to the baseline situation may be apparent but would not adversely affect the view to any great extent
Minor - Moderate	The combined effects on landscape character caused by the addition of the proposed development to the baseline situation would be small	The combined visual impact caused by the addition of the proposed development to the baseline situation would be limited and may be missed by the casual observer
Minor/ Negligible	The combined effects on landscape character caused by the addition of the proposed development to the baseline situation would be very small	The combined visual impact caused by the addition of the proposed development to the baseline situation is likely to be missed altogether and would be barely perceptible

4 Landscape and Visual Context (Baseline)

Introduction

4.1 The landscape and visual context (baseline) represents a summary of the existing landscape receptors (i.e. landscape features and landscape character) relevant to the site and surrounds and visual amenity, against which changes likely to be caused by the Proposed Development can be assessed. The study area extends to a radius of approximately 3.0 kilometres (km) from the centre of the Site, as indicated on Figures 1 - 3.

4.2 Figure 1: Visual Context shows the location of thirteen viewpoint locations, which have been discussed and agreed with the Northamptonshire County Council, and also includes a ZTV map which indicates from which areas it would be theoretically possible to obtain views of the Proposed Development. In addition, this drawing indicates areas from which the Site is not visible taking into account intervening built development and vegetation and also local PRoW. Refer to Figure 1 for further technical information relating to the ZTV.

4.3 Figure 2: Landscape Character Areas show the national and local landscape character types (LCT) and/or the landscape character areas (LCA) relevant to the Site and surrounds.

4.4 Figure 3: Landscape Context illustrates the location of a number of landscape and cultural heritage features within the landscape setting that are described below, and generally follow the standard OS map nomenclature, with added information as necessary. The combination of some or all of these landscape features contributes to the character and appearance of the Site and surrounds.

Landscape Context

Description of the Site and Immediate Surrounds

4.5 The application boundary includes the existing ENRMF hazardous waste and low level radioactive waste (LLW) landfill site and the proposed western extension area, as indicated on Figure 1. The existing facility has a long history of mineral and waste development and extends across an area of approximately 31.76ha. It is divided into eleven working phase areas of which Phases 1 and 2 are currently being capped. Landfilling operations are completed in Phases 3, 4, 5

and the southern part of Phase 6, with Phases 3, 5 and the southern part of Phase 6 partially capped. Currently, landfilling operations are being carried out in the northern part of Phase 6 and in Phase 10, while Phase 7 is currently being constructed. In addition, material currently in Phases 8 & 9 will need to be moved in future to allow construction of landfill cells.

4.6 A waste treatment and recovery facility is located within Phase 11, at the north western corner of the site. This facility consists of various treatment infrastructure including buildings, conveyors, tanks and silos (the highest of these being approximately 14m) as well as stocking and circulation areas. Two lagoons are located to the west of the treatment plant area, beside the western boundary, and there is a further lagoon in the very north western corner of the site, with Collyweston Great Wood to the immediate north. The gas flare compound is located to the northwest of the waste treatment and recovery facility.

4.7 An area along the north eastern boundary of the Site has previously been restored to neutral/calcareous grassland and scrubland, for the benefit of nature conservation. This area is used as an ecological refuge area for Great Crested Newts.

4.8 The south eastern corner of the site includes the site access off Stamford Road, office/welfare buildings, car park, weighbridge and waste reception facilities, storage areas and maintenance building and other associated infrastructure, which is separated from the adjacent road by a strip of woodland vegetation.

4.9 The existing ENRMF landfill is generally undulating in profile, reflecting the progressive nature of the material placement operations. The existing ENRMF landfill is bounded to the north by a large block of mature woodland, Collyweston Great Wood, which is designated as Ancient Semi Natural Woodland (ASNW), is a National Nature Reserve (NNR) and is also a Site of Special Scientific Interest (SSSI) and Special Protection Area (SPA). The site is bounded to the east by a hedgerow separating it from Stamford Road, beyond which is a commercial and agricultural facility associated with Westhay Farm, consisting of several utilitarian/agricultural storage buildings and areas of hardstanding for parking and circulation. In addition, there are four properties (Westhay Cottages) along the

eastern side of the road, which are located at the north western corner of the commercial facility, separated from it by a mature woodland strip. A single residential property is located close to the south western corner of the commercial facility, set back by approximately 55m from Stamford Road, and screened from it by intervening vegetation. This property is owned by the operators of the commercial facility.

4.10 The existing ENRMF landfill is bounded to the south by a hedgerow with scrubby vegetation which runs alongside a farm access road and adjacent to the centre of the southern boundary are some agricultural storage barns. Beyond the farm access track are open agricultural fields extending over 2km to the south, towards the northern edge of the village of Kings Cliffe.

4.11 It should be noted that for the purposes of this LVIA report, the baseline situation for the restoration of the existing ENRMF landfill is shown on Drawing no. 1960/008A: Restoration Scheme, dated March 2011 (David Jarvis Associates). This drawing shows that the approved (post settlement) restoration landform extends up to a level of 93m Above Ordnance Datum (AOD) and that the southern part of the existing ENRMF landfill is restored to approximately 21.01ha 'species rich neutral grassland'. The northern part of the Site is shown as being restored to approximately 5.62ha of 'woodland planting with glades and rides for maintenance', with a total of approximately 2.88ha of 'scrub' along with four new ponds along the southern boundary and one pond in the north western corner. A new permissive path link extends from the Site entrance in a westerly direction, up the side of and along the landform, and exits the site close to the north western corner, to link up with existing Footpath MX15 further west.

4.12 The proposed western extension area lies to the immediate west & northwest of the existing ENRMF landfill and extends across an area of approximately 26.78ha, consisting of agricultural fields currently used for crop production. The proposed western extension area is divided into two separate, large fields by a south southwest to north northeast hedgerow across the approximate central part of the Site, with one mature oak tree at its eastern end. The proposed western extension area is approximately 1.2km in length from north to south while the

width of the area varies from approximately 95m at the northern end of the area to approximately 275m at the southern end.

4.13 The approximate central part of the proposed western extension area is bounded to the east by the existing Site while the southern section is bounded to the east by a large agricultural field. The northern part of the area is bounded to the east by the aforementioned Collyweston Great Wood. This woodland extends to the north while the northern part of the western boundary abuts a hedgerow beyond which are agricultural fields. The rest of the western boundary is formed by the eastern edge of part of Fineshade Woods known as The Assarts. To the south of the application boundary, the agricultural field extends further for approximately 50m – 102m (from west to east), beyond which lies a small woodland block, Little Wood.

Description of the Wider Surrounding Area

4.14 The Site is set within a predominantly agricultural landscape, which is mainly evident across land to the south and southeast, consisting of large-scale productive fields bounded by well-managed hedgerows and occasional trees, though these are not a characteristic feature of the landscape. There is a distinct lack of woodland cover across this wide expanse of agricultural land which, when combined with the very gently undulating landform, allows long distance views over the boundary hedgerows to the landscape beyond, framed by woodland in the far distance.

4.15 In contrast to the large agricultural area, land to the immediate northeast, west and southwest of the Site is characterised by large tracts of mature woodland vegetation with occasional glades, rides and other land uses in areas cleared of tree cover. Beyond the woodland to the north, further large areas of agricultural land are evident, again lacking any woodland blocks, extending to the village of Collyweston and beyond.

4.16 Further to the west, approximately 470m beyond the fields and woodland bounding the western edge of the Site, Collyweston Quarry is set within a surrounding landscape of agricultural fields with boundary hedgerows. Thornhaugh Landfill Site, operated by the applicant, is located approximately

3.4km to the east of the Site. Cooks Hole Quarry, owned by the applicant and operated by a third party, is also located approximately 3.4km to the east of the Site, immediately to the south of Thornhaugh Landfill Site. Wakerley Quarry is located approximately 4.4km to the southwest of the Site..

4.17 The topography of the surrounding landscape, within the approximate 3.0km radius study area, is varied, with land to the north consistent at between approximately 80m – 90m AOD while land to the east is gently undulating, between levels of approximately 70m – 78m AOD. Land to the southeast is slightly more varied with a land sloping down to approximately 60m AOD to the east of Stamford Road, to form a relatively localised dip in the landscape. Land further east, heading towards Bedford Purlieus National Nature Reserve (NNR) woodland, slightly falls to levels of between 65m – 60m AOD.

4.18 To the south, land is again gently undulating, sloping downwards to a level of approximately 60m AOD before slowly heading upwards again towards the eastern side of Westhay Wood, at approximately 85m AOD. Land to the east of this woodland slopes downwards towards Stamford Road where it heads north from Kings Cliffe, at an elevation of approximately 50 – 55m AOD.

4.19 Land to the west is steady at approximately 90m AOD until the western side of Fineshade Wood (The Assarts) where it starts to drop down towards the A43 and Duddington, where elevations range between approximately 40m – 55m AOD.

4.20 The main settlements within the area include the village of Duddington, located on lower level land approximately 1.1km to the west northwest of the application boundary, the village of Kings Cliffe approximately 2.0km to the south southeast and the village of Collyweston approximately 1.6km to the north northwest. The closest town is Stamford, approximately 6.8km to the north-northeast with the City of Peterborough approximately 16km to the east. There is no intervisibility between the site and any of these settlements due to distance, landform and/or intervening vegetation.

4.21 The pattern of PRoW routes is varied, with land to the west containing a number of routes associated with rising land to the east of Duddington and also routes

through Fineshade Wood (The Assarts), including the Jurassic Way which extends from the A43 in a roughly north-northwest to south-south easterly direction towards the north western corner of Kings Cliffe, almost entirely through woodland.

4.22 No PRoWs cross the application area. Several other PRoWs lie within the surrounding landscape, including the following of most relevance to this assessment:

- The Jurassic Way, MX16, which extends from the A43, to the south of Duddington, in a south easterly direction through North Spinney and Westhay Wood, towards the north western side of Kings Cliffe;
- Footpath MX15 which extends through The Assarts woodland to the west of the Site, approximately 100m from the application boundary at its closest point;
- Bridleway NE8 which extends from Stamford Road at a point approximately 870m to the southeast of the Site, in a south easterly direction and then southwards to join the Roman Road between Kings Cliffe and Wansford; and
- Footpath NE20 which extends from a point close to the start of the aforementioned Bridleway NE8 off the Roman Road, in a north easterly direction towards Bedford Purlieus NNR woodland.

4.23 Refer to Appendix A: Figures 4 to 29 (Viewpoints 1 to 13), Figures 30 to 38 (Existing and Proposed Photomontages for Viewpoints 3, 9 & 13) and Section 6 below for further consideration of visibility and potential visual effects on users of a number of these footpaths.

4.24 The main roads in the surrounding area include the A43 linking Collyweston with Duddington and onwards in a south westerly direction, to the west of the Site, and also the A47 to the north, linking Duddington with Wansford. As mentioned above, Stamford Road runs from north to south past the existing entrance to the operation on the eastern boundary of the Site.

4.25 There are no notable water features within the study area except for Willow Brook which runs from west to east within land to the immediate south of Kings Cliffe.

Existing Landscape Character Assessments

Introduction

4.26 The combined elements of a landscape set one area apart from those adjacent to it and make its character distinctive to the people who both live in or visit the area. Recognition of this character variation requires an understanding of these influences that give different areas a unique 'sense of place'. This section reviews existing landscape character assessments that relate to the Site and its locality.

4.27 Landscape Character Assessment (LCA) is a process of characterising a landscape and of informing decision makers when considering effects on landscape character. The Guidelines for Landscape and Visual Impact Assessment (GLVIA3) states that LCA is *"The process of identifying and describing variation in the character of the landscape, and using this information to assist in managing change in the landscape. It seeks to identify and explain the unique combination of elements and features that make landscape distinctive."*

4.28 Figure 2 (Appendix A) illustrates the Site location together with relevant national and local landscape character areas. See below for further explanation.

National Level Landscape Character Assessment

4.29 At the national level landscape character assessment has been defined by Natural England's own assessment work which has divided areas of England into areas with similar landscape character called National Character Areas (NCAs). The site lies within NCA 92: Rockingham Forest[2]. This character area does not describe the Site and its setting in detail. However, it provides the landscape context for the Site and identifies elements of regional importance. The key characteristics of this NCA are summarised as:

[2] National Character Area profile 92: Rockingham Forest, Natural England, 2014

- *"Principally broad undulating plateau and ridge which falls away from a prominent steep northern scarp towards the Welland Valley;*
- *The area is well wooded with large commercial conifer and broadleaved plantations, and ancient semi-natural woodlands. Large woodlands – such as Wakerley Great Wood, Geddington Chase and Fermyn Woods – form a prominent feature on the skylines*
- *Ancient woodlands of national importance for nature conservation contain a diverse range of species; many are designated as National Nature Reserves (NNRs) and Sites of Special Scientific Interest (SSSI), such as Bedford Purlieus, Collyweston Great Wood and Easton Hornstocks;*
- *A patchwork of large- to medium-sized fields, of mixed arable and some pastoral land use, displays the rectilinear pattern of 18th- and 19th-century enclosures set within a more sinuous pattern of older enclosures, winding lanes and watercourses. Fields are commonly bounded by well-managed hedgerows with characteristic mature trees or drystone walls which become more common in the Soke of Peterborough;*
- *Remnant unimproved grasslands occur throughout the area. Areas of former grazing land exist within the woodlands, with low-lying grassland on the broader flood plain of the River Nene;*
- *The settlement pattern is small nucleated villages with a few isolated farmsteads and houses, the former often in sheltered streamside locations; and*
- *Retains a largely rural and tranquil character, particularly in the heart of the Rockingham Forest. There is a sharp transition between the countryside and the main urban areas of Peterborough, Kettering and Corby, which remain the focus for future development growth".*

4.30 Under the Statements of Environmental Opportunity (SEO) section of the assessment, the following is relevant to the Proposed Development:

"SEO 1: Extend the area and connectivity of broadleaved woodland, individual trees and hedgerows in the core Rockingham Forest area, seeking to enhance historic landscape character and biodiversity and increasing the

potential for timber, biomass, access and recreation, while helping to regulate the impacts of climate change and maintaining and improving water and soil quality".

For example, by:

- *Supporting the planting of new broadleaved woodlands that are well integrated with the surrounding landscape and do not impact negatively upon the integrity of other sites of biological, geological or historical interest. New woodlands should connect existing ancient woodland and historic parkland sites and provide both biodiversity and recreational opportunities; and*
- *Looking for opportunities to extend and enhance the public rights of way network and to create other areas of permissive access".*

"SEO2: Maintain and enhance the quality of natural sites of interest across the area, and particularly within the farmed landscape, seeking to realise opportunities to strengthen ecological networks and increase the quantity and quality of semi-natural habitat mosaics and geodiversity sites, providing additional benefits to recreation and so enhancing visitors' experiences and understanding as well as the local economy.

For example, by:

- *Supporting the establishment of new networks which incorporate isolated wildlife sites and establishing a variety of new habitats – such as lowland grasslands..;*
- *Seeking opportunities to enhance the farmed landscape by creating more semi-natural habitats (such as grasslands, scrub, field margins and hedgerows), including provision of habitats for pollinators and species that could assist in the control of crop pest species and establishing ecological networks, especially utilising riverine and woodland corridors. This will help to protect soils, improve water quality and enhance biodiversity; and*

- *Recognising that landscape and biodiversity in the NCA are key attractions for visitors and are important for recreation and creating a sense of place that has intrinsic and societal value and can be interpreted to enhance recreational experience".*

Regional/County Level Landscape Character Assessment:
Northamptonshire Current Landscape Character Assessment[3]
Northamptonshire Current Landscape Character Strategy and Guidelines[4]

4.31 These two documents are intended to be read in conjunction with one another. The Current Landscape Character Assessment document provides a detailed review and description of the current character of the Northamptonshire landscape. The Current Landscape Character Strategy and Guidelines document goes into more detail regarding landscape strategies, guidelines and land management.

4.32 The studies split Northamptonshire into 19 Landscape Character Types (LCTs). The Site falls within LCT 11: Wooded Limestone Hills and Valleys and within that LCT, the Site is located in Landscape Character Area (LCA) 11a: King's Cliffe Hills and Valleys. Relevant key characteristics of this LCA include the following:

- *"A series of broad valleys and broad low hills, dipping gradually to the east define a gently rolling landform with a generally enclosed character. Limited long-distance views due to screening landform and woodland blocks, particularly in the valley bottoms or where woodland cover is more extensive. Intermittent wider views from the crest and upper slopes of the low hills across breaks between the woodland cover;*
- *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. Fields a mixture of regular and sub regular shapes enclosed mainly by low*

[3] Northamptonshire Current Landscape Character Assessment, River Nene Regional Park assisted by Northamptonshire County Council, 2005
[4] Northamptonshire Current Landscape Character Strategy and Guidelines, River Nene Regional Park assisted by Northamptonshire County Council, 2006

to medium height well-trimmed hedgerow with infrequent hedgerow trees. This mosaic of enclosure patterns and the changing colour and textures of the cropping pattern add to the diversity of the agricultural landscape, enhanced and framed by the simpler and more uniform outlines of the enclosing woodlands;

- *Limited limestone walls evident across the landscape. Their presence is indicative of the underlying limestone geology and a harmonious relationship between the built and natural elements;*
- *Significant woodland cover of varying composition with large areas designated ancient woodland, particularly in the northern and eastern areas where they make an important contribution to the biodiversity resource. The woodland provides a strong sense of enclosure. A number of the woodlands are accessible to the public such as…Fineshade Woods within the Westhay Wood complex and are a valuable recreation resource;*
- *Communication routes principally confined to minor roads connecting small settlements and individual dwellings…;*
- *Contained within the woodlands, the open land is predominantly under arable cultivation although pastoral land is also evident particularly in the valley bottoms and surrounding the villages. The area also supports some areas of biodiverse rich calcareous grassland; and*
- *The field pattern, cropping regimes and network of hedgerows and walls contribute texture and colour within the simple tree cover".*

4.33 The Landscape Strategy sub-section states the following of relevance:

"New development, change and land management practices should be controlled or encouraged to conserve the small scale and enclosed character of the peaceful and secluded rural landscape of the Wooded Limestone and Hills and Valleys. The woodland resource, and the enclosure it provides, is of particular importance and it should therefore be conserved and enhanced to ensure that the resource is not diminished. Opportunities to extend the woodlands should also be encouraged, including management of the ancient woodland to ensure their continuity and also the promotion of wider public access of woodlands where possible.

The peaceful rural character of this landscape is an inherent part of its character so the introduction of elements that would devalue and disturb this quality should be resisted. New development should therefore be limited to visually contained locations and where the tranquillity would not be diminished".

4.34 The Landscape Guidelines sub-section states the following of relevance:

- *"Conserve and enhance the mosaic of land uses across the hills and valleys, field patterns and boundary features;*
- *Conserve areas of calcareous grassland and where appropriate introduce management regimes to restore and create further areas of calcareous grassland. Seek opportunities to coordinate restoration and creation in order to maximize connectivity of like habitat; and*
- *Conserve the significant woodland blocks and encourage the reconfiguration of coniferous plantations to follow landform more sympathetically, replanting wherever possible with deciduous species.*

Summary of Landscape Receptors

4.35 This section of the LVIA summarises the existing landscape receptors that have been identified by the baseline study and that may be affected by the Proposed Development. Landscape receptors can be divided into two separate types: landscape features (or fabric) and landscape character. These have been considered below in further detail.

Landscape Features:

4.36 Key landscape features within or very close to the Site that are likely to be directly affected by the Proposed Development include the following:

- The topography of the proposed extension area would be permanently affected by the soil stripping and mineral extraction works and then the subsequent landfilling with imported waste;
- A total of approximately 26ha of agricultural land within the proposed extension area, consisting of approximately 6ha of grade 3a soil and approximately 20ha of grade 3b soil;

- A total of approximately 0.53ha of modified grassland within the western extension area;
- A total of approximately 510m of hedgerow, consisting of a hedgerow separating the northern part of the proposed western extension area from the southern part (and including one mature oak tree at its eastern end), and a hedgerow separating the existing ENRMF landfill from the western extension; and
- Approximately 0.55ha of mixed scrub (heathland and shrub) habitat in the central, eastern part of the proposed western extension area.

Landscape Character:

4.37 The Site comprises two adjoining areas which are fundamentally different in terms of their existing character. The existing ENRMF landfill operation is a typically disturbed and degraded landscape of this type, with various areas consisting of operational facilities (offices and other built development, access roads and car parks, plant structures and associated infrastructure), backfilled but as yet unrestored land, partially filled landfill cells, landfill cells being engineered/prepared for landfilling works, areas with stockpiles and other material, and access/circulation routes.

4.38 One area of the Site along the eastern part of the north side of the operation has been previously restored to neutral/calcareous grassland and scrubby planting, so the character of this area is slightly different to the rest of the Site, and is closer in nature to the woodland areas to the north.

4.39 In contrast to this, the character of the proposed western extension area is broadly rural and agricultural in nature, with the open fields flanked by mature woodland and other fields hence is entirely characteristic of a number of other farmed areas of land within the surrounding landscape. The northern part of the area does have a more enclosed character due to the established woodland and mature hedgerows partially flanking the field on three sides, whereas the southern part of the extension area is more open in character due to the lack of woodland to the east and southeast.

4.40 The central and southern parts of the proposed western extension area are flanked to the east by the existing ENRMF landfill, which influences the character of the land in this area to some extent, mainly due to the higher elevation of the evolving Site landform and the industrial and active nature of the landfill operation.

4.41 The proposed western extension area is generally typical of the key characteristics identified in the national and local character assessment relevant to the locality. The western extension area is located within a predominantly arable landscape with well managed hedgerows with infrequent hedgerow trees and also significant woodland cover providing a strong sense of enclosure.

Existing Tranquillity

4.42 The Site is located in an Area of Tranquillity, as identified in Policy 3: Landscape Character of the North Northamptonshire Joint Core Strategy (refer to section 5: Planning Context below for full policy wording) and as shown on Figure 3: Landscape Context (Appendix A). The Area of Tranquillity covers a wide area to the south of the A47 and includes the current ENRMF landfill as well as Collyweston Quarry to the west. In relation to tranquillity, Policy 3: Landscape Character states that the tranquillity in the area should be preserved by "*minimising light and noise pollution and minimising the visual and traffic impacts of development".*

4.43 The existing ENRMF landfill is a working industrial facility carrying out a variety of waste reception, processing and treatment operations all of which involve various activity and mobile plant movements. Typically this type of an environment reduces levels of tranquillity although there are areas within the landfill boundary that are more tranquil than others due to the lack of proximity to active phases or various other works. One such area is the previously restored neutral/calcareous grassland and scrubby tree/shrub bank along the northern edge of the landfill. In contrast, the office and administration area at the south eastern corner and also the waste treatment and recovery facility at the north western corner are typically always active and therefore relatively less tranquil. It is noted that the existing ENRMF landfill is located within the locally designated

Area of Tranquillity, so it is within this context that effects of the Proposed Development on tranquillity are assessed.

4.44 The northern part of the western extension area is visually and physically separated from the existing ENRMF landfill and is more typically associated with the adjacent woodland areas in terms of tranquillity levels. The influence of the ENRMF landfill in terms of noise and activity emanating from it is minimal in this area, and there is little to no intervisibility with the landfill, which means that the sense of separation of this area from the landfill is very evident. The scrubby hedgerow across the centre of the area serves to reinforce this sense of separation of the northern part from the rest of the western extension area.

4.45 In contrast, the central part of the western extension area is immediately adjacent to the ENRMF landfill, so tranquillity is more directly affected by current works in Phases 11, 9, 8 and 7, to varying degrees. The southern part of the western extension area is further away and therefore is not affected to quite the same degree by operational noise emanating from the landfill, although views of the landfill are available, which reduces tranquility within the southern part of the extension area to a limited extent.

4.46 The wider area surrounding the Site is overall relatively tranquil due to the lack of roads, built development or other potential sources of aural disturbance. However, there are pockets of activity such as Collyweston Quarry to the west of the Site and Westhay Farm and its associated commercial facility to the immediate east of the Site, across Stamford Road, which do introduce noise and activity sources into the landscape, which affect tranquillity. However this does not preclude these areas from being included in the aforementioned Area of Tranquillity local designation, which is notable.

4.47 In addition, the villages of Kings Cliffe, Duddington and Collyweston introduce less tranquillity into the landscape due to the activities of the local population, along with vehicles using the A43 and A47 to the west and north of the Site respectively, which adversely affect tranquillity due to movement and associated noise. However, the rest of the land within the approximate 3.0km radius study

area is relatively unaffected by sources of noise and activity uncharacteristic of the rural location.

Visual Context

Identification of Visual Receptor Groups

4.48 The range of visual receptors usually considered in LVIA reports include residents, people visiting the area for amenity/recreation purposes, road users (including pedestrians, cyclists, horse riders and people in vehicles), and people at work. These categories of visual receptor are summarised below:

- *Settlements/Residents:* It is generally held and embodied in recognised standard visual impact assessment methodology that residents will have a high level of sensitivity to changes in their landscape and visual environment. The most important views are likely to be those available from their own homes as they will be consistently present;
- *Amenity/Recreation:* This visual receptor group embraces a broad category with often different objectives. It includes those people who are primarily concerned with the enjoyment of the outdoor environment for recreational pursuits and includes recreational walkers, cyclists and horse riders (i.e. users of PRoW) plus people sightseeing by car or generally enjoying the outdoors. These receptors have a higher sensitivity to changes in the view;
- *Road Users:* This category of visual receptor overlaps to a degree with the other two general categories in that it embraces residents and amenity/recreational users, including those who come to visit the area or pass through it. Sensitivity ranges from a medium level to a lower level depending on the type of road users and their purpose in driving through the landscape; and
- *People at Work:* This category includes those people who work within the local surroundings, including the outdoor environment and would therefore generally have less sensitivity to visual disruption.

