

14 Landscape and Visual Effects

14.1 Introduction

- 14.1.1 This chapter of the ES covers the assessment of the likely significant landscape and visual effects. It starts by describing the current conditions found within and around the route of the Northstowe Phase 2 development, the nature and pattern of buildings, streets, open space and vegetation and their interrelationships within the adjacent rural environment. The significant effects that would arise during construction and operation on landscape character areas (LCAs) and visual receptors are described.
- 14.1.2 The landscape character assessment examines the type and form of the natural and built landscape of the site and surrounding area to establish its quality, character, and specific features. It determines the degree to which the existing landscape would be affected both directly and indirectly by the proposed development. The assessment area is also evaluated in terms of sensitivity to change i.e., the capacity of the landscape to accept change of the type and scale proposed.
- 14.1.3 The visual assessment examines the visual effects that arise from changes in character and quality of people's views arising from the proposed development. The significance of an effect on views is determined by consideration of the sensitivity of the receptor (the group of people experiencing the view) and the magnitude of change.
- 14.1.4 The baseline conditions and assessment for all landscape and visual receptors which are considered to experience non-significant effects during construction and operation are included within the technical appendices in Volume 2 Appendix H1.
- 14.1.5 Plans of the proposed development as well as figures included in the assessment for this site are contained in a separate volume of the ES.
- 14.1.6 A separate but related assessment of effects on the setting of heritage assets is included in Chapter 9: Archaeology and Cultural Heritage.

14.2 Review of Proposed Development

- 14.2.1 The description of the proposed Northstowe Phase 2 development has been given in Chapter 2 of the ES. Potential significant effects of the proposed development on the landscape and views include:

- Changes to landform/topography of the site as a result of earthworks;
- Changes to tree cover and existing vegetation including historic hedgerows and field patterns;
- Changes to drainage features and ditches characteristic of the local landscape;
- Changes to land use including built features, settlement patterns, and building materials;
- Changes to public rights of way, including historic green lanes.

14.2.2 As well as the above, the impacts of the activities during the construction stage likely to give rise to effect on the landscape and visual receptors are listed below;

- Removal of vegetation, especially along existing site boundaries, including Rampton Bridleway;
- General earthworks along the boundary which require cut/fill operations and land modification;
- Presence of machinery, vehicles associated parking and lighting required for the works;
- Location of site hoarding and access into the site; and
- Location of storage for materials and stock piles.

14.2.3 Operational effects assessment of the impact of the development in use primarily focuses on the phasing, design, scale and layout of the development and the mitigation of the visual effects. Consideration would be given to the temporary boundary treatments and land management operations and treatment.

14.3 Approach and methods

14.3.1 This section of the report sets out the relevant legislation and guidance as well as the methodology for assessing the likely significant environmental effects on the landscape and visual receptors arising from the construction and operation of the proposed development.

14.3.2 The methodology for the landscape and visual assessment has followed the guidelines set out in the following landscape guidance documents:

- DMRB Volume 11, Section 3, Part 5 Landscape Effects, (Highways Agency, June 1993/ updated August 1994); and
- Guidelines for Landscape and Visual Impact Assessment (GLVIA) (2013) Landscape Institute and Institute of Environmental Management and Assessment, Third Edition.

- 14.3.3 The landscape and visual baseline has been established through desk based research and field survey to establish the character of the landscape within the development site and in the surrounding areas and the nature of existing views.
- 14.3.4 The definition of landscape is 'an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors' (European Landscape Convention - Council of Europe, 2000)¹⁹⁰.
- 14.3.5 For this assessment, the term 'landscape' encompasses all types and forms of open space and development in the countryside, villages, and towns. This is to avoid the use of interchangeable terms (such as townscape) which may cause confusion, therefore the term 'landscape' has been consistently used throughout.
- 14.3.6 The landscape character of the study area and the nature of existing views have been established through desk based research and field survey undertaken by chartered landscape architects.

Legislation and Guidance

- 14.3.7 The SCDC Local Plan contains 14 policies that are relevant to landscape and visual assessment in terms of determining the value and sensitivity of Landscape Character Areas (LCAs) and assessing the effects on these character areas.
- Policy NH/1 sets out the designation of conservation areas, including at Longstanton, and ensures that a green separation is maintained between Longstanton and Northstowe. Open land uses of the green separation could include playing fields, allotments and cemeteries and must maintain the open fields surrounding All Saints' church.
 - Policy NH/2 covers the protection of the environment and landscape character. Development will only be permitted if it enhances, respects or retains the existing national character of the area where it is located.
 - Policy NH/3 addresses the protection of rural agricultural land not permitting substantial built development or development that would alter its use as agricultural land.
 - Policy NH/4 states that new developments must maintain enhance and restore or add biodiversity, with the built environment fully integrating biodiversity and integrating habitat creation to achieve the target stated in BAPs. Any protected species of habitat that could not be conserved in the development should be mitigated.
 - Policy NH/6 Green infrastructure: new proposals are required to contribute to the enhancement of green infrastructure and

¹⁹⁰ European Landscape Convention CETS No.: 176, Florence Date : 20/10/2000

reinforce the link and buffer to green infrastructure as well as enhancing the public enjoyment of it. Northstowe is located within the Green Infrastructure Network Plan.

- Policy NH/7 Ancient Woodlands and Veteran trees: proposals affecting any of these are expected to mitigate any adverse impacts with further enhancements.
- Policy NH/8 Mitigating the Impact of Development in and adjoining Green Belt: Development at the edges of settlements and green belts are to incorporate high quality landscape design measures to mitigate any loss.
- Policy NH/12 Local Green Space: will be protected from development that would adversely impact on the character and particular local significance placed on such green areas which make them valued by their community.
- Policy NH/13 Important Countryside Frontages are areas to be protected where the land with a strong countryside character penetrates into the village or provides an important rural break between two nearby developments.
- Policy NH/14 Heritage assets addresses the safeguarding and enhancement of listed monuments and buildings.

14.3.8 SCDC has produced several supplementary planning documents (SPDs) that are of relevance to this assessment, including the following;

- Landscape in New Developments SPD (March 2010)
- Open Space in New Developments SPD (January 2009)
- Cambridge and South Cambridgeshire Sustainable Development Strategy (November 2012)
- Cambridgeshire Green Infrastructure Strategy (June 2011)
- District Design Guide SPD (March 2010)

Study Area

14.3.9 The site is located 9 km to the north west of Cambridge on low lying land adjacent to the village of Longstanton. The villages of Cottenham and Oakington are located in slightly elevated positions at 10m AOD to the east and south. Bar Hill is located 1km to the south west of the site boundary at the foot of a ridge which reaches 70mAOD and follows the line of the A428 trunk road west towards St Neots.

Methodology

14.3.10 The process for the landscape and visual assessment is illustrated in Image 1. Each stage of the assessment process is then described in more detail through the following sections.

