



## UNIVERSAL DESTINATIONS & EXPERIENCES UK PROJECT

Former Kempston Hardwick Brickworks  
and adjoining land, Bedford

### Environmental Statement Volume 1

## Chapter 7 - Landscape and Visual Impact Assessment

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## 7 LANDSCAPE AND VISUAL IMPACT ASSESSMENT

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### 7.1. INTRODUCTION

7.1.1. This chapter has been prepared in support of the planning proposal for the Proposed Development as described in **Chapter 2: Description of the Proposed Development (Volume 1)**. This reports the outcome of the assessment of likely significant effects arising from the Proposed Development in relation to landscape and visual during construction and operation.

7.1.2. This chapter reports the outcome of the assessment of likely impacts and likely significant effects arising from the Proposed Development upon landscape and visual resources within the Site and study areas as identified in Section 7.3.

7.1.3. The assessment considers two distinct but closely related areas: landscape character and visual amenity.

#### LANDSCAPE

7.1.4. The landscape assessment considers the effects of change and development on landscape as a resource.

7.1.5. The character of the landscape derives from a combination of physical factors, natural processes, and human intervention. Landscape effects are a combination of the physical changes to the landscape and how these will be perceived.

7.1.6. The landscape assessment considers the effects of the Proposed Development on the landscape as a whole, effects on significant individual elements of the landscape, and effects on characteristic combinations or patterns of elements and how these are seen to affect its character and quality.

#### VISUAL

7.1.7. The visual assessment is concerned with the views that are available to people who may be affected by the Proposed Development, and their perception of and responses to changes in these views, based on presumed levels of interest in and sensitivities to their visual environment.

7.1.8. Visual effects arise from changes in the composition and character of views available in the area affected. The assessment considers the likely change that would be experienced, including the effects both on specific views and on general visual amenity – the pleasantness of the view or outlook – that the people potentially affected enjoy.

7.1.9. For the purposes of assessment, whilst it is the people living, working, passing through or enjoying recreational activities in the area who actually see the views and derive the visual amenity, it is their general locations that are mapped and described as the visual receptors.

7.1.10. In some instances, it may be appropriate to consider private viewpoints, mainly from residential properties. As it is impractical to visit all properties that may be affected, professional judgement must be used so that an assessment can be made about the likely views based on the views from the nearest public vantage point, previous experience of undertaking similar assessments and available information from both desktop studies and Site information during the field assessment.

## SUPPORTING DOCUMENTATION

7.1.11. This chapter is intended to be read in conjunction with the following supporting figures and technical appendices:

- **Figure 7.1: Zones of Theoretical Visibility and Viewpoint Locations (Volume 2);**
- **Figure 7.1a: Viewpoint Locations (Volume 2);**
- **Figure 7.2: Site Context (Volume 2);**
- **Figure 7.3: Topography (Volume 2);**
- **Figure 7.4: Landscape Designations (Volume 2);**
- **Figure 7.5: National Landscape Character Areas (Volume 2);**
- **Figure 7.6: Local Landscape Character Areas (Volume 2);**
- **Figure 7.7: Access and Public Rights of Way (Volume 2);**
- **Figure 7.8: Viewpoint Photography (Volume 2);**
- **Figure 7.9: Landscape Mitigation Plan (Volume 2);**
- **Appendix 2.3: Outline Construction and Environmental Management Plan (Volume 3);**
- **Appendix 3.1: Legislation, Policy and Guidance for All ES Technical Topics (Volume 3);**
- **Appendix 3.2: Significance Criteria for All ES Technical Topics (Volume 3);**
- **Appendix 6.5: Outline Landscape and Ecology Management Plan (Volume 3);**
- **Appendix 7.1: Technical Methodology: Photography, 3D Modelling, Accurate Visual Representations (Volume 3);**
- **Appendix 7.2: LVIA Engagement (Volume 3);**
- **Appendix 7.3: LVIA Methodology (Volume 3);**
- **Appendix 7.4: Landscape Character Areas: Key Characteristics (Volume 3);**
- **Appendix 7.5: Landscape Character: Assessment of Effects (Volume 3);**
- **Appendix 7.6: Detailed Visual Impact Assessment (Volume 3);**
- **Appendix 7.7: Landscape Visualisations (Volume 3); and**
- **Appendix C: Tree Removal and Protection Plan of the Arboricultural Impact Assessment Report (Document Reference 6.11.0).**

## LEGISLATIVE FRAMEWORK, POLICY AND GUIDANCE

7.1.12. The relevant legislation, policy and guidance for the assessment of landscape and visual effects associated with the Proposed Development are detailed in **Appendix 3.1: Legislation, Policy and Guidance for all ES Technical Topics (Volume 3).**

## 7.2. ASSUMPTIONS USED TO INFORM ASSESSMENT

7.2.1. The assessment presented in this chapter has been based on the Proposed Development as described in **Chapter 2: Description of the Proposed Development (Volume 1)**. This chapter has also used the following assumptions to build on the information in **Chapter 2: Description of the Proposed Development (Volume 1)** to support undertaking an assessment of a cautious worst case (that provides a robust assessment of likely significant effects):

- Existing vegetation (comprising hedgerows, individual trees, scrub and woodland) within the Site, but excluding parts of the perimeter planting, is assumed to be removed, refer to **Appendix C: Tree Removal and Protection Plan** of the **Arboricultural Impact Assessment Report (Document Reference 6.11.0)**.
- Maximum proposed structure/building heights Above Ordnance Datum (AOD) have been established for the various parts of the Site, these are listed in **Appendix 7.1: Technical Methodology: Photography, 3D Modelling, Accurate Visual Representations (Volume 3)** and shown on the wirelines (refer to **Appendix 7.7 Landscape Visualisations (Volume 3)**);
- The maximum height of buildings/structures within the relevant Zones are identified within **Chapter 2: Description of the Proposed Development (Volume 1)**. The specific locations of the tallest proposed structures, and their specific locations within the various zones are not defined at this stage. Accordingly, the visuals of the Proposed Development included in **Figure 7.8: Viewpoint Photography (Volume 2)** assume a cautious worst case and apply the maximum heights of any structure within each zone to the whole extents of that Zone. However, as described in the **Design Standards (Document 6.3.0)**, the tallest structures within the Core Zone (up to 115m Above Ground Level (AGL)), Lake and West Gateway Zone (up to 75m Above Ground Level (AGL)) would only occupy a limited portion of the overall area, and within the Lake and West Gateway Zone only 15%, therefore creating a more varied skyline. This variation within the skyline has been considered when assessing the likely visual extent of the Proposed Development and subsequent impacts on visual receptors and the local landscape character, whose horizon is occasionally punctuated by tall and narrow structures such as those found to the south of the Site (Marston Vale Wind Turbine and the stacks associated with the Rookery South Energy Recovery Facility (ERF));
- Vegetation along the existing highways and railway lines, adjacent to the Marston Leys Industrial Estate within the study area will be retained consistent with the **Appendix C: Tree Removal and Protection Plan** of the **Arboricultural Impact Assessment Report (Document Reference 6.11.0)**; and
- Proposed planting along the perimeter to replace vegetation removed for construction and to reinforce existing perimeter planting that is retained. This planting will extend along a minimum of 60% of the perimeter. It will comprise a combination of whips and transplants with targeted planting of feathered nursery stock. Large planting stock may be used in some locations which would benefit screening and integration. However, the extent and location of this is unknown and has therefore been excluded from the assessment.

## 7.3. ENGAGEMENT, SCOPE AND STUDY AREA

### ENGAGEMENT

- 7.3.1. **Table 7-1** provides a summary of the engagement activities undertaken in support of the preparation of this assessment. All information shared and received during engagement is recorded in **Appendix 7.2: LVIA Engagement (Volume 3)**. It should be noted that the viewpoint numbers have been re-ordered between the engagement and the preparation of this chapter, to make the viewpoint numbers easier to identify on the supporting figures. Therefore, both the new viewpoint numbers and former viewpoint numbers, which were engaged on, have been listed in the table below.



**Table 7-1 - Summary of engagement undertaken**

Body/Organisation	Individual/Stat Body/Organisation	Meeting Dates and Other Forms of Engagement	Summary of Outcome of Discussions
Bedford Borough Council (Bedford BC)	Bedford Town Deal Manager, Bedford BC Priority Project Manager, Bedford BC LDA Design - providing support for landscape and visual matters for Bedford BC Assistant Director for Development and Infrastructure, Central Bedfordshire Council (CBC)	Meeting attended on 21 March 2024 to confirm approach to landscape and visual impact assessment (LVIA). An initial list of day-time and night-time viewpoints and accompanying Zone of Theoretical Visibility (ZTV) plan was shared for discussion.	Twelve additional viewpoints were suggested, as listed in <b>Appendix 7.2: LVIA Engagement (Volume 3)</b> . Whilst the majority of these additional viewpoints have been included within the assessment, receptors for additional viewpoints 1, 2, 11 and 12 were already covered by existing representative viewpoints (RVPs) or minor modifications to proposed viewpoints, so these have been excluded from the scope. In light of the comments received, RVP 23 has been scoped out (proposed viewpoints 5 and 23 combined to a single location: RVP 38).  Feedback was also received regarding viewpoints for which visualisations of the Proposed Development were sought.
CBC	Assistant Director for Development and Infrastructure, CBC		Feedback was received on 30 April 2024.  RVP 16 (formerly RVP 13) Sollars way/Bedford Road. Visualisation and night-time photography requested. Close to mid-range night-time views have already been assessed from this direction (southeast of the Site), and a wireline visual has been prepared for RVP 16.  SVP (specific viewpoint) 17 (formerly SVP 18) Public Right of Way (PRoW) at Houghton House. Night-time photography requested. This has been scoped out of the assessment, as receptors are considered unlikely to be visiting this location at night.  RVP 30 (formerly RVP 19) Moat Farm/Bridleway 24. Night-time photography requested.

Body/Organisation	Individual/Stat Body/Organisation	Meeting Dates and Other Forms of Engagement	Summary of Outcome of Discussions
			A visualisation was also requested from a new viewpoint near Houghton Conquest, however, the receptors at this location are already represented by RVP 15 and 16, and a visualisation has been prepared for RVP 16.

## SCOPE OF THE ASSESSMENT

- 7.3.2. As stated in **Chapter 1: Introduction and Site Description (Volume 1)**, the assessment of landscape and visual effects has been undertaken in line with best practice guidance, engagement and using professional judgement based on previous experience of undertaking similar assessments and using available information from desktop studies and Site survey information.
- 7.3.3. The assessment has considered the potential for likely significant effects of the Proposed Development on landscape and visual resource during both the Construction and Operational Phases. This includes Year 1, once construction is complete, and Year 15, once planting has matured. Additionally, it considers the potential for construction associated with the full buildout to be underway ensuring that a cautious worst case scenario is assessed in accordance with industry best practice. This LVIA chapter has been prepared in support of the planning proposal for the Proposed Development as described in **Chapter 2: Description of the Proposed Development (Volume 1)**.
- 7.3.4. The assessment of operational effects commences from 2031 ( Primary Phase Opening Year ) when the peak period of construction has concluded. The assessment of effects has considered the operational effects of these elements in Year 1 following construction, and Year 15 to consider the effects that mitigation in the form of planting may have on landscape and visual receptors. Where relevant, reference to the construction of the emerging Entertainment Resort Complex as part of the full build out has been identified.
- 7.3.5. The assessment has considered the construction and operational effects during winter, as a cautious worst case scenario i.e. in the absence of foliage within the landscape. An assessment of effects in the summer months is not predicted to substantially differ to the winter survey, due to the majority of effects being in relation to the relative height of associated buildings/structures visible above intervening vegetation within the landscape.
- 7.3.6. The elements shown in **Table 7-2** are considered to have the potential to give rise to likely significant effects during the Construction Phase and/or Operational Phase of the Proposed Development and have therefore been considered within this assessment.

**Table 7-2 - Elements scoped into the assessment**

Element Scoped in	Construction Phase	Operational Phase
Local Landscape Character Areas (LCAs) 5D, 5E, 1A, 3B, 6B.	✓	✓
Existing landscape features within the Site.	✓	✓
Visual receptors at Manor Road, Kempston Hardwick, Wootton Broadmead, Wixams and Marston Moretaine.	✓	✓
Visual receptors on the local PRoW network within the study area.	✓	✓

Element Scoped in	Construction Phase	Operational Phase
Visual receptors along the Millennium Circuit and John Bunyan National Trail (at points east, west, and south of the Site).	✓	✓
Visual receptors at Marston Vale Millennium Country Park.	✓	✓
Visual receptors from rural roads at Houghton Conquest, Kempston Hardwick (including users of the Kempston Hardwick Station) and Maulden.	✓	✓
Night-time impacts to residential receptors at Stewartby, Wootton and Wixams, and landscape setting of heritage receptors along Greensand Ridge.	✓	✓
Visual receptors along the A421, where it runs adjacent to the Site.	✓	✓

- 7.3.7. The elements shown in **Table 7-3** are not considered to give rise to likely significant effects as a result of the Proposed Development and have therefore been scoped out of this assessment.