Zone of Theoretical Visibility (ZTV)

4.49 Figure 1 illustrates the 3.0km study area radius within the surrounding landscape and also indicates the ZTV map of the Proposed Development. The ZTV was modelled using 3D photogrammetric digital surface model (DSM) data on a 2m grid resolution. A ZTV is a computer generated, initial assessment tool to indicate the possible (or theoretical) visibility of any part of a proposed development.

4.50 Target points were taken across the surface of the proposed landform and target eye level was set at 1.6m. DSM data includes the underlying landform and also vertical elements including woodland, buildings and other landscape features. However, the ZTV does not take account of distance in reducing the significance of a proposed development in the view and is not entirely accurate or comprehensive. It is therefore considered to be only an indication of the likely visibility of the Proposed Development.

General Visibility of the Site

4.51 The general visibility of the Site is considered below, as follows;

4.52 The assessment includes thirteen representative viewpoints showing the existing view from each of these locations, with three of the viewpoints further presented as proposed photomontages, at the Mineral Extraction and Landfilling stage and also at the 10 Years Post Restoration stage (Appendix A). In addition, Figure 1 includes magenta arrows which indicate general areas from which there are no or extremely restricted views of the Site due to a range of factors, primarily intervening vegetation, distance and/or landform.

Views from the North

4.53 There are no views towards the Site from the north due to a combination of extensive mature woodland (Collyweston Great Wood) and an absence of any residential properties or publicly accessible locations within land to the north.

Views from the East

4.54 The eastern boundary of the existing landfill operation is marked by an approximate 2 – 3m high hedgerow which effectively screens the Site all year

round from Stamford Road, Westhay Cottages and Westhay Farm. In addition, the landform of the existing landfill prevents any views of the proposed extension area from the Cottages and from the road in this location. The approximately 660m long stretch of Stamford Road between Westhay Lodge and Westhay Farm drops down to a lower elevation and, when combined with the roadside hedgerow, severely restricts views towards the Site, including the existing landfill. Glimpsed views are available through the Site entrance but these are limited by landform and the fleeting, transitory nature of the visual receptors as they pass along the road.

4.55 Further to the east and southeast, there is a notable lack of any residential properties or PRoW within the agricultural land, with views from Cross Leys Farm and St John's Wood Farm approximately 1.6km and 2.3km away from the site boundary respectively. Footpath NE20 is also approximately 1.8km from the site boundary at its closest point. Therefore views from these locations are restricted by distance and, in places, intervening landform and/or vegetation.

Views from the South

4.56 There are partial views towards the existing landfill operation from a section of Stamford Road in the vicinity of Westhay Lodge, approximately 750m from the Site boundary. This would also suggest that partial views are available from the Lodge itself and the garden, although a strip of conifers to the northwest of the Lodge combined with agricultural buildings between the conifers and the Lodge act as visual screens to severely restrict views from both the road and the property towards the proposed extension area.

4.57 Approximately 80m to the northwest of Westhay Lodge is another property, The Barn, which is both a residential dwelling for the owners and a bed and breakfast business. Due to its location and the lack of substantial vegetation screening between the property, its garden and the existing ENRMF landfill, views of the southern side of the evolving landform are available, including the unrestored areas, stockpiles and intermittent machinery movements. Views of Fineshade Wood adjacent to the southern part of the proposed western extension are available across intervening agricultural fields, some 1.1km to the northwest.

However, the agricultural land within the extension area itself is not visible due to distance and intervening hedgerows. The northern part of the western extension is not visible at all due to the intervening existing landfill.

4.58 There are no other properties or PRoW within land due south of the Site, which comprises agricultural fields extending across undulating land towards the northern edge of the village of Kings Cliffe, approximately 2.1km from the Site boundary. There are no views of the Site from any properties within Kings Cliffe due to a combination of rising landform to the north of the village and a belt of woodland vegetation extending in an almost unbroken strip along the northern edge of the settlement.

Views from the West

4.59 There are only very limited views of the Site from the west due to a combination of mature woodland bounding the Site along most of its western boundary and landform, which slopes downwards towards Duddington, entirely screening the Site from views from this settlement. Footpath MX15 extends through The Assarts woodland but is too far within the woodland to allow views through to the Site except for along one stretch, approximately 52m long, where an existing gap in the woodland due to a pipeline corridor allows views eastwards towards the western end of the existing ENRMF landfill.

4.60 Views towards the Site from footpaths to the west of Collyweston Quarry are also very restricted due to distance and intervening vegetation, as well as soil bunds around the quarry in places.

Representative Viewpoint Photographs and Descriptions

4.61 To help define the existing visual baseline, it is accepted practice to select a number of representative viewpoints, which are determined by professional judgement, reference to the ZTV, and a Site visit. Figure 1 includes thirteen viewpoints representing views for residents, amenity/recreational users (including PRoW users) and road users. The number of viewpoints and their locations were agreed with Northamptonshire County Council as part of the initial discussions.

4.62 A series of panoramic photographs for Viewpoints 1 – 11 were taken in February 2020. Viewpoint 12 photographs were taken in January 2021. The weather on both occasions was clear and bright. The photographs were taken in winter to allow for the highest level of visual permeability through woody, leafless vegetation. Viewpoint 13 photographs were taken in June 2021 as access to the location was not possible when the other viewpoint photographs were taken.

4.63 The view from each viewpoint location is shown as a single frame image and a context panoramic photograph, arranged on individual A3 sheets, in accordance with the latest guidance note from the Landscape Institute: Visual Representation of Development Proposals[5]. Refer to Figures 4 to 29 (Appendix A) for further information.

4.64 Figures 30 to 35 show the existing view for Viewpoints 3, 9 and 13 along with a photomontage image of the view at the Mineral Extraction and Landfill stage and also at the 10 Years Post Restoration stage.

[5] Landscape Institute Technical Guidance Note 06/19: Visual Representation of Development Proposals, September 2019.

5 Planning Context

Landscape Designations and Policies

National Level Landscape Designations

5.1 The Site is not located within a National Park or Area of Outstanding Natural Beauty (AONB).

Local Level Landscape Designations

5.2 The Site is not located within an area locally designated for its landscape value or quality.

National Level Nature Conservation Designations

5.3 As shown on Figure 3, a small number of woodlands within the 1.5km radius study area are classified as Ancient and Semi Natural Woodlands (ASNW) or Ancient Replanted Woodland (ARW) including the following:

- ASNW – Collyweston Great Wood, to the immediate east of the western extension area;
- ASNW – Little Wood, approx. 360m to the northwest of the western extension area; and
- ARW – Westhay Wood, approx. 380m to the southwest of the western extension area.

5.4 Collyweston Great Wood is also a Site of Special Scientific Interest (SSSI) and a National Nature Reserve (NNR). There are no Special Protection Areas (SPA), Special Areas of Conservation (SAC) or RAMSAR sites within the 3.0km radius study area.

5.5 Note: while not strictly relevant to consideration of potential effects of the Proposed Development on landscape and visual receptors, these areas are included in this LVIA report and on Figure 3 for added information.

Historical and Cultural Related Designations with Relevance to Landscape

5.6 As shown on Figure 3, there are several Listed Buildings (LB) within Duddington to the west of the Site (all Grade II Listed, with no views of the Site) and also within Kings Cliffe to the south of the Site. The most important of these LB within Kings Cliffe is the Grade I Listed Church of All Saints and the Grade II* Listed Hall Farmhouse, which are both approximately 2.4km from the Site boundary. Neither of these LBs have intervisibility with the Site.

5.7 There are no Registered Parks & Gardens or Scheduled Monuments within the 3.0km study area.

National and Local Level Planning Policy and Guidance

5.8 The following national and local level planning policies/guidelines have been identified as relevant to the Proposed Development in terms of potential landscape and/or visual effects. The table in Section 9 below addresses how the Proposed Development accords with key local policies/guidelines.

National Policy Statement for Hazardous Waste[6]

5.9 Section 5.9 of this document considers Landscape and Visual Impacts of proposed developments. The document does not include any policy as such but outlines what information should be provided as part of an application in terms of addressing potential landscape and visual effects.

Revised National Planning Policy Framework (NPPF)[7]

5.10 On a national scale the revised NPPF is the document of most relevance to planning applications for most developments. In relation to potential landscape and visual effects, relevant policies included within the revised NPPF are as follows:

- Section 11: Making Effective Use of Land - Policy 120;
- Section 12: Achieving Well-designed Places - Policies 130, 131 & 132;

[6] National Policy Statement for Hazardous Waste, June 2013
[7] National Planning Policy Framework (NPPF), July 2021

- Section 15: Conserving and Enhancing the Natural Environment – Policies 174 & 185; and
- Section 17: Facilitating the Sustainable Use of Minerals – Policies 210 & 211

Local Level Landscape Policies and Guidance

Northamptonshire Minerals and Waste Local Plan (July 2017)[8]

5.11 Relevant policies relating to the Site and potential landscape and visual effects include the following:

Policy 18: Addressing the Impact of Proposed Minerals and Waste Development

"Proposals for minerals and waste development must demonstrate that the following matters have been considered and addressed:

- *Protecting Northamptonshire's natural resources and key environmental designations (including heritage assets)"*

Policy 20: Natural Assets and Resources

"Minerals and waste development should seek to achieve a net gain in natural assets and resources, through:

- *Protecting and enhancing international and national designated sites;*
- *Contributing towards Northamptonshire Biodiversity Action Plan targets for habitats and species.*

Proposals for minerals and waste developments will be required to undertake assessment (where appropriate) in order to:

- *Identify mitigation measures and/or requirement for compensation (where necessary) to avoid, reduce and manage potentially adverse impacts".*

[8] Northamptonshire Minerals and Waste Local Plan, Northamptonshire County Council, adopted July 2017

Policy 21: 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".*

Policy 23: Layout and Design Quality

"The layout and overall appearance of waste management facilities, and where appropriate minerals development, will be required to demonstrate that the development:

- *Supports local identity and relates well to neighbouring sites and buildings;*
- *Is set in the context of the area in which it is to be sited in a manner that enhances the overall townscape, landscape or streetscape (as appropriate),*
- *Incorporates specific elements of visual interest"*

Policy 24: Restoration and After-Use

"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, the local environment and amenity, and*
- *Benefits the local community and / or economy.*

The restoration of minerals and waste sites should meet the following requirements (where appropriate):

- *Sites previously comprising high-grade agricultural land or good-quality forestry use should be restored to the original land use and coupled with a secondary after-use objective;*
- *Precedence should be given to the establishment of Biodiversity Action Plan habitat, strategic biodiversity networks, promotion of geodiversity and enhancement of the historic environment and heritage assets where the specific conditions occur that favour such after-use objectives;*
- *Sites connecting or adjacent to identified habitat areas and green infrastructure networks should be restored in a manner which promotes habitat enhancement (in line with Biodiversity Action Plan targets) and green infrastructure plans;*
- *Sites located near to areas identified as lacking recreational facilities should be restored in a manner that promotes such opportunities;*
- *Sites located within river corridors should be restored to support water catchment conservation and incorporate flood attenuation measures, and*
- *In specific instances, and where fully in accordance with policies in other local plans in Northamptonshire, sites may be restored in a manner that promotes economic opportunities".*

Sites for mineral extraction in river valleys should not be restored to a predominantly open 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".

North Northamptonshire Joint Core Strategy 2011 - 2031[9]

5.12 This document (which is also relevant to East Northamptonshire, the District in which the Site is located) replaces the first Core Spatial Strategy which was issued in 2008 and covered the period up to 2021.

5.13 Relevant policies include the following:

Policy 3: Landscape Character

"Development should be located and designed in a way that is sensitive to its landscape setting, retaining and, where possible, enhancing the distinctive qualities of the landscape character area which it would affect. Development should:

- *Conserve and, where possible, enhance the character and qualities of the local landscape through appropriate design and management;*
- *Make provision for the retention and, where possible, enhancement of features of landscape importance;*
- *Safeguard and, where possible, enhance important views and vistas including sky lines within the development layout;*
- *Protect the landscape setting and contribute to maintaining the individual and distinct character, and separate identities of settlements by preventing coalescence;*
- *Provide appropriate landscape mitigation and/or suitable off-site enhancements; and*
- *Preserve tranquility within the Kings Cliffe Hills and Valleys Landscape Character Area (as shown on the policy map) and other areas identified*

[9] North Northamptonshire Joint Core Strategy 2011 – 2031, prepared by the Joint Planning Unit reporting to the North Northamptonshire Joint Committee , adopted July 2016

in Part 2 Local Plans by minimising light and noise pollution and minimising the visual and traffic impacts of development".

Policy 19: The Delivery of Green Infrastructure

"The special mixed urban and rural character of North Northamptonshire will be maintained and enhanced by:

a) Managing development and investment to secure a net gain in green infrastructure through:

- *Providing, where opportunities exist, new wildlife habitats, facilities and routes to enhance assets and the linkages between them".*

Trees and Landscape Supplementary Planning Document, February 2013[10]

5.14 This SPD document provides guidance on landscape design and tree protection as part of site development.

5.15 While mainly aimed at other types of proposed development, including residential housing schemes, new parks and public green space provision, the design of the urban environment etc. the SPD does include various design notes and guidelines which are broadly applicable for any proposed development scheme, including reference to a landscape management plan.

5.16 Where applicable, the principles and guidelines contained within the SPD would be applied throughout the Proposed Development.

[10] Trees and Landscape Supplementary Planning Document (SPD), developed jointly by East Northamptonshire Council and the Borough Council of Wellingborough, adopted February 2013

6 Project Description and Proposed Mitigation Measures

Summary of Proposed Development

6.1 A full description of the Proposed Development is contained within the Environmental Statement which accompanies the application.

6.2 For the purpose of this assessment, the Proposed Development has been divided into two separate stages as follows:

- Mineral extraction and landfilling stage;
- 10 Years post restoration stage

The Site would provide mineral extraction (proposed western extension area only) and subsequent landfill void which would result in the operation of the landfill for a further period of up to 20 years from commencement.

Mineral Extraction and Landfilling Stage

6.3 These temporary, though long-term works would involve a number of operations which are likely to have effects on landscape receptors (i.e. landscape features and character) and visual amenity. The landfilling works would dovetail with the mineral extraction works once each cell had been constructed in the existing ENRMF landfill and the western extension area. The works would include the following:

- Progressive soil/overburden stripping and bund construction works within the western extension area involving movement of mobile plant machinery and other related activity;
- Removal of the existing hedgerow (and mature oak tree at its eastern end) which extends through the central part of the western extension area and also the hedgerow with occasional small trees along the western boundary of the existing landfill, dividing it from the proposed western extension area. These hedgerows total approximately 510m in length
- Removal of approximately 0.55ha of mixed scrub (heathland and shrub) including one mature tree within the central eastern part of the western extension area;

- Diversion of overhead power cables;
- Progressive extraction of mineral in accordance with the phased design plan (PINS document reference 2.4). Extraction works within the western extension area would extend from its northern boundary southwards to the retained 20m wide doline channel (Phases 12 – 14), then would switch to the southern boundary and head northwards (Phases 15 to 21). The extraction works would involve the use of 360 degree excavators, dumper trucks and dozers along with other Site vehicles and equipment as necessary;
- Progressive soil stripping and placement works would also be required as part of the operational works, including placement of soil and overburden into stockpiles as necessary and use of the materials in restoration at a later date. Again this would involve a range of mobile plant machinery;
- Regular movements of HGVs containing hazardous waste and LLW to and from the Site;
- Movement and activity of the HGVs within the Site in order to place, spread out and compact the hazardous waste and LLW where required in order to progressively construct the restoration landforms;
- Progressive recovery of indigenous soil from stockpiles and placement onto the final land surface as part of the restoration works; and
- Continued operation of the existing waste treatment and recovery facility, which may involve relocating one or more of the approximate 14m high silo structures to another part of the facility footprint or introduction of further plant and equipment as necessary within the footprint.

'10 Years Post Restoration' Stage (Permanent)

6.4 This stage represents the Proposed Development several years after it has been restored and aftercare has taken place, in order to demonstrate the intended appearance of the Site at that point. Refer to PINS document reference 5.4.9.1 Restoration Concept Scheme and PINS document reference 5.4.9.2 Restoration Cross Sections A-A' to C-C'. The main landscape changes at this stage would be as follows:

- The landform of the proposed western extension area would be significantly altered, as shown by the proposed restoration contours on the Restoration Concept Scheme, when compared to the baseline topography;
- Land use across the proposed restoration landform (including the existing ENRMF landfill) would be neutral/calcareous grassland, seven attenuation basins, one of which would also function as a permanent pond (attenuation basin C6 at the northern end of the western extension area) and others that may also function as ephemeral ponds in periods of high rainfall, other small ponds for the purpose of enhancing biodiversity, and a number of woodland blocks and scrubby areas linked with native hedgerows including trees.
- Taking into account that not all habitats within the baseline would be adversely affected by the Proposed Development and therefore do not require compensation, the Restoration Concept Scheme would provide a significant Biodiversity Net Gain (BNG) (see BNG Assessment for further, more detailed information relating to the estimated net gains in hedgerow length, scrubby areas, woodland, grassland and other habitats).
- Of this BNG, the majority of the gain would occur as a result of restoration within the western extension area when compared to the baseline. For the existing ENRMF landfill, BNG would be less when compared with the existing baseline (i.e. the current approved final restoration plan) although modest BNG for grassland and hedgerows would still be evident;
- The restored Site would include approximately 4,166m of new permissive paths which would provide circular routes across the Site and which could potentially link with existing footpaths to the west (Footpaths MX13 and MX15) subject to agreement; and
- The restored Site would include the retained routes of the underground water pipes and the gas pipeline which would be managed for nature conservation enhancement, including hedgerows linking the two sides of the western extension area.

Designed In Mitigation Measures

6.5 The Proposed Development would result in several unavoidable effects on landscape and visual receptors, as outlined above, although opportunities to reduce or compensate for unavoidable effects have been taken into account during the process of planning and designing the Proposed Development.

6.6 The following mitigation measures are proposed:

- Soils to be stripped and stored on Site in separate stockpiles no higher than 3m (topsoil) or 5m (subsoil and overburden). MAFF (now DEFRA) Best Practice Guidelines for soil stripping and bund construction can be downloaded from the following location: https://webarchive.nationalarchives.gov.uk/20090317221756/http://www.defra.gov.uk/farm/environment/land-use/soilguid/index.htm; Further details are provided in the Soil Handling and Management Scheme.
- A number of hedgerows with trees would be planted in advance of works occurring in the western extension area, including along the northern and western sides of the northern section, along both sides of the retained, 20m wide water pipe corridor and along the eastern side of the southern section of the extension area. The purpose of this planting would be to improve the structure of the existing patchy vegetation along those boundaries (where relevant), to demarcate the edge of the Site, improve biodiversity and provide visual screening;
- The Site would be restored in a progressive manner, in order to minimise the area of land under disturbance hence the adverse effects on landscape receptors and visual amenity. The intended duration for extraction, landfilling and final restoration works for the extended Site is a further period of up to 20 years;
- The proposed western extension would initially be worked and restored from the northern boundary towards the centre of the area (Phases 12 – 14), in part to minimise the duration that Fineshade Wood would be separated from Collyweston Wood by operational works, to more quickly establish the restoration landform in this area and undertake restoration seeding/planting; and

- Mitigation for the permanent removal of approximately 26ha agricultural land (though only c. 6ha of Best and Most Versatile Grade 3a land), the removal of approximately 510m of hedgerow with scrubby trees, approximately 0.55ha of mixed scrub (heathland and shrub) habitat and two mature oak trees would be provided by the creation of areas of neutral/calcareous grassland (guided by the properties of the available soil resources) along with the establishment of new woodland blocks, scrubby areas, attenuation basins which may also function as ephemeral ponds (attenuation basin C6 is expected to function as a permanent pond), small individual ponds for biodiversity enhancement and new permissive path routes which may link with existing footpath routes (MX13 and MX15) to the west of the Site, subject to agreement. Refer to the ESL Consultants BNG assessment for further information.

7 Assessment of Landscape and Visual Effects

Introduction

7.1 In this section of the LVIA, the Sensitivity to the Proposed Development and Magnitude of Effects are assessed for landscape receptors (landscape features and landscape character) and visual receptors at all identified stages before a separate sub-section considers how the two values combine to indicate a rating for Significance of Effects. Depending on the Significance rating given, an effect is either considered likely to be 'Significant' or 'Not Significant', in accordance with the requirements of Annex IV, point 4 of EU Directive 2011/92/E. This Directive is available at: http://ec.europa.eu/environment/eia/pdf/EIA_Directive_informal.pdf.

7.2 The LVIA has been undertaken using the Methodology described in Section 3 which is based on GLVIA3. It is noted that the assessment has identified activities that are considered to be 'worst case' and estimated the approximate time during the Proposed Development when these activities would be undertaken.

Assessment of Landscape Effects

Introduction

7.3 Adverse or beneficial effects on the landscape receptors (i.e. landscape features and landscape character) can take place during all stages of the Proposed Development and have been described and assessed below.

Sensitivity of the Landscape Receptors to the Proposed Development

7.4 The Methodology set out in Section 3 summarises how Sensitivity of the landscape receptors is assessed in accordance with recommendations included within GLVIA3 and Table M1 included in the Methodology gives an explanation of Sensitivity rating criteria. Table 1 below evaluates a number of factors to arrive at an overall Sensitivity rating for the identified landscape receptors. (Note: ratings are adverse unless stated as being beneficial).

Magnitude of Landscape Effects

7.5 The Methodology set out in Section 3 above summarises how the Magnitude of Landscape Effects is assessed and Table M2 in the Methodology gives an explanation of Magnitude rating criteria. Table 1 below evaluates a number of factors to arrive at overall Magnitude ratings for the two identified stages of the Proposed Development.

Significance of Landscape Effects

7.6 When Sensitivity and Magnitude of Effects ratings are considered together, a Significant of Effects rating is obtained, which utilises the 'Significance of Effects Matrix' (see matrix Table M5 above, in Section 3, Methodology).

7.7 See landscape assessment tables below for a consideration of Sensitivity, Magnitude of Effects and Significance of Effects for the identified landscape receptors at the two identified stages of the Proposed Development. Effects of Moderate – Major or Major Significance are highlighted in **bold** and are considered Significant.

7.8 It should be noted that there are four different 'Works Areas' that have been assessed separately, as necessary, in respect of potential effects on landscape receptors: Works Areas 1A, 1B (the landfill areas), Works Area 2 (the waste treatment and recovery facility) and Works Area 3 (the site reception area). Within Works Areas 1A and 1B, there are three separate design scenarios that need to be considered, as follows:

- Design Scenario 1: The Limit of Deviation (LOD) would be 1m above the proposed restoration contours, assuming that the waste does not settle;
- Design Scenario 2: The restoration landform would remain at the proposed restoration profile (i.e. restoration landform constructed to design levels and no settlement);
- Design Scenario 3: The restoration landform settles by 15% from the proposed restoration profile ie the restored landform is 15% lower than that shown on the restoration profile plan.

Assessment of Landscape Effects Tables

Landscape Receptor: Topography – Existing ENRMF landfill

Existing Situation/Condition: The existing ENRMF landfill is largely disturbed and of an industrial character across its whole extent, except for the restored calcareous grassland area along part of the northern slope. The topography has been gradually altering for a number of years as material is placed, both into engineered cells and also into temporary stockpiles, raising levels across the land.