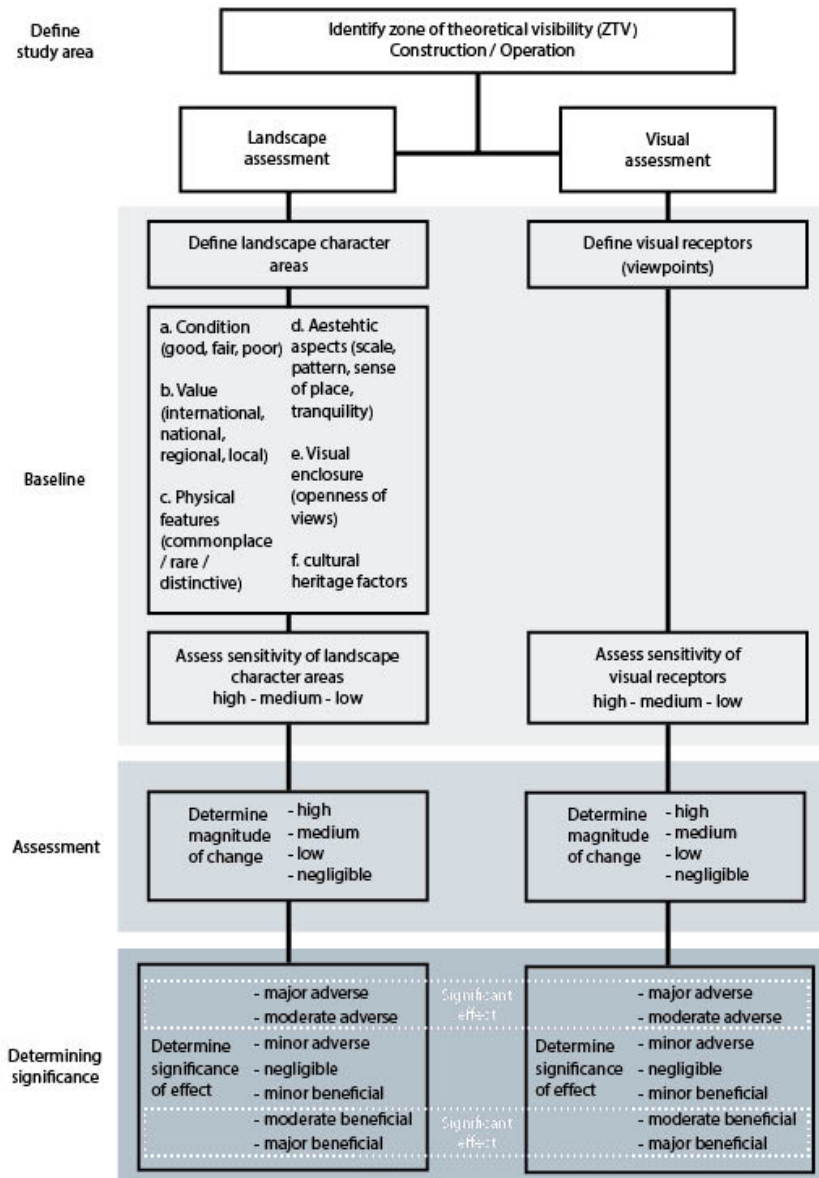


Image 1: Assessment process for the landscape and visual assessment

Establishment of baseline definition of survey

- 14.3.11 The landscape character of the study area and the nature of existing views was established through desk based research and field survey.
- 14.3.12 The landscape and visual surveys were carried out by Chartered Landscape Architects experienced in EIA. Assessments made were verified by at least two other Chartered Landscaped Architects experienced in EIA. Survey work was carried out in winter, in order to gauge the 'worse case scenario' in the assessment. The survey work was undertaken in a methodical order as follows:
- verification of the zone of theoretical visibility (ZTV) i.e. the study area;
 - definition of the landscape character areas;
 - assessment of the attributes of each of the character areas;
 - establishment of the sensitivity of each of the character areas;
 - definition of viewpoints representative of groups of visual receptors within the ZTV;
 - definition of the type and nature of the view from each viewpoint; and
 - determination of the magnitude of change for each character area (see section 14.3.26).

Landscape baseline

- 14.3.13 The landscape baseline was based on information available at the time of producing the ES. The description includes an overview of the elements that form the baseline within the study area, using text and plans to describe:
- Topography and geology;
 - Cover, distribution and type of land use and open space, including statutory and non-statutory designations relevant to the landscape and visual assessment (Conservation Areas, Green Belt);
 - Development patterns and scale, including age, massing and density of buildings, levels of enclosure, skyline characteristics, building materials and landmark features;
 - Vegetation patterns and extents;
 - Transport routes and PRoW and other routes , National Trails to include roads, railways, cycleways, bridleways, footpaths, historic green lanes and drovers roads and waterways;
 - Heritage features, including listed buildings, registered parks and gardens and other historic components; and

- Existing landscape character assessments and local green infrastructure strategies or plans prepared by CCC and SDC, including the latest available National Character Assessment¹⁹¹ and profiles from Natural England.

Landscape character areas

- 14.3.14 Landscape character areas are defined as areas with broadly homogenous characteristics. The identification of character areas was influenced by published character assessments, including ones prepared at the national, county and district scale. Where appropriate these were sub-divided to create units of character appropriate to the scale of the project.
- 14.3.15 The character of each landscape character area was described, using existing documentation including local authority character assessments, historic landscape character assessments and Conservation Area character appraisals where available. The character area boundaries follow natural changes in the landscape rather than political or administrative boundaries.
- 14.3.16 Each character area description culminates in an assessment of sensitivity. This assessment of sensitivity requires the application of professional judgement, in line with guidance provided by the Landscape Institute. The presence of any combination of attributes may be considered when assessing the sensitivity of a character area, including published character assessments which attribute sensitivity to landscape character areas. This allows professional judgement to be used when determining the relative importance of different attributes. The attributes which influence the sensitivity of a character area are described in Table 14.1 below.

Table 14.1: Landscape sensitivity

Level of Sensitivity	Definition The character areas:
High	<p>A landscape valued at the international, national or regional level (Considered an important component of the country's character, experienced by significant numbers of international or national tourists, located within an AONB, or a nationally or regionally significant historic or cultural resource including Green Belt).</p> <p>Is predominantly characterised by landscape components that are rare and distinctive and/or listed.</p> <p>Is designated as a conservation area, registered park and garden or public open space.</p> <p>Has limited tolerance to change.</p> <p>Has components that are not easily replaced or substituted (e.g., mature trees).</p> <p>Has limited scope for effective mitigation in character with the existing landscape.</p>

¹⁹¹ <http://www.naturalengland.org.uk/publications/nca/default.aspx>

Level of Sensitivity	Definition
	The character areas: Is well maintained and in a good condition - components are regularly maintained to a high standard.
Medium	Is locally valued (recognised at local authority level, a public, semi-public or private open space that serves the local community or residents, a residential area, likely to be valued by the local community.) Is fairly tolerant of change. Has components that are easily replaced or substituted. Has scope for effective mitigation in character with the existing landscape. Is of a fair condition - components are relatively well maintained.
Low	Has limited landscape value. Has few or no distinctive components, or components that detract from the overall character of the site. Is tolerant of change. Has components that are easily replaced or substituted. Has scope for effective mitigation in character with the existing landscape and opportunities for an improvement in character. Is in a poor condition -components are poorly maintained or damaged.

Visual baseline – selection of views

14.3.17 Viewpoints were selected to allow an assessment of effects from receptors within the study area. Individual residential, employment and educational receptors were identified and those with the same or similar view grouped together. Representational viewpoints were identified for recreational, transport and active sports receptors (Figure 14.1). All viewpoints were agreed with SCDC.

14.3.18 Photos during winter were included in the ES for each viewpoint in order to represent views with no natural screening from foliage. The composition of the view was described, including foreground and background characteristics, the nature of the view towards the site, and what, if anything, obstructs the view and whether a view is panoramic, framed, glimpsed or sequential.

Visual sensitivity

14.3.19 Unlike the landscape character areas the sensitivity of viewpoints is predetermined and mapped by category of visual receptor type in the following hierarchy shown in Table 14.2. These categories are based on best practice guidance from the Landscape Institute and relate to people's level of interaction with the landscape.

Table 14.2: Categories of visual sensitivity

Level of sensitivity	Definition of viewpoint:
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Level of sensitivity	Definition of viewpoint:
High	Occupiers of residential properties. Recreational users or tourists, on rights of way and in recreations areas where attention may be focussed on the landscape. Designated or protected views.
Medium	People travelling along scenic roads where the focus may be on the landscape. People staying in hotels and healthcare institutions.
Low	People at work and in educational institutions. People engaged in formal sports activities. People walking and traveling through urban areas and on main roads where the focus of attention is unlikely to be on the landscape.

Scope of assessment

Spatial scope

14.3.20 The visual assessment study area was defined by the maximum extents of the ZTV (Figure 14.1) except in those locations where the proposed development would be barely perceptible determined. Separate ZTVs would be established for:

- The peak construction phase (2016- 2023), defined as the period during which the main civil engineering works would take place and be visible; and
- Operation - defined as the area over which the components of the proposed development would be visible.

14.3.21 The landscape assessment study area was defined by the maximum extents of all character areas located partially or entirely within the ZTV except in those locations where the proposed development during construction or operation would be barely perceptible.

Temporal scope

14.3.22 The landscape and visual assessment was undertaken for the following years:

- Construction - an assessment of effects in winter during the construction phase;
- Operation Year 1 - an assessment of effects in winter [and summer] during operation Year 1 (2031).

Significance criteria

- 14.3.23 Physical changes to the landscape may give rise to effects on character. Effects may be direct (whereby landscape components are lost, damaged or altered by the construction or operation of the proposed development), or indirect (whereby the proposed development alters the setting of surrounding character areas).
- 14.3.24 Below is guidance to the significance criteria of the landscape character assessment and visual baseline.

Landscape character assessment methodology

- 14.3.25 Landscape effects arising from the construction and operation of the proposed development are assessed for each landscape character area by weighing the findings of receptor sensitivity (described in the baseline section) and magnitude of change (described below). The level of effect will either be significant or not.

Determining magnitude of change

- 14.3.26 The likely nature and magnitude of changes to individual landscape components and characteristics are described together with the consequential effect on landscape character. Factors that would be considered in assessing the magnitude of change to the character areas surrounding the site are summarised in **Table 14.3** below. These criteria are based on guidance provided by the Landscape Institute.

Table 14.3: Landscape magnitude of change

Impact of magnitude	Definition
High	Total loss or substantial alteration to key characteristics of the character and/or setting of the character area. Addition of new features or components that substantially alter the character and/or setting of the character area.
Medium	Noticeable change or alteration to one or more key characteristics of the character and/or setting of the character area. Addition of new features or components that form prominent elements of the character and/or setting of the character area, but are largely characteristic of the existing setting.
Low	Slight loss or alteration to one or more characteristics of the character and/or setting of the character area. Addition of new features or components that form largely inconspicuous elements of the existing character and/or setting.
Negligible	No change to, or barely perceptible loss or alteration of inconspicuous characteristics of the character and/or setting of the character area. Addition of new features or components that do not influence the overall character and/or setting of the character area, or are entirely characteristic of the existing setting.

Determining significant effects

14.3.27 Determination of the significance of an effect requires the application of impartial professional judgement including experience of other major development proposals to weigh the findings of the sensitivity of the receptor and the magnitude of change. This approach is recommended by the Landscape Institute. The presence of any combination of factors may be considered when assessing the significance of effect. This allows professional judgement to be used when determining the relative importance of different factors, which varies on a site specific basis. Effects may be adverse or beneficial. The broad criteria that influence the level of significance of landscape effects are noted in Table 14.4 below. Both the major and moderate categories are considered to comprise a significant effect. Any one aspect described may result in a categorisation within that significance level. These criteria are based on guidance provided by the Landscape Institute.