**Table 7-3 - Elements scoped out of the assessment**

Element Scoped out	Justification
National Character Areas (NCAs)	In accordance with Paragraph 5.14 of <i>Guidelines for Landscape and Visual Impact Assessment, Third Edition (Ref. 7.1)</i> , a summary of the key NCA characteristics is included for context but the NCAs are not carried forward for assessment as they are considered too spatially extensive in scale for the purpose of this LVIA.
LCAs 1D, 2A, 2B, 4A	These LCAs have little or no visible connection to the Proposed Development due to existing development, areas of screening and routes of the existing transport corridors, therefore significant effects on these receptors are unlikely.
Visual receptors along main roads and other transport networks generally (excluding users of the A421 where it runs around the Site, and users of rural roads)	For the purposes of proportionality and to make sure the effects that are significant are the key focus of this assessment, these receptors of typically low sensitivity and which are less susceptible to change due to speed of travel, are scoped out on the basis that significant effects are highly unlikely.
Visual receptors from business parks and places of work	For the purposes of proportionality and to make sure the effects that are significant are the key focus of this assessment, these receptors of typically lower sensitivity and which are less susceptible to change due to the focus of views being on the activity as opposed to the views, are scoped out on the basis that significant effects are highly unlikely.

## EXTENT OF THE STUDY AREA

- 7.3.8. During initial desktop studies, a ZTV was produced based on the tallest anticipated feature of the Proposed Development. Based on that study and professional judgement, whilst the visibility of the tallest elements would extend over a considerable distance, significant effects beyond 10km distance from the Proposed Development boundary will not arise. A 10km study area for both landscape and visual elements has therefore been used for this assessment to ensure proportionality. The ZTV and study area are illustrated in **Figure 7.1: Zones of Theoretical Visibility and Viewpoint Locations (Volume 2)** which demonstrates that to the west, south and east, the extent of views is limited by landform. To the north and northeast, the ZTV is potentially more extensive due to the flatter landform, however the built form and vegetation within Bedford would substantially reduce the extent of this, reducing the potential for significant effects.

## 7.4. METHODOLOGY

### METHOD OF BASELINE DATA COLLATION

#### Desk Study

- 7.4.1. Information on the existing ('baseline') landscape resource within the study area has been collected through a desktop study incorporating reference to Local Plans, Ordnance Survey (OS) maps and ZTV mapping. In addition, a review of relevant literature published by the statutory bodies and the relevant Local Planning Authority (LPA) has been undertaken. Information sources comprise:
- Natural England's NCA profiles (**Ref. 7.2**)
    - NCA 88: Bedfordshire and Cambridgeshire Claylands;
    - NCA 90: Bedfordshire Greensand Ridge;
  - Central Bedfordshire Landscape Character Assessment (**Ref. 7.3**);
  - Bedford Borough Landscape Character Assessment (**Ref. 7.4**);
  - Bedford BC's GIS system (**Ref. 7.5**);
  - Council for the Protection of Rural England Tranquillity mapping (**Ref. 7.6**);
  - Department for Environment, Food and Rural Affairs (Defra's) MAGIC Database (<https://www.magic.gov.uk>) (**Ref. 7.7**);
  - Google Streetview/publicly available aerial photography;
  - OS Maps at 1:50,000, and 1:25,000 scales;
  - Aerial photographs of the Site and the Landscape and Visual study areas (as defined below), via Google Earth ([https://www.google.co.uk/intl/en\\_uk/earth](https://www.google.co.uk/intl/en_uk/earth));
  - Planning Policies, as listed in **Appendix 3.1: Legislation, Policy and Guidance for all ES Technical Topics (Volume 3)**;
  - Natural England Datasets; and
  - OS terrain 5 data.

## Site Visit and Surveys

- 7.4.2. A Site visit was carried out by a Chartered Landscape Architect between 13 March 2024 to 15 March 2024. The purpose was to review the ZTV in the field, confirm the appropriateness of the initial list of viewpoints, identify any additional viewpoint locations, and gain a general understanding of the landscape character and visual amenity within the study area. Weather conditions at the time were overcast, however, visibility was good. Surveys and photography were undertaken in early spring when hedgerows and shrubs were just coming into leaf, but larger trees were typically still missing leaf cover. Surveys and supporting photography were therefore undertaken when there was an absence of foliage on trees, which is typically considered to be a cautious worst case scenario. The assessment of landscape and visual effects reported in this chapter therefore represents the cautious worst case scenario, and the findings and conclusions of the LVIA are considered to be robust.
- 7.4.3. All viewpoint photography was undertaken between 05 April 2024 to 08 April 2024, inclusive, when the prevailing weather conditions were a combination of overcast and sunny, and visibility was clear. The approach used to obtain the viewpoint photography is described in **Appendix 7.1: Technical Methodology: Photography, 3D Modelling, Accurate Visual Representations (Volume 3)**.
- 7.4.4. A further Site visit was undertaken on the 08 May 2024 to consider the additional viewpoints as suggested by CBC.
- 7.4.5. Night-time site visits were subsequently carried out to viewpoints representative of residential receptors to determine baseline conditions and support the assessments of night-time effects.

## ASSESSMENT METHODOLOGY

- 7.4.6. The methodology for this LVIA has been produced in accordance with best practice, by suitably qualified Landscape Architects that are Chartered Members of the Landscape Institute (CMLI).
- 7.4.7. The assessment of likely significant effects has taken into account the Primary Phase of the Construction (including Site preparation and earthworks) and Operational Phases of the Proposed Development. The significance level attributed to each landscape/visual effect has been assessed based on the sensitivity of the resource/receptor and magnitude of change the Proposed Development would have on these. The criteria used to determine landscape and visual sensitivity, the expected Magnitude of Change (impact), and Significance of Effect are outlined in **Appendix 7.3: LVIA Methodology (Volume 3)**. Effects classified as **Moderate or above** are considered to be **Significant** and effects classified as **Slight or below** are considered to be **Not Significant**.
- 7.4.8. Whilst these criteria have been used as a basis for decisions, it should be noted that an appropriate level of professional judgement and common sense has been exercised. This ensures that reasonable and proportional, largely qualitative decisions are made throughout. These decisions are based on previous experience of undertaking similar assessments and referring to desktop information and information from site survey data.

## 7.5. BASELINE CONDITIONS

### LANDSCAPE ELEMENTS WITHIN AND ADJOINING THE SITE

- 7.5.1. The Site occupies 268 hectares of land located to the south of the town of Kempston (which forms part of the wider Bedford urban area) and to the east of the A421 road and Marsh Leys Business Park (refer to **Figure 7.2: Site Context (Volume 2)**).

- 7.5.2. The topography of the Site is influenced by its location in the basin of the River Great Ouse, with an elevation around 30 to 35m AOD, and gently rising towards the south of the Site. Former clay pits (most of which are flooded) within and immediately adjacent to the Site form some extensive bodies of water to the north of the Site. Elstow Brook and an unnamed stream flow south to north across the southern part of the Site.
- 7.5.3. Manor Road crosses the Site and broadly runs east to west linking the B530 Ampthill Road in the east and the Bedford/Woburn Road (which joins the A421) to the west. Manor Cottages and more recent detached dwellings lie along Manor Road with industrial development comprising cement mixing operation, car auctions and car breaking operations present to the south. The dual carriageway that forms the A421 is a strong linear feature to the west and forms the most westerly boundary to the Site.
- 7.5.4. To the north of Manor Road are linear blocks of woodland surrounding the large distribution warehouses in the Marsh Leys Industrial Estate which form the northwestern boundary to the Site. To the east of the industrial estate, there is a mosaic of woodland, scrub and larger areas of open water formed by the flooded clay pits. Immediately adjacent to Manor Road and the railway line are the extensive remnants of a former industrial site, the only built form being a single red brick building and areas of hardstanding which are slowly being colonised by scrub. There are linear belts of trees close to the eastern boundary of the Site along the B530 Ampthill Road and sizeable areas of vegetation around the flooded clay pits, some which screens in part a further cement mixing operation immediately west of Ampthill Road.
- 7.5.5. To the south of Manor Road, there is a belt of trees along the south side of the road, and south and west of Kempston Court and the British Car Auctions Bedford site, the cement mixing operations and car breaking operations. The southern portion of the Site is characterised by agricultural use comprising small to large-sized fields, scattered pockets of woodland and field boundary hedgerows. More substantial woodland exists on the eastern edge of the Site and forms a strong landscape feature, east of which is open water and wet woodland to the north of Stewartby.
- 7.5.6. PRoWs which cross the Site are identified in **Figure 7.2: Site Context (Volume 2)** and **Figure 7.7: Access and Public Rights of Way (Volume 2)**, and include:
- Footpath 1 which connects Bedford Road to Manor Road near the junction with the B530 in Kempston Hardwick;
  - Footpath 2 which runs north-south to connect Footpath 1 to Broadmead Road and Stewartby; and
  - Footpaths A1 and 8 are located to the northern edge of the Site, linking Chantry Road (within the Wolesey Road Industrial Estate to the north of the A421) to the B530 Ampthill Road at the northern end of the Site.

## LANDSCAPE ELEMENTS AND FEATURES (WIDER STUDY AREA)

### Topography and drainage

- 7.5.7. As shown in **Figure 7.3: Topography (Volume 2)**, the topography in the immediate locality of the Site is generally low lying and flat, lying between approximately 30 and 35m AOD. There are two landfill sites (one to the southwest and one to the east of the Site) which have resulted in highly localised increases in elevations on these sites.



- 7.5.8. There is a marked increase in levels towards the south and east of the study area as the land rises appreciably towards the Greensand Ridge where the highest point (within the study area) is located at an approximate height of 120m AOD. The land also rises markedly in the western part of the study area in the vicinity of Cranfield and Holcot Wood where levels are approximately 110m AOD.
- 7.5.9. The topography to the north of the Site within the urban area of Bedford is generally flat with levels falling slightly towards the River Great Ouse which runs broadly west to east through the central part of the town. This River is the main water course within the study area though there are several waterbodies located close to the northern edge of the Site adjacent to the A421. The flooded former clay pits within and in the immediate vicinity of the Site are also notable waterbodies within the area. Further afield there are several flooded clay pits within the southern part of the study area near the villages of Stewartby and Lidlington.

### **Vegetation and Land Use**

- 7.5.10. Vegetation within the immediate locality of the Site is characterised by arable fields separated by hedgerows, and ruderal vegetation adjoining the flooded clay pits. The development of warehousing and distribution centres in the area has resulted in blocks of woodland aimed at screening these elements within the landscape.
- 7.5.11. There are several areas of ancient woodland within the study area (as identified in **Figure 7.4: Landscape Designations (Volume 2)**), with the closest one to the Site near Wootton Wood (approximately 2km to the west of the Site). Other notable blocks of ancient woodland within the study area include:
- Marston Thrift (approximately 5km to the southwest of the Site);
  - Holcot Wood and Reynolds Wood (approximately 6.5km to the southwest of the Site);
  - Kings Wood (approximately 2.5km to the southeast of the Site);
  - Wilstead Wood (approximately 3.7km to the west of the Site); and
  - Wootton Wood (approximately 2km to the west of the Site).
- 7.5.12. Several notable belts of vegetation are evident within the study area including adjacent to the Midland Main Railway Line, along the A421 and the B530 Ampthill Road, and along Broadmead Road adjacent to Broadmead Farm and Randall's Farm. There are also several hedgerows which mark field boundaries and run alongside local roads within the study area.
- 7.5.13. The Greensand Ridge is a prominent and extensive escarpment characterised by more extensive woodland, located approximately 4km southwest of the Site. There are several areas of woodland on the north facing slopes of the Mid Greensand Ridge. Some of these areas of woodland have been extended northwards towards the Site as part of the Forest of Marston Vale initiative, which has restored historically industrialised landscape through tree planting and the creation of recreational areas.



- 7.5.14. Land use within the study area is varied. To the immediate east, west and north of the Site, there are several large distribution warehouses that form noticeable linear built forms within the landscape, and which are visible over a considerable distance. These long flat forms frequently interrupt the horizon, visible above planting aimed at reducing their visual prominence within the wider landscape. Whilst commercial and construction associated activities exist in the context of Manor Road consisting of a car auction, car breaking site, and cement mixing operation and Ampthill Road consisting of a further cement mixing operation. Further north is the town of Kempston which forms part of the wider urban area of Bedford. The southern fringe of Kempston is dominated by industrial development and retail parks with residential development beyond.
- 7.5.15. A sizeable amount of the land in the study area is in agricultural use, interspersed with the villages of Stewartby, Houghton Conquest, Marston Moretaine, Shortstown, Wixams and Wootton. There are several landfill sites within the study area including the Veolia sites at Elstow (less than 500m east of the Site) and Stewartby (immediately southwest of the Site). The Rookery South ERF is located to the south of Stewartby and its stack are visible over a broad distance.
- 7.5.16. Notable recreational uses within the study area include the Marston Vale Millenium Country Park (approximately 1.5km to the south of the Site), Milbrook Events Venue (located approximately 3km to the south of the Site) and Center Parcs Woburn Forest (located approximately 6km to the south of the Site). There are several parks and areas of open space within Bedford including Great Denham Playground and Park (approximately 2km to the northwest of the Site) and Addison Howard Park (approximately 2km to the north of the Site).
- 7.5.17. The former Royal Air Force Cardington Airfield site is located approximately 4km to the east of the Site, next to the expanding village of Shortstown. There are two large former airship hangars located within the former airfield which are now used as film studios.