Receptor Sensitivity: Low

Proposed Development Stage	Design Scenario	Magnitude of Effects	Significance of Effects
Mineral Extraction and Landfilling Stage (c. up to 20 years)	Design Scenario 1: the Limit of Deviation would be 1m above the proposed restoration levels, assuming that the waste doesn't settle	The maximum height of the proposed restoration landform would be 7m above the approved restoration landform, which would include the 6m difference between the max approved post settlement level (93m AOD) and the max proposed restoration level (99m AOD) plus an additional 1m. This would have a limited effect on the Magnitude. *Magnitude:* Small	*Significance:* Minor
	Design Scenario 2: The proposed restoration landform would be constructed to designed levels and there would be no settlement.	The height of the proposed restoration landform would be 6m above the approved restoration landform in the area of the existing ENRMF. However, due to temporary stockpiling on the existing ENRMF landfill, the Site has been as high as the proposed landform in places for many years without causing notable adverse effects or resulting in complaints. In addition, with a landform of that size and scale, an increase of 6m would not affect overall topography to a substantial extent. The proposals would also delay final restoration of parts of the existing landfill which would have a limited effect on landform. *Magnitude:* Small	*Significance:* Minor

	Design Scenario 3: the Limit of Deviation would be that the proposed restoration landform settled by 15%. Assuming this would be 15% of the max height of the landform (c. 19m), that would be c. 3m lower than the proposed restoration profile)	As above, although the height of the proposed restoration landform would still be approximately 3m above the current approved restoration landform. This would have a relatively small effect on the Magnitude. *Magnitude:* Negligible	*Significance:* Negligible
10 Years Post Restoration Stage	Design Scenario 1: the Limit of Deviation would be 1m above the proposed restoration levels, assuming that the waste doesn't settle)	As above – the increase of 1m in height would have negligible effects on topography when compared to the no Limit of Deviation design scenario 1 (i.e. 6m above the current approved restoration landform) *Magnitude:* Small	*Significance:* Minor
	Design Scenario 2: no Limit of Deviation, so the proposed restoration landform would be constructed to designed levels and there would be no settlement	The topography of the final restoration landform would be 6m higher at its highest level than the approved restoration landform, although the large scale of the overall landform and the presence of the woodland blocks and hedgerows extending the eye higher, as would be the case with the current approved restoration scheme, would mean that the effects on topography would be noticeable but not substantial. *Magnitude:* Small	*Significance:* Minor
	Design Scenario 3: the Limit of Deviation would be that the restoration landform settled by 15%. Assuming this would be 15% of the max height of the landform (c. 19m), that would be c. 3m lower than the proposed restoration profile)	As above – the proposed landform, by settling by 15% (approximately 3m) would be approximately 3m above the current approved restoration landform. This would have a relatively small effect on topography when compared to the no Limit of Deviation design scenario 1 (i.e. 6m above the current approved restoration landform) *Magnitude:* Negligible	*Significance:* Negligible

Landscape Receptor: Topography – Proposed Western Extension Area *Existing Situation/Condition:* The western extension area is very gently sloping from the northern and southern ends towards the middle. The existing landfill to the immediate east of the southern part of the extension area influences Sensitivity of the topography to the Proposed Development *Receptor Sensitivity:* Low - Medium			
Proposed Development Stage	***Design Scenario***	***Magnitude of Effects***	***Significance of Effects***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	Design Scenario 1: the Limit of Deviation would be 1m above the proposed restoration levels, assuming that the waste doesn't settle).	An additional 1m height increase would not alter the scale of effects on topography, which are already considered notable. *Magnitude:* Large	*Significance:* **Moderate – Major (Significant)**
	Design Scenario 2: no Limit of Deviation, so the proposed restoration landform would be constructed to designed levels and there would be no settlement.	The landform of the proposed extension area would fundamentally change due to the extraction works, although this would be progressive so effects would not occur to the whole of the western extension at the same time but would gradually develop over a number of years. *Magnitude:* Large	*Significance:* **Moderate – Major (Significant)**
	Design Scenario 3: the Limit of Deviation would be that the restoration landform settled by 15%. Assuming this would be 15% of the max height of the main extension landform (c. 16.5m), that would be c. 2.5m).	As above. A reduction in height of c. 2.5m would not alter the scale of effects on topography, which are already considered notable. *Magnitude:* Large	*Significance:* **Moderate – Major (Significant)**

10 Years Post Restoration Stage	Design Scenario 1: the Limit of Deviation would be 1m above the proposed restoration levels, assuming that the waste doesn't settle).	The restoration landform would be substantially different to the existing landform and would be irreversible. However, the sloping landform would be in character with the existing ENRMF landfill and would provide physical continuity with it. The smaller mounded landforms south of the water pipelines would appear less integrated with the surroundings due to their reduced scale. A 1m height increase above the proposed restoration landform would have little significance on the overall effect on topography, over the long term. *Magnitude:* Medium	*Significance:* Minor - Moderate
	Design Scenario 2: no Limit of Deviation, so the proposed restoration landform would be constructed to designed levels and there would be no settlement.	As above: the landform would be clearly different to the baseline and would be permanent. It would however be in character with the landform of the adjoining existing ENRMF landfill. *Magnitude:* Medium	*Significance:* Minor - Moderate
	Design Scenario 3: the Limit of Deviation would be that the restoration landform settled by 15%. Assuming this would be 15% of the max height of the landform (c. 19m), that would be c. 3m)	A reduction in height of c. 2.5m below the proposed restoration landform would have little significance on the overall effect on topography, over the long term. Magnitude would remain the same. *Magnitude:* Medium	*Significance:* Minor - Moderate

Landscape Receptor: ALC Grade 3a soil *Existing Situation/Condition:* The northernmost part of the western extension area is considered to be Best and Most Versatile (BMV) land *Receptor Sensitivity:* Medium		
Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	The soil would be stripped and stockpiled for use in restoration, so it would be retained on Site. *Magnitude:* Small	*Significance:* Minor - Moderate
10 Years Post Restoration Stage	The soil would be used in restoration works, and due to its chemical properties (calcareous) it would be suitable to develop neutral/calcareous grassland with a wildflower component. *Magnitude:* Negligible/No Change	*Significance:* Negligible/No Change

Landscape Receptor: ALC Grade 3b soil *Existing Situation/Condition:* The lower part of the northern area and the southern part of the western extension area are rated as Grade 3b, which is not BMV land. *Receptor Sensitivity: Low*		
Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	The soil would be stripped and stockpiled for use in restoration, so it would be retained on Site. *Magnitude:* Small	*Significance:* Minor - Moderate
10 Years Post Restoration Stage	The soil would be used in restoration works, and due to its chemical properties (calcareous) it would be suitable to develop neutral/calcareous grassland with a wildflower component. *Magnitude:* Negligible/No Change	*Significance:* Negligible/No Change

Landscape Receptor: Hedgerow across central section of proposed western extension area, including one mature oak tree at its eastern end

Existing Situation/Condition: This hedgerow across the central part of the proposed western extension area, and one mature oak tree at its eastern end, would be removed. The hedgerow is unremarkable and of relatively limited landscape value. The oak tree is a good, mature specimen and reasonably notable as it is the only one of its kind within the hedgerow. It has moderate landscape value and contributes positively to landscape character, but is not unique or particularly special when considered in the context of the large woodland areas to the east and west.

Sensitivity: Hedgerow – Low
Mature oak tree – Medium

Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	The loss of the hedgerow would be of limited magnitude as it is unremarkable and does not contribute in a notable way to landscape character. *Magnitude:* Small Loss of the oak tree would be of a higher magnitude due to its increased landscape value compared to the hedgerow *Magnitude:* Medium	*Significance:* Hedgerow: Minor Oak tree: Moderate
10 Years Post Restoration Stage	Site restoration would result in a notable net gain in hedgerows and hedgerow trees which is a significant benefit compared to the baseline. *Magnitude:* Large (Beneficial)	***Significance:*** **Moderate - Major (Beneficial)** **(Significant)**

Landscape Receptor: Hedgerow dividing the western boundary of the existing landfill with the proposed western extension area

Existing Situation/Condition: This hedgerow with occasional small trees would be removed. This feature is unremarkable and of relatively limited landscape value

Sensitivity: Low

Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	The loss would be permanent but the hedgerow does not contribute in a unique or special way to landscape character *Magnitude:* Small	*Significance:* Minor
10 Years Post Restoration Stage	Site restoration would result in a net gain in hedgerows and hedgerow trees which is a significant benefit compared to the baseline. *Magnitude:* Large (Beneficial)	*Significance:* **Moderate - Major (Beneficial)** **(Significant)**

Landscape Receptor: Mixed scrub (heathland and shrub) *Existing Situation/Condition:* This area of vegetation is in close proximity to the swallow hole. The whole of this area would be removed, which totals approximately 0.55ha. The vegetation is unremarkable, and its landscape value is relatively low. *Sensitivity: Low*		
Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	The vegetation is unremarkable in landscape terms and its value is relatively low. The loss of the vegetation would be permanent but collectively it does not contribute in a unique or special way to landscape character. *Magnitude:* Small - Medium	*Significance:* Minor - Moderate
10 Years Post Restoration Stage	Site restoration would result in an overall small net gain in woodland and scrub compared to the baseline (although a large net gain across the western extension area, which is currently agricultural land). The more diverse spacing of the woodland and scrubby blocks across the whole Site (not concentrated in one area on the existing ENRMF landfill, as per the approved Restoration Plan) would be desirable for enhancing biodiversity and connections. *Magnitude:* Minor (Beneficial)	*Significance:* Minor - Moderate (Beneficial)

Landscape Receptor: Waste treatment facility at the north western corner of the existing ENRMF landfill (area footprint approximately 4.19ha) *Existing Situation/Condition:* This area consists of various plant infrastructure including four storage silos, the existing height of which is approximately 14m. *Sensitivity: Low*		
Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	A maximum height of the structures within the waste treatment and recovery facility has been assessed at 15m. Through the duration of the operations at the site it may be necessary to move them to a different location within the waste treatment and recovery facility footprint or further plant may be added, such as filtration systems on the top of the silos which would add additional height of approximately 1m. The effect of this on landscape character would be almost imperceptible due to the current context. *Magnitude:* Negligible	*Significance:* Negligible
10 Years Post Restoration Stage	N/A – at this point, the waste treatment and recovery facility would no longer be in place, so it would have no effect on the landscape character at this point.	*Significance: N/A*

Landscape Receptor: Site reception and administration area (Area footprint approximately 3.0ha) *Existing Situation/Condition:* The Site is currently an active landfill operation with most of the land in a disturbed state, so the character is typified by its industrial nature. The Proposed Development would be broadly identical to the current operations. *Sensitivity: Low*		
Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	It may be operationally necessary to place maximum 8m high building(s) anywhere within this area. The effect of this on landscape character would be almost imperceptible due to the current context. *Magnitude:* Negligible	*Significance:* Negligible
10 Years Post Restoration Stage	At this point, the site reception area would no longer be in place, although the existing car park would be retained permanently for use by the public, which would alter the character slightly when compared with the baseline (i.e. approved restoration in that area, which shows no car park) *Magnitude:* Small	*Significance:* Minor

Landscape Receptor: Landscape Character – Existing ENRMF landfill

Existing Situation/Condition: The Site is currently an active landfill operation with most of the land in a disturbed state, so the character is typified by its industrial nature. The Proposed Development would be broadly identical to the current operations.

Sensitivity: Low

Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	These works would be almost identical to the current landfilling works, but the proposals would extend the duration of working, resulting in some areas remaining in use and unrestored for an additional 20 year duration (i.e. the waste treatment and recovery facility, the office and administrative area and the main haul road). The effects of this on character would be noticeable when compared to the baseline (which is that the whole Site would be restored approximately 20 years earlier than it would be if the Proposed Development went ahead). Many areas however would be restored during this 20 year period and seeded to grassland and/or planted with scrubby woodland in accordance with the Restoration Concept Scheme *Magnitude:* Medium	*Significance:* Minor - Moderate

10 Years Post Restoration Stage	The proposed restoration landform would be higher than the approved landform but the land uses would be broadly similar: woodland blocks, scrubby planting, grassland areas and hedgerows along with new permissive paths. However, the proposed restoration scheme increases the area of tree/scrub cover, hedge length and public right of way provision, so would slightly benefit landscape character. *Magnitude:* Small (Beneficial)	*Significance:* Minor (Beneficial)

Landscape Receptor: Landscape Character – Western extension (northern area, bounded by the dividing hedgerow) *Existing Situation/Condition:* This part of the western extension area comprises mainly arable land which is abundant in the area, does not contribute in a special or irreplaceable way to local landscape character and is not aesthetically notable. The well enclosed character of this area is defined by the surrounding tall, mature woodland. This severely limits views out of the area towards the surrounding rural landscape and also limits intervisibility between the existing ENRMF landfill, reducing the influence the operation has on the character of the area. The area is reasonably tranquil. *Sensitivity: Low - Medium*		
Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	Landfilling operations would be uncharacteristic of the existing baseline and would clearly and permanently alter the character of the landscape in this area. While the nearby ENRMF landfill does reduce magnitude by a small amount, the limited influence the existing works has on the character of this part of the extension means that Significance of Effects would be higher. *Magnitude:* Medium – Large	*Significance:* **Moderate – Major (Significant)**

10 Years Post Restoration Stage	The restoration scheme would introduce a different, more varied character to this area. The raised landform would be immediately obvious and the woodland/scrubby blocks of vegetation together with hedgerows with trees would introduce vertical features into the landscape whilst visually linking the adjacent woodland areas. Character would alter from enclosed agricultural land to grassland with extensive woodland/scrub blocks linked by hedgerows & footpath routes. The character would be significantly different to the baseline but is considered to be appropriate for the locality and beneficial for nature conservation and biodiversity. *Magnitude:* Medium - Large (Beneficial)	*Significance:* Moderate (Beneficial)

Landscape Receptor: Landscape Character – Western extension (southern area, bounded by the dividing hedgerow)

Existing Situation/Condition: The southern part of the western extension area is also mainly arable land, which is unremarkable in the wider context. The character is slightly more open as there is no boundary woodland to the east or southeast of the southern part of this area, although The Assarts woodland and the existing ENRMF landfill enclose the northern part of this area (up to the dividing hedgerow) to a greater extent. The influence of the existing ENRMF landfill on landscape character is more noticeable in this part of the western extension area due to its proximity and direct intervisibility.

Sensitivity: Low

Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	Landfilling operations would be uncharacteristic of the existing baseline although the influence of the adjacent waste management site, which is characterised by landfilling operations and other material movements, means that the magnitude of the works on local landscape character, especially the southern part of the extension area, would be reduced. *Magnitude:* Medium – Large	*Significance:* Moderate

10 Years Post Restoration Stage	The restoration scheme would effectively merge this part of the western extension with the existing ENRMF landfill. As with the northern area, the raised landform would be immediately obvious and the woodland/scrubby blocks of vegetation together with hedgerows with trees would introduce vertical features into the landscape whilst visually linking the existing woodland areas. Character would alter from agricultural land adjacent to a resource management facility to grassland with woodland/ scrub blocks linked by hedgerows featuring new permissive path routes. The character would be significantly different to the baseline but is considered to be appropriate for the locality and beneficial for nature conservation. *Magnitude:* Medium - Large (Beneficial)	*Significance:* Minor - Moderate (Beneficial)

Landscape Receptor: Landscape Character – LCA 11a: Kings Cliffe Hills and Valleys (From Northamptonshire Current Landscape Character Strategy and Guidelines, Published 2006)

Existing Situation/Condition: This study identifies that arable land is typical of the local area although long distance views are screened by undulating landform and woodland blocks. The study also states that 'biodiverse rich' calcareous grassland areas are supported but… implies that these are relatively infrequent. The Site is largely 'contained within woodlands' which is also a characteristic feature of arable land within the LCA area. The Site however does not make a unique or special contribution to the character of the wider LCA area.

Sensitivity: Low

Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***

Mineral Extraction and Landfilling Stage (c. up to 20 years)	Landfilling operations would be uncharacteristic of the existing baseline in the proposed western extension area although the influence of the existing ENRMF, which is characterised by landfilling operations and other material movements, means that the Magnitude of the works on local landscape character, especially the southern part of the extension area, would be reduced. *Magnitude:* Medium – Large	*Significance:* Moderate
10 Years Post Restoration Stage	The restoration scheme would effectively merge this part of the western extension with the existing ENRMF landfill. As with the northern area, the raised landform would be immediately obvious and the woodland/scrubby blocks of vegetation together with hedgerows with trees would introduce vertical features into the landscape whilst visually linking the existing woodland areas. Character would alter from agricultural land adjacent to a resource management facility to grassland with woodland/ scrub blocks linked by hedgerows featuring footpath routes. The character would be significantly different to the baseline but is considered to be appropriate for the locality and beneficial for nature conservation. *Magnitude:* Medium - Large (Beneficial)	*Significance:* Minor - Moderate (Beneficial)

Landscape Receptor: Tranquillity – ENRMF landfill

Existing Situation/Condition: Tranquillity varies across the landfill depending on whether operations are occurring in any location although generally it is a working landfill and waste treatment and recovery facility so is typically active and industrial in nature, with associated adverse effects on tranquillity.

Sensitivity: Low

Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***

Mineral Extraction and Landfilling Stage (c. up to 20 years)	Effects on tranquillity would include the increased duration of operations, although as more areas are raised to final levels and restored, more and more of the landfill would not be in operational use and would instead gain a measure of tranquillity. *Magnitude:* Small	*Significance:* Minor
10 Years Post Restoration Stage	When compared to the baseline (i.e., the landfill as shown on the current approved Restoration Scheme) there would be no discernible difference in tranquillity between the two scenarios. *Magnitude:* Negligible/No Change	*Significance:* Negligible/None

Landscape Receptor: Tranquillity – Western extension (northern area, bounded by the dividing hedgerow)

Existing Situation/Condition: Due to the lack of intervisibility due to woodland and the distance between this area and the existing landfill, tranquillity within this area is relatively high, with the influence of the adjoining areas of woodland, and the tranquil nature of those areas, being more evident than the discordant influence of the industrial activities related to the landfill.

Sensitivity: Medium

Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***

Mineral Extraction and Landfilling Stage (c. up to 20 years)	Within the northern part of the western extension area the effects on tranquillity would be immediately noticeable due to the various works involved, which would be unavoidable for a number of years. In a similar way to the effects on the landscape character of this area, the Proposed Development would adversely affect tranquillity of the Site itself to a Significant degree. However, the area is not open to public access and is relatively well screened, so the effects on tranquillity for people using the landscape surrounding the western extension area (for instance, users of Footpath MX15 at Viewpoint 12 and then heading southeast through the Assarts) would be reduced, and not considered to be of high Significance. *Magnitude:* Large	*Significance:* **Moderate – Major (Significant)**
10 Years Post Restoration Stage	When compared to the baseline, there would be public access to this part of the Site along a proposed permissive path, along with occasional vehicles travelling along the track for restoration maintenance purposes, so there would be slightly more activity and noise but it would be entirely appropriate to the rural surroundings. *Magnitude:* Negligible	*Significance:* Negligible

Landscape Receptor: Tranquillity – Western extension (southern area, bounded by the dividing hedgerow)

Existing Situation/Condition: Tranquillity in this part of the western extension area is less than the northern part due to the influence of the adjoining landfill operation. However, due to the scale of the landscape, the woodland to the west and south, and the openness of the land to the southeast in particular, there is still a measure of tranquillity evident within the landscape.

Sensitivity: Low - Medium

Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	Effects on tranquillity within the area would be evident although by no means as much as the northern part of the western extension, due entirely to the context in which the land is situated and the adjoining landfill. *Magnitude:* Medium	*Significance:* Moderate
10 Years Post Restoration Stage	Again, when compared to the baseline, there would be public access to this part of the Site along a proposed permissive footpath, along with occasional vehicles travelling along the track for restoration maintenance purposes, so there would be slightly more activity and noise but it would be entirely appropriate to the rural surroundings. *Magnitude:* Negligible	*Significance:* Negligible

Landscape Receptor: Public Rights of Way (PRoW)

Existing Situation/Condition: There are no PRoW within the existing ENRMF landfill or the western extension area. The current approved restoration scheme for the existing ENRMF includes a footpath link approximately 978m in length, extending along the restored landform from Stamford Road in the east to a potential link with existing Footpath MX15 to the west.

Sensitivity: Low		
Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	There would be no change to any PRoW during the operational stages of the proposed Development *Magnitude: No Change*	*Significance:* No Change
10 Years Post Restoration Stage	There would be a net benefit of permissive PRoW routes across the restored Site as a result of the Proposed Development. There may also be three additional links westwards through to existing PRoW, which would improve the local PRoW network compared to the baseline (subject to agreement). *Magnitude: Medium (Beneficial)*	*Significance:* *Minor (Beneficial)*

Summary of Assessment of Landscape Effects

Introduction

7.9 This sub-section uses information presented above to summarise the assessment of landscape effects on a range of variables. Identification of Significant effects has been emphasised where necessary.

Extension in time of the existing ENRMF landfill

7.10 The approved working and restoration scheme for the existing ENRMF landfill requires it to be restored by 2026. The Proposed Development would extend this to 2046, so an increase of approximately 20 years. Therefore, some adverse effects on landscape character would be evident due to the unavoidable delay in restoration of this area, prolonging the duration of time that the Site would be uncharacteristic of the surrounding landscape. However, a number of phase areas would be progressively restored during the 20 year extension duration, including the majority of the existing ENRMF landfill, excluding operational areas that would still be required for works in the western extension area, including the waste treatment and recovery facility, the site reception area and the haul road connecting these two operational parts of the Site. This haul road would also extend into the western extension area.

7.11 It is considered that while notable, the extension in time would not cause Significant adverse effects on landscape features or character, taking into account the existing Site context. The effects would be temporary and mitigation would be provided by way of the enhanced restoration proposals for the existing ENRMF landfill combined with the proposed western extension, which together would provide substantial net gains in nature conservation and public amenity. Furthermore, many areas across the existing ENRMF landfill would be fully restored during the 20 year duration of the Proposed Development anyway, meaning that effects on the character of these areas would be limited.

Construction of the new void including mineral extraction, material stockpiling and landfill cell construction

7.12 In relation to the proposed western extension area, these works would cause Significant adverse effects on the topography of the area, which would fundamentally alter due to extraction operations and the resultant lowering of the land surface. In addition, the Proposed Development at this stage would cause Significant effects on the landscape character of the northern part of the western extension area, although due to the influence of the existing, adjacent ENRMF landfill, effects on the character of the southern part of the western extension area would be of lower Significance.

7.13 Effects on the wider LCA 11a: Kings Cliffe Hills and Valleys area would be limited, not considered Significant.

7.14 The works would cause adverse effects of only Minor to Minor - Moderate Significance on the soils to be stripped from the area, largely because these would all be retained on Site in storage bunds, for later use in restoration. Effects on existing vegetation features (including the hedgerow across the middle of the western extension area, the hedgerow dividing the existing landfill from the western extension area and the mixed scrub (heathland and shrub) area in the central eastern part of the western extension area, which are considered unremarkable and of limited landscape value) would also be of a Minor – Moderate significance. The loss of the mature oak tree at the eastern end of the hedgerow across the western extension area would be of higher significance due to its age, good condition and landscape value, but considering the local context (mature woodlands predominating to the west and northeast) and the mitigation planting proposed, long term adverse effects would not be Significant. There would be no effects on PRoW due to these works.

Operation of the Landfill to 2046

7.15 Operation of the landfill within the western extension area up to 2046 would have Significant adverse effects on the landscape character of the northern part of the western extension area, as stated above, due to the baseline situation, where the

influence of the existing ENRMF landfill is relatively limited when compared to its greater influence on the southern part of the western extension area. Effects therefore on the character of the southern part of the western extension area would be reduced, and are not considered Significant, partly due to the unremarkable nature of the southern part of the western extension area (not a designated landscape, doesn't contribute in a special or notable way to wider landscape character, influenced by adjacent landfill operation).

Operation of the Waste Treatment and Recovery Facility up to 2046

7.16 This facility is located in the north western corner of the existing ENRMF landfill, and includes two silos which extend up to approximately 14m in height, with the elevation of the top of the structures at approximately 99.5m AOD. The Proposed Development would extend the operation of the facility by approximately 20 years (as stated above at point 7.9) but it is not considered that this would result in Significant adverse effects on landscape features or character.

7.17 While the waste treatment and recovery facility is uncharacteristic of the surrounding agricultural land and woodland blocks, it is characteristic of the existing ENRMF landfill in which it is located, the retention of which for an additional 20 years would not cause Significant effects on landscape receptors.

Removal of the Waste Treatment and Recovery Facility by 2046

7.18 In accordance with the 2013 DCO (as amended), this facility is due to be removed by 2026 as part of the existing ENRMF landfill restoration works. This would clearly be beneficial to landscape receptors as it means that final restoration works would be able to take place across the footprint of the facility at that time. If the facility is retained until 2046 and then removed, the effects would still be beneficial for landscape features at that time, although the delay would reduce the significance of this.

Restoration

7.19 When compared to the baseline (which is the current approved restoration scheme for the existing ENRMF landfill and the current appearance of the western extension area), the Proposed Development would result in a significant

BNG. In addition, there would be net benefits in terms of permissive path routes. (Note: Refer to the ESL consultants BNG assessment included in the DCO for further, more detailed information relating to the estimated net gains in hedgerow length, scrubby areas, woodland, grassland and other habitats)

7.20 Notwithstanding the substantial overall BNG across the Site, there would only be limited net gains in woodland and scrubby planting areas when the proposed Restoration Concept Scheme is compared with the baseline. However the more scattered and random distribution of this vegetation across the restored Site (as opposed to just across the existing ENRMF landfill) is considered to offer notable benefits to biodiversity and would enable eventual vegetation linkage between Fineshade Woods (The Assarts woodland) to the west of the proposed western extension area and Collyweston Great Wood to the east of the proposed western extension area.

7.21 The loss of approximately 26ha of agricultural land across the proposed western extension area would be mitigated by the significant net gains within the proposed western extension area of neutral/calcareous grassland, woodland/scrubby planting, hedgerows with trees, attenuation basins which may occasionally function as ephemeral ponds (with basin C6 incorporating a permanent pond), other individual ponds for biodiversity enhancement along with the retention of the ALC grade 3a and 3b soils on Site for use in restoration. New permissive path routes extending across the whole Site would provide a net gain in terms of public access when compared to the baseline (i.e., the current approved restoration scheme) and these routes may link to existing PRoW to the west of the Site, subject to agreement.