Table 14.4: Landscape significance of effects

Significance of effect	The proposed development would result in effects that:
Major beneficial (significant)	Would considerably and distinctly improve and enhance the existing character. Would restore valued characteristic features substantially or entirely lost through other land uses.
Moderate beneficial (significant)	Would markedly improve and enhance the existing character. Would restore valued characteristics substantially lost through other land uses.
Minor beneficial	Would improve and enhance the existing character. Would restore valued characteristic features partially lost through other land uses.
Negligible	Would be compatible with the existing character.
Minor adverse	Would be slightly at variance with the existing character.
Moderate adverse (significant)	Would be at variance with the existing character. Would be judged adverse at a local level. Would not be wholly compatible with local environmental policies for the protection and enhancement of the landscape.
Major adverse (significant)	Would be at considerable variance with the existing character, degrading its integrity. Would permanently degrade, diminish or destroy the integrity of valued characteristic features, elements and/or their setting. Would be judged adverse at a national or regional level. Would comprehensively conflict with national, regional or local environmental policies for the protection and enhancement of the landscape.

Visual assessment methodology

- 14.3.28 The visual assessment considers the effect of the proposed development on people's views. Visual effects relate to:
- The changes that arise in the composition of available views as a result of changes arising from the proposed development; and
 - People's likely responses to changes.
- 14.3.29 For sites where substantial lighting is anticipated during construction or operation, an assessment of these effects is presented in Chapter 15: Lighting.
- 14.3.30 The construction phase assessment has been undertaken during winter, when construction works are likely to be most visible.
- 14.3.31 The operation year 1 assessment has been undertaken during winter to account for seasonal change in the visibility of the proposed development.

Determining magnitude of change

- 14.3.32 The factors that would be considered in assessing the magnitude of change on views of the identified receptors are summarised in Table 14.5 below, based on guidance from the Landscape Institute.

Table 14.5: Visual Magnitude of Change

Impact of magnitude	Definition
High	Total loss of or major alteration to key characteristics of the view from a receptor. Addition of new features or components that are continuously highly visible and incongruous with the existing view from a receptor. Substantial changes in close proximity to the visual receptor, within the direct frame of view.
Medium	Noticeable change or alteration to one or more key characteristics of the view from a receptor. Addition of new features or components that may be continuously highly visible, but are largely characteristic of the existing view from a receptor. Changes a relatively short distance from the receptor, but viewed as one of a series of components in the middle ground of the view. Substantial change partially filtered by intervening vegetation and/or built form, or viewed obliquely from the visual receptor.
Low	Slight loss of or alteration to one or more characteristics of the view from a receptor. Addition of new features or landscape/townscape components that may be continuously or intermittently visible, but are largely characteristic of the existing view from a receptor.

Impact of magnitude	Definition
	Changes within the background of the view, viewed as one of a series of components in the wider panoramic view from a receptor. Change largely filtered by intervening vegetation and/or built form, or viewed obliquely from the visual receptor.
Negligible	Not change to, or barely perceptible loss or alteration of inconspicuous characteristics of the view from a receptor. Addition of new features or landscape/townscape components that are largely inconspicuous and characteristic of the existing site when viewed from a receptor. Changes within the background of the view, viewed as an inconspicuous element within the wider panoramic view from a receptor. Change from a visual receptor almost entirely obscured by intervening vegetation and/or built form.

Determining significance of effects

14.3.33 Determination of the significance of an effect requires the impartial application of professional judgement to weigh the sensitivity of the receptor with the magnitude of an impact. Effects may be adverse or beneficial. The broad criteria that influence the level of significance of visual effects are set out in Table 14.6 below. Both the major and moderate categories are considered to comprise a significant effect. The significance for visual effects follows the guidance provided by the Landscape Institute.

Table 14.6 – Significance of effects for visual assessment

Significance of effect	The proposed development would result in:
Major beneficial (significant)	A marked improvement in the existing view.
Moderate beneficial (significant)	A noticeable improvement in the existing view.
Minor beneficial	A discernible improvement in the existing view.
Negligible	No perceptible deterioration or improvement in the existing view.
Minor adverse	A discernible deterioration in the existing view.
Moderate adverse (significant)	A noticeable deterioration in the existing view.
Major adverse (significant)	A marked deterioration in the existing view.

14.4 Consultation

14.4.1 The key consultee for the LVIA has been SCDC. A site visit was undertaken with SCDC on the 13th February 2014 to agree viewpoint locations. An additional site visit was undertaken on the 1st April 2014 to take additional viewpoints.

14.5 Baseline conditions

14.5.1 The following section sets out the baseline conditions for the landscape and visual topic for the proposed Northstowe Phase 2 development as follows:

- Information on the physical elements that make up the overall landscape character of the assessment area (topography, land use, development patterns, vegetation, open space and transport routes), which inform the identification of landscape character areas. These form the receptors for the landscape assessment.
- Information on the landscape character (including setting), condition, tranquillity, value and sensitivity of the site and each landscape character area.
- Information on the nature of the existing views towards the site from all visual assessment viewpoints during the daytime in winter. This is ordered beginning with the most sensitive receptors through to the least sensitive.
- Future baseline conditions (base case) are also described.

Physical elements – topography and geology

14.5.2 The study area is formed of a low lying, flat open landscape on the flood plain of the Great Ouse. The study area lies on Lower Greensand overlaid with Cretaceous Gault Clay. High spots in the landscape are formed of gravel ridges and villages are often located in these gravel islands (for further information refer to Chapter 11).

Cover, distribution and type of land use and open space

14.5.3 Figure 14.4 illustrates the vegetation cover and distribution of different land uses.

14.5.4 The study area lies within open countryside of medium to large rectilinear arable fields, which form the largest land use of the area. The tributaries to the Great Ouse meander through the study area and some are lined with substantial tree and hedgerows (Figure 14.4). The nearest water courses are the Beck Brook which meanders along the south-eastern boundary of the site and Longstanton Brook passing to the west of Longstanton (Figure 14.5). There is also a pond in the southern part of the former Oakington Airfield.

14.5.5 Oakington and Longstanton are two large residential villages in the centre of the study area; these are immediately surrounded by small fields formed by paddocks and orchards. Their centres are rural in character with the churches dating back to C13 at Oakington and C14 at Longstanton; these areas are part of conservation areas. In

recent years, the expansion of the villages has created a suburban character.

- 14.5.6 The former Oakington Barracks and Airfield are located at the centre of the study area, east of Longstanton and north of Oakington. They are characterised by open agricultural fields derelict barrack buildings, two water towers at the southern end of the barracks complex and large areas of hardstanding. The two storey housing estate at Rampton Drift is located to the east of the former barracks area. Intervening vegetation results in the barracks site being largely screened from surrounding villages and farmsteads. The spire of All Saints church in Longstanton and the water towers are the key built features visible in the wider landscape.

Development patterns and scale

- 14.5.7 There are a number of villages located in the study area which have developed in a linear pattern following the high street. In between the villages, scattered isolated farmstead set off the access roads and surrounded by agricultural fields are locate throughout the study area.
- 14.5.8 Longstanton village was in existence in 1807, initially two villages with their nucleus at All Saints Church, and St Michaels Church (with smaller residential properties at the end of Mills Lane). The villages grew linearly along Woodside road and the High Street and were amalgamated in 1953. In recent times, from the 20th Century, the village has grown considerably to the north and expanded to the east and west, following a traditional suburban residential layout. Longstanton Village now comprises approximately 2,300 residents.
- 14.5.9 Oakington village historic centre is located around St Andrews Church and the village green. In the 19th Century the settlement developed in a linear format due to the introduction of the railway to the east and the increase of use of a busy junction to the west (formed of Dry Drayton Road, Water Lane and Cambridge Road). In the 20th Century development has predominantly occurred north of the village creating a nucleated village.

Heritage

- 14.5.10 Figure 14.3 indicates all landscape related statutory, non-statutory and local plan designations. A separate but related assessment of effects on the setting of heritage assets is included in Chapter 9:Archaeology and Cultural Heritage.
- 14.5.11 Protected features in the vicinity of the site include Longstanton, Oakington and Westwick Conservation Areas. At Longstanton the Conservation Area incorporates the Grade 1 Listed Church of All

Saints, Grade 2 listed Church of St Michael and the historic core of the village south of the crossroads. The western site boundary is also protected as an 'Important Countryside Frontage'. Eight pillboxes on the former Oakington Airfield and one off Rampton Road are also Grade II listed.

- 14.5.12 The Oakington Conservation Area includes six listed buildings and lies to the south east of the study area. It encompasses an area around St Andrew's Church, between the High Street and Water Lane. Westwick Conservation Area includes three listed buildings and is centred on Westwick Hall, Westwick Cottages and Westwick Farm.
- 14.5.13 Further afield The Giant's Hill Scheduled Monument is a motte¹⁹² with associated field system adjacent to Rampton, and located one mile east from the study area.

Vegetation pattern and extent

- 14.5.14 The pattern and extent of the vegetation within the study area is shown on Figure 14.4.
- 14.5.15 Vegetation is a dominant feature in this gently undulating landscape of pasture fields and former military barracks. A number of historic hedgerow boundaries remain from fields and orchards that existed on this site in the 19th Century. These are particularly evident along the northern boundary of the site and along the western boundary with Longstanton. There are also remnant hedgerow boundaries in the centre of the site.
- 14.5.16 There are significant groups of mature trees throughout the former Oakington Barracks including avenues of mature trees around the barracks complex and leading to the station headquarter building. There are also prominent lines of Lombardy Poplars in the east of the site, rectangular tree plantations within the southern part of the Oakington Airfield and groups of mature oak and poplar trees throughout the study area. These all contribute to the wooded setting to the site and adjacent Longstanton.
- 14.5.17 The dominant vegetation in the surrounding landscape is the extensive network of hedges, trees and ditches bordering the large regular rectilinear fields.