### **Settlement Pattern**

- 7.5.18. The largest settlement in the study area is the town of Bedford which has coalesced with several other villages and towns over time including Kempston.
- 7.5.19. Large areas of new residential development are emerging within the study area. This includes Wixams, located approximately 1.2km to the east of the Site, which is a new town covering an area of approximately 380 hectares. New Cardington Park and New Cardington Fields are recent housing developments located immediately east of Shortstown.
- 7.5.20. Kempston Hardwick is a village which largely comprises 'ribbon development' along Manor Road and part of Ampthill Road, and new residential development has recently been constructed immediately east of the Midland Main Railway Line, which is perceived as part of this settlement. Similarly, Wootton, Marston Moretaine and Cranfield are villages where recent residential development has taken place. The village of Stewartby to the south of the Site is a 'model village' which includes a conservation area and several listed buildings and has not experienced the same recent expansion of residential development (though the introduction of the Rookery South ERF is a notable recent development to the south of the village, standing at 105m tall).
- 7.5.21. The continued development of warehousing and distribution centres within the landscape form prominent areas of development within the wider landscape. The extensive built form occupying locations through the landscape to the south of Bedford, adjacent to the main distribution roads including the A421.

## Transport Network

- 7.5.22. The transport network is characterised by a strong road and rail network typically orientated north-south and which crosses or is immediately adjacent to the study area. The principal road route is the dual carriageway that forms the A421 (west of the study area) which joins the A6 to the north and forms a major road corridor to the south of Kempston and which along with the local distributor road (Bedford Road) forms a substantial physical barrier with the Site to the south. Access to the villages to the west of the Site and the A421 is provided by a series of minor roads off Bedford Road, linked by road bridges that cross the A421 or by junctions with the trunk road. The B530 to the east of the Site provides access to the central villages of Stewartby and Kempston Hardwick, whilst to the east of the study area, the A6 road extends south of Kempston, allowing access to the eastern villages of Wixams and Wilstead. There are several minor roads connecting the villages and hamlets across the study area.
- 7.5.23. There are two railway lines which extend across the study area from north-south. These are the Midland Main Railway Line and the Marston Vale Railway Line. The Marston Vale Railway Line intersects the Site and borders the entire western perimeter of the Core and Lake Zones and includes Kempston Hardwick Station.

## Public Rights of Way/Cycle Routes

- 7.5.24. Several PROWs and cycle routes extend across much of the study area (refer to **Figure 7.7: Access and Public Rights of Way (Volume 2)**). Key locally promoted routes include:
- The John Bunyan Trail – a circular Long Distance Trail, which runs along the top of the Mid Greensand Ridge, through Amptill Park, and close to the ridgeline near Cranfield;
  - The Marston Vale Trail (also known as the Marston Vale Timberland Trail) – this is a circular Long Distance Trail which passes through Stewartby, the Mid Greensand Ridge and through Amptill Park;
  - The Greensand Ridge Walk is a linear Long Distance Trail which largely follows the John Bunyan Trail and the Marston Vale Trail;
  - The Clay Way is a linear Long Distance Trail which passes through Cranfield and follows part of the John Bunyan Trail runs along the top of the ridge south of Cranfield; and
  - National Cycle Network Route 51/Sustrans: Varsity Way – Route 51 Oxford to Cambridge – extends from north to southwest of the Site, Wootton to Marston Moretaine.

## Tranquillity

- 7.5.25. The highest levels of tranquillity occur within the south of study area, in the vicinity of the Greensand Ridge. Relatively high levels of tranquillity are also associated with areas around The Forest Centre and Millenium Country Park and in the southeastern part of the study area to the south of Wixams and east of the B530 road. High levels of tranquillity are likely to be due to the presence of limited built form and a general absence of road and rail infrastructure allied with high levels of openness of the landscape (apart from the woodland area) and perceived naturalness.

- 7.5.26. The areas with lower levels of tranquillity are associated with larger settlements in the study area such as Wooton, Wixams and Shortstown and along major transport routes such as the A421, the Midland Main Railway Line and Marston Vale Railway Line. The greatest concentration of low levels of tranquillity is in the locality of the Site along the A421, around development on the urban fringe of Kempston, the industrial estates to the south of the A421 and where the distribution warehousing is present.

## NATIONAL LANDSCAPE CHARACTER

- 7.5.27. England is sub-divided into 159 NCA, providing descriptions of the differences in landscape character at the national scale. The Site and a large portion of the study area falls within NCA 88: Bedfordshire and Cambridgeshire Claylands. The southern part of the study area falls within NCA 90: Bedfordshire Greensand Ridge. The distribution of NCAs in the study area is shown in **Figure 7.5: National Landscape Character Areas (Volume 2)**.
- 7.5.28. Whilst scoped out of the assessment on the basis that they are too spatially extensive in scale, and as identified in **Table 7.3 - Elements scoped out of the assessment**, key characteristics of NCA 88 and NCA 90 that are pertinent to the study area are summarised in **Appendix 7.4: Landscape Character Areas: Key Characteristics (Volume 3)** for context. As noted in Section 7.3 the LCAs have been taken forward as landscape receptors for assessment on the basis that they represent smaller, discrete areas that are more appropriate for use as landscape character receptors in this LVIA than the far more spatially extensive NCAs.

## LOCAL LANDSCAPE CHARACTER

- 7.5.29. Bedford BC published a Landscape Character Assessment (**Ref 7.4**). The Site is located within LCA 5D: North Marston Clay Vale. Within the study area there are several LCAs, and their distribution within the study area is shown in **Figure 7.6: Local Landscape Character Areas (Volume 2)**.
- 7.5.30. Key characteristics of LCAs that are pertinent to the study area are set out in **Appendix 7.4: Landscape Character Areas: Key Characteristics (Volume 3)**.

## LANDSCAPE DESIGNATIONS

- 7.5.31. There are no designated landscapes within the study area, the closest formally designated landscape is the Chilterns National Landscape which is approximately 12km to the south of the Site. There are several designations within the study area which, whilst not landscape designations, do contribute to the landscape value of the study area. These designations are shown in **Figure 7.4: Landscape Designations (Volume 2)** and include ancient woodlands, conservation areas and County Wildlife Sites, and registered parks and gardens, such as Ampthill Park; a Grade II registered Park, which lies 3.8km south of the Site, along the Greensand Ridge.

## FUTURE BASELINE

### Overview

- 7.5.32. Landscape change is an ongoing and inevitable process and will continue across the study area irrespective of whether the Proposed Development proceeds. As described in Section 3.3 of **Chapter 3: Approach to EIA (Volume 1)**, in the absence of the Proposed Development there is likely to be a change to the future baseline conditions as a result of other factors and developments in proximity to the Site. These are the anticipated conditions that would prevail 'Without the Proposed Development' in place.

- 7.5.33. The anticipated future baseline will influence the assessments of landscape and visual effects undertaken in relation to the Construction and Operational Phases defined in Section 7.2. Change can arise through natural processes (e.g. the maturity of woodlands) and natural systems (e.g. river erosion) or, as is often the case, due to human activity, land use, management, or neglect.

### **Wider Landscape Change**

- 7.5.34. Ash dieback - Chalara dieback of ash - became established in the UK in 2012 with the consequence that the future of common ash (*Fraxinus excelsior*) as a woodland, hedgerow and urban tree species became threatened. Reference to the Forestry Commission's map of confirmed infection sites for the UK (**Ref. 7.8**) indicates that ash dieback was recorded to the south of the study area in 2014, and to the west in 2015. Resultant impacts on the landscape are likely to develop relatively slowly, starting with the decline of young trees and only becoming fully apparent as affected mature trees are felled. This tree loss may open views for visual receptors and alter the structure of existing woodlands.
- 7.5.35. The Bedford BC Landscape Character Assessment sets out the forces for change that have been identified for each LCA. These have been reviewed for the LCAs within the study area with an emphasis on the host LCA 5D: North Marston Clay Vale and adjacent LCAs (5E: East Marston Clay Vale and 1A: Cranfield to Stagsden Clay Farmland). The relevant forces for change that are likely to affect the future baseline during the Operational Phase of the Proposed Development are:
- On-going industrial estate and distribution shed development north of Wixams;
  - On-going settlement expansion at Kempston (Bedford), Wooton, Stewartby, Wixams and Wilstead, plus settlement coalescence; and
  - Suburbanisation of smaller settlements in proximity to larger towns e.g. Shortstown.
- 7.5.36. The effects of these changes are considered within the cumulative effects assessment in Section 7.6.

### **Climate Change**

- 7.5.37. Climate change in the study area, and the southeast of England in general, is predicted to result in warmer drier summers, warmer wetter winters, and higher sea levels. This in turn may result in the following land use changes which are of relevance to landscape and visual issues:
- Drier summers could lead to drought-stress for semi-natural habitats and agricultural crops. This could lead to degradation and loss of certain habitats and species;
  - Hotter and drier summers, milder winters and changes in seasonal rainfall patterns could lead to changes in species composition of some habitats with changes to tree productivity;
  - Potential for double cropping and/or growing different crops; and
  - Increased prevalence of pests and diseases, such as oak decline, may result in changes to the composition and the visual role of ancient woodlands and mature, ancient and veteran trees.

### **LANDSCAPE RECEPTORS**

- 7.5.38. The identified sensitive landscape receptors are defined within the Bedford BC Landscape Character Assessment (**Ref. 7.9**), and CBC Landscape Character Assessment (**Ref. 7.10**). The Central Bedfordshire LCA which covers the south of the study area is complementary to the Bedford BC LCA which covers the north of the county, providing a collective assessment of the landscape

character. LCAs identified within the study area are as follows and a summary of LCA sensitivity is provided in **Table 7-4**.

7.5.39. Local landscape character area directly affected:

- LCA 5D: North Marston Clay Vale is the host LCA.

7.5.40. Adjacent LCAs that may be indirectly affected and which have been scoped into the assessment include:

- 1A Cranfield to Stagsden Clay Farmland;
- 3B Oakley – Great Ouse Limestone Valleys;
- 5E: East Marston Clay Vale;
- 6B Mid Greensand Ridge;
- Bedford Urban Area (which includes Kempston) has also been identified as an LCA and assessed accordingly; and
- Existing landscape features: such as woodland, trees, hedgerows and water courses that contribute to the landscape fabric within the Site.

#### **LCA 1A Cranfield to Stagsden Clay Farmland**

7.5.41. This LCA, part of the Clay Farmland type, lies west of Bedford, stretching from Pavenham in the north to Brogborough at the boundary with the Mid Greensand Ridge in the south. Split between Bedford Borough and Central Bedfordshire, this LCA is physically distinct from similar landscapes due to its separation by the Wooded Wolds and Limestone Valleys, with a portion situated within the Forest of Marston Vale.

7.5.42. The LCA is characterised by gently rolling landform, expansive arable fields, and limited woodland cover. Unmanaged and gappy hedgerows reflect a landscape of low quality with unremarkable and common features. There is limited scenic quality despite the presence of a nationally important Site of Special Scientific Interest (SSSI), Hanger Wood, because of limited management. Public routes across open fields offer some remote perceptual qualities. The value is therefore assessed as **Medium**.

7.5.43. The guidelines for managing landscape change in this LCA aim to “*Retain views from elevated areas to the lower lying Clay Vales (LCA 5D) and to the Mid Greensand (LCA 6B) and conserve views to undeveloped horizons*” (**Ref. 7.10**). The susceptibility of the receptor to accommodate the Proposed Development without undue consequences is assessed as **High**.

7.5.44. Based on the value and susceptibility above, the sensitivity of this landscape receptor is assessed as **Medium to High**.

#### **LCA 3B: Oakley – Great Ouse Limestone Valleys**

7.5.45. The Oakley-Great Ouse Limestone Valley is situated northwest of Bedford Borough, nestled between the limestone slopes of the Wooded Wolds landscape to the east and west. Boundaries are delineated by roads or contour lines indicating the valley's rising sides. To the north, the landscape transitions into the Harrold-Great Ouse Limestone Valley, marked by more open water bodies. In the south, Bedford's western settlement edge approaches the river.

- 7.5.46. The LCA is characterised by an open valley, arable farmland, and large villages. On-going residential development from Bedford has reduced the rural quality of the landscape. There are some areas of significant biological interest, including Stevington Marsh SSSI. Although there are limited historical designations, areas of parkland and long-distance trails provide recreational features. The value is therefore assessed as **Medium**.
- 7.5.47. The guidelines for managing landscape change in this LCA are heavily focused on conservation. The receptor is therefore judged as not being able to accommodate the form of change proposed, without undue consequences for the baseline situation. The susceptibility is therefore assessed as **High**.
- 7.5.48. The sensitivity of this landscape receptor is assessed as **Medium**.