Assessment of Visual Effects

Introduction

7.22 This section assesses the potential visual effects of the Proposed Development upon a range of visual receptors, including the representative viewpoints, at the Mineral Extraction & Landfilling stage and then longer term, at the 10 Years Post Restoration stage. Visual effects from most residential properties are 'likely effects', as no properties or associated gardens (except for Viewpoint 13: The Barn, to the northwest of Westhay Lodge) were directly accessed in relation to the assessment.

7.23 The assessment has been undertaken within the following visual context:

- The existing ENRMF comprises a long-established landfill operation with stockpiled material on top, in places rising to elevations slightly higher than the previously assumed maximum pre settlement elevation of 97m AOD. This has not resulted in any formal complaints;
- The existing landfill has been a visual component of the wider landscape for several years, although there are a lack of good viewpoints from public accessible locations and the western extension area is generally well enclosed, notably by large woodland blocks (Collyweston Great Wood to the northeast and The Assarts and Fineshade Wood to the west and southwest):
- There are a lack of residential properties within the surrounding landscape, with the closest properties to the western extension area approximately 820m to the east (Westhay Cottages) and visually separated from it by the northern part of the existing landfill;
- There are no publicly accessible views at all towards the northern part of the western extension area from the north and east due to a combination of intervening mature woodland and the existing landfill;
- Views northwards towards the Site from Kings Cliffe are curtailed by rising landform which extends from levels of approximately 55m AOD to 65m AOD along the northern side of the village up to levels of between 65m AOD and 85m AOD within land to the north of the settlement. This curtails

all views from locations and properties within the village towards the Site; and

- The maximum elevation of the proposed restoration landform is 99m AOD. The working assumption when the existing landfill site was designed was that the landfilled waste would settle by around 15% and therefore the waste height of the final landform was designed to allow for settlement to achieve approximately the levels of the approved restoration profile. However there is little experience of long term settlement rates in hazardous waste landfill and due to the nature of the wastes received at ENRMF it is likely to be much slower and more limited than for landfills containing putrescible wastes. For the purpose of this assessment the restored landform is assessed both with and without settlement.

Visual Receptor Groups

7.24 Assessment on the effects on views from a number of key locations for different visual receptors have been assessed as part of the Representative Viewpoints section below (points 7.26 – 7.30 and the Assessment of Visual Effects tables that follow those points). Those locations not included as representative viewpoints have been considered below, as necessary. It should be noted that assessment of these visual receptor groups does not include detailed consideration of Sensitivity of the visual receptors to the Proposed Development or Magnitude of Effects but these factors have been taken into account when providing the Significance rating. Significance of Effects ratings are considered to be adverse unless specified as neutral or beneficial.

<u>Residential Properties</u>

7.25 Viewpoints 5 and 13 consider the effects on residents at Westhay Lodge and The Barn respectively, both located to the southeast of the Site. Refer to point 7.30 and the Visual assessment tables that follow it within the Representative Viewpoints sub-section below for further information. Effects on other properties within the study area are considered below, with residents considered to be of Medium – High Sensitivity to the proposals:

Westhay Cottages

These four terraced properties are located on Stamford Road to the immediate east of the Site, approximately 820m from the western extension area, separated from it by the existing landfill and a well-established roadside hedgerow. The residents are considered to be of Medium - High Sensitivity to the Proposed Development.

The western extension area would not be visible from these properties although the duration of works at the existing ENRMF would be extended by several years as a result of the Proposed Development. It is considered that the Significance of this would be of a Minor – Moderate level during the Operational stage, and not Significant, taking into account the existing visual context. Effects would be Negligible at the 10 year Post Restoration stage.

Westhay Farm

This property is also located on Stamford Road to the immediate east of the Site, though set back from the carriageway by approximately 60m. The existing view westwards is heavily curtailed by intervening garden and roadside vegetation, and the proposed western extension development would not be visible from this property, including from the first floor windows. The extended duration of works within the existing landfill site would have a limited effect on residents, assessed as being of Minor Significance during the Operational stage and of Negligible Significance at the 10 year Post Restoration stage.

St John's Wood Farm

This property is located approximately 3.0km to the southeast of the proposed western extension area, with the intervening undulating land featuring open agricultural fields with dividing hedgerows and no woodland blocks. In addition, the land is at an elevation of approximately 72m AOD, so lower than the western extension area. Existing views of the landfill are limited by distance, intervening landform and vegetation.

The Proposed Development in the southern part of the western extension area would be barely noticeable, with works in the northern part not visible at all. Visual

effects on residents during the Operations stage would be of Negligible – Minor Significance and then Negligible at the 10 Years Post Restoration stage.

Residents of Properties within Kings Cliffe

Properties on the northern edge of this settlement lie approximately 2.2km to the south of the Site, although they are located on land at an elevation of approximately 60m AOD, with land further to the north/northwest rising up to approximately 80m AOD. This undulating topography obscures views from these properties towards the Site and means that the Proposed Development would not be visible from this settlement.

Amenity/Recreation - Public Rights of Way (PRoW) Users

The site and surrounds feature a number of PRoW which are indicated and named on Figure 1: Visual Context. Locations along key PRoW are included as Viewpoints within the Representative Viewpoints sub-section below at point 7.30 and effects on PRoW users are assessed in further detail. The text below considers in general terms how individual sections of PRoW would be affected by the Proposed Development:

Footpath MX15

This route lies to the west of the Site and extends through The Assarts and Fineshade Wood, approximately 120m from the western edge of the western extension area at its closest point. The intervening woodland screens almost all views from this Footpath, even in winter, due to the density of the woody vegetation. Significance of Effects would be Negligible - Minor from the screened sections of this route within the woodland areas, for the Operational and 10 Years Post Restoration stages.

Refer to the detailed information relating to Viewpoint 3 and Photomontage A below for assessment of the view eastwards from a point along the approximately 52m long stretch of this Footpath crossing a gap between the woodland blocks, from where the Site is visible.

Footpath MX13

This Footpath also lies to the west of the Site, within established woodland, approximately 180m from the western extension area, at its closest point. Views are obscured by intervening vegetation, including in winter, so there would be no effects on Footpath users for the majority of the route. Refer to the detailed information relating to Viewpoint 4 below, which is located at a point along this route where the Proposed Development within the western extension would be visible to a limited extent.

Footpath MX18

This Footpath runs along the western side of The Assarts woodland and heads westwards and then northwards around Collyweston Quarry. The Site is not visible from the majority of this route, so the Proposed Development would have no visual effects on users along these sections. Refer to detailed information on Viewpoint 2 below for further assessment of effects on users of Footpath MX18.

The Jurassic Way (PRoW routes MX16 and NE12)

This long distance route is located approximately 850m to the west and southwest of the Site, extending from the A43 to the south of Duddington in a south easterly direction towards Kings Cliffe. It passes through Fineshade Wood and Westhay Wood, to the southwest of the Site, as well as across agricultural land further to the west. Distance and intervening vegetation screen all views of the Site from this PRoW so there would be no visual effects on Jurassic Way users.

Bridleway NE8

This PRoW extends off Stamford Road at a point approximately 130m to the south of Westhay Lodge and heads in a south easterly direction for approximately 665m before turning south to join a road leading east from Kings Cliffe towards Wansford. Existing views towards the Site from the northernmost section of this route are curtailed by undulating landform and intervening vegetation, so users on this part of the Bridleway would receive no visual effects due to the Proposed Development.

Views of the existing landfill from the southern part of the route are available, although due to distance, the Site occupies a relatively small proportion of the

wider, panoramic view. Refer to the details relating to Viewpoints 8 and 9 below for further information about the visual effects on users of this PRoW.

Footpath NE20

This PRoW heads in a north-easterly direction from the road between Kings Cliffe and Wansford towards the central western boundary of Bedford Purlieus National Nature Reserve, approximately 1.77km from the Site at its closest point. Distance and the gently undulating landform combined with relatively sparse intervening vegetation (hedges) restrict views from this PRoW. The existing landfill is discernible in the wider view but is a very small component of the panorama, likely to be missed by most Footpath users.

The Proposed Development would cause visual effects of Negligible significance for PRoW users along most sections of this route, both at the Operational and the 10 Years Post Restoration stage. Refer to the details relating to Viewpoints 10 and 11 below for further information about the visual effects on users of this PRoW.

Road Users

The Site is very well screened from surrounding roads, with limited locations from where the existing landfill is visible.

Stamford Road

This road extends in a northerly direction from Kings Cliffe towards the A47, passing along the eastern side of the existing ENRMF before passing through Collyweston Great Wood before meeting the A47. A well-established hedgerow along the western side of the carriageway combined with the undulating nature of the topography effectively limits views of the landfill to a small number of glimpses over or through gaps in the intervening vegetation. In addition, views of the land within the western extension area are not available from any points along this route.

Therefore, for most sections of the road, effects on road users would be of either None or Negligible Significance. Where the road approaches closer to the landfill,

effects would increase slightly due partly to the increased duration that the Site would be in operation, though effects would not be Significant. Refer to the details relating to Viewpoint 5 below for further information about the visual effects on users of this road.

Road Between Kings Cliffe and Wansford

Views of the Site from this road, which is approximately 1.9km from the Site, are extremely limited, restricted to partial glimpses between and over intervening vegetation. Visual effects of the Proposed Development on road users would be of Negligible Significance, at all stages of the works.

Representative Viewpoints 1 – 13

7.26 As a result of initial desk study and subsequent confirmation during fieldwork, thirteen representative viewpoints were selected at locations surrounding the Site**,** as shown on Figure 1: Visual Context. These viewpoints were agreed with Northamptonshire County Council. In addition, Viewpoints 3, 9 and 13 were selected for the production of photomontages, showing the existing view, the anticipated view at the Mineral Extraction and Landfilling stage and then at the 10 Years Post Restoration stage. Landform and intervening vegetation along with distance are the elements that influence visibility of the Site from the surrounding study area, which extends to a radius of approximately 3.0km from the centre of the Site.

7.27 For Viewpoints 1 – 13, Figures 4 to 29 (Appendix A) include a single frame image (A3 sheet) and a panoramic context view (A3 sheet) representing the view towards the Site from each viewpoint. Figures 30 to 38 show existing and photomontage views at the Mineral Extraction and Landfilling stage and at the 10 Years Post Restoration stage for Viewpoints 3, 9 and 13.

7.28 The information in the visual assessment tables below considers the Sensitivity of visual receptors to the Proposed Development, Magnitude of Visual Effects and Significance of Visual Effects at the two identified stages of the Proposed Development.

7.29 As with the assessment of landscape effects, there are four different 'Works Areas' that have been assessed separately, as necessary, in respect of potential effects on visual amenity: Works Area 1A (the existing landfill), Works Area 1B (the proposed western extension area), Works Area 2 (the waste treatment and recovery facility), and Works Area 3 (the site reception area). Again, as with the assessment of landscape effects considered above, within Works Areas 1A and 1B there are three separate design scenarios that need to be separately considered: refer to point 7.8 above for further information.

7.30 As with landscape effects, the matrix in Table M5 of the Methodology in Section 3 above has been used to combine ratings for Sensitivity and Magnitude to arrive at an indicative rating for Significance of Visual Effects. In addition to this, further written explanation has been added where necessary. Effects of Moderate – Major or Major are highlighted in **bold** and are considered Significant. All ratings are adverse unless stated.

Assessment of Visual Effects Tables

Viewpoint 1: Jurassic Way, Close to The Royal Oak Pub and Restaurant (c. 1.3km from Site) *Type of Visual Receptor:* PRoW users, pub users, road users *Receptor Sensitivity:* PRoW users: High Pub users: Medium Road users: Low			
Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***	***Explanation/Rationale***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	*Magnitude:* No Change	*Significance:* No Change	There would be no views from this location or from any other location within Duddington due to distance, landform and intervening elements
10 Years Post Restoration Stage	*Magnitude:* No Change	*Significance:* No Change	

Viewpoint 2: Footpath MX18 to west of Collyweston Quarry (c. 750m from Site) *Type of Visual Receptor:* PRoW users *Receptor Sensitivity:* PRoW users: Medium				
Proposed Development Stage	***Works Areas 1A, 1B, 2 and 3 (as relevant – see below)*** ***Including Design Scenarios for Works Areas 1A & 1B***	***Magnitude of Visual Effects***	***Significance of Visual Effects***	***Explanation/Rationale***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	Works Area 1A & 1B: Design Scenario 1 - LOD is that the final levels are 1m above the proposed restoration levels, no settlement). Works Area 1A & 1B: Design Scenario 2 - no LOD, proposed restoration landform constructed to designed levels, no settlement. Works Area 1A & 1B: Design Scenario 3 - LOD is that the restoration landform settles by 15%.	*Magnitude:* Small	*Significance:* Minor	The Site itself is not visible due to distance and intervening vegetation although as the land is raised due to the landfilling operations, there is likely to be glimpses of plant activity in the distance, through the intervening tree belt, from some sections of the footpath, in the vicinity of the viewpoint. However, these would be seasonal and would likely be missed by most users due to distance.

10 Years Post Restoration Stage	Works Area 1A & 1B: Design Scenario 1 - LOD is that the final levels are 1m above the proposed restoration levels, no settlement).	*Magnitude:* Negligible (Beneficial)	*Significance:* Negligible (Beneficial)	The restored landform and matured woodland/scrub would again be glimpsed through/above the intervening vegetation, which would be in character with the surrounding established woodland
	Works Area 1A & 1B: Design Scenario 2 - no LOD, proposed restoration landform constructed to designed levels, no settlement.			
	Works Area 1A & 1B: Design Scenario 3 - LOD is that the restoration landform settles by 15%.			

Viewpoint 3: Footpath MX15 to west of site (c. 120m from Site) *Type of Visual Receptor:* PRoW users *Receptor Sensitivity:* PRoW users: Medium				
Proposed Development Stage	***Works Areas 1A, 1B, 2 and 3 (as relevant – see below)*** ***Including Design Scenarios for Works Areas 1A & 1B***	***Magnitude of Visual Effects***	***Significance of Visual Effects***	***Explanation/Rationale***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	Works Area 1A & 1B: Design Scenario 1 - LOD is that the final levels are 1m above the proposed restoration levels, no settlement). Works Area 1A & 1B: Design Scenario 2 - no LOD, proposed restoration landform constructed to designed levels, no settlement. Works Area 1A & 1B: Design Scenario 3 - LOD is that the restoration landform settles by 15%.	*Magnitude:* Medium – High	*Significance:* **Moderate – Major (Significant)** (Note: only for a short part of the c. 20 year development duration – see explanation in next column)	For most of the length of Footpath MX15, the Site is not visible due to intervening vegetation. For a c. 52m section of the footpath in this location, the existing part-completed landfill is visible to the east, along with an area within the waste treatment and recovery facility, including c.14m high silos. While the Proposed Development would bring views of stockpiling and subsequent landfill placement and construction closer to the viewpoint, the increase in visual disturbance would be seen in the context of the existing view, which has been a component of the landscape for many years. Another factor to consider is that the duration of visual disturbance would be extended when compared to the existing baseline. Significant visual effects would therefore only be experienced for the relatively short duration when stockpiling would occur on Phases 19 – 21 and also when the western sides of Phases 20 and 21 would be being landfilled. At all other times, Significance would be reduced.

				Providing further information, Figure 30 (Appendix A) shows the existing contextual view from Viewpoint 3 while Figure 31 shows the existing baseline photograph (53.5° planar projection) and a photomontage image of the Proposed Development at the operational stage (i.e. while Phases 19 - 21 are being landfilled). The photomontage illustrates how the landfill works would bring visual disruption closer to the viewer, while the silos would still be partially visible to the left of the view.
	Works Area 2: treatment facility	*Magnitude:* Small	*Significance:* Minor	Views of the waste treatment and recovery facility, specifically the silos within the north-eastern part of this area, would continue for a longer duration than would otherwise be the case, due to the Proposed Development. In addition, the silos may be moved to another location within the treatment facility as part of the longer-term operational requirements. This would cause some minor visual effects but when compared with the existing visual context, and the fleeting nature of the view for Footpath users crossing this gap in the woodland blocks, the Significance of Effects would not be of a major level. As noted above, views of the silos and other infrastructure within this area would, at some point, be screened by the evolving landfill landform.
10 Years Post Restoration Stage	Works Area 1A & 1B: Design Scenario 1 - LOD is that the final levels are 1m above the proposed restoration levels, no settlement).	*Magnitude:* Medium	*Significance:* Moderate	When compared to the baseline (i.e. the restored ENRMF landfill), the restored western extension area would be closer to the viewpoint location and therefore more evident as part of the wider panorama. The visible western slope of the existing ENRMF landfill would be at a steeper gradient for its lower part than the approved restoration slope (approximately 1:6 as opposed to approximately 1:28) and the highest part of the landform would be at an elevation of approximately 97m AOD as opposed to approximately 93m AOD. The proposed
	Works Area 1A & 1B: Design Scenario 2 - no LOD, proposed restoration landform constructed to designed levels, no settlement.			

	Works Area 1A & 1B: Design Scenario 3 - LOD is that the restoration landform settles by 15%.			slope visible to Footpath users would feature grassland with a block of native woodland together with hedgerows with trees, some at a higher level, all of which would help break up the profile and add vertical interest. While the proposed view would be notably different to the view available if the approved restoration were to be implemented, it is considered that it would still be appropriate to the rural surroundings and would add visual interest when compared to the existing agricultural field partially screened due to patchy intervening hedgerow vegetation. Figure 32 shows the photomontage image of the Proposed Development at the operational stage and an image beneath it shows a photomontage of the Proposed Development at the 10 years post restoration stage. The photomontage illustrates how views of the restored Site, including the western extension area, would not be substantially different to the view that would be available if the approved restoration plan was to be implemented. Land to the east would be higher than the level of viewpoint and it would consist of grassland areas and woodland blocks, which would integrate well with the existing woodland either side of the panorama.
	Works Area 2: treatment facility	*N/A*	*N/A*	The waste treatment and recovery facility area would not be visible from Viewpoint 3 or from any other point along Footpath MX15 once the western extension landform had been built

Viewpoint 4: Footpath MX13 to southwest of site (c. 210m from Site) *Type of Visual Receptor:* PRoW users *Receptor Sensitivity:* PRoW users: Medium				
Proposed Development Stage	***Works Areas 1A, 1B, 2 and 3 (if relevant)*** ***Plus Design Scenarios for Works Areas 1A & 1B***	***Magnitude of Visual Effects***	***Significance of Visual Effects***	***Explanation/Rationale***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	Works Area 1A & 1B: Design Scenario 1 - LOD is that the final levels are 1m above the proposed restoration levels, no settlement). Works Area 1A & 1B: Design Scenario 2 - no LOD, proposed restoration landform constructed to designed levels, no settlement.	*Magnitude:* Negligible - Small	*Significance:* Minor	Only a very small part of the southern section of the western extension area is visible through a gap between two blocks of woodland. This view also includes the existing waste management operations in the far distance, which influences the current view. While the extraction and landfilling works would be partially visible in this view, they would only be glimpsed by PRoW users for a very short time, with the vast majority of the proposed works out of view due to intervening vegetation.

	Works Area 1A & 1B: Design Scenario 3 - LOD is that the restoration landform settles by 15%.			
	Works Area 2: treatment facility	*Magnitude:* No change	*Significance:* No Change	The treatment facility is not visible from this location or from any other location along this PRoW (except from Viewpoint 3 – refer to the assessment relating to that viewpoint for further information)
10 Years Post Restoration Stage	Works Area 1A & 1B: Design Scenario 1 - LOD is that the final levels are 1m above the proposed restoration levels, no settlement).	*Magnitude:* Negligible - Small (beneficial)	*Significance:* Minor (Beneficial)	The restored site would again be glimpsed by path users and would be characteristic of the surroundings.
	Works Area 1A & 1B: Design Scenario 2 - no LOD, proposed restoration landform constructed to designed levels, no settlement.			
	Works Area 1A & 1B: Design Scenario 3 - LOD is that the restoration landform settles by 15%.			

	Works Area 2: treatment facility	*Magnitude:* No change	*Significance:* No Change	As mentioned above, the waste treatment and recovery facility is not visible from this location

Viewpoint 5: Stamford Road near to Westhay Lodge (c. 770m from Site) *Type of Visual Receptor:* Residents (Westhay Lodge), Road users *Receptor Sensitivity:* Residents (Westhay Lodge) - High Road users - Low				
Proposed Development Stage	***Works Areas 1A, 1B, 2 and 3 (if relevant)*** ***Plus Design Scenarios for Works Areas 1A & 1B***	***Magnitude of Visual Effects***	***Significance of Visual Effects***	***Explanation/Rationale***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	Works Area 1A & 1B: Design Scenario 1 - LOD is that the final levels are 1m above the proposed restoration levels, no settlement).	*Magnitude:* Medium (Residents) Negligible (Road users)	*Significance:* **Moderate - Major (Residents)** Negligible (Road users)	Views of the site from most locations along Stamford Road are very limited due to a combination of distance, intervening landform and vegetation. Better views are available for a short stretch of road in the vicinity of Westhay Lodge, although the

	Works Area 1A & 1B: Design Scenario 2 - no LOD, proposed restoration landform constructed to designed levels, no settlement. Works Area 1A & 1B: Design Scenario 3 - LOD is that the restoration landform settles by 15%.			transient nature of road users reduces the magnitude. There are partial views of the southern side of the existing ENRMF landfill from areas within the grounds of Westhay Lodge and from first floor windows, although due to a triangular shaped block of coniferous trees approximately 90m to the northwest of the property, views of the central part of the site are screened. Therefore, some operations within the existing ENRMF landfill would be visible for a longer duration, although infrastructure within the waste treatment and recovery facility (including c. 14m high silos) would not be visible. Operations within the northern and central parts of the western extension area would likely not be visible at all, or only glimpsed, from the Lodge or its grounds due to intervening landform (i.e. the existing ENRMF landfill) along with distance and vegetation. However, operations within the southern part of the western extension area would be partially visible: soil stripping & mineral extraction would cause less visual disturbance but the landfilling works would become increasingly visible as the restoration landform is constructed, rising above the boundary hedges. Views of this, combined with the additional duration of working, would cause significant visual effects although this would be restricted to only when the eastern side of the landform in

				the southernmost part of the western extension area is being built. For all other works, effects would be reduced and while noticeable, would not be significant.
10 Years Post Restoration Stage	Works Area 1A & 1B: Design Scenario 1 - LOD is that the final levels are 1m above the proposed restoration levels, no settlement).	*Magnitude:* Small beneficial (Residents) Negligible beneficial (Road users)	*Magnitude:* Minor beneficial (Residents) Negligible beneficial (Road users)	The restored site, with vegetation cover on the slopes, would increasingly visually integrate with the mature woodland in the background.
	Works Area 1A & 1B: Design Scenario 2 - no LOD, proposed restoration landform constructed to designed levels, no settlement.			
	Works Area 1A & 1B: Design Scenario 3 - LOD is that the restoration landform settles by 15%.			