¹⁹² A motte is an enditched mound, usually artificial.

Transport routes

- 14.5.18 The pattern and extent of roads and PRoW is shown on Figure 14.3.
- 14.5.19 The A14 is the primary route in the study area and runs from south-east to north-west broadly parallel to the north boundary of Bar Hill. The B1050 (Hatton's Road) is the main road connecting Bar Hill to Longstanton and Willingham beyond and Dry Drayton connects the A14 with Oakington and Cottenham. Longstanton is connected via a network of smaller roads including tracks.
- 14.5.20 Existing PRoW within the site include a bridleway along Rampton Road, two byways along Wilson's Road and Long Lane and the Long Distance Pathfinder footpath which follows Longstanton Road and Dry Drayton Road. There are also footpaths crossing the study area at Rampton Road.
- 14.5.21 The Cambridge Guided Busway forms the eastern boundary of the study area and connects Cambridge via Westwick to St. Ives. The busway runs along the outer of a former railway line.

Landscape character areas

- 14.5.22 At a national level the study area lies within the Natural England National Character Area 88: Bedfordshire and Cambridgeshire Claylands¹⁹³. Key features of this character area are the gently undulating topography with shallow river valleys, open intensive arable landscape bounded by open ditches of hedges and settlements clustered around major roads with smaller disperse settlements elsewhere.
- 14.5.23 The East of England Landscape Framework¹⁹⁴ divides the east of England into 27 landscape character types. The study area falls within the Lowland Village Farmlands landscape character type. Key features of this character area include a low lying gently rolling landscape, high density largely nucleated settlements, major transport infrastructure resulting in an often busy, rural landscape and intensive agriculture with rectilinear arable fields interspersed with smaller orchards and pasture.
- 14.5.24 Using key features from these published character assessments the study area has been further sub-divided into 12 landscape character areas (LCAs). These are described below and identified on Figure 14.2.

¹⁹³ <http://publications.naturalengland.org.uk/publication/5091147672190976?category=587130>

¹⁹⁴ Landscape East (2004), Published by Landscape East supported by Natural England

Longstanton Village LCA

- 14.5.25 Longstanton Village LCA is a medium sized village that has grown linearly and expanded from the High Street. Orchards and paddocks located at the periphery provide an attractive setting for the village with the boundary at Rampton Road being designated as an Important Countryside Boundary. This provides an important rural break from Oakington airfield as well as providing a significant setting for this rural village. The village is also rural in character as it is enclosed at most of its boundaries, access roads and village green by mature vegetation.
- 14.5.26 The village has two Conservation Areas that are centred on the two listed churches, St Michaels to the south and All Saints on the north. Historic courtyards and farmhouses, made from flint and brick, align the busy High Street cross roads to form the attractive historic core of the village. All Saints Church spire is a visible landmark as the village sits in a low gravel ridge and is slightly higher than the neighbouring areas.
- 14.5.27 Outside of the Longstanton Conservation Areas are recent developments formed of two storey high brick buildings are set back from the main roads and create a suburban atmosphere. The new residential estates are located around Thornhill place & Magdalene Close, east of All Saints Church. The new housing extends north to include Prentice Walk, Ladywalk and Brewers Walk. East of the High Street are Spiggot Close, Colesfield and the area surrounding Haddows Close and The Dale.
- 14.5.28 New developments also extend west and east of St Michaels Church and comprise Thatcher's Wood and Mills Lane. With the newest most recent house development being St Michaels Chase, west of Over Road and formed of 77 units. The combination of the new and old village creates a nucleated settlement but with some loss of the charm and character of a historic village. The main routes through the village are busy throughways and detract from the quiet character of the village.
- 14.5.29 Due to the conservation area designations, the important Countryside Frontage forming a village boundary designation and the extensive PRow network running through the village, this character area is regionally and locally valued. Components within the landscape including the historic buildings, grass verges and boundary treatments are well maintained and considered in a fair condition. However there are extensive areas of new development throughout the village, in particular to the north and east of All Saints Church, which dilute the historic character of the village and therefore result in the landscape being fairly tolerant of change. Therefore the overall sensitivity of this landscape character area is considered to be medium.



Image 2: All Saints Church, Longstanton Village LCA

Longstanton Paddocks and Pastures LCA

- 14.5.30 Longstanton Paddocks and Pastures LCA is categorised by the medium sized isolated fields enclosed by poor quality hedges. The northern field boundaries also encompass mature trees creating enclosed fields.
- 14.5.31 The mixed vegetation is a dominant feature but the adjacent built forms including All Saints Church, the Longstanton Barracks and residential houses are visible through gaps in the vegetation. In the southern fields there are a few trees, allowing for distant views over Longstanton airfield.
- 14.5.32 The Manor, located off Rampton Road is accessed through a small track, the building, pond and garden are enclosed by a well-established hedge and mature trees and are not visible from the LCA or the surrounding area. There are three small yellow brick and render 19th Century houses typical of Longstanton located at Mill Lane, immediately to the west of these are Todd Acres and Badgers Hall, formed of permanent caravans with very small perimeter gardens.

- 14.5.33 The LCA is well connected to the adjacent areas, a byway open to all public aligned with mature trees, creates the eastern boundary and connects Rampton Road in the northern boundary with St Michaels Lane. The Pathfinder March, a long distance walk, runs from north to south on the western boundary and a small PRoW crosses the northern most paddocks.
- 14.5.34 The medium sized fields north of St Michaels Lane are used for pastoral farming including horses and cows and have by post and wire fencing forming part of the boundary. Further south, the fields become smaller and have stables but are generally used for crop farming.
- 14.5.35 Longstanton Paddocks and Pastures LCA slopes to the north-east but not noticeable due to the structured vegetation, there is no visible watercourse in the LCA but there are small ponds in the lower lying northern fields.
- 14.5.36 The views into Longstanton are a characteristic feature in this landscape and contribute to the strong sense of connection to the adjacent village. Due to the good condition, value at a local level and presence of components that are distinctive to this area this character area has a medium sensitivity to change.



Image 3: View east of the existing paddocks

Village Farmlands LCA

- 14.5.37 Village farmlands LCA is categorised by a few scattered one storey high 20th century dwellings, set back from Rampton Road, and surrounded by small rectilinear fields.
- 14.5.38 The most prominent dwelling is No 3 Rampton Road, a small nursery with growing fields, greenhouses and associated buildings. The medium sized rectilinear fields are predominantly used for arable farming although there is some pastoral farming. Since the area is relatively flat, the fields are drained by small open ditches not visible in the landscape.

- 14.5.39 Rampton Road on the southern boundary of this LCA is the only road access to the area and beyond Rampton Drift turns into a track and then a grassy byway. The byway, known as Rampton Rift, is an attractive and secluded historic track, bordered by tall native hedges, and crosses the CGB to link into an extensive network of PRoW towards Rampton Village.
- 14.5.40 Due to the rural and relatively secluded landscape setting, and the presence of the byway, which is valued at the local level, this LCA is assessed as having a medium sensitivity to change.



Image 4: view east of byway

Longstanton Golf course LCA

- 14.5.41 Longstanton Golf Course LCA is formed of an old 18 hole golf course gently sloping west. It is characterised by the man-made modifications including sand banks, linear ditches, ponds and grass mounds at the northern boundary.
- 14.5.42 The former golf course (which now forms part of Phase 1), is now overgrown scrub land and retains some key features including; a clubhouse and driving range (unseen from the B1050, Station Road).

- 14.5.43 The dominant vegetation is a mixture of native and non-native young tree species which are scattered or sometimes planted in a linear pattern (aligning the fairways). At the boundaries of the golf course, there are well-established hedges integrated with mature trees.
- 14.5.44 Access to the character area is from the B1050 Station Road and three footpaths adjacent to Longstanton Village. There is further access from CGB on the east.
- 14.5.45 The amenity value of the LCA has declined due to the closure of the golf course for Northstowe phase 1. Due to the poor condition of the site, low tranquillity due to the proximity to new housing developments at Longstanton and value at a local level, the character area is assessed as having a low sensitivity to change.

Oakington Barracks LCA

- 14.5.46 Originally this LCA was a WWII RAF and military base until the 1990's when it became an immigration detention centre until November 2010. Oakington Barracks LCA is a well vegetated area formed of the abandoned and demolished buildings, large areas of hardstanding and the existing Rampton Drift residential area.
- 14.5.47 Rampton Drift is a small residential estate formed of two storey high brick buildings. Grass verges align the quiet residential roads with scattered native trees adding interest to the site. Boundaries to the estate are formed by a 1.8m high weldmesh fence and groups of mature trees, create an enclosed landscape.
- 14.5.48 The abandoned detention centre comprises large areas of hardstanding (remnants of previous building demolished in 2013), three boarded up, large 1940's red brick buildings (the Officers Mess, and Guards House station headquarters), a tall water tower, and the retained infrastructure of roads aligned by mature trees, lampposts and road signs. High wire mesh fencing topped with barbed wire encloses large pockets of the pastoral landscape which are currently used for cattle farming.
- 14.5.49 Rampton Road is the only access to the LCA and is lined by an avenue of mature trees on a grass verge and a fence set back approximately 7m from the road. This creates a formal avenue to Oakington Immigration Centre and Rampton Drift.
- 14.5.50 There are no watercourses or features which are visible in the landscape. The area lies at 10m AOD and is the lowest point in the study area, with only the water tower being visible from some adjacent areas.
- 14.5.51 The mature avenue of trees along the main road within the character area forms a key feature in this landscape. There are

also scattered mature non-native trees, namely cherry, that enhance the setting of the abandoned detention centre.