#### **LCA 5D: North Marston Clay Vale**

- 7.5.49. The North Marston Clay Vale is the 'host' LCA. The area lies to the south of Bedford, bordering Kempston and extending to Marston Moretaine and Lidlington in Central Bedfordshire. Dominated by the elevated Mid Greensand Ridge to the south and Cranfield to Stagsden Clay Farmland to the west, it contrasts sharply with its flat and open terrain. This area is integral to the Forest of Marston Vale.
- 7.5.50. The landscape elements largely consist of arable fields with pockets of woodland which are intersected by industrial, landfill and renewable energy developments. Several areas within the LCA are dominated locally by the extensive warehousing and distribution centres that are prominent within the landscape. Although parks are concentrated to the south of the LCA they offer some scenic value. There are several SSSIs, ancient woodlands, registered parks and gardens, scheduled monuments, and listed buildings together with several recreational destinations and long-distance footpaths all of which contribute to the value of the study area. Conversely, the areas of derelict land, the ERF/Power Station and various landfill sites detract from the landscape value of the study area. The value is therefore assessed as **Medium**.
- 7.5.51. The guidelines for managing landscape change in this LCA state, amongst other things, that the location of any new development should avoid land at the base of the Mid Greensand Ridge (6B). The use, form and scale of the landscape vary considerably across this LCA particularly in the northern part of the LCA. This receptor is therefore judged as being able to accommodate the form of change proposed to some extent due in part to the presence of a number of existing large warehouse type buildings with new ones under construction. The susceptibility is therefore assessed as **Medium**.
- 7.5.52. Based on the value and susceptibility above, the sensitivity of this landscape receptor is assessed as **Medium**.

#### **LCA 5E East Marston Clay Vale**

- 7.5.53. The East Marston Clay Vale, situated south of Bedford, is primarily within Bedford Borough, with a small portion north of the A603 falling under Central Bedfordshire District. The prominent Mid Greensand Ridge to the south accentuates its flatness. Characterised by arable land, it differs from the adjacent North Marston Clay Vale, with fewer mineral extraction sites and settled areas.



- 7.5.54. The landscape elements predominantly consist of arable fields. Woodland cover is sparse and there are no areas of distinguished landscape quality. The influence of Bedford is evident along the western boundary of the LCA, where distribution buildings have formed an industrial urban fringe. There are no important landscape features. There is however one registered park and garden and several scheduled monuments and listed buildings, concentrated to areas of settlement. The value is therefore assessed as **Medium**.
- 7.5.55. The guidelines for managing landscape change in this LCA are focused on the renewal and conservation of the landscape via field boundary renewal and woodland planting. The lack of significant woodland, sporadic built form and flat landform makes this LCA of **Medium** susceptibility.
- 7.5.56. Based on the value and susceptibility above, the sensitivity of this landscape receptor is assessed as **Medium**.

#### **LCA 6B Mid Greensand Ridge**

- 7.5.57. This LCA lies mostly outside the study area, with only the north-facing slopes within it. The ridge's steep slopes provide a backdrop to the adjacent North Marston (5D) and East Marston Clay Vales (5E), offering commanding views to the north. Divided by the Flit Greensand Valley, the ridge contrasts subtly with nearby areas due to its steepness and lack of large-scale mineral extraction.
- 7.5.58. The LCA offers a landscape of high quality with distinctive and well-defined attributes, including extensive woodlands and areas of heathland. There are several nationally important SSSIs including the largest remaining heathland site in Bedfordshire, Cooper's Hill. The LCA is home to recreational destinations comprising several parks and gardens, which includes Ampthill Park. These elevated areas also establish a sense of remoteness and tranquillity. The value is therefore assessed as **High**.
- 7.5.59. The guidelines for managing landscape change in this LCA aim to "*Conserve views to and from the northwest facing slope and resist development at the foot of the slope that would threaten to dilute the dramatic contrast in character between the vales and the ridge*" (**Ref. 7.10**). Due to its elevated landform and undeveloped characteristics which are an important context with adjoining character areas, the susceptibility is assessed as **High**.
- 7.5.60. The sensitivity of this landscape receptor is assessed as **High**.

#### **Bedford/Kempston Urban Area**

- 7.5.61. Bedford and the adjacent urban area of Kempston to the southwest form the northern limits of the study area. The town has developed over many centuries either side of the River Great Ouse that meanders to the west of Bedford and north of Kempston. The A6 delineates development to the west and the A421 to the south, east and north of which are a series of suburbs that comprise a mixture of housing from different period, linked by a network of local roads.
- 7.5.62. Informal open spaces associated with the floodplain of the river occur to the margins of the town and extend eastwards towards the town centre. More formal open space exists within some of the older parts of Bedford, particularly Bedford Park which sits on gently rising landform to the north of the town centre.

- 7.5.63. The landform associated with Kempston and the southern suburbs of Bedford is relatively flat and a number of local watercourses pass through the urban areas as they flow towards the River Great Ouse. Bodies of open water, commonly associated with flooded workings occur on the margins of the town.
- 7.5.64. Retail, commercial and distribution warehousing has developed to the south and southwest of the suburbs, with these extensive developments forming a new skyline to the south of the town, alongside remnants of agricultural land.
- 7.5.65. The value of the landscape associated with the southern suburbs is **Low** given the extensive mixed use land uses and influence that the recent large-scale developments have had on the area.
- 7.5.66. The susceptibility is considered **Medium** due to the presence of existing built form combined with the existing infrastructure and transport connections combined with agricultural fields and areas of open water.
- 7.5.67. The sensitivity of this landscape receptor is assessed as **Medium**.

#### Landscape Elements within the Site

- 7.5.68. The condition of the vegetation across the Site varies and the bulk of vegetation consists of ruderal plants of limited landscape value. There are no designations, including Tree Preservation Orders, however, vegetation across the Site is valued at a local level. The drainage pattern is primarily influenced by quarrying at the historical brickworks which has created manmade waterbodies. The waterbodies are a characteristic feature of the Bedford 'urban fringe' and are valued locally as recreational routes where access allows.
- 7.5.69. The land use across the Site is predominately agricultural field to the south and far north, with a portion of brownfield land toward the centre of the Site. Although agricultural land is typically valued for its contribution to a sense of open countryside, the condition and proximity to degraded land would suggest that the value is of lower quality. The value of landscape elements within the Site is assessed as **Medium**.
- 7.5.70. The landscape elements within the Site are moderately capable of accommodating the Proposed Development without undue consequences for the baseline situation. The susceptibility is therefore assessed as **Medium**.
- 7.5.71. The sensitivity of landscape elements within the Site is assessed as **Medium**.

**Table 7-4 – Summary of Landscape Character Area Sensitivity**

Landscape Character Area	Value	Susceptibility	Sensitivity
LCA 1A Cranfield to Stagsden Clay Farmland	Medium	High	Medium to High
LCA 3B: Oakley – Great Ouse Limestone Valleys	Medium	High	Medium
LCA 5D: North Marston Clay Vale	Medium	Medium	Medium



Landscape Character Area	Value	Susceptibility	Sensitivity
LCA 5E East Marston Clay Vale	Medium	Medium	Medium
LCA 6B Mid Greensand Ridge	High	High	High
Bedford/Kempston Urban Area	Low	Medium	Medium
Landscape elements within the Site	Medium	Medium	Medium

## VISUAL BASELINE

- 7.5.72. A full description of the visual receptors and the level of sensitivity associated with them can be found in **Appendix 7.6: Detailed Visual Impact Assessment (Volume 3)**. A summary of the visual context and key receptors is provided below.
- 7.5.73. Viewpoint locations are illustrated in **Figure 7.1: Zones of Theoretical Visibility and Viewpoint Locations (Volume 2)** and **Figure 7.1a: Viewpoint Locations (Volume 2)**, baseline photography is presented in **Figure 7.8: Viewpoint Photography (Volume 2)** and the methodology used to capture baseline photography is outlined in **Appendix 7.1: Technical Methodology: Photography, 3D Modelling, Accurate Visual Representations (Volume 3)**.

### Visual Context

- 7.5.74. The Site lies in a shallow topographical bowl in the landscape, bordered by the Greensand Ridge, which lies approximately 4 to 5km away to the south, east and west. The elevated location of the ridge line against the surrounding landscape allows for far reaching and expansive views across the study area. Sensitive visual receptors that sit along or close to the Greensand Ridge include Ampthill Park, Ampthill Park House, Houghton House, and users of the national trails which run along the top of the ridgeline. As the ridge line sits approximately 100m higher than the Site itself and is wooded in many areas, it does provide a visual screen which prevents longer distance views from south/west/east locations in the wider study area.
- 7.5.75. Closer to the Site, there are residential receptors at Kempston Hardwick, Stewartby, Wootton and Wixams which have fairly clear short-range views towards the Site. However, to the south, woodland planting at Marston Vale Millenium Park helps to filter or obscure some short-mid range views from residential receptors at Marston Moretaine.
- 7.5.76. To the north, the Site lies against a backdrop of industrial and residential development associated with Bedford. This includes large industrial units which reach 30 to 50m AGL in places, such as the B&M distribution warehouse to the east, and Sainsbury's and Argos distribution centres to the northwest. More recent warehousing and distribution development has arisen to the west of the Site, south of Wootton and form significant visual detractors. The shallower topography and level of development here means that views of the Site are generally more difficult to discern from this direction.

- 7.5.77. From many parts of the study area, including from the Greensand Ridge, the horizon is punctuated by tall and narrow structures, including the wind turbine at Millennium Country Park which reaches over 120m AGL in height, the chimney at Rookery South Energy Recovery Facility which reaches 105m tall, and retained brickwork chimneys at Stewartby that are 70m AGL tall (all south of the Site), in addition to numerous large pylons which are scattered across the landscape. These structures generally only form a very small portion of the long distance views but contribute to the visual character.

### Visual Receptors

- 7.5.78. Following the production of the ZTV, Site visits and engagement with the LPA, a list of 38 viewpoints was compiled for assessment of visual receptors. The most notable visually sensitive receptors represented by these viewpoints are;
- Residents at Wootton, Wixams, Stewartby, Marston Moretaine and Kempston Hardwick;
  - Recreational users of the John Bunyan Way/Greensand Ridge Walk, and Marston Vale Trail; and
  - Visitors to Ampthill Park, Ampthill Park House and Houghton House.
- 7.5.79. Whilst the majority of viewpoint locations are representative of one or more receptors, SVP have been used for Houghton House (SVP 17) and Ampthill Park House (SVP 23), where the views associated with these receptors are particularly noteworthy for recreational amenity.

## 7.6. ASSESSMENT OF POTENTIAL EFFECTS, MITIGATION AND RESIDUAL EFFECTS

### EMBEDDED MITIGATION

- 7.6.1. Landscape and visual impacts arising during the Construction Phase typically arise from vegetation removal, excavations, embankments/re-profiling and topsoil stripping.
- 7.6.2. The following mitigation measures are required to limit impacts on landscape and visual receptors during construction and are set out in appropriate wording within **Appendix 2.3: Outline Construction and Environmental Management Plan (Volume 3)**:
- Where appropriate to deliver the Proposed Development and to allow construction activities the necessary working space, the existing perimeter planting shall be retained as permanent screening in the areas shown on **Figure 7.9: Landscape Mitigation Plan (Volume 2)**;
  - Prior to the start of construction works, and throughout their duration, all existing vegetation identified for retention shall be protected by fencing, in accordance with BS:5837: 2012 (**Ref. 7.11**), to protect roots from compaction and prevent damage to the structure of the vegetation. No activity, storage of materials or liquids of any sort shall be permitted within the protective fencing at any time;
  - Decisions to remove vegetation and its timing will be discussed and agreed upon with the Environmental Clerk of Works in order that vegetation is not unnecessarily removed;
  - A suitably qualified tree surgeon will oversee any works relating to the management and protection of trees;

- Site management shall seek to reduce the visual clutter associated with construction works through appropriate storage of materials/plant/equipment, and management of materials and waste on-site;
- Appropriate location, organisation and phasing of construction activities shall be applied to ensure areas for construction are cleared as close as practicable to works commencing, and top soiling, seeding and planting will be undertaken as soon as practicable after sections of work are complete. Where practicable, advanced planting will provide accelerated site integration and visual screening;
- In general, plant and material storage areas will be located away from the Site boundary, to limit landscape and visual impact. However, based on construction logistics, temporary soil mounds or hoarding will be located close to the Site boundary in areas where no existing vegetation is being retained and where it does not impede construction access to the Site, to help screen views for neighbouring residents at Stewartby, Wootton and Kempston Hardwick. At locations where it is known that there will be no future works that would require their removal, soils will be placed in their final locations and landscaped, creating permanent landscape bunds, reducing the need for double handling and to provide opportunities for planting to be carried out;
- Where hoardings are used, these will be sensitively coloured and positioned to reduce the visual impact to nearby sensitive receptors;
- Measures will be applied to reduce impacts on soil quality through appropriate stripping and storage of topsoil and subsoil, works to be carried out in accordance with BS 3882:2015;
- Vegetation management and establishment measures shall be implemented, to ensure that planting establishes; and
- As much as feasible, and in line with **Appendix 2.3: Outline Construction and Environmental Management Plan (Volume 3)** lighting will utilise directional cowls to reduce light spill and will be directed inwards to the Site and kept at as low a height as is practicable in order to carry out activities safely.