Viewpoint 6: Bridleway NE8 to SE of site (c. 1.05km from site) *Type of Visual Receptor:* PRoW users *Receptor Sensitivity:* Medium			
Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***	***Explanation/Rationale***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	*Magnitude:* No Change	*Significance:* No Change	There are no views of the Site from this location due to distance, landform and intervening vegetation. There would be no views of any part of the Proposed Development.
10 Years Post Restoration Stage	*Magnitude:* No Change	*Significance:* No Change	

Viewpoint 7: Agricultural track (Willow Lane) to north of Kings Cliffe (not a PRoW) (c. 1.5km from site)

Type of Visual Receptor: Track users and people at work in adjacent scrap yard

Receptor Sensitivity: Low

Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***	***Explanation/Rationale***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	*Magnitude:* No Change	*Significance:* No Change	There are no views of the Site from this location due to distance, landform and intervening vegetation. In addition, there are no views of the Site from any properties within Kings Cliffe, again due to a combination of distance, landform and intervening vegetation. There would be no views of any part of the Proposed Development.
10 Years Post Restoration Stage	*Magnitude:* No Change	*Significance:* No Change	

Viewpoint 8: Bridleway NE25 NE of Kings Cliffe (c. 2.2km from site) *Type of Visual Receptor:* PRoW users *Receptor Sensitivity:* Medium			
Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***	***Explanation/Rationale***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	*Magnitude:* No Change	*Significance:* No Change	There are no views of the site from this location due to distance, landform and intervening vegetation. There would be no views of any part of the Proposed Development.
10 Years Post Restoration Stage	*Magnitude:* No Change	*Significance:* No Change	

Viewpoint 9: Footpath NE8 NE of Kings Cliffe (c. 2.2km from site) *Type of Visual Receptor:* PRoW users *Receptor Sensitivity: Medium*				
Proposed Development Stage	***Works Areas 1A, 1B & 3*** ***(Including Design Scenarios 1 - 3 for Works Areas 1A & 1B)***	***Magnitude of Visual Effects***	***Significance of Visual Effects***	***Explanation/Rationale***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	Works Area 1A & 1B: Design Scenario 1 - LOD is that the final levels are 1m above the proposed restoration levels, no settlement).	*Magnitude:* Small	*Significance:* Minor - Moderate	The upper sections of the existing ENRMF landfill are partially visible in the far distance, although due to distance and the relatively wide panorama, the site only occupies a limited proportion of the view. The western extension area itself is not visible although the upper parts of the proposed landform may be able to be glimpsed once material placement has reached a high enough level. The effects of this on PRoW users in this location would be very limited, or missed altogether. Providing further information, Figure 33 (Appendix A) shows the existing contextual view from Viewpoint 9 while Figure 34 shows the existing baseline photograph (53.5° planar projection) and a photomontage image of the Proposed Development at the operational stage (i.e.
	Works Area 1A & 1B: Design Scenario 2 - no LOD, proposed restoration landform constructed to			

	designed levels, no settlement.			while Phases 15 - 17 are being landfilled). The photomontage illustrates how the existing ENRMF site would be partly restored at this stage, with just the haul road and some adjacent areas unrestored, and a grassed bund screening vehicle movements through the Phase 3A and Phase 6 areas. The western extension landfill works would be screened by intervening hedgerow vegetation, although some plant movements (i.e. top of excavator arms) may be glimpsed occasionally above the hedgerow, in the far distance
	Works Area 1A & 1B: Design Scenario 3 - LOD is that the restoration landform settles by 15%.			
	Works Area 3: Site reception and administration area	*Magnitude:* Negligible	*Significance:* Negligible	The existing 7.9m high building is either not visible or barely discernible from this location and at all points along this PRoW. Therefore an additional 8m high building placed anywhere within Works Area 3 would be similarly inconspicuous in the view and is very likely to be missed by PRoW users.
10 Years Post Restoration Stage	Works Area 1A & 1B: Design Scenario 1 - LOD is that the final levels are 1m above the proposed restoration levels, no settlement).	*Magnitude:* Negligible (beneficial)	*Magnitude:* Negligible (beneficial)	When compared to the baseline (i.e. the currently approved restoration scheme) the landform would be slightly higher but at this distance, that difference would be almost imperceptible. The greater proportion of vegetation, which is distributed across the restoration slopes in

	Works Area 1A & 1B: Design Scenario 2 - no LOD, proposed restoration landform constructed to designed levels, no settlement. Works Area 1A & 1B: Design Scenario 3 - LOD is that the restoration landform settles by 15%.			a more random pattern, would very slightly improve the view from this PRoW. Figure 35 shows the photomontage image of the Proposed Development at the operational stage and an image beneath it shows a photomontage of the Proposed Development at the 10 years post restoration stage. The photomontage illustrates how the restored Site would blend in well with the wider panorama and would be in character with the surrounding landscape.
	Works Area 3: Site reception and administration area	*Magnitude:* No Change	*Magnitude:* No Change	At this stage, there would be no difference between the view from this PRoW of the approved restored site and the proposed restored site, with regard to Works Area 3

Viewpoint 10: Footpath NE20 NE of Kings Cliffe (c. 1.8km from site) *Type of Visual Receptor:* PRoW users *Receptor Sensitivity:* Medium			
Proposed Development Stage	***Magnitude of Effects***	***Significance of Effects***	***Explanation/Rationale***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	*Magnitude:* No Change	*Significance:* No Change	Neither the existing ENRMF landfill nor the western extension area are visible from this location or from other points along this footpath. It is considered that the Proposed Development, at all stages, would cause no effects on visual amenity for path users.
10 Years Post Restoration Stage	*Magnitude:* No Change	*Significance:* No Change	

Viewpoint 11: Footpath NE20 on western edge of Bedford Purlieus Woodland (c. 2.05km from site) *Type of Visual Receptor:* PRoW users *Receptor Sensitivity: Medium*				
Proposed Development Stage	***Works Areas 1A, 1B & 3*** ***(Including Design Scenarios 1 - 3 for Works Areas 1A & 1B)***	***Magnitude of Visual Effects***	***Significance of Visual Effects***	***Explanation/Rationale***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	Works Area 1A & 1B: Design Scenario 1 - LOD is that the final levels are 1m above the proposed restoration levels, no settlement).	*Magnitude:* Negligible	*Significance:* Negligible	This viewpoint is over 2km from the existing ENRMF landfill, the top of which is visible in the far distance, although the adverse effects on the wider view are very limited. Due mainly to distance and intervening vegetation, the proposed extraction works in the western extension area would not be visible although the proposed landform, as it is constructed and rises in height, may be able to be glimpsed in the distance. The effects of this on visual amenity would however be very small and would likely be missed by footpath users.
	Works Area 1A & 1B: Design Scenario 2 - no LOD, proposed restoration landform constructed to designed levels, no settlement.			
	Works Area 1A & 1B: Design Scenario 3 - LOD is that the restoration landform settles by 15%.			

	Works Area 3: Site reception and administration area	*Magnitude:* Negligible	*Significance:* Negligible	The existing 7.9m high building is either not visible or barely discernible from this location and at all points along this PRoW. Therefore an additional 8m high building placed anywhere within Works Area 3 would be similarly inconspicuous in the view and is very likely to be missed by PRoW users.
10 Years Post Restoration Stage	Works Area 1A & 1B: Design Scenario 1 - LOD is that the final levels are 1m above the proposed restoration levels, no settlement).	*Magnitude:* Negligible (beneficial)	*Magnitude:* Negligible (beneficial)	The upper parts of the restored landform of the western extension would be visible in the view but would just be an extension to the current site once it is restored and vegetated in places
	Works Area 1A & 1B: Design Scenario 2 - no LOD, proposed restoration landform constructed to designed levels, no settlement.			
	Works Area 1A & 1B: Design Scenario 3 - LOD is that the restoration landform settles by 15%.			
	Works Area 3: Site reception and administration area	*Magnitude:* No Change	*Magnitude:* No Change	At this stage, there would be no difference between the view from this PRoW of the approved restored site and the proposed restored site, with regard to Works Area 3

Viewpoint 12: Junction between Footpath MX18 and MX15 at north western corner of The Assarts Woodland (c. 320m from site) *Type of Visual Receptor:* PRoW users *Receptor Sensitivity: Medium*				
Proposed Development Stage	***Works Area 1B*** ***(Including Design Scenarios 1 – 3)***	***Magnitude of Visual Effects***	***Significance of Visual Effects***	***Explanation/Rationale***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	Works Area 1B: Design Scenario 1 - LOD is that the final levels are 1m above the proposed restoration levels, no settlement).	*Magnitude:* Small - Medium	*Significance:* Minor - Moderate	The view towards the northern part of the western extension area is glimpsed at only this location, as the Footpath routes are otherwise screened by intervening woodland, so visual effects would be fleeting/transient. The landfilling works would be the most noticeable, through/over the intervening boundary vegetation, though less so when vegetation is in leaf. While the Proposed Development within the northern part of the western extension would be evident, it would not dominate the view and Footpath users would not receive Significant visual effects. Works within the existing landfill and the southern part of the western extension would not be visible from this location, further reducing the overall Significance of Effects.
	Works Area1B: Design Scenario 2 - no LOD, proposed restoration landform constructed to designed levels, no settlement.			

	Works Area 1B: Design Scenario 3 - LOD is that the restoration landform settles by 15%.			
10 Years Post Restoration Stage	Works Area 1B: Design Scenario 1 - LOD is that the final levels are 1m above the proposed restoration levels, no settlement). Works Area 1B: Design Scenario 2 - no LOD, proposed restoration landform constructed to designed levels, no settlement. Works Area 1B: Design Scenario 3 - LOD is that the restoration landform settles by 15%.	*Magnitude:* Negligible	*Magnitude:* Negligible	At this point, the proposed landform would be noticeable in the view, although it would be well vegetated with grassland, hedgerows, scrub and small woodland blocks. While it would partially screen the mature woodland vegetation beyond, it would still be broadly characteristic of the rural area in which it is set. Visual effects on the fleeting view for Footpath users would be limited compared to the baseline and may well be missed by several users.

Viewpoint 13: The Barn residential property (and Bed and Breakfast business) approximately 80m to the northwest of Westhay Lodge, approximately 725m to the south southeast of the existing ENRMF landfill *Type of Visual Receptor:* Residents and B&B guests *Receptor Sensitivity: Medium - High*				
Proposed Development Stage	***Works Areas 1A, 1B & 2*** ***(Including Design Scenarios 1 – 3)***	***Magnitude of Visual Effects***	***Significance of Visual Effects***	***Explanation/Rationale***
Mineral Extraction and Landfilling Stage (c. up to 20 years)	Works Areas 1A & 1B: Design Scenario 1 - LOD is that the final levels are 1m above the proposed restoration levels, no settlement).	*Magnitude:* Medium - Large	*Significance:* **Moderate – Major (Significant)** Note: it is considered that there would be Significant visual effects only for the relatively short duration when the eastern sides of Phases 15 – 17 are being landfilled, which would be the most visible elements of the Proposed	The view towards the existing ENRMF landfill is the clearest available for residents, with a lack of intervening elements between The Barn property/garden and the Site. Therefore the southern side of the landfill is visible along with a section of the haul road and also the upper parts of the storage silos within the waste treatment and recycling facility, due to a dip in the evolving landfill landform. While the southern side of the landfill will be restored over the next few years, the Proposed Development would result in prolonged views of some
	Works Area 1B: Design Scenario 2 - no LOD, proposed			

	restoration landform constructed to designed levels, no settlement.		Development. At other times, activity would be far less visible, taking into account the increased duration of overall works, and visual effects would not be Significant.	operational elements, including part of the haul road and a proposed bund that would help screen vehicles on the road. In addition, landfilling works within Phases 15 – 17 and part of Phase 18 within the southern part of the western extension would be visible over the intervening hedgerows (i.e. an existing hedge and a proposed advance planted hedge flanking the track to the east of the southern part of the western extension. However, residents are used to viewing the evolving landfill which reduces sensitivity to further activity to some extent. B&B guests are not similarly conditioned to the view but would experience it for a relatively short duration. The waste treatment and recovery facility (Works Area 2) is largely screened by the existing ENRMF landfill and any relocation of the silos would not cause notable visual disturbance. The facility is likely to be fully screened in a few years anyway by the landfill. Providing further information, Figure 36 (Appendix A) shows the existing contextual view from Viewpoint 13 while Figure 37 shows the existing baseline photograph (53.5° planar projection) and a photomontage image of the Proposed Development at the operational stage (i.e. while Phases 15 - 17 are being landfilled). The photomontage illustrates how the existing ENRMF site would be partly
	Works Area 1B: Design Scenario 3 - LOD is that the restoration landform settles by 15%.			
	Works Area 2: treatment facility	*Magnitude:* Small	*Significance:* Minor - Moderate	

				restored at this stage, with just the haul road and some adjacent areas unrestored, and a grassed bund screening vehicle movements through the Phase 3A and Phase 6 areas. The western extension landfill would be evident to the left of the ENRMF landfill but it would not break the skyline and distance combined with intervening vegetation would limit visual effects.
10 Years Post Restoration Stage	Works Area 1A & 1B: Design Scenario 1 - LOD is that the final levels are 1m above the proposed restoration levels, no settlement). Works Area 1A & 1B: Design Scenario 2 - no LOD, proposed restoration landform constructed to designed levels, no settlement. Works Area 1A & 1B: Design Scenario 3 - LOD is that the restoration landform settles by 15%.	*Magnitude:* Small	*Magnitude:* Minor	At this point, the proposed ENRMF landform would be clearly noticeable in the view, and although the pattern of vegetation would be different to the approved scheme, the difference would make little difference to the visual scene. The increased height of the restored landform when compared to the approved landform would not be apparent, as the landfill and stockpiles have been at or slightly over the previously assumed pre-settlement height (c. 97m AOD) for many years anyway, so the increased height would be of little relevance to the residents and B&B guests. The vegetation and grassland on the slopes would help to visually integrate the landform with the surrounding woodland areas and the steeper slopes would not be noticeably visually detrimental due to the distance of the property and garden from the Site and the 'camouflaging' effect of the grassland and vegetation, which would provide

				vertical elements clothing the slopes and somewhat obscuring the gradient of the land. The restored western extension landforms would be additional elements in the view compared to the baseline but would be generally characteristic of the surrounding fields and the wooded backdrop due to the grassed slopes and the scrubby woodland planting which would be visible in the distance. The restored landforms would be evident but would not look uncharacteristic or visually discordant in the context of the wider surroundings. Figure 38 shows the photomontage image of the Proposed Development at the operational stage and an image beneath it shows a photomontage of the Proposed Development at the 10 years post restoration stage. The photomontage illustrates how the restored western extension area would not break the skyline even with mature trees and the grassland would integrate well with the existing fields in the foreground. The restored ENRMF landfill would screen views of the existing woodland beyond in places but would be visually pleasant and in character with the surrounding landscape.

	Works Area 2: Treatment facility	*Magnitude:* None	*Magnitude:* None	At this stage, the waste treatment and recovery facility would be gone, so there would be no visual effects.

Summary of Assessment of Visual Effects

Introduction

7.31 This sub-section uses information presented above to summarise the assessment of visual effects on a range of variables, as follows:

Extension in time of the existing ENRMF landfill

7.32 As stated above, the Proposed Development would extend the duration of working at the existing ENRMF landfill by approximately 20 years. Residents at Westhay Lodge (represented by Viewpoint 5) and The Barn (represented by Viewpoint 13) have partial views of the southern side of the existing landfill, with The Barn residents (and B&B guests) having clearer, more direct views due to a lack of intervening screening elements. In contrast, the triangular block of coniferous trees to the northwest of Westhay Lodge screens the vast majority of the central part of the landfill for the Westhay Lodge residents, while these trees do not affect the more open views for The Barn residents (& B&B guests). Sensitivity of the residents to the view(s) is slightly reduced as they are accustomed to the presence of the evolving landfill- to the northwest and the associated disturbed land and plant activity. The extension of time relating to the existing ENRMF landfill would not introduce additional visual disturbance into the views, although the existing levels of disturbance would be extended, which would result in effects of a Minor – Moderate Significance level.

7.33 Similarly, visual disturbance for users of Footpath MX15 to the west of the site (represented by Viewpoint 3) would be extended, although this view would also encompass works within the southern part of the proposed western extension area. Again, while this would be an adverse effect on visual amenity for footpath users, it would be fleeting, oblique to the direction of travel and similar in nature/scale to the existing 'disturbed' view. For all other activity during the 20 year development duration, Significance of visual effects would be reduced.

7.34 The extended duration of works within the existing ENRMF landfill would have no or negligible effects on the vast majority of visual receptors with partial views or glimpses of the Site from the surrounding area, including those at a number of

the representative viewpoints. Due to distance, landform and/or intervening elements, the limited or very limited scale of visual disturbance at present is such that an extension of the operations at the existing ENRMF would not cause visual effects of notable Significance. This would apply to PRoW users at viewpoints 2, 4, 9 & 11.

Construction of the new void, including mineral extraction, material stockpiling and landfill cell construction

7.35 Residents at Westhay Lodge and The Barn would receive visual effects of Moderate significance, as soil stripping and other related activity would be partially visible above the existing hedgerow and proposed (advance planted) hedgerow flanking the access track along the eastern boundary of the southern part of the proposed western extension. However, views of works beneath ground level, including extraction and cell construction would be restricted due to distance and angle of view, which reduces Significance of Effects. In addition, these construction works in the northern part of the area would largely be curtailed by intervening landform and vegetation, as well as distance.

7.36 Users of Footpath MX15, represented by Viewpoint 3, would be able to experience partial views of the above ground works but subsequent below ground activity would be screened from view. Views of the existing waste treatment and recovery facility and the partially restored western end of the existing ENRMF landfill would remain. It is considered that the visual effects of the Proposed Development during these partially out of sight works would be noticeable but not Significant.

7.37 Due to the good screening provided by the surrounding woodlands and existing ENRMF landfill coupled with distance and the lack of publicly accessible locations within approximately 700m of the Site, there would be limited visual effects of a Negligible – Minor Significance on all other visual receptors as a result of these works, including those represented by Viewpoints 2, 4, 9 & 11.

Operation of the Landfill to 2046

7.38 As the worked-out void is infilled and the restoration landform is subsequently constructed by placement of material, the visibility of the Proposed Development would increase, with residents of Westhay Lodge and The Barn (represented by Viewpoints 5 and 13 respectively) receiving visual effects of Moderate – Major Significance (i.e. classed as Significant). However, this would only be the case in relation to the landfill works in the southern part of the proposed western extension (Phases 15 – 17). These works would only be visible above the existing and proposed (advance planted) hedgerows along the eastern boundary of the western extension area. Works in the northern part of the western extension area would be entirely screened from these residents by the existing landfill and works along the western side of the proposed western extension landfill would also be screened to some extent, once the eastern side of the landfill within Phases 15 – 17 had been raised to a sufficient level. These visible works would be temporary in nature, lasting only for a few years.

7.39 The Proposed Development would bring visual disturbance closer to users of a c. 52m length of Footpath MX15 between two woodland blocks (represented by Viewpoint 3) and would be Significant although this would be restricted to when the landfill is being constructed in parts of Phases 19 - 21 of the proposed western extension area and would be fleeting/transient. At all other times during the 20 year development duration, effects on footpath users would be reduced and would not be Significant, even allowing for the increased timescale compared to the baseline, due to the current visual context. Construction in the northern part of the western extension area would not be visible at all from this section of Footpath MX15.

7.40 Users of Footpath MX18 (Viewpoint 2) would likely be able to view the restoration landform in the far distance, through intervening tree vegetation, within the northern part of the proposed western extension area. While adverse in nature, the effects would not be Significant due to the influence of distance, intervening elements, direction of travel and the temporary nature of the constriction (landfilling) works.

7.41 The visual effects of this work would remain very limited for all other visual receptors within the surrounding area, including those represented by a number of viewpoint locations, due to distance, landform and intervening elements. Therefore, users of Footpath NE20 (Viewpoints 10 & 11) and Bridleways NE8 and NE25 (Viewpoints 6, 8 & 9) would have no views of the evolving landform in the northern part of the proposed western extension area but may be able to glimpse parts of the landform when it is within the southern part of the western extension area. Significance of Effects would be Negligible to Minor.

Operation of the Waste Treatment and Recovery Facility up to 2046

7.42 This facility is very well located in the north western part of the existing ENRMF landfill as it is very well screened, mainly by established woodland and landform (the existing ENRMF landfill) from all publicly accessible locations except for users of an approximate 52m length of Footpath MX15, to the west of the site. Users of this stretch of footpath are currently able to view infrastructure at the western end of this facility, (as shown on Figures 8, 9, 30 and 31, Appendix A) including two silos which are approximately 14m in height.

7.43 The Proposed Development would result in this facility being part of the view for a longer duration, although it would eventually be screened by the landfill within the southern part of the proposed western extension area, as it is progressively constructed. The extended duration of the presence of the facility in the view would be an adverse consequence of the Proposed Development, although due to the existing influence of the facility on the view, the effects would be of a Minor level, and not Significant.

Removal of the Waste Treatment and Recovery Facility by 2046

7.44 Removal of this facility by 2046 would extend its presence within the existing ENRMF landfill by 20 years, which has been dealt with above. Removal of the infrastructure would be one of the last operations to be undertaken at the Site. The area of the waste treatment and recovery facility will then be extracted to create the final landfill phase which will be landfilled to achieve the final restoration contours.

7.45 Only users of Footpath MX15 would receive views of this work, which would include movements of a variety of plant machinery including 360 degree excavators, dump trucks, dozers, cranes and other vehicles and equipment. The works would be temporary and would be noticeable in the middle distance for footpath users, although effects would be limited and not Significant when compared to the baseline. There would be no or very limited visual effects due to these works on all other visual receptors within the surrounding area.

Restoration

7.46 The restored Site would be visible from various locations within the surrounding area, including a number of the representative viewpoints. The Proposed Development would create a higher restoration landform than currently permitted across the existing ENRMF landfill, although the restoration principles to be applied would be very similar. The views would comprise woodland blocks, scrubby planting areas and hedgerows with trees, all of which would extend across grassland slopes rising up to a level of 99m AOD.

7.47 This would be similar to the views that would be available of the Site if the approved restoration scheme were to be implemented, for many visual receptors to the east and southeast of the Site.

7.48 Views of the restored Site for residents at Westhay Lodge and, to a greater degree, The Barn, would occupy a larger proportion of the view to the northwest than would be the case with the approved restoration scheme for the existing ENRMF landfill. However, it is considered that the restored western extension area, specifically the southern part of this area, would visually integrate well with woodland within Fineshade Woods (The Assarts), to the rear of the restored landform. The proposed vegetation, once sufficiently developed, would be seen in conjunction with the woodland further to the northwest, in the same way as the proposed woodland and scrubby planting on the restored ENRMF landfill landform will be seen once the restoration works have been completed.

8 Assessment of Cumulative Effects

Introduction

8.1 The cumulative effects of the Proposed Development upon landscape resources and visual amenity have been considered below in line with the GLVIA3. Cumulative impacts are defined on page 120 of GLVIA3 as those that:

"result from additional changes to the landscape or visual amenity caused by the proposed development in conjunction with other developments (associated with or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future."

8.2 A Proposed Development can either cause cumulative landscape effects or cumulative visual effects, or both of these. GLVIA3 states that the emphasis in Environmental Impact Assessment (EIA) is on *likely significant* effects rather than cataloguing every conceivable effect that might occur. That guidance has been followed in this section.

8.3 Cumulative landscape effects include changes to landscape elements, character and qualities of the landscape as a result of two or more proposed developments or related activities. Cumulative visual effects are concerned with changes in the appearance of available views as a result of two or more proposed developments or related activities. Cumulative visual effects may occur as follows:

- *Simultaneously* - where a number of mineral workings and/or landfill related activities may be viewed from a single fixed viewpoint simultaneously, within the viewer's field of view without moving;
- *Successively* - where a number of mineral workings and/or landfill related activities may be viewed from a single viewpoint successively by turning around at a viewpoint; and
- *Sequentially* - where a number of mineral workings and/or landfill related activities may be viewed sequentially or repeatedly from a range of locations when travelling along a route.

Extent of Other Mineral Extraction and/or Resource Management Operations and Proposed Development in the Surrounding Area (Existing Baseline)

8.4 In order to establish a baseline against which the *additional* effects of the Proposed Development can be assessed, existing or proposed developments of a similar nature or scale to the Proposed Development, ideally within the study area, need to be identified.

8.5 As shown on Figure ES1.1: The Site Location (PINS document reference 5.3.1.1) the following sites are located within a radius of 4.5km:

- Collyweston Quarry, approximately 470m to the west of the Site;
- Thornhaugh Landfill Site (operated by the applicant), approximately 3.4km to the east of the Site;
- Cooks Hole Quarry (owned by the applicant), approximately 3.4km to the east of the Site; and
- Wakerley Quarry, approximately 4.4km to the southwest of the Site.

8.6 There are no other similar developments proposed within the study area.

Assessment of Cumulative Landscape Effects

8.7 There would be no significant cumulative effects on landscape features as a result of the Proposed Development during the working stages. Neither of the two other sites operated or owned by the applicant will affect agricultural land during the proposed scheme duration and any vegetation loss would be minor and of negligible cumulative significance. It is considered that any effects on agricultural land or vegetation at the other two sites listed above would be of a minor nature as these operations are either well established (Collyweston Quarry) or are sufficiently distant from the Site (Wakerley Quarry).

8.8 As a result of the restoration proposals, there would be minor beneficial cumulative effects on landscape features due to the substantial net benefit in terms of overall vegetation cover to be established across the Site along with the

approved features that will be created as other quarry and landfill sites are restored in accordance with their restoration plans.

8.9 There would be no Significant cumulative effects on landscape character as a result of the Proposed Development. While the character of the western extension area would alter in a notable way, it would largely affect the local area without having evident adverse effects on the wider landscape due in part to the well screened nature of the land, notably the northern part of the western extension area. In addition, the character of the surrounding land is influenced in places by industrial operations of a similar nature to the Proposed Development, namely Collyweston Quarry (c. 470m to the west of the Site), Thornhaugh Landfill Site and Cooks Hole Quarry, (c. 3.4km to the east of the Site).

8.10 While the Proposed Development would therefore increase the total area of land affected by mineral extraction and/or landfilling activity within the study area, this would not result in Significant cumulative effects on the overall character of the wider landscape during the working stages. It is considered that cumulative effects on character would instead be of Minor Significance, especially when taking into account the progressive nature of Site working and restoration schemes.

8.11 Following restoration, the cumulative effects on landscape character caused by the Proposed Development would be generally positive but would not be Significant in the context of the wider landscape within the study area. The defining characteristic of the area would remain as open agricultural land to the south and east with large woodland blocks to the west and north and few built elements.

Assessment of Cumulative Visual Effects

8.12 It is considered that there is only one location from which the Proposed Development may able to be glimpsed along with other quarry and/or landfill operations. Viewpoint 2 is located on Footpath MX18 to the northwest of Collyweston Quarry and footpath users can glimpse sections of soil bunds and the

upper section of faces associated with the quarry at present, as indicated on Figure's 6 and 7.

8.13 The Proposed Development is likely to be glimpsed through tall intervening tree belt vegetation as the landform is constructed, although visibility would reduce to virtually nothing in spring and summer months due to leaves on the trees. When seen in combination with the Collyweston Quarry bunds and faces, this would cause cumulative visual effects of Minor Significance, and may well be missed altogether by users.