- 14.5.52 Most of the character's area is formed of poor quality abandoned land, except for the small residential area, Rampton Drift and the avenue of mature trees. The landscape has little value and is in a poor condition. Therefore the area has a low sensitivity to change.



Image 5: view east from entrance road of exiting building and water tower at Oakington Immigration Centre.

Oakington Airfield LCA

- 14.5.53 Oakington Airfield LCA is an open area of grassland with scattered groups of mature oak trees in the southern area and blocks of evergreen or deciduous tree plantations and tree belts located in the western area. The plantations and tree belts are strategically located close to the boundaries and screen the neighbouring villages of Longstanton and Oakington. There are a number of trees of landscape value within this LCA, including a line of mature poplar trees north of the former hanger areas, a group of 3 maples approximately 100m south from the poplars and a mature willow located south of the officer's mess and west of the former officers housing and east of Long Lane (refer to Figure 14.4).
- 14.5.54 The northern boundary of the LCA is bordered by wiremesh fencing and contains large areas of hardstanding which are a characteristic feature in the adjacent Oakington Barracks LCA. The lack of vegetation screening this boundary, except for a line of Poplar trees

planted along the northern track, allow a visual connection between both LCAs.

- 14.5.55 Manmade features reminiscent of the old airfield, include a landing strip, eight WWII Grade I listed pillboxes (five of these are located parallel to the eastern boundary) and a small circular road that encloses most of the LCA.
- 14.5.56 Oakington airfield is slightly undulating with the higher topography being in the centre of the LCA. The open fields located on the south of the LCA are currently being used for arable farming, whilst the northeast corner adjacent to Rampton Drift is overgrown grassland/scrub.
- 14.5.57 There is no evident watercourses/drainage on the site except for a large manmade pond in the south west and a dilapidated sewage treatment works located in the northeast corner of the character area.
- 14.5.58 This LCA is regionally valued due to the presence of the listed pill boxes and the site's historic links to World War II. The 'TPO' trees, large belts of mature oaks and the mature avenue of poplar trees are all distinctive landscape components that are not easily replaced or substituted. Therefore this character area has a high sensitivity to change.

Image 6: view south of the scattered trees and southern boundary plantation



Oakington Farmlands LCA

- 14.5.59 Oakington farmland LCA is formed of slightly undulating agricultural fields and isolated farmsteads scattered throughout the area. Historic boundary hedgerows with mature trees are the dominant feature in the landscape and enclose the large rectilinear fields that become smaller closer to the villages of Oakington, Cottenham and Rampton. Telegraph poles and wires are also an evident vertical feature in the landscape. The main forms of access to the character area are Oakington Road running east-west and connecting Oakington to Cottenham, and Rampton Road running between Rampton and Cottenham. There is also an extensive network of historic lanes or byways, namely Rampton Drift, Cuckoo Lane and Gun's Lane, that form a link between the scattered farms and villages.
- 14.5.60 The CGB forms a strong linear feature in the landscape along the western boundary of this character area.
- 14.5.61 Beck Brook, a Great Ouse tributary to the east of Oakington Village, supports a substantial belt of mature trees in this landscape that creates a visual boundary to the west of character area. There are also open ditches aligning the fields, roads and tracks.
- 14.5.62 The area is tranquil and rural in character when away from the dominant busy road. The fields and hedges are kept in good condition. The proximity and open views to the adjacent villages (Oakington, Westwick, Rampton and Cottenham). Therefore this LCA has a medium sensitivity to change.



Image 7: View east from Rampton road, Oakington farmlands LCA

Westwick Village LCA

- 14.5.63 Westwick Village LCA is characterised by Westwick Hall and associated farm buildings, set back from the road within an enclosed garden and a small hamlet of two storey high terrace houses. The majority of the buildings date from the late 19th/early 20th Century and are yellow brick and align the busy Station Road. Enclosing the village are small agricultural fields, paddocks, and pastoral land often aligned with mature hedgerows and trees. Westwick Conservation Area encompasses the west side of the village.
- 14.5.64 The old railway, now the CGB and Oakington Road are the main linear features in the landscape. There is also a public bridleway which runs parallel to the bus route. A small tributary of the Great Ouse, which runs east of the busway creates the northern boundary to the LCA. The topography of the character area gently slopes east, thus most of the drainage occurs into this tributary.
- 14.5.65 The main access routes and the brook are aligned with mature trees and hedgerows, and form a boundary to the built form. The margin of Westwick Village LCA is formed of large open pastoral fields, whilst the main road, Oakington Road, intersects the centre of the village. Both the busy road and the Busway are dominant components that decrease the tranquillity of the area and detract from the rural surrounding setting.
- 14.5.66 Due to the good condition, medium tranquillity and value at a local level, this character area has a medium sensitivity to change.

Image 8: Westwick Hall, Westwick Village LCA



Oakington Village LCA

- 14.5.67 Oakington Village is an attractive, archetypal English village in which the characteristic thatched cottages, front gardens, mature trees and village green are well maintained and create an attractive environment. The built environment is surrounded by orchards and paddocks which create an attractive setting for the village. The overall landscape condition is good.
- 14.5.68 Through traffic is dominant and detracts from the quality of the landscape. There are a number of PRoW that connect the village from north to south, including the Pathfinder long distance walk that intersects the LCA.
- 14.5.69 Oakington Village LCA includes the Oakington Conservation Area that contains many valued components including the Grade II listed St Andrews's church and churchyard. Mature trees and high hedges line the main road into the village and enclose the built environment at the village periphery from the surrounding area. There is also a large tree belt that screens Oakington Barracks from the LCA.
- 14.5.70 Outside the conservation area on the eastern side of the village, 20th Century two-storey high brick buildings with front gardens aligning the residential road add to the tranquil and rural character of the village. Due to the good condition, value at a local level and containing landscape components that are distinctive and listed, this character area has a medium sensitivity to change.

Image 9: Typical house in Oakington Conservation Area



Longstanton Farmlands LCA

- 14.5.71 Longstanton Farmlands LCA incorporates large rectilinear arable fields located between the A14 corridor to the west and Oakington and Longstanton villages to the east. The land is slightly undulating and open in character gently rising towards Bar Hill and resulting in characteristic long distant views to the surrounding areas.
- 14.5.72 A network of busy roads including B1050 Hatton's Road and Dry Drayton intersect the fields and create prominent linear features in the landscape. Noise and movement from the A14 is also evident in this character area and reduces the tranquillity of the landscape. Smaller quiet roads and tracks provide access to the isolated dwellings and the 'Christian Blind Mission' complex north of Oakington. Wilson's Road is a historic track and PRow that dissects the area but ends at the A14 boundary. The Pathfinder long distance walk follows the eastern boundary of the area but otherwise there is little public access through this character area.
- 14.5.73 Generally, the vegetation in the character area is of limited landscape value; there are few mature hedgerow trees and hedges bordering fields are fragmented. The lack of vegetation allows for distant panoramic views through most of the site. Some mature native hedges align the roads leading to the built environment, whilst mature trees to Longstanton and Oakington village boundaries provide a screen to the eastern villages.



Image 10: Typical view of Longstanton Farmlands, facing west from Wilson Road, Longstanton

- 14.5.74 Ditches are common within this character area but they contain little vegetation and have no dominance in the landscape. The Longstanton and Beck Brooks also dissect the area and running from west to east, scattered farmsteads and cottages are located close to these brooks.
- 14.5.75 Due to the poor condition of vegetation, the influences from the A14 and busy roads, and the limited local value of the landscape, this character area has a low sensitivity to change.

A14 Corridor LCA

- 14.5.76 The A14 is a dual carriageway road with associated infrastructure and aligned with earth bunds and well-maintained belts of trees on both sides of the carriageway. In addition to the road, this character area encompasses a light industrial site, including a large Tesco, and the Menzies Cambridge Hotel and Golf Club the West of the carriageway.
- 14.5.77 Noise and movement from the A14 dominate the character of this area, and the enclosing tree belts are the principal landscape feature in the area. Dense, overgrown tree belts at the junction to Bar Hill and the golf club screen the golf course and the road. Other dominant man made elements include the Longstanton over-bridge, highway lighting and sign gantries, and the large footprints of the warehouse style buildings in the industrial area.
- 14.5.78 This character area has limited landscape value. The noise and movement from the A14 detract from the overall character of the site. Therefore the character area has a low sensitivity to change.

Bar Hill Village LCA

- 14.5.79 Bar Hill LCA lies on a south facing ridge of land that forms the high point in the area and comprises a quiet residential area with a recreational ground and open spaces.
- 14.5.80 There is no historical nucleus or connection in Bar Hill and there are no landmark features. The village is formed of large residential estates, with houses being predominantly two-storey high red brick buildings with front gardens facing the sinuous quiet residential roads. The houses are well maintained with manicured gardens.
- 14.5.81 The main infrastructure into the village is formed by Saxon Way and Crafts Way which commence in the northern boundary of the village and adjacent to the A14, and merge in the southern boundary creating a periphery and small ring road to the village. Houses aligning these roads are set back approximately 15m and are screened by either brick walls or garden hedges. The outward

facing side of the road is formed of a highly dense continuous tree belt enclosing the village and creating a strong rural boundary.