7.6.3. The following embedded mitigation measures have informed the landscape and visual impact of the Operational Phase:

- An articulated skyline is proposed to reduce the prominence of building and structure outlines which is described in **Section 2 Design Standards - Scale** of the **Design Standards (Document Reference 6.3.0)**;
- Tree planting will be included as part of the surrounding urban realm and adjacent to the Transport Hub within the East Gateway Zone by Network Rail to break up the visual mass of these developments and provide gateway features;
- The perimeter of the Site will be planted (either through retention of existing vegetation or provision of new mitigation planting). This will provide screening of lower elements of the Proposed Development. **Figure 7.9: Landscape Mitigation Plan (Volume 2)** is provided to illustrate the proposed habitat creation measures that are specific to landscaping requirements. **Figure 1: Indicative Habitat Creation and Enhancement Plan** of **Appendix 6.4: Outline Habitat Creation and Enhancement Plan (Volume 3)** sets out all the habitat and creation enhancement mitigation measures for the Proposed Development;

- Mitigation planting or alternative visual screening, will be provided adjacent to Manor Road (to the south of the new road alignment) and existing planting along the northern side of Manor Road will be retained where feasible to provide screening to Manor Road cottages as illustrated in **Figure 7.9: Landscape Mitigation Plan (Volume 2)**;
- Where feasible, and to allow required access points, existing planting along sections of Broadmead Road (southern boundary to the West Gateway Zone and Core Zone) will be retained as screening as illustrated in **Figure 7.9: Landscape Mitigation Plan (Volume 2)**. In addition, new mitigation planting will be provided between Broadmead Road and the southeast corner of the Site as a visual screen to the northern fringe of Stewartby, as indicated in **Figure 7.9: Landscape Mitigation Plan (Volume 2)**;
- Existing vegetation will be retained along the eastern margins of the Marston Vale Railway Line within the Core Zone and Lake Zone in the areas illustrated on **Figure 7.9: Landscape Mitigation Plan (Volume 2)** (and where the land is within the control of UDX);
- A daylight study (refer to **Appendix 2.7: Daylight Assessment Results (Volume 3)**) was undertaken for dwellings on Manor Road, based on the **Design Standards (Document Reference 6.3.0)**. This study was conducted in order to inform the design of the Proposed Development, in particular the required offsets of tall structures/buildings and specifically in relation to sunlight and overshadowing of the residential properties on Manor Road. The assessment tested the proposed Maximum Heights (as set out in design standard MH02 Maximum Height by Land Area) **Design Standards (Document Reference 6.3.0)** and provided advice on how the proposals could be optimized through detailed design to ensure negligible daylight and sunlight effects;
- The approach to lighting within the zones which has been set out within the **Design Standards (Document Reference 6.3.0)**;
- Roadways within the Proposed Development and adopted by Bedford BC will feature tree and shrub planting; and
- The new A421 Junction under the control of National Highways will adhere to National Highways Environmental Sustainability Strategy to integrate their network into the wider landscape which may include the use of native planting (refer to Design Standard WG4.1 within the **Design Standards (Document Reference 6.3.0)**).

7.6.4. As explained above, **Figure 7.9: Landscape Mitigation Plan (Volume 2)** is provided to illustrate the proposed habitat creation measures that are specific to landscaping requirements. **Figure 1: Indicative Habitat Creation and Enhancement Plan** of **Appendix 6.4: Outline Habitat Creation and Enhancement Plan (Volume 3)** sets out all the habitat and creation enhancement mitigation measures for the Proposed Development. Details on the long term maintenance and management of habitat and landscaping for the Proposed Development can be found in **Appendix 6.5: Outline Landscape and Ecology Management Plan (Volume 3)**.

## LANDSCAPE EFFECTS: CONSTRUCTION PHASE

7.6.5. Landscape receptors identified as potentially sensitive to change from the Proposed Development during the Construction and/or Operational Phase are as follows:

- LCA 5D: North Marston Clay Vale is the host LCA;

- LCA 1A: Cranfield to Stagsden Clay Farmland;
- LCA 3B: Oakley – Great Ouse Limestone Valleys;
- LCA 5E: East Marston Clay Vale;
- LCA 6B: Mid Greensand Ridge;
- Bedford Urban Area (which includes Kempston); and
- Existing landscape features that contribute to the landscape fabric within the Site.

7.6.6. A detailed assessment of the landscape effects of the Proposed Development during the Construction Phase is provided in **Appendix 7.5: Landscape Character: Assessment of Effects (Volume 3)**. The detailed assessment of landscape effects concludes that the Proposed Development would not have significant effects on the following receptors during the Construction Phase:

- LCA 1A: Cranfield to Stagsden Clay Farmland;
- LCA 3B: Oakley – Great Ouse Limestone Valleys; and
- LCA 5E: East Marston Clay Vale.

7.6.7. **Significant** landscape effects are predicted to arise primarily as a result of construction activities associated with the tallest elements within the Core Zone during the Primary Phase of construction, affecting landscape receptors of medium to high sensitivity. This is a result of the tallest elements (ride attractions up to 115m AGL and the other development up to 75m AGL) and associated cranes being visible above intervening vegetation, changing the perception of landscape character within the host LCA, and its relationship with the surrounding landscape. Effects arising as a result of the presence of cranes is predicted to continue beyond the Primary Phase of construction as development extends across the Site and is captured within the assessment of Year 1.

7.6.8. Landscape receptors likely to experience significant landscape effects are summarised below in **Table 7-5**.

**Table 7-5 - Assessment of likely significant landscape effects, additional mitigation, residual effects and monitoring during construction**

Sensitive Receptor	Likely Significant Effects/Additional Mitigation/Residual Effects	
LCA 5D: North Marston Clay Vale (Host LCA)	<b>Potential Effects</b>	<p><b>Sensitivity:</b> This LCA is considered as being of medium value and medium susceptibility, the sensitivity of this landscape receptor is therefore assessed as <b>Medium</b>.</p> <p><b>Magnitude of Change:</b> The magnitude of change on the perception of the landscape character at a local level within the LCA would be High, however the character area is quite extensive and when considered in the context of the LCA as a whole the effects would be <b>Medium</b>.</p>
	<b>Mitigation</b>	No additional mitigation measures other than those stated within Paragraphs 7.6.2 and 7.6.3 are anticipated during the construction period.
	<b>Residual Effects</b>	The sensitivity of this LCA is Medium, and the magnitude of change, following mitigation, would be Medium. Therefore, there would be a direct, temporary, medium-term <b>Moderate Adverse</b> residual effect on this LCA ( <b>Significant</b> ).
LCA 6B: Mid Greensand Ridge	<b>Potential Effects</b>	<p><b>Sensitivity:</b> This LCA is considered as being of high value and high susceptibility, the sensitivity of this landscape receptor is therefore assessed as <b>High</b>.</p> <p><b>Magnitude:</b> As a result of minor changes to some perceptual characteristics associated with long distant views at the northeastern boundary of the LCA, the magnitude of change on this receptor would be <b>Low</b>.</p>
	<b>Additional Mitigation</b>	No additional mitigation measures other than those stated within Paragraphs 7.6.2 and 7.6.3 are anticipated during the construction period.

Sensitive Receptor	Likely Significant Effects/Additional Mitigation/Residual Effects	
	<b>Residual Effects and Monitoring</b>	The sensitivity of this LCA is High, and the magnitude of change, following mitigation would be Low. Therefore, there would be a limited indirect, medium-term <b>Moderate Adverse</b> residual effect on this LCA ( <b>Significant</b> ).
Bedford Urban Area LCA	<b>Potential Effects</b>	<p><b>Sensitivity:</b> This LCA is considered as being of Low value and Medium susceptibility, the sensitivity of this landscape receptor is therefore assessed as <b>Medium</b>.</p> <p><b>Magnitude:</b> Due to a change to the existing agricultural landscape that currently forms the boundary of the LCA with 5D North Marston Clay Vale to the south and an extension of the existing urban land uses, the magnitude of change on this receptor is judged to be <b>Medium</b>.</p>
	<b>Additional Mitigation</b>	No additional mitigation measures other than those stated within Paragraphs 7.6.2 and 7.6.3 are anticipated during the construction period.
	<b>Residual Effects and Monitoring</b>	The sensitivity of this LCA is Medium, and the magnitude of change, following mitigation would be Medium. Therefore, there would be a noticeable, direct, medium-term <b>Moderate adverse</b> residual effect on this landscape ( <b>Significant</b> ) following the implementation of mitigation measures.
Landscape elements within the Site	<b>Potential Effects</b>	<p><b>Sensitivity:</b> This defined part of the landscape is considered as being of Medium value and Medium susceptibility, the sensitivity of this landscape receptor is therefore assessed as <b>Medium</b>.</p> <p><b>Magnitude:</b> The magnitude of change on this receptor would be <b>High</b>.</p>
	<b>Additional Mitigation</b>	No additional mitigation measures other than those stated within Paragraphs 7.6.2 and 7.6.3 are anticipated during the construction period.

Sensitive Receptor	Likely Significant Effects/Additional Mitigation/Residual Effects	
	<b>Residual Effects and Monitoring</b>	The sensitivity of this landscape is Medium, and the magnitude of change, following mitigation would be High. Therefore, there would be a direct, temporary, medium-term <b>Large Adverse</b> residual effect on this LCA ( <b>Significant</b> ) following the implementation of mitigation measures.



## LANDSCAPE EFFECTS: OPERATIONAL PHASE

- 7.6.9. The detailed assessment of landscape effects in **Appendix 7.5: Landscape Character: Assessment of Effects (Volume 3)** concludes that the Proposed Development would not have significant effects on the following receptors during the Operational Phase:
- LCA 1A: Cranfield to Stagsden Clay Farmland;
  - LCA 3B: Oakley – Great Ouse Limestone Valleys; and
  - LCA 5E: East Marston Clay Vale.
- 7.6.10. Landscape receptors assessed to experience likely significant landscape effects are summarised below in **Table 7-6**. This summarises the effects in Year 15 (2046) and assumes the presence of proposed outline mitigation measures as set out in Paragraphs 7.6.2 and 7.6.3.

**Table 7-6 - Assessment of likely significant landscape effects, additional mitigation and residual effects during operation**

Sensitive Receptor	Likely Significant Effects/Additional Mitigation and Residual Effects	
LCA 5D: North Marston Clay Vale (Host LCA)	<b>Potential Effects</b>	<p><b>Sensitivity:</b> This LCA is considered as being of Medium value and Medium susceptibility, the sensitivity of this landscape receptor is therefore assessed as <b>Medium</b>.</p> <p><b>Magnitude of Change:</b> The magnitude of change on the perception of the landscape character at a local level within the LCA would be High, however the character area is quite extensive and when considered in the context of the LCA as a whole the changes would be <b>Medium</b>.</p>
	<b>Mitigation</b>	No additional mitigation measures other than those stated within Paragraphs 7.6.2 and 7.6.3 are anticipated during the operation period.
	<b>Residual Effects</b>	The sensitivity of this LCA is Medium, and the magnitude of change, following mitigation, would be Medium. Therefore, there would be a direct, permanent, long-term <b>Moderate Adverse</b> residual effect on this LCA ( <b>Significant</b> ) following the implementation of mitigation measures.
LCA 6B: Mid Greensand Ridge	<b>Potential Effects</b>	<p><b>Sensitivity:</b> This LCA is considered as being of high value and high susceptibility, the sensitivity of this landscape receptor is therefore assessed as <b>High</b>.</p> <p><b>Magnitude of Change:</b> Minor changes to some perceptual characteristics associated with long distant views at the northeastern boundary of the LCA across the lower lying open landscape to the north would remain, the magnitude of change on this receptor would be <b>Low</b>.</p>
	<b>Additional Mitigation</b>	No additional mitigation measures other than those stated within Paragraphs 7.6.2 and 7.6.3 are anticipated during the operation period.
	<b>Residual Effects and Monitoring</b>	The sensitivity of this LCA is high, and the magnitude of change, following mitigation would be low. Therefore, there would be a limited indirect, permanent, long-term <b>Moderate Adverse</b> residual effect on this LCA ( <b>Significant</b> ) following the implementation of mitigation measures.

Sensitive Receptor	Likely Significant Effects/Additional Mitigation and Residual Effects	
Bedford Urban Area LCA	<b>Potential Effects</b>	<p><b>Sensitivity:</b> This LCA is considered as being of low value and Medium susceptibility, the sensitivity of this landscape receptor is therefore assessed as <b>Medium</b>.</p> <p><b>Magnitude of Change:</b> As a result of the expansion of the urban characteristics associated with Bedford to the north, the magnitude of change on this receptor is judged to be <b>Medium</b>.</p>
	<b>Additional Mitigation</b>	No additional mitigation measures other than those stated within Paragraphs 7.6.2 and 7.6.3 are anticipated during the operation period.
	<b>Residual Effects and Monitoring</b>	The sensitivity of this LCA is Medium, and the magnitude of change, following mitigation would be Medium. Therefore, there would be a noticeable, direct, permanent, <b>Moderate Adverse</b> residual effect on this landscape ( <b>Significant</b> ) following the implementation of mitigation measures.
Landscape elements within the Site	<b>Potential Effects</b>	<p><b>Sensitivity:</b> This defined part of the landscape is considered as being of Medium value and Medium susceptibility, the sensitivity of this landscape receptor is therefore assessed as <b>Medium</b>.</p> <p><b>Magnitude of Change:</b> The magnitude of change on this receptor would be <b>High</b>.</p>
	<b>Additional Mitigation</b>	No additional mitigation measures other than those stated within Paragraphs 7.6.2 and 7.6.3 are anticipated during the operation period.
	<b>Residual Effects and Monitoring</b>	The sensitivity of this landscape is Medium, and the magnitude of change, following mitigation would be High. Therefore, there would be a substantial, direct, permanent, <b>Large Adverse</b> residual effect on this landscape ( <b>Significant</b> ) following the implementation of mitigation measures.