8.14 The restored northern end of the western extension would be visible through the intervening tall trees alongside views of the Collyweston Quarry bunds and faces, which may at that time be fully or partially restored as well. Therefore, at that point, cumulative visual effects would again be of Minor Significance and would generally be beneficial in nature.

8.15 There would be no other cumulative visual effects involving the Proposed Development in conjunction with other, similar operations within the study area. Footpath and/or road users may experience sequential views of the Proposed Development along with other developments as they travel along routes that take them within visible proximity of the operations, but the distance and time between the visual experiences would be such that there would be No or Negligible cumulative visual effects occurring.

9 Accordance of Proposed Development with Local Planning Policy

Introduction

9.1 Section 5 above summarises national and local level landscape policies and guidance relating to the Proposed Development, including the relevant policy wording. The table below summarises how the Proposed Development accords with selected key local polices.

Accordance of the Proposed Development with Relevant Local Planning Policy and Guidelines

Local Policy or Guideline Document	Accordance with Relevant Local Policy or Guideline
Northamptonshire Minerals and Waste Local Plan, July 2017	*Policy 18: Addressing the Impact of Proposed Minerals and Waste Development* The Site is not located in any areas designated for their landscape quality or value. Natural resources, in terms of soils across the western extension area, would be retained on the Site and utilised in restoration works. *Policy 20: Natural Assets and Resources* The Proposed Development would positively contribute towards the Northamptonshire BAP due to the long term net gain in biodiversity which would be well in excess of 10%. Mitigation in the form of long term enhancements to biodiversity and PRoW routes provided by the restoration scheme would be in positive accordance with this policy. *Policy 21: Landscape Character* It is acknowledged that the Proposed Development would result in unavoidable, Significant effects on the rural character of the northern part of the western extension area during the operational stage, though Significance would be less in terms of the southern part due to the influence of the existing ENRMF landfill on the character of this area. The scheme would also prolong the duration of operations within some parts of the ENRMF landfill, which would affect the character of the existing Site for a longer time than would otherwise be the case. However, the progressive restoration works would seek to reduce effects on landscape character and in the long term, once fully restored and established, the character of the Site landscape, even with the immediately evident changes to the topography of the western extension area, would integrate well with the surrounding woodland and grassland areas,

	benefitting biodiversity and increasing PRoW routes and connectivity. It is considered that the Restoration Concept Scheme would result in a high quality restored landscape which would complement the adjacent woodland and grassland areas once it had established and integrated into the surroundings. *Policy 23: Layout and Design Quality* The proposed western extension area has been selected carefully in order to minimise adverse effects on a range of receptors, including landscape and visual receptors. The proposed western extension area is immediately adjacent to the existing ENRMF landfill, which makes good design sense and utilises existing waste management infrastructure. The proposed landform would also merge well with the existing landfill. See above for how the Proposed Development would maintain and contribute to landscape character in the long term, once the Site had been restored. *Policy 24: Restoration and After-Use* The Proposed Development would positively accord with this policy due to the intended progressive nature of the restoration works, which would be in accordance with the Restoration Concept Scheme. Site after-use would also positively accord with this policy as it would enhance biodiversity, increase public amenity (PRoW routes) and as a result, benefit the local community. It is acknowledged however that these benefits would only fully occur once the site restoration had been completed and several years of after-care had occurred. Most of the western extension area is not classified as high grade (Best and Most Versatile) agricultural land so it is considered that the proposed restoration, which doesn't include any agricultural restoration and instead focuses on habitat creation and enhancement along with providing good public access through provision of new permissive path routes to benefit public amenity, is entirely appropriate and in accordance with this policy.
North Northamptonshire Joint Core Strategy 2011 - 2031	*Policy 3: Landscape Character* See above re. effects on landscape character. In terms of the tranquillity of the Site, it is acknowledged that tranquillity in the northern part of the western extension area would be Significantly affected by the Proposed Development during the working phases, as is the case with its landscape character. Effects would be reduced for the southern part of

	the extension due to the existing influence of the adjoining landfill. However, these effects would be temporary and once restored, relatively high levels of tranquillity would be evident, punctuated only by the occasional activity of footpath users or maintenance works across the restored landscape, all of which is considered entirely appropriate in that rural location. Therefore in the long term, the Proposed Development would positively accord with this policy in relation to tranquillity.
	Policy 19: The Delivery of Green Infrastructure The Proposed Development would result in BNG well in excess of 10%, including grassland, scrubby planting and woodland that would eventually provide a vegetated corridor linking Collyweston Great Wood with the Assarts woodland (refer to the ESL Consultants BNG assessment for further detailed information). The scheme would also result in a net gain in permissive path routes across the site and may result in links with existing PRoW to the west of the Site (subject to agreement)
Trees and Landscape Supplementary Planning Document, February 2013	It is intended that, subject to a DCO being issued a Landscape and Ecology Management Plan (LEMP) would be produced which would build on the restoration principles set out on the Restoration Concept Scheme. The content and structure of the LEMP is specified in the DCO Requirement.

10 Conclusion

Significant Effects on Landscape Features

10.1 It is concluded that the most significant effect of the Proposed Development on landscape features would be the temporary soil and overburden stripping works, mineral excavation works and then subsequent landfilling within the proposed western extension area, which would permanently alter the topography of this area. However, when considered in the context of the approved restoration landform for the adjacent ENRMF landfill, the long term effect of this change to landform is not considered to be of notable Significance. The landscape is considered to have the capacity to absorb this change without unacceptable adverse effects on landscape features.

10.2 All other effects on landscape features during the operational works would not be Significant, although two mature trees would be removed along with lengths of hedgerow and other mixed scrub vegetation. However, the Restoration Concept Scheme would result in substantial, long term BNG for the proposed western extension area, effectively establishing connectivity between Fineshade Wood and Collyweston Wood through the planting and subsequent natural regeneration and spread over time of woodland blocks and scrubby planting areas. Ponds would also be established in places on the restored land. BNG across the ENRMF landfill area would be similar to that proposed on the current approved restoration plan so overall, the Proposed Development would deliver positive long term benefits for landscape features in terms of vegetation cover, habitat creation and public access, including approximately 4,166m of permissive path routes across the Site which could potentially link with existing Footpaths to the west.

Significant effects on Landscape Character

10.3 The Site is not located in an area designated for its landscape quality or value and the proposed western extension area is not considered to be particularly sensitive to landscape change. The Site is however within an Area of Tranquillity, a local designation which encompasses the existing ENRMF landfill, Collyweston Quarry

and other pockets of activity such as the A43, A47 and Kings Cliffe. It is concluded that there would be temporary effects on the character and also tranquillity levels within the proposed western extension area during the Mineral Extraction and Landfilling stage, which would differ in scale and nature according to whether activity was being undertaken in the northern or the southern part of the extension area. The character and tranquillity of the northern area of the proposed western extension is largely unaffected by the existing ENRMF landfill so the various extraction and landfilling operations would Significantly affect these receptors. The character and tranquillity of the southern area are both partially influenced by the adjacent landfill, so effects on these landscape receptors would be noticeable but reduced, not considered Significant. Effects on the character and tranquillity of the ENRMF landfill would be spread over a longer duration but given the current context would be limited.

10.4 At the 10 year Post Restoration stage, it is concluded that beneficial effects on the character of the proposed western extension would range from Minor to Moderate, with less benefit for the character of the existing ENRMF landfill when compared to the approved restoration plan. The substantial increase in vegetation cover across the western extension area combined with the improved connectivity between the two adjacent woodlands would be the most notable positive aspects of the change in character across this area. The changes to landform would also be immediately noticeable although the landscape character of the area would remain rural in nature. The character of the restored ENRMF landfill would be similar to the baseline (i.e. the current approved restoration plan). In the long term, tranquillity across both the Site and the wider surroundings would be maintained due to the proposed restoration scheme.

Significant Effects on Visual Amenity

10.5 It is concluded that the location of the proposed western extension area is well screened due to mature woodland to the west and northeast, especially the northern part of the area, and the lack of PRoW and residential properties to the east and south combined with gently undulating topography. Visibility of the existing ENRMF landfill is also relatively restricted due to these factors and there

are a limited number of publicly accessible locations from where views of the landfill are available, within approximately 700 - 800m of the application boundary.

10.6 There would be temporary Significant effects on visual amenity for residents at Westhay Lodge and The Barn to the southeast of the Site, although this level of effects would only occur when the eastern sides of Phases 15 – 17 are being landfilled, which would be the most visible elements of the Proposed Development in the western extension area. At other times effects would be noticeable to varying degrees but not Significant, considering the increased duration of works and the existing visual context. No other residents would experience Significant effects at any time, including residents within Kings Cliffe.

10.7 In terms of PRoW users, the only Significant effects would be experienced by walkers along a c. 52m length of Footpath MX15 to the west, from where views eastwards towards the existing landfill and parts of Phases 19 - 21 of the western extension are available. However, Significant effects would only be experienced for the temporary period that Phases 19 - 21 are subject to stockpiling or are being actively landfilled. In addition, these effects would be fleeting/transient and at an oblique angle of view. At all other times, landfilling works would be out of view and therefore would not cause visual disturbance of notable Significance. The extended duration of working would be offset by progressive restoration of the existing ENRMF landfill.

10.8 Views from all other PRoW are either screened/partially screened by landform and/or intervening vegetation, even in winter, or are too far away for the Proposed Development to cause Significant visual disturbance. Road users heading north along Stamford Road may catch glimpses of the Proposed Development through or above the intervening hedgerow, but visual effects would be very limited.

10.9 Following restoration and vegetation establishment, views of the Proposed Development would be entirely in character with the surrounding rural landscape and the difference in height between the proposed landform (max elevation 99m AOD) and the current approved restoration landform (max elevation 93m AOD, following anticipated settlement) would not be evident due to the scale of the Site

and the camouflaging effect of mature vegetation which would blend in with the background woodland.

10.10 It is therefore concluded that while there would be Significant though temporary visual effects for a very limited number of visual receptors at specific times during the life of Proposed Development, the lack of any other notable visual effects reinforces the selection of the land to the immediate west as being appropriate for an extension to the existing ENRMF landfill. The Proposed Development would be restored in a manner in character with the surroundings and which would be visually appealing in the long term.

10.11 In summary, the Proposed Development would result in a number of Significant effects on landscape receptors and visual amenity as mentioned above, while there would also be several effects not considered to be Significant. However, due to the nature and duration of the scheme, certain effects of this type are unavoidable and would be relatively limited when set within the context of the existing ENRMF landfill and the proposed western extension area. Effects of highest Significance would generally be temporary although some would be permanent (i.e. changes to landform and land use across the western extension) with substantial long term benefits for nature conservation, biodiversity and public access. The rural landscape character of the surrounding area would be maintained and enhanced as the restored Site integrates into the surroundings.

Appendix A: Figures

Appendix B: Glossary

Aftercare The steps necessary to manage the land following restoration so that the quality of the land is at a satisfactory standard for the planned afteruse.

Baseline studies Work done to determine and describe the environmental conditions against which any future changes can be measured or predicted and assessed.

Biodiversity Range of variation in living organisms including genetic variation and ecosystem variation.

Bund A low bank or wall of material used to store soils or to provide a visual or acoustic screen.

Designated landscape Areas of landscape identified as being of importance at international, national or local levels, either defined by statute or identified in development plans or other documents.

EIA Environment Agency. The national environmental regulator.

Environmental Statement (ES) The document that reports the findings of an Environmental Impact Assessment.

ha Hectare. A unit of measure.

Landscape An area, as perceived by people, the character of which is the result of the action and interaction of natural and/or human factors.

LVIA (Landscape and Visual Impact Assessment) A tool used to identify and assess the likely significance of the effects of change resulting from development both on the landscape as an environmental resource in its own right and on people's views and visual amenity.

Landscape character A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different to another, rather than better or worse.

Landscape Character Areas (LCA's) These are single unique areas which are the discrete geographical areas of a particular landscape type.

Landscape character assessment The process of identifying and describing variation in the character of the landscape, and using this information to assist in managing change in the landscape. It seeks to identify and explain the unique combination of elements and features that make landscapes distinctive. The process results in the production of a Landscape Character Assessment.

Landscape effects Effects on the landscape as a resource in its own right

Landscape receptors Defined aspects of the landscape resource that have the potential to be affected by a proposal.

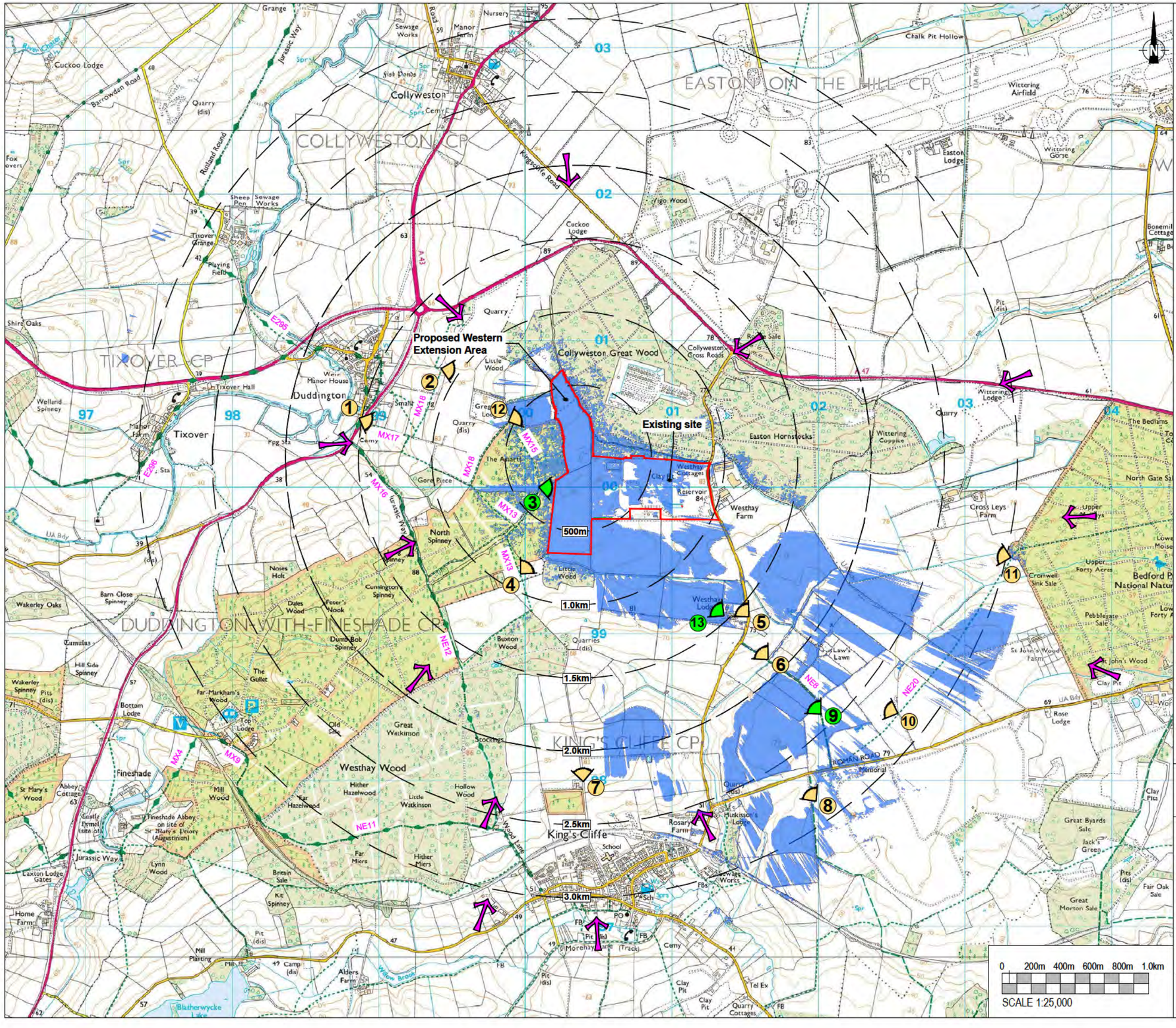
Landscape value The relative value that is attached to different landscapes by society. A landscape may be valued by different stakeholders for a whole variety of reasons.

Magnitude (of effect) A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration.

NPPF National Planning Policy Framework which provides the primary policy basis for planning decisions.

Photomontage A visualisation which superimposes an image of a proposed development upon a photograph or series of photographs. The image can vary depending on the stage at which the development is illustrated

Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor.
Significance	A measure of the importance or gravity of the environmental effect, defined by significance criteria specific to the environmental topic
Site of Special Scientific Interest (SSSI)	Sites of national importance designated under the Wildlife and Countryside Act 1981. Sites may be designated to protect wildlife, geology or land forms.
Tranquillity	A state of calm and quietude associated with peace, considered to be a significant asset of landscape.
Visual amenity	The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area.
Visual effects	Effects on specific views and on the general visual amenity experienced by people
Visual receptors	Individuals and/or defined groups of people who have the potential to be affected by a proposal.
ZTV	(Zone of Theoretical Visibility) A map, usually digitally produced, showing areas of land within which a development is theoretically visible. The map can be produced using either DTM (digital terrain model or 'bare ground) 3d data or DSM (digital surface model, which includes built development, woodland canopies etc. to varying levels of accuracy) 3d data, often with a 3d representation of the proposed development inserted into the model.



KEY

- APPLICATION BOUNDARY
- RADIUS FROM CENTRE OF APPLICATION AREA, AT 500m INTERVALS
- PROPOSED VIEWPOINT LOCATION AND DIRECTION OF VIEW (Figures 4 to 29)
- VIEWPOINTS PRESENTED AS EXISTING/ PROPOSED PHOTOMONTAGES (Figures 30 to 35)
- AREAS FROM WHICH THERE ARE NO VIEWS OF THE APPLICATION AREA
- PUBLIC RIGHT OF WAY: FOOTPATH
- PUBLIC RIGHT OF WAY: BRIDLEWAY
- PUBLIC RIGHT OF WAY: BYWAY OPEN TO ALL TRAFFIC
- LONG DISTANCE FOOTPATH: JURASSIC WAY
- NE20 — PUBLIC RIGHT OF WAY REFERENCE
- ZONE OF THEORETICAL VISIBILITY (Using 3d Photogrammetric Digital Surface Model data on a 2m grid)

The Zone of Theoretical Visibility (ZTV) was produced using 3D DSM (Digital Surface Model) base data on a 2m grid resolution, purchased from www.blueskymapshop.com. A ZTV is a computer generated, initial assessment tool to identify the possible (or theoretical) visibility of any part of the development. The ZTV does not take account of distance in reducing the significance of a development in the view and is limited in terms of the screening effect that existing buildings, vegetation and other visual screening features may have on the visibility of a development. Used in accordance with best practice guidance ZTV is a useful guide to relevant locations for site survey in advance of Landscape and Visual Impact Assessment (LVIA) by showing areas from which views of a proposal may occur. It is used to focus the assessment process on those areas which may be affected and avoids those that won t be affected.

Target points were taken from points across the proposed draft restoration landform which extends up to a maximum height of 98.5m AOD. Target eye level was set at 1.6m. DSM data includes the underlying landform and also vertical elements including retained woodland, buildings and other landscape features. It is however not entirely accurate or comprehensive and is only an indication of the likely visibility of the proposed development

0 200m 400m 600m 800m 1.0km

SCALE 1:25,000

Client: Augean South Ltd

Site: ENRMF

Project: PROPOSED WESTERN EXTENSION

Drawing Title: VISUAL CONTEXT

Date: JULY 2021

Drawing No.: FIGURE 1

Scale: 1:25,000 @ A3

File Ref.: 2107_008.006_FIG1_VIZ CONTEXT

Revision: 0

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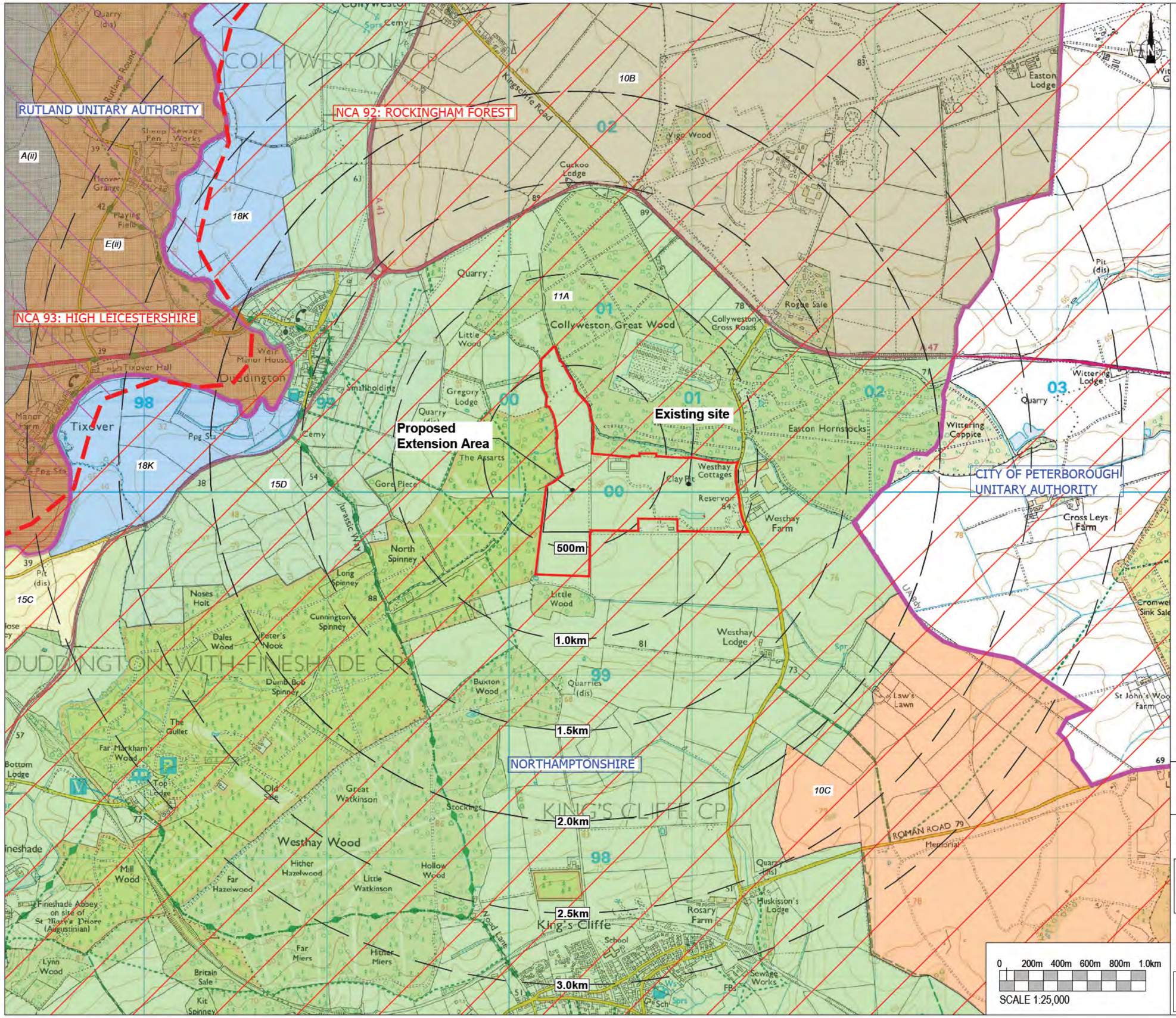

KEY

- APPLICATION BOUNDARY
- RADIUS FROM CENTRE OF APPLICATION AREA, AT 500m INTERVALS
- NATIONAL CHARACTER AREA (NCA) BOUNDARY
- COUNTY BOUNDARY

NATIONAL LANDSCAPE CHARACTER AREAS

- ROCKINGHAM FOREST
- HIGH LEICESTERSHIRE

NORTHAMPTONSHIRE LANDSCAPE CHARACTER AREAS
Northamptonshire Current Landscape Strategy & Guidelines

- 10B — LIMESTONE PLATEAU — 10B - COLLYWESTON LIMESTONE PLATEAU
- 10C — LIMESTONE PLATEAU — 10C - KING S CLIFFE PLATEAU
- 11A — WOODED LIMESTONE HILLS AND VALLEYS — 11A - KING S CLIFFE HILLS AND VALLEYS
- 15C — FARMED SCARP SLOPES — 15C - HARRINGWORTH TO DUDDINGTON
- 15D — FARMED SCARP SLOPES — 15D - DUDDINGTON TO EASTON ON THE HILL
- 18K — BROAD RIVER VALLEY FLOODPLAIN — 18K - THE WELLAND - TIXOVER TO WOTHORPE

RUTLAND UA LANDSCAPE CHARACTER AREAS
Landscape Character Assessment of Rutland 2003

- A(ii) — HIGH RUTLAND — A(ii) - RIDGES AND VALLEYS
- E(ii) — WELLAND VALLEY — E(ii) - MIDDLE VALLEY EAST

Client: Augean South Ltd

Site: ENRMF
Project: PROPOSED WESTERN EXTENSION
Drawing Title: LANDSCAPE CHARACTER AREAS
Date: JULY 2021
Drawing No.: FIGURE 2
Scale: 1:25,000 @ A3
File Ref.: 2107_008.006_FIG2_LCA'S
Revision: 0