- 14.5.82 Mature trees are dominant throughout the LCA and make the village feel enclosed and established. There is a large tree belt connecting the north and south of the village via the central recreational space. The open fields of the recreational ground extend east to form a long linear park to the edge of this village which is intersected by a small brook aligned with trees and a second smaller tree belt.
- 14.5.83 The open spaces and mature tree planting and vegetation are in a fair condition and are likely to be valued by the local community and residents. However there are components that detract from the overall character and the landscape. Therefore the character area has a medium sensitivity to change.

Visual baseline

- 14.5.84 Figure 14.1 indicates the location of viewpoints referenced below. The locations of viewpoints have been agreed with SCDC.
- 14.5.85 For each viewpoint, images have been included to represent the view from visual receptors during winter. The first part of the baseline description relates to the view during winter. A brief assumption has been made for the views during the summer.
- 14.5.86 There are no protected viewpoints, panoramas or viewing corridors designated by the local authority or other relevant stakeholders.

Viewpoint 1 – Magdalene Close, Longstanton, looking east

- 14.5.87 Representative view at ground level from residences on Magdalene Close, at the eastern boundary of Longstanton Village.



Date taken: 13th February 2014. Pentax K30, 35mm Lens/stitched panorama.

- 14.5.88 The foreground of the view is a post and wire fence enclosing a large agricultural field on the outskirts of the village. In the middle ground a mature hedge screens views of Rampton Road Nursery and associated greenhouses beyond, but the former Oakington

Barracks are just visible in a gap in the hedgerows. Scattered mature trees dominate the skyline in the background of the view.

- 14.5.89 Due to the lack of vegetation in the foreground and middle ground, summer views would remain the same. The built form in the middle ground would be hidden by the trees and hedges in full leaf.

Viewpoint 2 - Rampton Road cross roads, Longstanton, looking south east

- 14.5.90 Representative view from recreational receptors on the Pathfinder walk and people traveling along Rampton Road looking across from the historic cross roads onto the sensitive paddock areas.



Date taken: 13th February 2014. Pentax K30, 35mm.

- 14.5.91 This view is characterised by mature vegetation and few built elements. The foreground of the view is dominated by an intermittent hedge with dispersed mature trees and a post and wire fence. A small rectilinear grass pasture with a pond and scattered ancient trees dominate the middle ground view. The post and wire fence and intermittent hedge is visible in the distance enclosing the paddock. The background of the view is formed of a tree and hedge line where buildings and roof tops of The Manor and Manor Farm can be seen in the gaps in the hedgerows. At a higher level the canopies of mature trees are a dominant feature.
- 14.5.92 In the summer, buildings in the background will be screened by the hedges and trees in full leaf.

Viewpoint 3 – Woodside Road, Longstanton, looking east

- 14.5.93 Representative view from residences in Thatcher's Wood and on Woodside Road looking through a gap in a hedge along Woodside Road. The majority of views from Thatcher's Wood are screened by an additional belt of mature trees and vegetation located between Woodside Road and the housing development.



Date taken: 13th February 2014. Pentax K30, 35mm.

- 14.5.94 The foreground view is characterised by a dense, tall mixed species hedgerow with mature trees, which screen the majority of the middle and background views. Where there are gaps in the hedge the middle ground is characterised by medium sized rectilinear paddocks and occasional built form. Mature coniferous and evergreen trees dominate the background.
- 14.5.95 In the summer views of the paddocks will be restricted as the vegetation is in full leaf. The hedges and mature trees would also screen most of the built form in the background.

Viewpoint 4 –Mills Lane, Longstanton, looking east

14.5.96 Representative view from residences on Mills Lane and St Michaels Lane.

Date taken: 13th February 2014. Pentax K30, 35mm



14.5.97 The view is characterised by the small pasture fields in the foreground. The middle ground comprises a fragmented belt of trees and shrubs which allows intermittent views towards the Long Lane byway alongside the tree belt. Further open fields and a dense tree belt in the background largely screen views of the Toad Acres Caravan Park. Gaps in the hedge have been filled with a post and rail timber fence.

14.5.98 In the summer there will be views into the small fields in the foreground, but restricted views further afield due to the dense vegetation in the middle ground.

Viewpoint 5 – Wilson’s Road PRow, Longstanton, facing south–west

- 14.5.99 Representative view from recreational receptors on the Wilson Road
bridleway (south of Falcon Park Caravan Park) towards Bar Hill.
- 14.5.100 The view is characterised by a grass path aligned with an open
ditch, deciduous trees and a tall dense hedge on the right (north),
and smaller scrub and bramble hedge on the left (south).



Date taken: 13th February 2014. Pentax K30, 35mm.

- 14.5.101 Beyond the low scrub hedge there are long distant views across
large arable fields which slope downwards towards the A14 in the
background. The road is only visible between gaps in fragmented
tree belts. Vehicles on the A14 as well as telegraph poles and lamp
posts, running parallel to the road, are just visible on the horizon.
The skyline is formed by the tree belts as well as sloping land infilled
with trees, west of the A14.
- 14.5.102 The summer view of the middle ground will be very similar due to a
lack of intervening vegetation. The tree belts in full leaf in the
background will screen some of the A14, however the vegetation is
not tall enough to cover other infrastructure elements including the
telegraph poles and lamp posts.

Viewpoint 6 - High Street, Oakington, facing north

- 14.5.103 Representative view from residential properties on the north side of the High Street, taken in a clearing between the existing houses.



Date taken: 13th February 2014. Pentax K30, 35mm.

- 14.5.104 The foreground of the view encompasses ornamental shrub and tree planting at the boundary of the rear gardens. The background and skyline of the view is dominated by a dense deciduous tree belt at the southern boundary of the former Oakington Barracks. The height of the trees is approximately 12m.
- 14.5.105 In the summer the trees in leaf within the rear gardens will limit views of the dense screen beyond.

Viewpoint 7 - Oakington Road, Westwick, facing north-west

- 14.5.106 Representative view from residential receptors at Westwick Manor and associated farm buildings to the north and south of Oakington Road



Date taken: 13th February 2014. Pentax K30, 35mm.

- 14.5.107 The foreground and middle ground view is dominated by pastoral farmland, which includes grazing sheep, ponds and areas of scrub. The farmland is enclosed by a 1.2m high weldmesh fence along Oakington Road. There is also a large mature tree in the foreground, just outside of this view.
- 14.5.108 In the background of the view is a belt of young trees and a fence that separate the field from the 'Sallywags Nursery' car park and a small gravel mound with scrub. On the southern side (left on the image) the fence follows the telephone post and line. A tree belt of mature deciduous and evergreen trees behind the southern boundary creates the skyline of the view and aligns the banks of Beck Brook.
- 14.5.109 In the summer intervening vegetation in full leaf will screen the middle ground and background views.

Viewpoint 8 - Rampton Drift PRow, Westwick, facing north west

- 14.5.110 Representative view from recreational receptors on the Rampton Drift PRow.



Date taken: 28th 13th February 2014. Pentax K30, 35mm Lens/stitched panorama.

- 14.5.111 The foreground of this view is characterised by various types of farming machinery, a timber post and wire frame and young orchard trees.
- 14.5.112 In the middle ground, arable fields and boundary post and wire fencing rise northwards. Telegraph poles form prominent vertical features in the view. The background is formed of a dense and mature tree line. The water tower and arable fields within the former Oakington Barracks site forms part of the skyline. The spire of All Saints Church in Longstanton is also visible behind the water tower.
- 14.5.113 There is little vegetation in the foreground but once in leaf there will be intermittent summer views of the middle ground. In summer the hedges and mature trees in the middle and background would form a dense vegetated screen to Oakington Barracks as well as the water tower and All Saints Church spire.

Viewpoint 9 - Rampton Drift playground, Rampton Drift, facing south

- 14.5.114 Representative view from residential properties within Rampton Drift.



Date taken: 13th February 2014. Pentax K30, 35mm Lens/stitched panorama.

- 14.5.115 The foreground of the view encompasses a small strip of grassland within the playground and a 1.8m weldmesh fence and concrete posts enclosing Rampton Drift. Views to the middle ground beyond the permeable fence include arable fields and groups of mature and semi-mature trees. Open grassland can be seen between the gaps on the tree trunks and in the background. The background of the view is formed of weldmesh fencing, dense planting and the line of distinctive mature poplars.
- 14.5.116 In the summer, the trees would screen part of the middle ground, whilst the trees and hedging in the background will create a stronger skyline and screen the areas outside the barracks, including CGB.

Viewpoint 10 - Rampton Road Byway, Rampton Drift, facing west

- 14.5.117 Representative view from recreational receptors on the Rampton Road byway.



Date taken: 13th February 2014. Pentax K30, 35mm

- 14.5.118 The foreground and middle ground of the view is dominated by the grass byway and tall mature deciduous hedges on either side of the grass track. Arable land is just visible in-between gaps in the vegetation. The tall hedge screens all views to the background.
- 14.5.119 In the summer, the hedge in full leaf would create a solid screen.

Viewpoint 11 - CGB PRoW, Rampton Drift, facing west.

- 14.5.120 Representative view of recreational receptors on the footpath and cycle path adjacent to the CGB.



Date taken: 1st April 2014. Canon 5DII, 27.296mm Lens/stitched panorama.