## VISUAL EFFECTS: CONSTRUCTION PHASE

- 7.6.11. A detailed assessment of the visual effects of the Proposed Development during the construction period is set out in **Appendix 7.6: Detailed Visual Impact Assessment (Volume 3)** and summarised below in **Table 7-7**. The detailed assessment explains how judgements of susceptibility to change and value have been combined to ascertain receptor sensitivity, how magnitude of change has been determined, and how these judgements have been combined for each receptor to evaluate the significance of effect.
- 7.6.12. **Significant** visual effects are predicted to arise primarily as a result of construction activities associated with the tallest elements within the Core Zone during the Primary Phase of construction, affecting visual receptors of medium to high sensitivity. This is a result of the tallest elements (e.g. rides and attractions up to 115m AGL and the hotel/visitor accommodation development up to 75m AGL) and associated cranes being visible above intervening vegetation within a predominantly flat landscape or where elevated receptors have a broader angle of views from the local ridgelines to the south and west.

**Table 7-7 - Assessment of likely significant visual effects, additional mitigation, and residual effects during construction**

Receptor	Likely Significant Effects/Additional Mitigation and Residual Effects	
Residential receptors on Manor Road/Broadmead Road (RVP 14, RVP 20)	Located immediately adjacent to the Site boundary	Sensitivity: <b>High</b> Subject to a substantial change in views, a <b>Significant</b> effect and the higher end of the scale of effects, as a result of their proximity to large-scale construction activities. Magnitude of change: <b>High</b>
	Additional Mitigation	Retention of existing planting along Manor Road and Broadmead Road as part of the reinforcement of the perimeter planting as shown in <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b> . Hoardings to Site boundary to screen low level clutter from ground floor as set out in <b>Appendix 2.3: Outline Construction Environmental Management Plan (OCEMP) (Volume 3)</b> Section 3.5.
	Residual effect	<b>Large Adverse (Significant)</b>
Stewartby (VP 18, RVP 19, RVP 21)	Approximately 500m to the south of the Site boundary	Sensitivity: <b>High</b> Due to the presence of tall construction elements, cranes and emerging structures that would be visible above intervening vegetation and built form. This would be particularly visible along the most northerly edge of Stewartby, represented by RVP 28, whereby a lack of significant vegetation in the intervening landscape and the removal of a block of woodland within the Site itself, would result in direct views of construction activity at ground level. Magnitude of change: <b>High</b>
	Additional Mitigation	Planting to the southern perimeter of the Site as shown in <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b> will screen low level clutter.
	Residual effect	<b>Large Adverse (Significant)</b>
Residential and recreational receptors on the Greensand	Located approximately 4km to the south of the	Sensitivity: <b>High</b>

Receptor	Likely Significant Effects/Additional Mitigation and Residual Effects	
Ridge (SVP 17, SVP 23, RVP 24)	Site boundary on rising landform	Views from sensitive receptors extend over greater distances to include the Primary Phase. As a result, <b>Significant</b> effects would occur although these would be at the lower end of significance due to the intervening distances and presence of some detracting features within the landscape including the Marston Vale wind turbine and chimney stack associated with the Rookery ERF. Magnitude of change: <b>High</b>
	Additional Mitigation	No additional mitigation in addition to that outlined in Paragraphs 7.6.2 and 7.6.3 is proposed.
	Residual effect	<b>Moderate Adverse (Significant)</b>
Residential and recreational receptors in Marston Moretaine (RVP 28)	Approximately 2km to the southeast	Sensitivity: <b>High</b> Views from the margins of the village and recreational routes around Stewartby Lake would have views of the tallest construction elements within the Primary Phase. Effects would be at the lower end of significance. Magnitude of change: <b>Medium</b>
	Additional Mitigation	No additional mitigation in addition to that outlined in Paragraphs 7.6.2 and 7.6.3 is proposed.
	Residual effect	<b>Moderate Adverse (Significant)</b>
Residential and recreational receptors to the west including Wootton (RVP 32, RVP 33, RVP 34, RVP 35)	Between 50 and 1,500m to the west	Sensitivity: <b>High</b> Views of construction activity would typically be interrupted by a combination of intervening vegetation and/or landform. Existing views typically include substantial buildings in the form of warehousing and distribution centres, and for some views the existing A421 is a notable visual detractor. <b>Significant</b> effects would arise as a result of awareness of cranes and emerging built form, visible above those elements in the foreground of views on views. Magnitude of change: <b>High</b>
	Additional Mitigation	No additional mitigation in addition to that outlined in Paragraphs 7.6.2 and 7.6.3 is proposed.
	Residual effect	<b>Large Adverse (Significant)</b>

Receptor	Likely Significant Effects/Additional Mitigation and Residual Effects	
Recreational receptors to the north (RVP 1)	Located immediately adjacent to the northern boundary	<p>Sensitivity: <b>High</b></p> <p>Direct views to the south would include construction activities during the Primary Phase, that would continue in the subsequent years as construction associated with the emerging Lake Zone continues in closer proximity.</p> <p>Magnitude of change: <b>High</b></p>
	Additional Mitigation	Mitigation planting along the northern perimeter of the Lake Zone would provide some screening towards the end of the Primary Phase construction period.
	Residual Effect	<b>Large Adverse (Significant)</b>
Residential receptors to the east within Kempston Wick and Wixams (RVP 10, RVP 11, RVP 13)	Located in developing residential development between 80 and 1,100m to the east	<p>Sensitivity: <b>High</b></p> <p>Construction activities in the foreground of views associated with the East Gateway Zone, and the Core Zone to the west. Where this is not removed for construction, vegetation along the Midland Main Railway Line would provide some screening of activities at ground level, however cranes and emerging built form would be visible in the middle distance of a wide extent of views to the west.</p> <p>Magnitude of change: <b>High</b></p>
	Additional Mitigation	Retention of existing mature planting as shown in <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b> , along the margins of the expanded Wixams Rail Station will provide some screening to construction activity to the west.
	Residual Effect	<b>Large Adverse (Significant)</b>

## VISUAL EFFECTS: OPERATIONAL PHASE

- 7.6.14. A detailed assessment of the visual effects of the Proposed Development during the Operational Phase in Years 1 and 15 is set out in **Appendix 7.6: Detailed Visual Impact Assessment (Volume 3)** and are summarised in **Table 7-8**. As above, the detailed assessment explains how judgements of susceptibility to change and value have been combined to ascertain receptor sensitivity, and how the magnitude of change has been determined considering the establishment of mitigation measures by Year 15, and how these judgements have been combined for each receptor to evaluate the significance of effect. Where appropriate, visual mitigation measures are also described in **Appendix 7.6: Detailed Visual Impact Assessment (Volume 3)**.



**Table 7-8 - Assessment of likely significant visual effects, additional mitigation, and residual effects during operation**

Location	Likely Significant Effects (Year 15)/Additional Mitigation and Residual Effects	
Residential receptors on Manor Road/Broadmead Road (RVP 14, RVP 20)	Located immediately adjacent to the Site boundary	Sensitivity: <b>High</b> Would remain subject to a substantial change in views as a result of substantial changes to their immediate outlook, and for those receptors associated with Manor Road (viewpoint 1) the ongoing activities associated with the development of the Lake Zone to the north. Magnitude of change: <b>High</b>
	Additional Mitigation	Additional planting as part of the perimeter planting strategy will provide additional screening (see <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b> ).
	Residual effect	<b>Large Adverse (Significant)</b>
Stewartby (RVP 18, RVP 19, RVP 21)	Approximately 500m to the south of the Site boundary	Sensitivity: <b>High</b> <b>Significant</b> visual effects in Year 15 are anticipated to remain due to the potential prominence of the tallest elements within the Core Zone, up to 115m AGL in height, that would be visible above intervening vegetation and built form. Establishing perimeter planting along the southern boundary of the Core Zone would contribute to reducing awareness of those elements of a lower height for those receptors along the most northerly edge of Stewartby, represented by RVP 28 however direct views of those taller elements within the Site would potentially remain prominent in views. Magnitude of change: <b>High</b>
	Additional Mitigation	Planting to the southern perimeter of the Site (see <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b> ) will screen low level clutter and reinforce existing planting.
	Residual effect	<b>Large Adverse (Significant)</b>
Residential and recreational receptors on the Greensand	Located approximately 4km to the south of the	Sensitivity: <b>High</b> <b>Significant</b> effects would remain for residents and users of the extensive network of both formal and informal PRoW, although these would remain at the lower end of significance due to the intervening

Location	Likely Significant Effects (Year 15)/Additional Mitigation and Residual Effects	
Ridge (SVP 17, SVP 23, RVP 24)	Site boundary on rising landform	distances and presence of some detracting features within the landscape including the Marston Vale wind turbine and chimney stack associated with the Rookery ERF. Whilst establishing planting would soften the edges of the Proposed Development, the prominence of the tallest elements would remain visible above any tree lines. Magnitude of change: <b>High</b>
	Additional Mitigation	No additional mitigation in addition to that outlined in Paragraphs 7.6.2 and 7.6.3 is proposed.
	Residual effect	<b>Moderate Adverse (Significant)</b>
Residential and recreational receptors in Marston Moretaine (RVP 28)	Approximately 2km to the southeast	Sensitivity: <b>High</b> <b>Significant</b> effects would remain on residential receptors on the margins of the settlement, and receptors using the footpaths around Stewartby Lake although the effects would remain at the lower level of significance. Magnitude of change: <b>Medium</b>
	Additional Mitigation	No additional mitigation in addition to that outlined in Paragraphs 7.6.2 and 7.6.3 is proposed.
	Residual effect	<b>Moderate Adverse (Significant)</b>
Residential and recreational receptors to the west including Wootton (RVP 32, RVP 33, RVP 34 RVP 35)	Between 50 and 1,500m to the west	Sensitivity: <b>High</b> Views of those taller elements of the Proposed Development up to 115m AGL would not be screened by intervening vegetation and/or landform. Existing views that include substantial buildings in the form of warehousing and distribution centres, and the existing A421 would remain. However, <b>Significant</b> effects would remain as a result of direct views of the upper sections of these taller elements, visible above elements in the foreground of views from Wootton, and the surrounding area. Magnitude of change: <b>High</b>
	Additional Mitigation	No additional mitigation in addition to that outlined in Paragraphs 7.6.2 and 7.6.3 is proposed.
	Residual effect	<b>Large Adverse (Significant)</b>

Location	Likely Significant Effects (Year 15)/Additional Mitigation and Residual Effects	
Recreational receptors to the north (RVP 1)	Located immediately adjacent to the northern boundary	<p>Sensitivity: <b>High</b></p> <p>For users of the PRoW network immediately north of the Lake Zone, direct views to the south would continue to include the taller elements within the Core Zone, however this is likely to reduce as construction associated with the emerging Lake Zone continues in closer proximity. Views would instead be replaced by the Entertainment Resort Complex to the south which may extend up to 115m AGL in height effectively screening views to the south.</p> <p>Magnitude of change: <b>High</b></p>
	Additional Mitigation	Mitigation planting along the northern perimeter of the Lake Zone (see <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b> ) would provide screening and filter views of the Proposed Development, however open views of arable fields to the south would be permanently lost.
	Residual Effect	<b>Large Adverse (Significant)</b>
Residential receptors to the east within Kempston Wick and Wixams (RVP 10, RVP 11, RVP 13)	Located in developing residential development between 80 and 1,100m to the east	<p>Sensitivity: <b>High</b></p> <p><b>Significant</b> effects are anticipated to remain as a result of the presence and potential further expansion of Entertainment Resort Complex within the East Gateway Zone. Awareness of the taller elements within the Core Zone to the west is anticipated to remain above new development within the foreground of views. Where this was not removed during construction, vegetation along the Midland Main Railway Line would continue to provide some screening of activities at ground level, and perimeter planting along the eastern edge of the Site would only reinforce this as it matures.</p> <p>Magnitude of change: <b>High</b></p>
	Additional Mitigation	Retention of existing mature planting, along the margins of the expanded Wixams Rail Station (see <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b> ) will provide some screening to the Proposed Development to the west.
	Residual Effect	<b>Large Adverse (Significant)</b>

- 7.6.15. **Significant** visual effects are predicted to remain into the Operational Phase primarily due to the presence of the tallest elements of the Proposed Development within the Core Zone, for example rides and attractions up to 115m AGL and the hotel/visitor accommodation development up to 75m AGL. Following construction, this development would be visible above intervening vegetation within a predominantly flat landscape or where elevated views have a broader angle of views from the local ridgelines to the south and west.
- 7.6.16. By Year 15 significant effects are not predicted to reduce substantially, and the majority of significant effects would remain. This is due to the majority of significant effects arising as a result of the presence of new tall elements, visible above intervening tree lines or built form. Proposed planting around the perimeter of the Site would soften lower levels views and filter views of the buildings at lower heights. In addition, the expectation is that further Entertainment Resort Complex within the Lake Zone, and development within the West and East Gateway Zones would be emerging at a height of up to 75m AGL and broaden the geographical extent to which views are affected.