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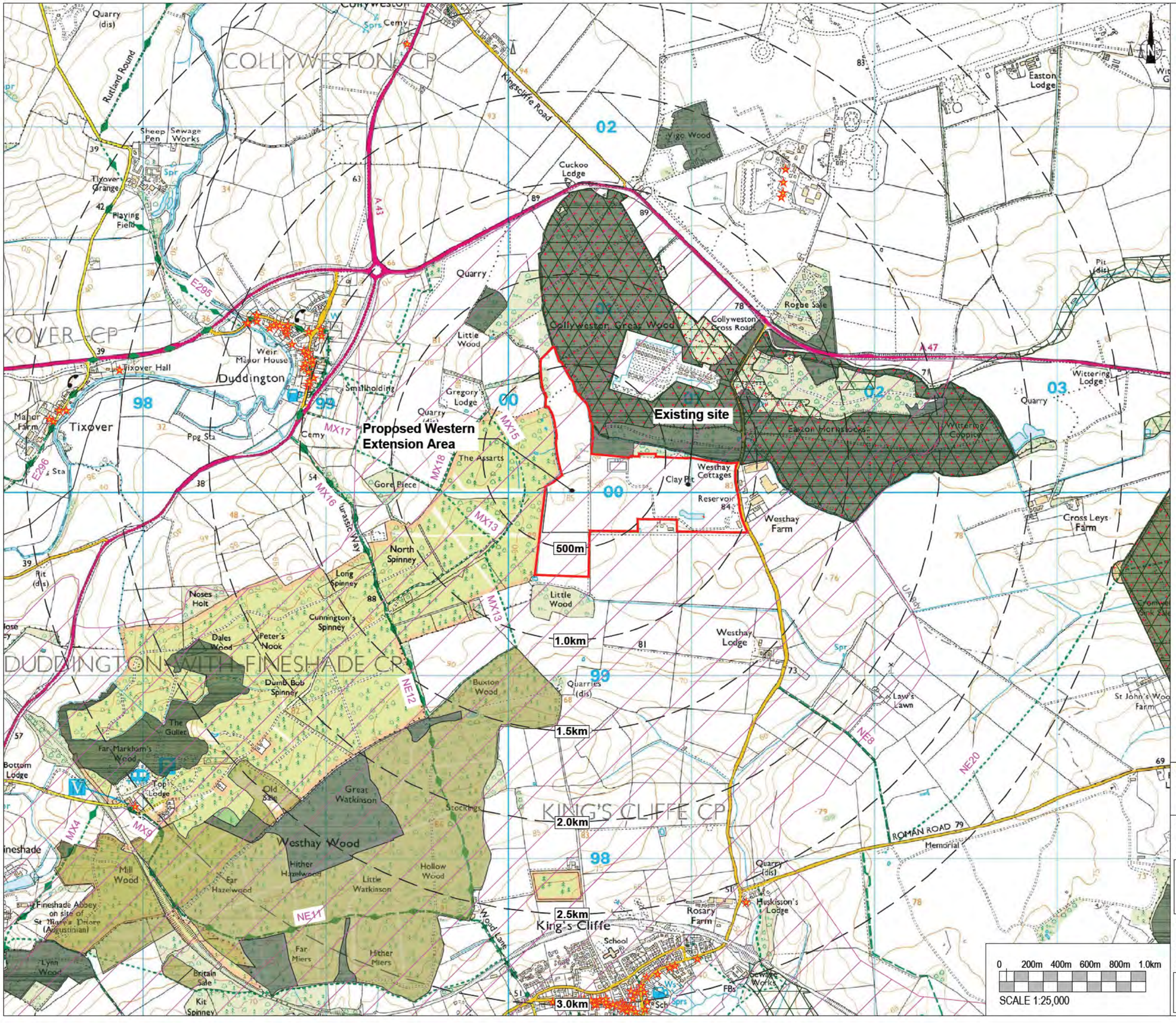

KEY

- APPLICATION BOUNDARY
- RADIUS FROM CENTRE OF APPLICATION AREA, AT 500m INTERVALS
- PUBLIC RIGHT OF WAY: FOOTPATH
- PUBLIC RIGHT OF WAY: BRIDLEWAY
- PUBLIC RIGHT OF WAY: BYWAY OPEN TO ALL TRAFFIC
- NE11 — LONG DISTANCE FOOTPATH: JURASSIC WAY
- LISTED BUILDING
- NATIONAL NATURE RESERVE
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI) & SPECIAL PROTECTION AREA
- ANCIENT AND SEMI-NATURAL WOODLAND
- ANCIENT REPLANTED WOODLAND
- AREA OF TRANQUILLITY (North Northamptonshire Joint Core Strategy 2011 - 2031, Policy 3: Landscape Character)

Client: Augean South Ltd

Site	ENRMF
Project	PROPOSED WESTERN EXTENSION
Drawing Title	LANDSCAPE CONTEXT
Date	JULY 2021
Drawing No.	FIGURE 3
Scale	1:25,000 @ A3
File Ref.	2107_008.006_FIG3_LANDSCAPE CONTEXT
Revision	0

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Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 1: JURASSIC WAY, CLOSE TO THE ROYAL OAK PUB & RESTAURANT*

Drawing Ref: *FIGURE 4*

Date: *JULY 2021*

Technical Information:

Photograph Date: 27/02/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: East	*Projection: Planar HFoV: 35.6 degrees*
Distance from Site boundary: c. 1.3km	*Image Size: 390 x 260mm*

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Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 1: JURASSIC WAY, CLOSE TO THE ROYAL OAK PUB & RESTAURANT - CONTEXT*

Drawing Ref: *FIGURE 5*

Date: *JULY 2021*

Technical Information:

Photograph Date: 27/02/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: East	*Projection: Planar HFoV: 35.6 degrees*
Distance from Site boundary: c. 1.3km	*Image Size: 390 x 260mm*

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Client: *AUGEAN SOUTH LTD*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

Site: *ENRMF, NORTHAMPTONSHIRE*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 2: FOOTPATH MX18 TO WEST OF COLLYWESTON QUARRY*

Drawing Ref: *FIGURE 6*

Date: *JULY 2021*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: East	*Projection: Planar HFoV: 35.6 degrees*
Distance from Site boundary: c. 750m	*Image Size: 390 x 260mm*

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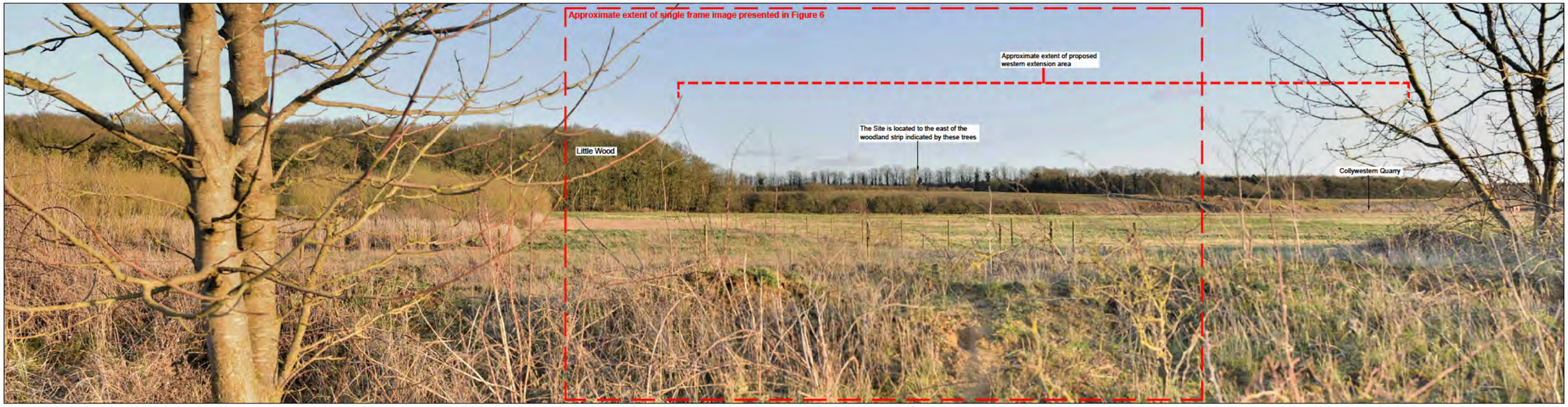

Client: *AUGEAN SOUTH LTD*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

Site: *ENRMF, NORTHAMPTONSHIRE*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 2: FOOTPATH MX18 TO WEST OF COLLYWESTON QUARRY*

Drawing Ref: *FIGURE 7*

Date: *JULY 2021*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: East	*Projection: Planar*
Distance from Site boundary: c. 750m	*HFoV: 85 degrees*

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Client: *AUGEAN SOUTH LTD*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

Site: *ENRMF, NORTHAMPTONSHIRE*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 3: FOOTPATH MX15 TO WEST OF SITE*

Drawing Ref: *FIGURE 8*

Date: *JULY 2021*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: East	*Projection: Planar HFoV: 35.6 degrees*
Distance from Site boundary: c.120m	*Image Size: 390 x 260mm*

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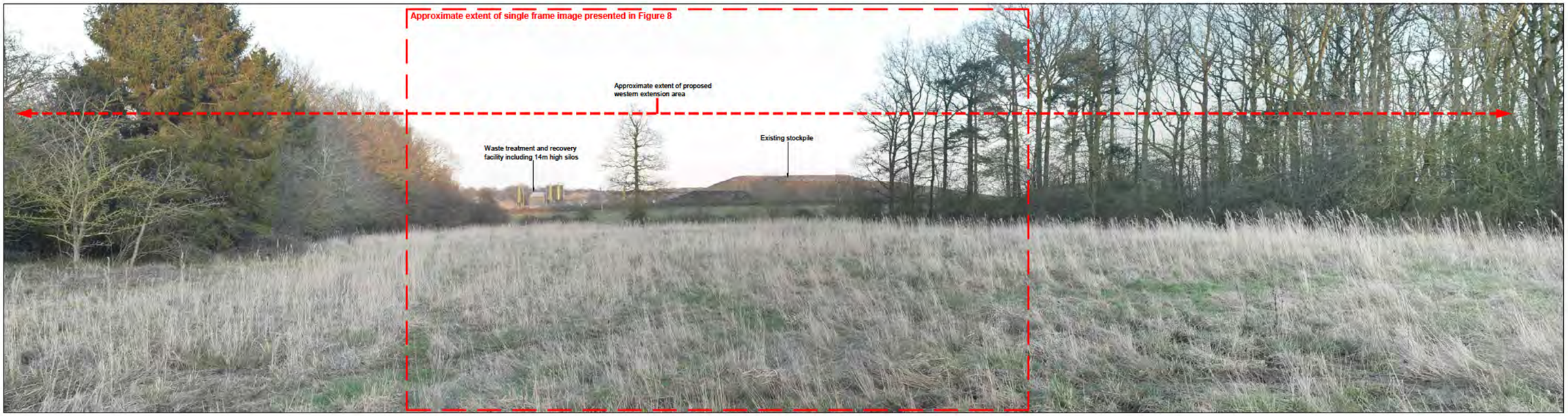

Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 3: FOOTPATH MX15 TO WEST OF SITE - CONTEXT*

Drawing Ref: *FIGURE 9*

Date: *JULY 2021*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: East	*Projection: Planar*
Distance from Site boundary: c. 120m	*HFoV: 85 degrees*

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Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 4: FOOTPATH MX13 TO SOUTHWEST OF SITE*

Drawing Ref: *FIGURE 10*

Date: *JULY 2021*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: Northeast	*Projection: Planar HFoV: 35.6 degrees*
Distance from Site boundary: c. 210m	*Image Size: 390 x 260mm*

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Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 4: FOOTPATH MX13 TO SOUTH WEST OF SITE - CONTEXT*

Drawing Ref: *FIGURE 11*

Date: *JULY 2021*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: Northeast	*Projection: Planar*
Distance from Site boundary: c. 210m	*HFoV: 85 degrees*

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Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 5: STAMFORD ROAD CLOSE TO WESTHAY LODGE*

Drawing Ref: *FIGURE 12*

Date: *JULY 2021*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: Northwest	*Projection: Planar HFoV: 35.6 degrees*
Distance from Site boundary: c. 770m	*Image Size: 390 x 260mm*

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Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 5: STAMFORD ROAD CLOSE TO WESTHAY LODGE - CONTEXT*

Drawing Ref: *FIGURE 13*

Date: *JULY 2021*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: Northwest	*Projection: Planar*
Distance from Site boundary: c.770m	*HFoV: 85 degrees*

DB Landscape Consultancy

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Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 6: VIEW FROM BRIDLEWAY NE8 TO SOUTHEAST OF SITE*

Drawing Ref: *FIGURE 14*

Date: *JULY 2021*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: Northwest	*Projection: Planar HFoV: 35.6 degrees*
Distance from Site boundary: c.1.05km	*Image Size: 390 x 260mm*

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Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 6: VIEW FROM BRIDLEWAY NE8 TO SOUTHEAST OF SITE*

Drawing Ref: *FIGURE 15*

Date: *JULY 2021*

Technical Informa ion:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: Northwest	*Projection: Planar*
Distance from Site boundary: c.1.05km	*HFoV: 85 degrees*

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Client: *AUGEAN SOUTH LTD*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

Drawing Title: *VIEWPOINT 7: AGRICULTURAL TRACK TO NORTH OF KINGS CLIFFE*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: North	*Projection: Planar HFoV: 35.6 degrees*
Distance from Site boundary: c. 1.5km	*Image Size: 390 x 260mm*

Site: *ENRMF, NORTHAMPTONSHIRE*

PINS project reference: *WS010005*

Drawing Ref: *FIGURE 16*

Date: *JULY 2021*

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Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 7: AGRICULTURAL TRACK TO NORTH OF KINGS CLIFFE - CONTEXT*

Drawing Ref: *FIGURE 17*

Date: *JULY 2021*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: North	*Projection: Planar*
Distance from Site boundary: c.1.5km	*HFoV: 85 degrees*

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Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 8: BRIDLEWAY NE25 NORTHEAST OF KINGS CLIFFE*

Drawing Ref: *FIGURE 18*

Date: *JULY 2021*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: Northwest	*Projection: Planar HFoV: 35.6 degrees*
Distance from Site boundary: c.2.2km	*Image Size: 390 x 260mm*

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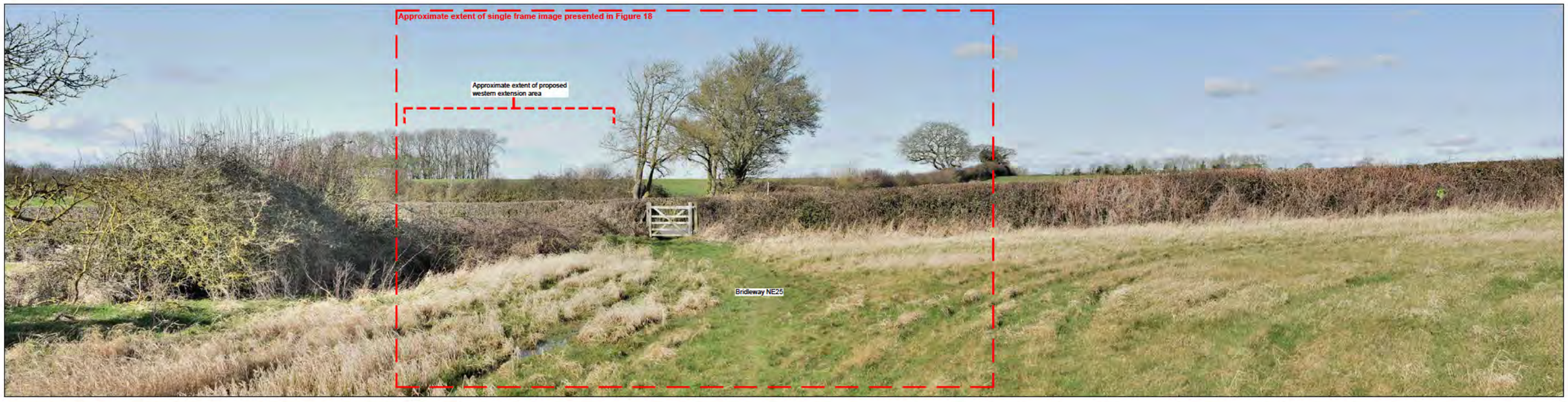

Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 8: BRIDLEWAY NE25 NORTHEAST OF KINGS CLIFFE - CONTEXT*

Drawing Ref: *FIGURE 19*

Date: *JULY 2021*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: Northwest	*Projection: Planar*
Distance from Site boundary: c.2.2km	*HFoV: 85 degrees*

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Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Ti le: *VIEWPOINT 9: FOOTPATH NE8 NORTHEAST OF KINGS CLIFFE*

Drawing Ref: *FIGURE 20*

Date: *JULY 2021*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: Northwest	*Projection: Planar HFoV: 35.6 degrees*
Distance from Site boundary: c.2.2km	*Image Size: 390 x 260mm*

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Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 9: FOOTPATH NE8 NORTHEAST OF KINGS CLIFFE - CONTEXT*

Drawing Ref: *FIGURE 21*

Date: *JULY 2021*

Technical Informa ion:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: Northwest	*Projection: Planar*
Distance from Site boundary: c. 2200m	*HFoV: 85 degrees*

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Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Ti le: *VIEWPOINT 10: FOOTPATH NE20 NORTHEAST OF KINGS CLIFFE*

Drawing Ref: *FIGURE 22*

Date: *JULY 2021*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: Northwest	*Projection: Planar HFoV: 35.6 degrees*
Distance from Site boundary: c.1.8km	*Image Size: 390 x 260mm*

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Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 10: FOOTPATH NE20 NORTHEAST OF KINGS CLIFFE - CONTEXT*

Drawing Ref: *FIGURE 23*

Date: *JULY 2021*

Technical Informa ion:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: Northwest	*Projection: Planar*
Distance from Site boundary: c.1.8km	*HFoV: 85 degrees*

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Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Ti le: *VIEWPOINT 11: FOOTPATH NE20 ON EDGE OF BEDFORD PURLIEUS WOODLAND*

Drawing Ref: *FIGURE 24*

Date: *JULY 2021*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: West	*Projection: Planar HFoV: 35.6 degrees*
Distance from Site boundary: 2.05km	*Image Size: 390 x 260mm*

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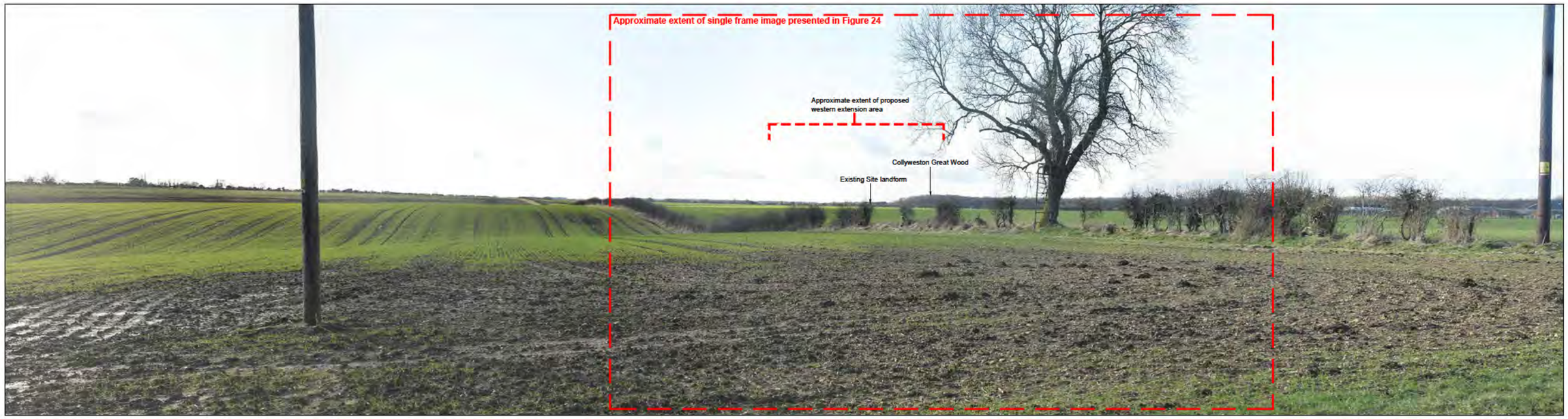

Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 11: FOOTPATH NE20 ON EDGE OF BEDFORD PURLIEUS WOODLAND - CONTEXT*

Drawing Ref: *FIGURE 25*

Date: *JULY 2021*

Technical Information:

Photograph Date: 17/07/2020	*Camera: Nikon D5300, cropped sensor*
Weather: Clear and bright	*Camera Lens: 35mm prime lens*
Direction of View: West	*Projection: Planar*
Distance from Site boundary: 2.05km	*HFoV: 85 degrees*

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Client: *AUGEAN SOUTH LTD*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

Site: *ENRMF, NORTHAMPTONSHIRE*

PINS project reference: *WS010005*

Drawing Ti le: *VIEWPOINT 12: JUNCTION BETWEEN FOOTPATHS MX15 AND MX18 AT NORTHERN END OF 'THE ASSARTS' WOODLAND*

Drawing Ref: *FIGURE 26*

Date: *JULY 2021*

Technical Information:

Photograph Date: 21/01/2021
Weather: Sunny spells & bright
Direction of View: East
Distance from Site boundary: c. 325m
Camera: Canon EOS 5D MkIV
Camera Lens: 50mm prime lens
Projection: Planar HFoV: 39.6 degrees
Image Size: 390 x 260mm

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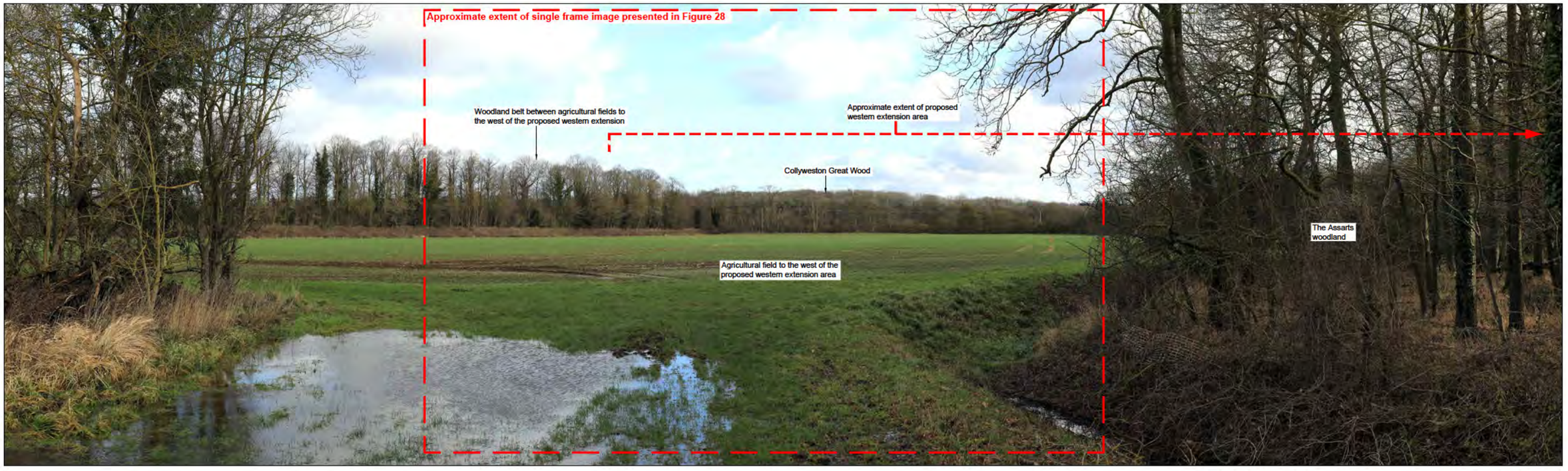

Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 12: JUNCTION BETWEEN FOOTPATHS MX15 AND MX18 AT NORTHERN END OF 'THE ASSARTS' WOODLAND - CONTEXT*

Drawing Ref: *FIGURE 27* Date: *JULY 2021*

Technical Information:

Photograph Date: 21/01/2021	*Camera: Canon EOS 5D MkIV*
Weather: Sunny spells & bright	*Camera Lens: 50mm prime lens*
Direction of View: East	*Projection: Planar*
Distance from Site boundary: c. 325m	*HFoV: 90 degrees*

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Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Ti le: *VIEWPOINT 13: GARDEN OF 'THE BARN' RESIDENTIAL PROPERTY AND B&B*

Drawing Ref: *FIGURE 28*

Date: *JULY 2021*

Technical Information:

Photograph Date: 22/06/2021	*Camera: Canon EOS 5D MkIV*
Weather: Sunny spells & bright	*Camera Lens: 50mm prime lens*
Direction of View: Northwest	*Projection: Planar HFoV: 39.6 degrees*
Distance from Site boundary: c. 730m	*Image Size: 390 x 260mm*

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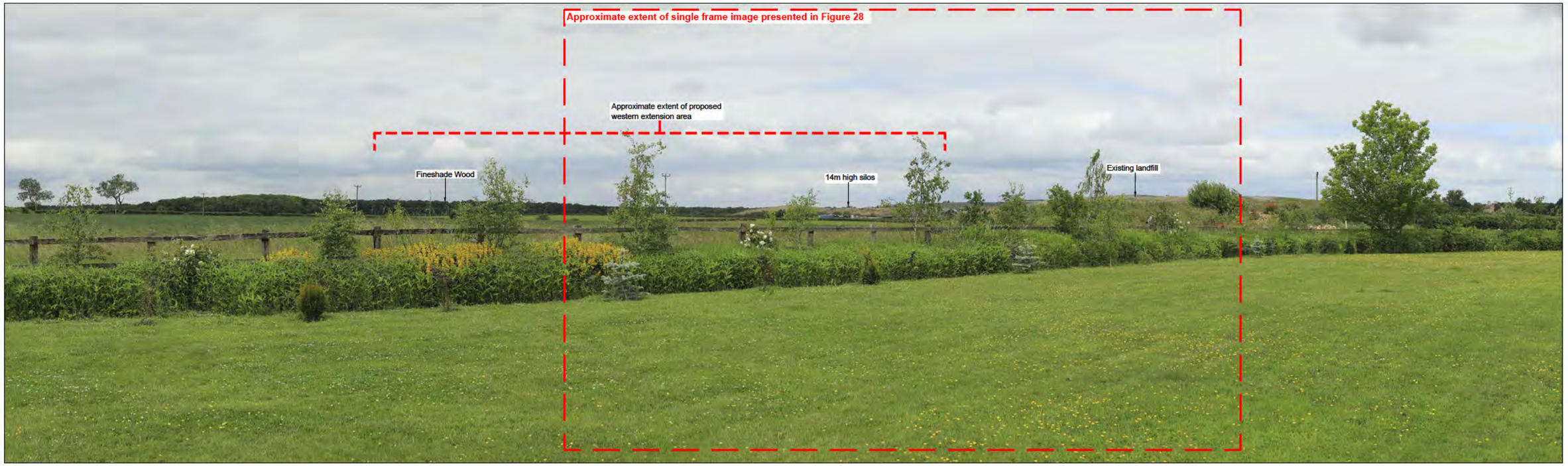

Client: *AUGEAN SOUTH LTD*

Site: *ENRMF, NORTHAMPTONSHIRE*

Project: *ENRMF PROPOSED WESTERN EXTENSION*

PINS project reference: *WS010005*

Drawing Title: *VIEWPOINT 13: GARDEN OF 'THE BARN' RESIDENTIAL PROPERTY AND B&B - CONTEXT*

Drawing Ref: *FIGURE 29*

Date: *JULY 2021*

Technical Information:

Photograph Date: 22/06/2021	*Camera: Canon EOS 5D MkIV*
Weather: Sunny spells & bright	*Camera Lens: 50mm prime lens*
Direction of View: Northwest	*Projection: Planar*
Distance from Site boundary: c. 730m	*HFoV: 90 degrees*

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Verified Views and Methodology

East Northants Resource Management Facility

July 2021

DB Landscape Consultancy

Overview

A verified photomontage is a visual representation of a proposed development that is as accurate as it is possible to be within the limits of the technology used and the available data. Although it is not possible to achieve 100% perfect accuracy due to minor errors in survey work, environmental variables and photographic distortion, the careful implementation of a best practise method will result in only a negligible error.