- 14.5.121 The foreground is dominated by the tracks of the busway, and a strip of shrubs and recently planted trees along the fenced boundary of the former Oakington Barracks site. The middle ground is characterised by the gently sloping arable fields and longer grass aligning the old airfield road. The edge of the fields are bounded by mature hedges and properties in Rampton Drift are just visible to the right of the image.
- 14.5.122 A mature tree belt of deciduous and evergreen trees, including the line of poplars on site, form the background and skyline of the view. Oakington Barracks Water Tower is also a dominant feature in the centre background of the view.
- 14.5.123 In the summer the vegetation in full leaf at the front of the view would screen areas in the middle ground, whilst the background trees will screen the water tower and areas of the Rampton Drift housing development.

Viewpoint 12 - Rampton Road, north of Cottenham, facing south west

14.5.124 Representative view from transport receptors traveling along Rampton Road.



Date taken: 13th February 2014. Pentax K30, 35mm Lens/stitched panorama.

14.5.125 The foreground and middle ground view is characterised by undulating arable fields, an access road aligned with open ditches and telegraph poles and wires running parallel to the access road.

14.5.126 The background of the view consists of a mature tree belt, including the line of poplars on the site that varies in height with the topography of the area. All Saints Church spire in Longstanton and the water tower within the Oakington Barracks site are also visible on the skyline.

14.5.127 In the summer, the trees in full leaf would screen parts of the water tower but the church spire will still be visible.

Viewpoint 13 - Rampton Road, south of Rampton, facing south-east

14.5.128 Representative view from recreational receptors on the Haven Drove track.



Date taken: 13th February 2014. Pentax K30, 35mm Lens/stitched panorama.

14.5.129 The view has been taken between the gaps in the hedge adjacent to the public footpath. The view is characterised by the undulating arable fields which are enclosed by fragmented poor quality hedges. In the middle ground, arable fields and farmsteads are visible. The background is formed of mature trees and a sloping valley in which a tall mast is very distinctive. Oakington Barracks Water Tower is visible in the centre of the above the tree belt.

14.5.130 In the summer, hedges in full leaf will screen some of the farmstead buildings and fields in the fore ground, although large areas will still be visible between the vegetation gaps. The mature trees will screen the higher landforms, but the water tower will still be visible.

Viewpoint 14 - Hill Row Causeway, Haddenham Ridge, facing south

- 14.5.131 Representative view from transport receptors traveling along Hill Row Causeway, A1123.



Date taken: 1st April 2014. Canon 5DII, 50mm Lens/stitched panorama.

- 14.5.132 The long distance view is characterised by a dense hedge in the foreground bordering the road. The middle and background view is dominated by arable fields, hedges and scattered trees. A line of telegraph posts are also visible. The skyline in the far distance is formed of a tree belt that screens everything that is further afield.
- 14.5.133 There will be little change in this view in the summer as the low hedge in leaf in the foreground will not screen the view.

Viewpoint 15- Hatton's Road, facing east

- 14.5.134 Representative view from residential receptors at Hazlewell Cottage, and Noon Folly Farm, and people at work at New Close Farm Business Park



Date taken: 13th February 2014. Pentax K30, 35mm Lens/stitched panorama.

- 14.5.135 The foreground view is characterised by the edge of arable fields and a drainage ditch running parallel to the boundary. An overgrown grass/ scrub strip separates the ditch from the road. Hatton Road, a dense hedge, telegraph posts and wires and New Close Farm Business Park are also visible in the view.

- 14.5.136 The middle ground of the view is formed of large arable fields with no boundary hedging, vegetation or structures.
- 14.5.137 Houses in Longstanton Village and belts of mature trees are visible in the background of the view. To the north of the view (left on the image), mature trees and the large communication mast on Gravel Bridge Road, north west of Longstanton, dominate the skyline.
- 14.5.138 In the summer, the mature trees in the background would screen Oakington Village. Gaps within the planting would still allow views of the built form, including the church.

Viewpoint 16 – Crafts Way, Bar Hill, facing north east

- 14.5.139 Representative view from road and residential receptors on Crafts Way, east of the golf club.



Date taken: 13th February 2014. Pentax K30, 35mm

- 14.5.140 The foreground view comprises a small earth bund with overgrown grass and a mix of ornamental planting. The middle ground contains a mix of deciduous mature trees and a lamppost. The background is formed of a tall grass mound. In the summer, the vegetation in the foreground and middle ground will screen most of the earth bund beyond.

Viewpoint 17 - End of Cuckoo Lane, Lolworth, facing north east

- 14.5.141 Representative view from residential properties on the edge of Lolworth.



Date taken: 13th February 2014. Pentax K30, 35mm Lens/stitched panorama.

- 14.5.142 The foreground of the view is dominated by small paddocks enclosed by timber and post fencing. In the middle ground, the land slopes away and the paddocks finish to make way for an extensive area of hedges and mature trees that screen the southern parts of Lolworth, including All Saints church, in Lolworth and the majority of the valley. A small section of the A14 dual carriageway and the roofs of the large warehouses in Bar Hill are just visible in breaks in the vegetation in the valley.
- 14.5.143 The background is formed of arable fields located between the A14 road and Longstanton village. All Saints Church Spire in Longstanton is just visible in the centre of the viewpoint against a backdrop of scattered tree belts and development at Longstanton, Over and Swavesey. The backdrop of scattered tree belts on the skyline screen much of Longstanton village. The village of Cottenham is also just visible on the higher ground beyond the tree line.
- 14.5.144 In summer the dense tree belts in leaf in the middle ground and background will further screen the adjacent built form. The higher topography further afield will still be visible in the summer.

Viewpoint 18 – School lane, Boxworth, facing east

14.5.145 Representative view from residential properties on the edge of Boxworth.



Date taken: 13th February 2014. Pentax K30

14.5.146 The view is characterised by long distance views along the road. To the south west (right of the image) a dense tree belt formed of a mixture of deciduous trees and hedge planting screen all views towards the A14 valley and agricultural land beyond. There are occasional views through the tree trunks to arable fields and pasture in the middle ground, but the number of hedges and tree belts forming the field boundaries and the A14 boundary reinforce the enclosed nature of this view. Further dense hedge and mature tree belts and woodland form the background of the view.

14.5.147 In summer, the foreground trees in full leaf there would screen most views to the woodland background.

Viewpoint 19 – Dry Drayton Road, facing north east

- 14.5.148 Representative view from residential properties on Dry Drayton Road (Poplar Farm, Poplars Villas and Phyphers Cottage).



Date taken: 1st April 2014. Canon 5DII, 50mm Lens/stitched panorama

- 14.5.149 The view is characterised by a deciduous dense hedge running adjacent to Hatton Road. The middle ground, behind the hedge, is a large arable field with telegraph poles running north-south before the A14. Beyond the field a belt of trees create a prominent vertical feature on the horizon. Fields and another tree belt are visible in the background. Oakington Business Park, Phypher's Farm and associated building and car parks are visible in the north east (right in the image).

- 14.5.150 In the summer, the tree belts in the middle ground will screen the fields and Bar Farm in the background.

Viewpoint 20 – The Boot PRow and track, Aldreth, facing south-west

- 14.5.151 Representative view from recreational receptors on the PRow network south of Aldreth.



Date taken: 1st April 2014. Canon 5DII, 50mm Lens/stitched panorama

- 14.5.152 In the foreground extending to the background, the view is dominated by large arable fields separated from the track by open ditches. There are a few scattered tree belts which frame the views east and west.
- 14.5.153 The background of the view is dominated by a line of trees, which also forms the skyline. The trees are regularly spaced, with a large clearance around Willingham farm.
- 14.5.154 In the summer the view will be very similar with the vegetation on the skyline being more prominent.

Future Baseline

- 14.5.155 A summary of the committed developments which are assumed to be built and occupied prior to either the construction or operation of the proposed development is provided below, along with the consequential effect on the character of LCAs and nature of views. Developments which would introduce new visual receptors which may be significantly affected are also described.

Construction (2016)

- 14.5.156 At the start of the peak construction phase of the proposed development (2016-2023) the 97 hectare Phase 1 development site, incorporating housing, employment, a school and open space, would be two years into its seven year construction programme. The construction of Phase 1 would be most prominent from visual receptors in Magdalene Close and from residences at the eastern boundary of Longstanton village. Phase 1 would also be apparent in views from the Rampton Road Byway, the Guided Busway PRoW and in more distant views from Rampton Drift PRoW and from Rampton Road.
- 14.5.157 The Phase 1 development would also have an influence on the Longstanton Village LCA and Oakington Farmlands LCA. The Longstanton Golf Course LCA would now be the Phase 1 development site and the construction activity, including construction of up to four storey high buildings, would add prominent new features into the rural landscape.
- 14.5.158 During the peak construction phase the A14 Cambridge to Huntingdon Improvement Scheme would also be in construction with works due to be completed in 2019/2020. Construction activity associated with the road widening and new Bar Hill Junction would be apparent from the Longstanton Farmlands LCA and within views from Wilson's Road PRoW.

Operation (2031)

- 14.5.159 The Phase 1 development would be complete by 2021. Formal recreation and sports pitches in the west of the site and retained tree groups would help to filter views from Longstanton village. A large informal open space in the east, adjacent to the CGB would also help filter views from the east.
- 14.5.160 Existing hedges would be retained along the southern boundary of the Phase 1 development site and the creation of the southern informal greenway with new planting would help to integrate the site into the surrounding landscape. The Longstanton Golf Course LCA would now house the completed Phase 1 development and would

continue to have an influence on the Longstanton Village LCA and Oakington Farmlands LCA.