### CUMULATIVE EFFECTS

- 7.6.17. Cumulative effects have been considered for those short-listed developments that could result in significant inter-project effects due their presence within the landscape and visual zone of influence, refer to **Table 7-9**. This is considered to extend up to 10km from the Site boundary and considers developments that would be perceived within shared views from sensitive receptors or which would potentially result in a material change to the landscape context. As referred to in **Chapter: 3 Approach to EIA (Volume 1)**, the cumulative assessment associated with the Landscape and Visual Impact Assessment is set out in **Chapter 18: Cumulative Effects (Volume 1)**. The long list of 'other developments' provided in **Chapter 18: Cumulative Effects (Volume 1)** of this ES was reviewed to consider which developments could potentially result in cumulative landscape and/or visual effects. The majority of the other developments shown in **Figure 18.1: Committed Developments (Volume 2)** were scoped out of the cumulative landscape and visual effects assessment due to one or more of the following:
- The relatively minor nature of the developments, attributable to the small scale, limited geographical extent or limited duration of the developments, or combination of these factors;
  - The appreciable distance between the developments and the Proposed Development; and
  - The appreciable amount, scale and/or density of built form and vegetation between the developments and the Proposed Development.
- 7.6.18. The remaining developments (mapped on **Figure 18.1: Committed Developments (Volume 2)** of this ES) were scoped into the cumulative landscape and visual assessment and are assessed in **Table 7-9** below.

**Table 7-9 - Assessment of Cumulative Landscape and Visual Effects**

ID	Summary Description of Committed Development	Assessment of Cumulative Effects
21/26/71	<p>App refs: 23/01614/M73, 21/02615/MAR, and 24/02146/M73</p> <p>Reserved matters for 232 residential dwellings on including Appearance, Landscaping, Layout and Scale, pursuant to Outline permission 11/01380/M73.</p>	<p><u>Landscape Effects</u></p> <p>This development would be located approximately 1km east of the Proposed Development and is assessed to not materially increase the magnitude of landscape change on LCA 5D North Marston Clay Vale during the Primary Phase.</p> <p>It is anticipated that this development would be completed by the Operational Phase (Year 1) of the Proposed Development, therefore it is assessed there would be no increase in the magnitude of change during this Phase.</p> <p>This development is assessed not to result in additional landscape effects, and it is therefore considered no additional mitigation is required.</p> <p>Accordingly, it is assessed that <b>no Significant</b> cumulative landscape effects would occur as a result of this development.</p> <p><u>Visual Effects</u></p> <p>This development is assessed to not materially increase the magnitude of visual change during the Construction Phase or the Operational Phase and it is therefore considered no additional mitigation is required.</p> <p>It is assessed that <b>no Significant</b> cumulative visual effects would occur as a result of this development.</p>
22	<p>App ref: 23/02566/MAR</p> <p>All reserved matters for the erection of a Regional Distribution Centre (Use Class B8) with ancillary office accommodation (Use Class E(g)(i)), gatehouse and access arrangements, vehicle maintenance unit, recycling area, car parking, landscaping and other associated works, pursuant to outline permission ref. 15/00466/EIA.</p>	<p><u>Landscape Effects</u></p> <p>This development would be located approximately 0.45km east of the Proposed Development and would have a <b>Negligible Adverse</b> effect on LCA 5D North Marston Clay Vale during the Primary Phase. These changes are assessed not to materially increase the magnitude of landscape change during the Construction Phase.</p> <p>It is anticipated that this development would be completed by the Operational Phase (Year 1) of the Proposed Development, therefore it is assessed there would be no increase in the magnitude of change during this Phase.</p> <p>This development is assessed not to result in additional landscape effects and it is therefore considered no additional mitigation is required.</p> <p>It is assessed that <b>no Significant</b> cumulative landscape effects would occur as a result of this development.</p> <p><u>Visual Effects</u></p> <p>The LVIA which supported the planning application reported that the development would not result in <b>Significant (Adverse)</b> effects on visual receptors in the surrounding area.</p>

ID	Summary Description of Committed Development	Assessment of Cumulative Effects
		<p>This development is assessed to result in no additional visual effects during the Operational Phase and it is therefore considered no additional mitigation is required.</p> <p>It is assessed that <b>no Significant</b> cumulative visual effects would occur as a result of this development.</p>
23	<p>App ref: 21/03124/MAR</p> <p>All reserved matters for the erection of a Regional Distribution Centre (Use Class B8) with ancillary office accommodation (Use Class E(g)(i)), gatehouse and access arrangements, vehicle maintenance unit, recycling area, car parking, landscaping and other associated works, pursuant to outline permission ref. 15/00466/EIA.</p>	<p><u>Landscape Effects</u></p> <p>This development would be located approximately 0.5km east of the Proposed Development and would have a <b>Negligible Adverse</b> effect on LCA 5D North Marston Clay Vale during the Primary Phase. These changes are assessed not to materially increase the magnitude of landscape change during the Construction Phase.</p> <p>It is anticipated that this development would be completed by the Operational Phase (Year 1) of the Proposed Development, therefore it is assessed there would be no increase in the magnitude of change during this Phase.</p> <p>This development is assessed not to result in additional landscape effects and it is therefore considered no additional mitigation is required.</p> <p>It is assessed that <b>no Significant</b> cumulative landscape effects would occur as a result of this development.</p> <p><u>Visual Effects</u></p> <p>The LVIA which supported the planning application reported that the development would result in some <b>Significant (Adverse)</b> effects on visual receptors in the surrounding area.</p> <p>This development is assessed to result in no additional visual effects during the Operational Phase and it is therefore considered no additional mitigation is required.</p> <p>It is assessed that <b>no Significant</b> cumulative visual effects would occur as a result of this development.</p>
25	<p>App ref: 23/01008/MAR</p> <p>Reserved Matters application for appearance, landscaping, layout and scale for the erection of 111 new dwellings, parking, landscaping and associated works pursuant to Outline Planning Permission 11/01380/M73.</p>	<p><u>Landscape Effects</u></p> <p>This development would be located approximately 2.4km east of the Proposed Development and is assessed to not materially increase the magnitude of landscape change during the Primary Phase.</p> <p>It is anticipated that this development would be completed by the Operational Phase (Year 1) of the Proposed Development, therefore it is assessed there would be no increase in the magnitude of change during this Phase and no additional mitigation is required.</p> <p>It is assessed that <b>no Significant</b> cumulative landscape effects would occur as a result of this development.</p>

ID	Summary Description of Committed Development	Assessment of Cumulative Effects
		<p><u>Visual Effects</u></p> <p>Changes would be experienced in a visual context where sizeable development (mainly residential) has occurred. These changes are assessed to not materially increase the magnitude of visual change during the Construction Phase or the Operational Phase of the Proposed Development and therefore no additional mitigation is required.</p> <p>It is assessed that <b>no Significant</b> cumulative visual effects would occur as a result of this development.</p>
49	<p>App ref: 23/01877/MAF</p> <p>Demolition of link building between two existing industrial unit to subdivide Site. New vehicular ramp (5 degree or shallower) with a retaining wall either side. Unfinished land between buildings to become service road to rear. Erection of fencing to create two separate properties.</p>	<p>This development would be located approximately 0.25km north of the Proposed Development and is assessed as unlikely to result in any cumulative landscape or visual effects occurring during either the Construction or Operational Phase of the Proposed Development. No additional mitigation is required.</p> <p>It is assessed that <b>no significant</b> cumulative landscape or visual effects would occur as a result of this development.</p>
62	<p>App ref: 24/02463/MAO</p> <p>Outline Planning Application for a residential development of up to 375 dwellings (nursery, a sports pavilion, ancillary commercial/community use, a mobility hub, and associated infrastructure including provision of green infrastructure; new woodland planting; biodiversity enhancements; open space; car parking; new pedestrian and cycle linkages; and drainage works (to include SuDS attenuation).</p>	<p><u>Landscape Effects</u></p> <p>This development would be located approximately 1.8km east of the Proposed Development and is assessed to not materially increase the magnitude of landscape change during the Primary Phase.</p> <p>It is anticipated that this development would be completed by the Operational Phase (Year 1) of the Proposed Development, therefore it is assessed there would be no increase in the magnitude of change during this Phase and no additional mitigation is required.</p> <p>It is assessed that <b>no Significant</b> cumulative landscape effects would occur as a result of this development.</p> <p><u>Visual Effects</u></p> <p>This development is assessed to not materially increase the magnitude of visual change during the Construction Phase or the Operational Phase and it is therefore considered no additional mitigation is required.</p> <p>It is assessed that <b>no Significant</b> cumulative visual effects would occur as a result of this development.</p>



ID	Summary Description of Committed Development	Assessment of Cumulative Effects
70	<p>24/02197/MOF</p> <p>Outline application for the demolition of existing buildings and erection of up to 95 residential dwellings (including affordable housing), public open space (including play space) and associated drainage, landscaping, internal roads, utilities and other service infrastructure. All matters are reserved except means of access.</p>	<p><u>Landscape Effects</u></p> <p>This development would be located adjacent to the western boundary of the Proposed Development and is assessed to not materially increase the magnitude of landscape change during the Primary Phase.</p> <p>It is anticipated that this development would be completed by the Operational Phase (Year 1) of the Proposed Development, therefore it is assessed there would be no increase in the magnitude of change during this Phase and no additional mitigation is required.</p> <p>It is assessed that <b>no Significant</b> cumulative landscape effects would occur as a result of this development.</p> <p><u>Visual Effects</u></p> <p>This development is assessed to not materially increase the magnitude of visual change during the Construction Phase or the Operational Phase and it is therefore considered no additional mitigation is required.</p> <p>It is assessed that <b>no Significant</b> cumulative visual effects would occur as a result of this development.</p>
78	<p>App ref: CB/24/01802/RM</p> <p>Reserved Matters: following Outline Application CB/17/02575/OUT (Mixed use development with access from Ampthill Road and Bedford Road comprising up to 650 dwellings and landscaping) Approval of appearance, landscaping, layout and scale for 351 dwellings with partial discharge of conditions 25 (Scheme of Noise Attenuation Measures), 26 (Waste Audit Scheme), 31 (Renewable and Low Energy Sources) and 37 (Landscape and Ecological Management Plan) relevant to the Residential Areas 1-6.</p>	<p><u>Landscape Effects</u></p> <p>This development would be located approximately 0.75km south east of the Proposed Development and is assessed to not materially increase the magnitude of landscape change during the Primary Phase.</p> <p>It is anticipated that this development would be completed by the Operational Phase (Year 1) of the Proposed Development, therefore it is assessed there would be no increase in the magnitude of change during this Phase and no additional mitigation is required.</p> <p>It is assessed that <b>no Significant</b> cumulative landscape effects would occur as a result of this development.</p> <p><u>Visual Effects</u></p> <p>Changes would be experienced in a visual context where sizeable development (mainly residential) has occurred. These changes are assessed to not materially increase the magnitude of visual change during the Construction Phase or the Operational Phase of the Proposed Development and therefore no additional mitigation is required.</p> <p>It is assessed that <b>no Significant</b> cumulative visual effects would occur as a result of this development.</p>



## **7.7. DIFFICULTIES AND UNCERTAINTIES**

- 7.7.1. Details of the specific location and extent of buildings, structures and vegetation are limited at this stage of design. The principle of an articulated or varied outline has been confirmed and this has been applied as broad principles and to the full extent of the relevant Zones to enable a robust assessment to be undertaken.
- 7.7.2. Details of non-customer facing buildings is currently unknown.
- 7.7.3. The details of the soft landscape proposals, with the exception of the retention of perimeter vegetation where it is practicable to do so, is currently unknown and to be determined as part of the detailed design of the Proposed Development. Comparable UDX sites have 'lands' that are themed and which are separated by vegetation and built form, and the assumption is that a similar approach would be taken at this location. Potential future expansion of the Theme Park may require additional vegetation removal with subsequent mitigation and expansion of the 'designed' landscape within it.

## 7.8. SUMMARY OF LIKELY SIGNIFICANT EFFECTS AND PROPOSED MITIGATION

- 7.8.1. **Table 7-10** below presents a summary of the likely significant effects relating to Landscape and Visual Impact as a result of the Proposed Development, and the mitigation measures proposed to avoid, prevent, reduce or, offset (if possible and required) any identified significant adverse effects. The table summarises those effects that were identified within the assessment as likely to be significant prior to the consideration of mitigation. Significant effects are identified as **major or moderate**. Effects that are identified as **negligible or minor** are not considered to be significant, and therefore, are not listed in the summary table below.