The photomontage images represent how the proposed development would be perceived from a number of locations surrounding the site. These locations were chosen as the result of a detailed consideration of sensitive viewpoints.

The methods described in this document are based on current best practise and follow recommendations from 'Guidelines for Landscape and Visual Impact Assessment 3rd edition' (GLVIA3), Landscape Institute and IEMA (2013), alongside the Landscape Institute technical guidance note, 'Visual Representation of Development Proposals, (LI 06/19)

The entities responsible for the preparation of the views that are set out in the following pages comprise:

Photography, production and checking of photomontages & Surveying
Andy Maw Design
Rose Cottage
Mill Lane
Wolverley
DY11 5TR

Methodology

Photography

During the field study, a photographic record was made to represent the full range of potential views towards the site from available viewpoints within the study area. These locations are mapped, the visual receptor types recorded and viewpoint context described. All photographs have been taken from publicly accessible locations; no private access was needed. The methodology ensures that the combination of camera and lens recreates as close as possible what can be seen by the human eye.

Equipment:
The aim of a verified photomontage is to illustrate what a proposed development may look like to a person standing at a specified photographic viewpoint. In order to create this effect, all photographs are taken with a camera and lens combination, resulting in a 'standard' focal length (equivalent to the cone of human vision). A standard focal length is usually considered to be in the range 45mm to 55mm on a traditional 35mm film camera. On digital cameras, where the image sensor is often smaller than the recorded image on traditional film cameras, the focal length of the lens used must compensate for the effective magnification resulting from the smaller sensor.

A Canon 5D Mark IV full frame sensor camera was used for all viewpoints in conjunction with a Canon 50mm prime lens (35mm format equivalent), which is within the 'standard' focal length range. The full frame sensor in the Canon 5D therefore, results in no magnification. To eliminate the parallax error that occurs when taking panoramic images, a sliding plate on the tripod head was employed allowing the camera to be moved back along the line of sight so that the nodal point of the lens was positioned directly over the axis of rotation.

Image capture: The camera was mounted on a tripod using a Nodal Ninja Panoramic tripod head at 1.6m above ground level to simulate the view at eye level.

The orientation of the camera was adjusted so that the optical axis and the horizontal axis were aligned with the horizon. This is the 'astronomical' horizon as set by a gravity governed bubble level.

Images were captured in the camera's maximum quality jpeg mode, with a RAW image processed as a backup. Camera settings were chosen carefully for each viewpoint; the camera was set to aperture priority mode, a small aperture of f/11 was used and the focus distance selected specifically to render all parts of the scene in focus whilst retaining image quality.

Panoramas were deemed essential to show the maximum extent of the proposed development and so frames were taken at 20-degree intervals to allow for overlap (discussed below).

Post Production: The panoramas were stitched together using PT Gui Pro specialist panorama creation software, with each photograph being cropped to take only the central portion of each image. These precautions minimise the small amount of optical distortion effect caused by the camera lens. Images were imported as jpeg files and minor tonal and colour adjustments were made which aim to replicate the scene as honestly as possible as it was perceived by the photographer at the time of capture. The stitched cylindrical panorama was then cropped to 90˚ for use as a baseline 'existing' view.

Survey

Precise surveying was essential to gain accurate information of the camera and control point positions. GPS readings were taken from the central tripod position that the camera was placed using a Spectra Precision SP60 GNSS Receiver, which achieved a 25mm degree of tolerance.

Control Points:
Control points are surveyed points/objects that can clearly be identified on the photograph. Since they are included in the 3D model, they can be visually matched with the corresponding points on the photograph.

Control points were identified within each photograph and marked for the survey team to take measurements. A minimum of three control points were chosen, and five where possible of fixed features such as lamp-posts, fences and sign posts. Occasionally if available, control points taken from another viewpoint were also used for even more accurate positioning of the 3D model within the photograph. Due to the rural nature of the viewpoint locations survey poles were used as temporary control points. These control points were then created within the 3D program in the precise positions.

Control points were taken using the aforementioned Spectra Precision GPS device.

All survey measurements were supplied in CAD format for use in the 3D model.

Client	**Augean**
Site	**East Northants Resource Management Facility**
Project	**Proposed Western Extension**
Drawing Title	Photomontage Methodology
Drawing No:	

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3D Model

3D models were created and supplied which were then aligned within 3DS Max using the site masterplan to determine the X and Y position. Finished floor levels were then used to accurately position the 3D model vertically AOD (above ordnance datum).

Camera Matching and Rendering

The process of camera matching (i.e. correctly assembling the perspective views within the 3D program to match those photographs taken on site) needs meticulous attention to detail. The details of the Ordnance Survey co-ordinates for each viewpoint, and the angle of each view were also checked as part of the verification process.

The survey information was added into the 3D model and aligned precisely with the OS coordinate system. '3D' Cameras (or perspective views) were then created within 3DS Max at each of the viewpoint locations and raised by 1.6m to match the position at eye-level that was achieved during photography.

3D control points were created to match those visible in each of the panoramas and positioned according to the survey data. Any atmospheric conditions experienced at the time of taking the photograph were added to the model. For example, haze or reflected sunlight.

Using the '3D' camera each 90˚ cylindrical panorama was used as a backdrop and rendered using a VRay camera option that mirrors the distortion exhibited in a cylindrical panorama. Adjustments were then made to the camera angle to align the 3D control points with the real-life equivalents shown in each panorama, thus creating a 'photo-matched' viewpoint with the model aligned at the correct scale and angle.

A daylight system was then created within 3DS Max using the geographic location and time zone, then setting the correct time that the viewpoint was captured. This allows for the accurate creation of shadows as at the time of taking the photograph. For viewpoints taken in full cloud, a High Dynamic Range Image (HDRI) was mapped as a 'dome light' within 3DS Max and used as the main light source. An HDRI is an image format that contains a large amount of shadow and highlight information and can be used to illuminate a 3D scene, providing a good representation of conditions on a cloudy day.

Post production

Care was taken in Adobe Photoshop to mask out elements of the 3D model that may be obscured by foreground objects to produce the final visualisations.

The final visualisations were then taken back into PT Gui Pro and converted to 53.5˚ rectilinear (or planar) panoramas. These panoramas were aligned according to the latest LI and SNH guidance and presented at A3 and A2 page width.

Caveats

i. A photomontage can never be considered as a 100% accurate representation of what would be seen due to the large number of variables affecting the images from the photography to the limitations of the 3D programs. They should be used as an aid to the decision making process.

References

All photomontages were created in accordance with recommendations given in the following publications:

Landscape Institute and IEMA (2013) Guidelines for Landscape and Visual Impact Assessment 3rd edition (GLVIA3).

Landscape Institute:
Note 06/19 - Visual Representation of Development Proposals

Note 07/19 - Visual Representation of Development Proposals: Glossary and Abbreviations

Note 08/19 - Visual Representation of Development Proposals: Camera Auto Settings

Scottish Natural Heritage (2017) Visual representation of windfarms: good practice guidance. ('SNH 2017')

Client **Augean**
Site **East Northants Resource Management Facility**
Project **Proposed Western Extension**
Drawing Title Photomontage Methodology
Drawing No:

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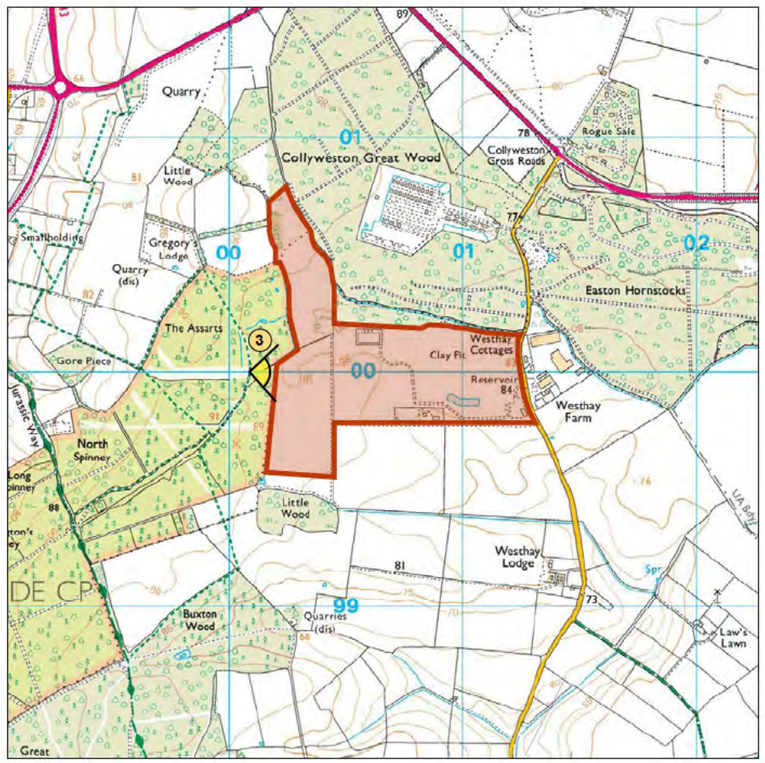
Existing Contextual Photograph

Extent of 53.5° planar panorama



Viewpoint Location

KEY

SITE BOUNDARY

LOCATION AND DIRECTION OF VIEW FOR REPRESENTATIVE VIEWPOINTS

Notes:
90° cylindrical projection panorama showing the existing view. For context purposes only.

Distance to site:	105m	Date & time of photo(s):	22/06/2021 11:16
Bearing to site centre:	089°	Camera:	Canon 5D MkIV
Viewpoint grid reference:	500091.583 E; 300004.207 N	Lens, FL, max aperture:	Canon, 50mm, f/1.2L
Viewpoint ground height:	87.68 m	LI Image Type:	Type 1
Camera Height (AGL)	1.6m		
Horizontal Field of View:	90° (Cylindrical Projection)		
Principal Distance:	254mm		

File Ref:	2106_008.006_ENORTH028_FIGURE30
Rev:	-
Scale:	-
Drawn:	AM
Checked:	DB
Date:	JULY 2021
Sheet Size:	A3 Landscape

Client	**Augean**
Site	**East Northants Resource Management Facility**
Project	**Proposed Western Extension**
Drawing Title	Photomontage Viewpoint 3 - Context
Drawing No:	FIGURE 30

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Existing Baseline Photograph

Photomontage - Proposed Development at Operational Stage

View flat at a comfortable arms length

Distance to site:	105m
Bearing to site centre:	089˚
Viewpoint grid reference:	500091.583 E; 300004.207 N
Viewpoint ground height:	87.68 m
Camera Height (AGL)	1.6m
Horizontal Field of View:	53.5˚ (Planar Projection)
Principal Distance:	616mm

Date & time of photo(s):	22/06/2021 11:16
Camera:	Canon 5D MkIV
Lens, FL, max aperture:	Canon, 50mm, f/1.2L
LI Image Type:	Type 4

File Ref:	2106_008 006_ENORTH028_ FIGURE31
Rev:	-
Scale:	-
Drawn:	AM
Checked:	DB
Date:	JULY 2021
Sheet Size:	A2 Landscape

Client	**Augean**
Site	**East Northants Resource Management Facility**
Project	**Proposed Western Extension**
Drawing Ti le	Photomontage Viewpoint 3 - Photomontage at operational stage
Drawing No:	FIGURE 31

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Distance to site:	105m
Bearing to site centre:	089˚
Viewpoint grid reference:	500091.583 E; 300004.207 N
Viewpoint ground height:	87.68 m
Camera Height (AGL)	1.6m
Horizontal Field of View:	53.5˚ (Planar Projection)
Principal Distance:	616mm

Date & time of photo(s):	22/06/2021 11:16
Camera:	Canon 5D MkIV
Lens, FL, max aperture:	Canon, 50mm, f/1.2L
LI Image Type:	Type 4

File Ref:	2106_008 006_ENORTH028_ FIGURE32
Rev:	-
Scale:	-
Drawn:	AM
Checked:	DB
Date:	JULY 2021
Sheet Size:	A2 Landscape

Client	**Augean**
Site	**East Northants Resource Management Facility**
Project	**Proposed Western Extension**
Drawing Ti le	Photomontage Viewpoint 3 - Photomontage at final restoration
Drawing No:	FIGURE 32

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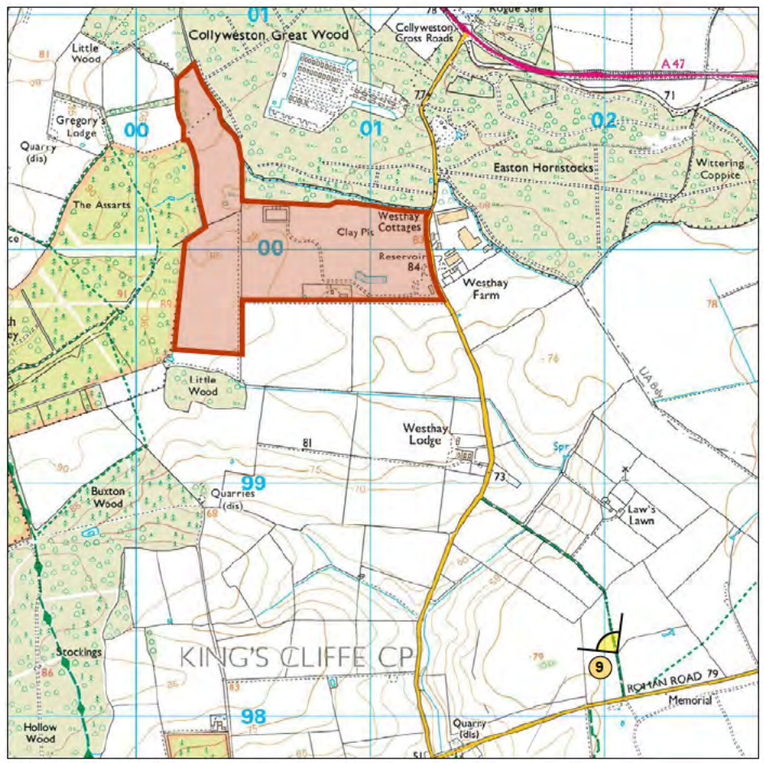
Existing Contextual Photograph

Extent of 53.5° planar panorama



Viewpoint Location

KEY

SITE BOUNDARY

LOCATION AND DIRECTION OF VIEW FOR REPRESENTATIVE VIEWPOINTS

Notes:
90° cylindrical projection panorama showing the existing view. For context purposes only.

Distance to site:	1.7km	Date & time of photo(s):	22/06/2021 10:14
Bearing to site centre:	321°	Camera:	Canon 5D MkIV
Viewpoint grid reference:	502056.170 E; 298269.659 N	Lens, FL, max aperture:	Canon, 50mm, f/1.2L
Viewpoint ground height:	78.82 m	LI Image Type:	Type 1
Camera Height (AGL)	1.6m		
Horizontal Field of View:	90° (Cylindrical Projection)		
Principal Distance:	254mm		

File Ref:	2106_008.006_ENORTH028_FIGURE33
Rev:	-
Scale:	-
Drawn:	AM
Checked:	DB
Date:	JULY 2021
Sheet Size:	A3 Landscape

Client	**Augean**
Site	**East Northants Resource Management Facility**
Project	**Proposed Western Extension**
Drawing Title	Photomontage Viewpoint 9 - Context
Drawing No:	FIGURE 33

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BERKSHIRE
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M: 07736 083 383
david@dblc.co.uk
www.dblc.co.uk

Distance to site:	1.7km	Date & time of photo(s):	22/06/2021 10:14
Bearing to site centre:	321˚	Camera:	Canon 5D MkIV
Viewpoint grid reference:	502056.170 E; 298269.659 N	Lens, FL, max aperture:	Canon, 50mm, f/1.2L
Viewpoint ground height:	78.82 m	LI Image Type:	Type 4
Camera Height (AGL)	1.6m		
Horizontal Field of View:	53.5˚ (Planar Projection)		
Principal Distance:	616mm		

File Ref: 2106_008 006_ENORTH028_ FIGURE34
Rev: -
Scale: -
Drawn: AM
Checked: DB
Date: JULY 2021
Sheet Size: A2 Landscape

Client: **Augean**
Site: **East Northants Resource Management Facility**
Project: **Proposed Western Extension**
Drawing Title: Photomontage Viewpoint 9 - Photomontage at operational stage
Drawing No: FIGURE 34

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Distance to site:	1.7km
Bearing to site centre:	321˚
Viewpoint grid reference:	502056.170 E; 298269.659 N
Viewpoint ground height:	78.82 m
Camera Height (AGL)	1.6m
Horizontal Field of View:	53.5˚ (Planar Projection)
Principal Distance:	616mm

Date & time of photo(s):	22/06/2021 10:14
Camera:	Canon 5D MkIV
Lens, FL, max aperture:	Canon, 50mm, f/1.2L
LI Image Type:	Type 4

File Ref:	2106_008 006_ENORTH028_ FIGURE35
Rev:	-
Scale:	-
Drawn:	AM
Checked:	DB
Date:	JULY 2021
Sheet Size:	A2 Landscape

Client	**Augean**
Site	**East Northants Resource Management Facility**
Project	**Proposed Western Extension**
Drawing Ti le	Photomontage Viewpoint 9 - Photomontage at final restoration
Drawing No:	FIGURE 35

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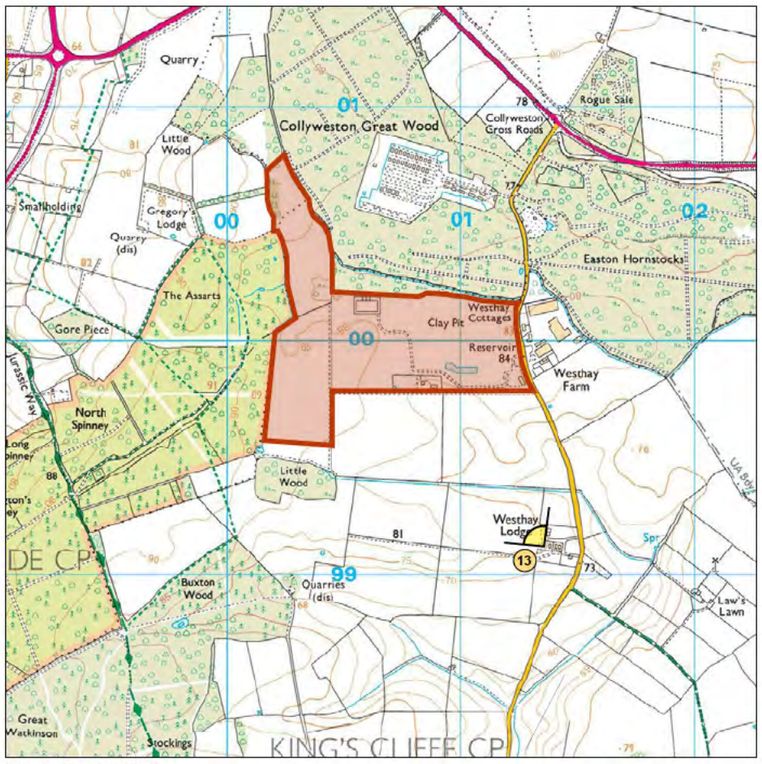
Existing Contextual Photograph

Extent of 53.5° planar panorama



Viewpoint Location

KEY

SITE BOUNDARY

LOCATION AND DIRECTION OF VIEW FOR REPRESENTATIVE VIEWPOINTS

Notes:
90° cylindrical projection panorama showing the existing view. For context purposes only.

Distance to site:	700m	Date & time of photo(s):	22/06/2021 12:17
Bearing to site centre:	308°	Camera:	Canon 5D MkIV
Viewpoint grid reference:	501360.175 E; 299090.702 N	Lens, FL, max aperture:	Canon, 50mm, f/1.2L
Viewpoint ground height:	75.09 m	LI Image Type:	Type 1
Camera Height (AGL)	1.6m		
Horizontal Field of View:	90° (Cylindrical Projection)		
Principal Distance:	254mm		

File Ref:	2106_008.006_ENORTH028_FIGURE36
Rev:	-
Scale:	-
Drawn:	AM
Checked:	DB
Date:	JULY 2021
Sheet Size:	A3 Landscape

Client	**Augean**
Site	**East Northants Resource Management Facility**
Project	**Proposed Western Extension**
Drawing Title	Photomontage Viewpoint 13 - Context
Drawing No:	FIGURE 36

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Distance to site:	700m
Bearing to site centre:	308˚
Viewpoint grid reference:	501360.175 E; 299090.702 N
Viewpoint ground height:	75.09 m
Camera Height (AGL)	1.6m
Horizontal Field of View:	53.5˚ (Planar Projection)
Principal Distance:	616mm

Date & time of photo(s):	22/06/2021 12:17
Camera:	Canon 5D MkIV
Lens, FL, max aperture:	Canon, 50mm, f/1.2L
LI Image Type:	Type 4

File Ref:	2106_008 006_ENORTH028_ FIGURE37
Rev:	-
Scale:	-
Drawn:	AM
Checked:	DB
Date:	JULY 2021
Sheet Size:	A2 Landscape

Client	**Augean**
Site	**East Northants Resource Management Facility**
Project	**Proposed Western Extension**
Drawing Ti le	Photomontage Viewpoint 13 - Photomontage at operational stage
Drawing No:	FIGURE 37

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Distance to site:	700m
Bearing to site centre:	308˚
Viewpoint grid reference:	501360.175 E; 299090.702 N
Viewpoint ground height:	75.09 m
Camera Height (AGL)	1.6m
Horizontal Field of View:	53.5˚ (Planar Projection)
Principal Distance:	616mm

Date & time of photo(s):	22/06/2021 12:17
Camera:	Canon 5D MkIV
Lens, FL, max aperture:	Canon, 50mm, f/1.2L
LI Image Type:	Type 4

File Ref:	2106_008 006_ENORTH028_ FIGURE38
Rev:	-
Scale:	-
Drawn:	AM
Checked:	DB
Date:	JULY 2021
Sheet Size:	A2 Landscape

Client	**Augean**
Site	**East Northants Resource Management Facility**
Project	**Proposed Western Extension**
Drawing Ti le	Photomontage Viewpoint 13 - Photomontage at final restoration
Drawing No:	FIGURE 38

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