**Table 7-10 - Summary of Likely Significant Landscape and Visual Effects and Proposed Mitigation**

Key to table:

**P/T = Permanent or Temporary, D/I = Direct or Indirect, ST/MT/LT = Short Term, Medium Term or Long Term, N/A = Not Applicable**

Receptor	Description of Effect	Classification of Effect	Mitigation	Classification of Residual Effect	Significant / Not Significant
<b>Landscape Character</b>					
LCA 5D: North Marston Clay Vale (Host LCA)	Noticeable loss of agricultural land and wooded areas within the LCA	<b>Construction Phase:</b> <b>Moderate Adverse</b> T/D/MT  <b>Operation Year 1:</b> <b>Moderate Adverse</b> P/D  <b>Operation Year 15:</b> <b>Moderate Adverse</b> P/D	Where appropriate to deliver the Proposed Development and to allow construction activities the necessary working space, the majority of the existing perimeter planting should be retained as permanent screening.  The perimeter of the Site will be planted (either through retention of existing vegetation or provision of new mitigation planting), as indicated on <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b> . This will provide screening of lower elements of the Proposed Development.  Tree planting will be included as part of the surrounding urban realm and adjacent to the transport hubs within the East Gateway Zone	<b>Moderate Adverse</b> P/D	<b>Significant</b>

Receptor	Description of Effect	Classification of Effect	Mitigation	Classification of Residual Effect	Significant / Not Significant
			<p>and West Gateway Zone by Network Rail to break up the visual mass of these developments and provide gateway features.</p> <p>Mitigation planting, or alternative visual screening, will be provided adjacent to Manor Road (to the south of the new road alignment), and existing planting along the northern side of Manor Road will be retained where feasible to provide screening to Manor Road cottages as indicated on <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b>.</p> <p>Where feasible and to allow required access points, existing planting along sections of Broadmead Road (southern boundary to the West Gateway Zone and Core Zone) will be retained as screening as indicated on <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b>.</p> <p>Existing vegetation will be retained along the eastern margins of the Marston Vale Railway Line within the Core Zone and Lake Zone as indicated on <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b> (where the land is within the control of UDX).</p> <p>An articulated skyline is proposed, which will consist of elements of varying heights and would break up the overall outline of the Proposed Development.</p> <p>Roadways within the Proposed Development and under the control of UDX will include appropriate tree and shrub planting. The new A421 Junction under the control of National</p>		

Receptor	Description of Effect	Classification of Effect	Mitigation	Classification of Residual Effect	Significant / Not Significant
			Highways will have appropriate native planting to screen views and integrate the junction within the existing highway.		
LCA 6B: Mid Greensand Ridge	Effects on long-distance views resulting in minor adjustments to perceptual characteristics, notably at the northeastern boundary of the LCA, overlooking the lower lying open landscape to the north	<p><b>Construction Phase:</b> <b>Moderate Adverse</b> T/I/MT</p> <p><b>Operation Year 1:</b> <b>Moderate Adverse</b> P/I</p> <p><b>Operation Year 15:</b> <b>Moderate Adverse</b> P/I</p>	<p>Where appropriate to deliver the Proposed Development and to allow construction activities the necessary working space, the majority of the existing perimeter planting should be retained as permanent screening.</p> <p>The perimeter of the Site will be planted (either through retention of existing vegetation or provision of new mitigation planting), as indicated on <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b>. This will provide screening of lower elements of the Proposed Development.</p> <p>Tree planting will be included as part of the surrounding urban realm and adjacent to the transport hubs within the East Gateway Zone and West Gateway Zone by Network Rail to break up the visual mass of these developments and provide gateway features.</p> <p>An articulated skyline is proposed, which will consist of elements of varying heights and would break up the overall outline of the Proposed Development.</p>	<b>Moderate Adverse</b> P/I	<b>Significant</b>

Receptor	Description of Effect	Classification of Effect	Mitigation	Classification of Residual Effect	Significant / Not Significant
Bedford Urban Area LCA	Loss of trees and woodland along northern boundaries of the LCA, altering the area's perception of open countryside	<p><b>Construction Phase:</b> <b>Moderate Adverse</b> T/I/MT</p> <p><b>Operation Year 1:</b> <b>Moderate Adverse</b> P/D</p> <p><b>Operation Year 15:</b> <b>Moderate Adverse</b> P/D</p>	<p>Where appropriate to deliver the Proposed Development and to allow construction activities the necessary working space, the majority of the existing perimeter planting should be retained as permanent screening.</p> <p>The perimeter of the Site will be planted (either through retention of existing vegetation or provision of new mitigation planting), as indicated on <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b>. This will provide screening of lower elements of the Proposed Development.</p> <p>An articulated skyline is proposed, which will consist of elements of varying heights and would break up the overall outline of the Proposed Development.</p>	<b>Moderate Adverse</b> P/I	<b>Significant</b>
Landscape elements within the Site	Noticeable loss of trees and woodland, altering the perception of open countryside between surrounding villages	<p><b>Construction Phase:</b> <b>Large Adverse</b> T/D/MT</p> <p><b>Operation Year 1:</b> <b>Large Adverse</b> P/D</p> <p><b>Operation Year 15:</b> <b>Large Adverse</b></p>	<p>Where appropriate to deliver the Proposed Development and to allow construction activities the necessary working space, the majority of the existing perimeter planting should be retained as permanent screening.</p> <p>The perimeter of the Site will be planted (either through retention of existing vegetation or provision of new mitigation planting), as indicated on <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b>. This will provide screening of lower elements of the Proposed Development.</p> <p>Tree planting will be included as part of the surrounding urban realm and adjacent to the</p>	<b>Large Adverse</b> P/D	<b>Significant</b>

Receptor	Description of Effect	Classification of Effect	Mitigation	Classification of Residual Effect	Significant / Not Significant
		P/D	<p>transport hubs within the East Gateway Zone and West Gateway Zone by Network Rail to break up the visual mass of these developments and provide gateway features.</p> <p>Mitigation planting, or alternative visual screening, will be provided adjacent to Manor Road (to the south of the new road alignment), and existing planting along the northern side of Manor Road will be retained where feasible to provide screening to Manor Road cottages as indicated on <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b>.</p> <p>Where feasible and to allow required access points, existing planting along sections of Broadmead Road (southern boundary to the West Gateway Zone and Core Zone) will be retained as screening as indicated on <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b>.</p> <p>Existing vegetation will be retained along the eastern margins of the Marston Vale Railway Line within the Core Zone and Lake Zone as indicated on <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b> (where the land is within the control of UDX).</p>		
<b>Visual Amenity</b>					
<ul style="list-style-type: none"> <li>Residential receptors at southern edge of Kempston Hardwick, Meadow Road (refer to RVP 13);</li> </ul>		<b>Construction Phase:</b> <b>Large Adverse</b> T/D/MT		<b>Large Adverse</b> P/D	<b>Significant</b>

Receptor	Description of Effect	Classification of Effect	Mitigation	Classification of Residual Effect	Significant / Not Significant
<ul style="list-style-type: none"> <li>Residential properties along Manor Road, and users of Manor Road (refer to RVP 14);</li> <li>Residential receptors at the northern edge of Stewartby (refer to RVP 19);</li> <li>Residents on Broadmead Road, and users of Broadmead Road (refer to RVP: 20);</li> <li>Representative of residents of Stewartby (refer to RVP 21);</li> <li>Residential receptors at the northern edge of Wootton, and recreational receptors at Wootton Play Park and Community Centre (refer to RVP 32); and</li> <li>Informal footpath south of Marsh Leys Industrial Estate (refer to RVP 33).</li> </ul>		<p><b>Operation Year 1:</b> <b>Large Adverse</b> P/D</p> <p><b>Operation Year 15:</b> <b>Large Adverse</b> P/D</p>	<p>Where appropriate to deliver the Proposed Development and to allow construction activities the necessary working space, the majority of the existing perimeter planting should be retained as permanent screening.</p> <p>The perimeter of the Site will be planted (either through retention of existing vegetation or provision of new mitigation planting), as indicated on <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b>. This will provide screening of lower elements of the Proposed Development.</p> <p>Tree planting will be included as part of the surrounding urban realm and adjacent to the transport hubs within the East Gateway Zone and West Gateway Zone by Network Rail to break up the visual mass of these developments and provide gateway features.</p> <p>Mitigation planting, or alternative visual screening, will be provided adjacent to Manor Road (to the south of the new road alignment), and existing planting along the northern side of Manor Road will be retained where feasible to provide screening to Manor Road cottages as indicated on <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b>.</p>		
<ul style="list-style-type: none"> <li>Recreational receptors along PRow and transport receptors along A421 (refer to RVP 1).</li> </ul>		<p><b>Construction Phase:</b> <b>Large Adverse</b> T/D/MT</p> <p><b>Operation Year 1:</b> <b>Moderate Adverse</b> P/D</p>		<b>Large Adverse</b> P/D	<b>Significant</b>

Receptor	Description of Effect	Classification of Effect	Mitigation	Classification of Residual Effect	Significant / Not Significant
		<b>Operation Year 15:</b> <b>Large Adverse</b> P/D	Where feasible and to allow required access points, existing planting along sections of Broadmead Road (southern boundary to the West Gateway Zone and Core Zone) will be retained as screening as indicated on <b>Figure 7.9: Landscape Mitigation Plan (Volume 2)</b> .  An articulated skyline is proposed, which will consist of elements of varying heights and would break up the overall outline of the Proposed Development.  Roadways within the Proposed Development and under the control of UDX will include appropriate tree and shrub planting. The new A421 Junction under the control of National Highways will have appropriate native planting to screen views and integrate the junction within the existing highway.		
<ul style="list-style-type: none"><li>▪ Residential receptors at the northern edge of Kempston Hardwick (refer to RVP10);</li><li>▪ Residential receptors at the northern edge of Wixams (refer to RVP 11);</li><li>▪ Residential receptors at northern edge of Houghton Conquest (refer to RVP 16);</li><li>▪ Residential receptors on the elevated Green Sandstone ridge, recreational receptors visiting Houghton House, and users of local PRoW (refer to SVP 17);</li><li>▪ Residential receptors along northeastern edge of Stewartby (refer to RVP 18);</li><li>▪ Representative of visitors to Ampthill Park RPG/Ampthill Park House residents (refer to SVP 23);</li><li>▪ Representative of visitors to Ampthill Park RPG and parkland/users of PRoW/Greensand Ridge Walk/John Bunyan Trail (refer to RVP 24);</li></ul>	<ul style="list-style-type: none"><li>▪ Construction Phase:</li><li>▪ Moderate Adverse</li><li>▪ T/D/MT</li> <li>▪ Operation Year 1:</li><li>▪ Moderate Adverse</li><li>▪ P/D</li> <li>▪ Operation Year 15:</li><li>▪ Moderate Adverse</li><li>▪ P/D</li></ul>		<ul style="list-style-type: none"><li>▪ Moderate Adverse</li><li>▪ P/D</li></ul>	<ul style="list-style-type: none"><li>▪ Significant</li></ul>	



Receptor	Description of Effect	Classification of Effect	Mitigation	Classification of Residual Effect	Significant / Not Significant
	<ul style="list-style-type: none"> <li>Recreational receptors at the Forest Centre and Marston Vale Millennium Country Park (refer to RVP 28);</li> <li>Residential receptors of Lower Shelton, and recreational receptors along footpath between Lower Shelton and Wootton Green and (refer to RVP 29);</li> <li>Residential receptors to the northeast of Wootton, and recreational receptors along bridleway and transport receptors along A421 (refer to RVP 34); and</li> <li>Residential receptors at Potters Cross and recreational users of footpath north of Wootton (refer to RVP 35).</li> </ul>				

## 7.9. REFERENCES

- **Ref. 7.1:** Guidelines for Landscape and Visual Impact Assessment (GLVIA), Third Edition. Routledge 2013
- **Ref. 7.2:** Department for Environment, Food and Rural Affairs (2024) *National Character Area profiles: information for local decision making*. Available at: <https://www.gov.uk/guidance/national-character-area-profiles-information-for-local-decision-making>
- **Ref. 7.3:** Central Bedfordshire Council (no date) *LCA in Central Bedfordshire*. Available at: [https://www.centralbedfordshire.gov.uk/info/44/planning/446/landscape\\_character\\_assessment/2](https://www.centralbedfordshire.gov.uk/info/44/planning/446/landscape_character_assessment/2)
- **Ref. 7.4:** Bedford Borough Council (2014) *Bedford Borough Landscape Character Assessment*. Available at: <https://edrms.bedford.gov.uk/OpenDocument.aspx?id=H1s1ijkK2oPN8wKbNf7JDw%3d%3d&name=Bedford%20LCA%202020.pdf>
- **Ref. 7.5:** Bedford Borough Council (no date) *Access ArcGIS online maps*. Available at: <https://www.bedford.gov.uk/parking-roads-and-travel/public-rights-way/arcgis-online-maps/access-arcgis-online-maps>
- **Ref. 7.6:** The Countryside Charity (2007) *Tranquillity Map: England*. Available at: <https://www.cpre.org.uk/resources/tranquillity-map-england/>
- **Ref. 7.7:** Department for Environment, Food and Rural Affairs (2024) *Defra's Magic Database*. Available at: <https://magic.defra.gov.uk/>
- **Ref. 7.8:** Ash dieback mapping. Available at: [Chalara ash dieback in the UK](#)
- **Ref. 7.9:** Bedford Borough Council Landscape Character Assessment, LUC 2020 Available at: [OpenDocument.aspx](#)
- **Ref. 7.10:** Central Bedfordshire Council Landscape Character Assessment, LUC 2016. Available at: [Landscape Character Assessment | Central Bedfordshire Council](#)
- **Ref. 7.11:** BS 5837:2012: Trees in relation to design, demolition and construction. Recommendations. Available at: [BS 5837:2012 | 30 Apr 2012 | BSI Knowledge](#)



WSP House  
70 Chancery Lane  
London  
WC2A 1AF

**wsp.com**

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