- 14.5.161 The completed A14 Improvement Scheme and the new Bar Hill Junction would have an influence on the Longstanton Farmlands LCA as noise and movement on the road would be more evident, reducing the tranquillity of the landscape. The A14 would also be more prominent in views from the Wilson's Road PRoW.

14.6 Environmental design/Design mitigation

- 14.6.1 A process of iterative design and assessment has been employed to avoid and reduce adverse effects during operation. Measures that have been incorporated into the design of the proposed development include those shown in Table 14.7.

Table 14.7: Design mitigation

Feature / Measures	Integration into design
Green Separation	<p>A green buffer of at least 20m would enclose the proposed development providing separation and screening from the neighbouring villages of Longstanton and Oakington. Within this boundary the retention of trees and vegetation would be maximised creating an established landscape from the outset.</p> <p>New built features around Rampton Drift estate would be set back by a 20m green boundary to allow for natural separation and screening. This boundary would retain some of the existing trees on site helping to create an established landscape.</p>
New Planting	<p>Extensive planting, including native broad-leaved woodland, orchards, shrub and hedgerows, would be implemented within the proposed development to integrate the scheme into the character of the surrounding landscape and help screen development from neighbouring residential properties and users of adjacent PRoW.</p> <p>The two proposed sports hubs would be enclosed by dense tree belts with the eastern sports hub bordered by the water park on its eastern boundary. This vegetation would minimise impacts from noise and light spill and glare from any flood lighting.</p>
Retained Planting	<p>Longstanton Paddocks would be retained with the addition of shrub and meadow planting to create a natural transition between the formal development edge and the paddock areas.</p> <p>Proposed Greenways would also be aligned with existing trees and hedgerows where practicable to provide established and characteristic features within the wider agricultural landscape.</p> <p>The mature Willow, Maple and Poplar trees of landscape value (refer to Figure 14.4), the existing avenue of trees leading to the Officer's Mess building, trees east of the Rampton Drift boundary and the hedgerows aligning Long Lane would also be retained.</p>
Retained pillboxes	<p>The existing listed pillboxes scattered within the area would be retained and their setting would be enhanced with the creation of the water park.</p>
Retained PRoW	<p>The existing Rampton Drift byway east of Rampton Road, Long Lane byway and a PRoW within the Longstanton Paddocks would be retained within the proposed development.</p>

Feature / Measures	Integration into design
New vehicular entrances	The proposed vehicular entrances to the site would bypass the villages of Oakington and Longstanton, enhancing the village tranquillity and atmosphere, especially at Longstanton where access to Rampton Road would be removed.
New play areas	The existing play area at Rampton Drift would be complimented with the addition of 4 new areas for play within the Main Phase 2 development area and also additional informal play opportunities within the Greenways, water park and Green Separation.
Levels	<p>The proposed land raising in the north east of the site around the attenuation ponds would increase screening of the development from the east. Substantial amounts of cut for the new attenuation ponds would be re-used to fill the areas identified above.</p> <p>It is proposed that all material arising from existing buildings or hardstanding areas that are demolished or broken up would be crushed and re-used on site..</p> <p>The majority of the Phase 2 area would be at existing ground levels to minimise impacts to existing retained vegetation and listed Pillboxes. (Levels of fill up to +0.5m would be limited to built development footprints).</p>
Brooks and Drains	The existing system of drains around the site would be enhanced with the creation of a new network of swales and attenuation ponds within the proposed development. These new features would be characteristic of the surrounding landscape.
Height of development	<p>The majority of the residential units within the proposed development would be a maximum of 11m high (three storeys) with half of the new dwellings being built within the existing large hard standing areas (these were previously two storey height buildings and hangers, demolished in 2012). These building heights would generally be in keeping with the height of development in surrounding villages.</p> <p>In addition, one proposed primary school would potentially reuse the existing officer's mess buildings adding to the local character of the area.</p>

14.6.2 These measures have been taken account of in the assessment of the operation effects.

14.7 Potential effects

Site establishment and construction effects

14.7.1 Due to the scale of the construction activities, works would be highly visible in some of the locations and would have the potential to give rise to significant effects which cannot be mitigated. This is commonplace with construction of major developments, but it should be noted that these effects are temporary in nature and relate to the peak construction phase. The peak construction phase is defined as the period during which the main civil engineering works would take place, including the main earthworks and structure

works associated with the proposed water park, primary road and busway, the Southern Access Road (West), five storey Town Centre and residential areas and school (in sub phases A-D). The effects associated with the peak construction phase in this area would generally be considered to be long term given the construction programme (chapter 3, section 3.2). Overall, civil engineering works in this peak phase would take place between 2016 and 2023. Construction of the water park would last for approximately two years. Construction activities associated with the Town Centre would last for approximately eleven years.

14.7.2 Effects during other phases of works are likely to be due to a reduced intensity of construction activity and reduced construction equipment being required at the time.

14.7.3 It should be noted that some of the site would start to be occupied in 2019, which will result in the addition of new visual receptors who would continue to experience some visual effects during construction for approximately 12 years.

14.7.4 The specific construction works that have been taken into account in determining the effects on landscape character and visual receptors includes:

- Construction of a two lane dual carriageway link with new roundabout junctions, pedestrian bridge and lighting using construction plant including cranes;
- Construction of buildings and internal roads, including the five storey Town Centre and residential blocks s using construction plant including cranes and scaffolding;
- Construction of the water park involving substantial land raising and cut in the north east corner of the site to bring levels above calculated flood levels and create new attenuation ponds;
- Introduction of construction traffic along temporary roads within the development area but also on public roads including Station Road, Hatton's Road (B1050) and Dry Drayton Road;
- Provision of construction compounds and welfare facilities comprising temporary structures such as portacabins;
- Removal of mature trees and field boundary hedges and disruption of agricultural land;
- Presence of hoardings;
- General earthworks and presence of stockpiles.

Construction environmental management plan (CEMP)

14.7.5 Measures contained in the outline CEMP (submitted in support of the planning application) relevant to landscape and visual assessment include the following:

- Maximising the retention and protection of existing tree and vegetation where possible;
- Use of well-maintained fencing and hoardings to prevent unwanted access to the construction site, to provide noise attenuation, screening, and site security where required;
- Use of different types of fencing and hoarding (e.g. mesh fence of solid hoarding including hoardings used for noise control);
- Painting the side of hoardings facing away from the site, and to keep them free of graffiti or posters;
- Retaining existing walls, fences, hedges and earth banks for the purpose of screening as far as reasonably practicable;
- Designing lighting to avoid unnecessary intrusion onto the adjacent buildings and other land uses;
- Protecting of all trees, whether statutorily protected or not within or in the vicinity of the site, in accordance with BS 5837: 'Trees in relation to design, demolition and construction'¹⁹⁵;
- Any works to trees or felling would be carried out in accordance with BS 3998: Tree work - Recommendations¹⁹⁶;
- Replacement of any trees intended to be retained by a suitably sized tree to the approval of the Local Authority.

Construction Phase - Assessment of Effects on Landscape Character Areas

14.7.6 The following section describes the likely effects on landscape character areas arising from the construction of the proposed development. No mitigation is possible due to the highly visible nature of construction activities. An assessment of significance is made using the criteria set out in Section 3.4 above.

Longstanton Village LCA

14.7.7 The proposed Northstowe Phase 2 development lies outside of this LCA and therefore no landscape elements within the LCA would be directly affected or removed. However, given the proximity of construction activity to this LCA and the presence of incongruous

¹⁹⁵ BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations

¹⁹⁶ BS 3998:2010 Tree Work - Recommendations

elements and construction activity adjacent to Magdalene Close, the disturbance in the area would reduce the rural and tranquil setting of this village. Therefore the magnitude of this temporary change is considered medium.

- 14.7.8 The medium magnitude of change assessed alongside the medium sensitivity of the character area, would result in a **moderate adverse** effect on the LCA during construction.

Longstanton Paddocks and Pastures LCA

- 14.7.9 The proposed Main Phase 2 development area would be set within this LCA. Construction activity associated with the creation of a new footpath linking Longstanton Paddocks footpath with Long Lane and the new principal cycle/ pedestrian route within the development would include the removal of some of the existing hedges separating the small fields and Long Lane.

- 14.7.10 However the scale of these operations is likely to be small and the landscape setting of this landscape character area would be largely unaffected. Therefore the magnitude of change is considered to be low.

- 14.7.11 The low magnitude of change assessed alongside the medium sensitivity of the character area, would result in a **minor adverse** effect on the LCA during construction.

Village Farmlands LCA, Oakington Barracks LCA and Oakington Airfield LCA

- 14.7.12 The proposed Main Phase 2 development area would be set within these three LCAs and as construction activity would have a similar direct impact on all three LCAs they have been grouped together for this assessment. Activity would include the removal of substantial areas of mature vegetation from the western side of Oakington Barracks LCA and from the eastern end of Oakington Airfield LCA. Hedges and mature trees in the field boundaries within Village Farmlands LCA and enclosing Brookfield Farm would be removed. Sections of oak, spruce and mixed native species plantations as well as the scattered mature oak species within the Oakington Airfields LCA would be removed. The majority of the existing vegetation to the west of Rampton Drift, within the Oakington Barracks LCA would also be removed with the exception of the avenue of mature trees leading to the Officers Mess and the tree boundary along Long Lane and east of Rampton Drift. The prominent line of Poplars on the western track leading to the sewage works would be removed. The removal of such vegetation would result in a noticeable change to characteristic elements of the landscape.

- 14.7.13 In addition, the construction activity associated with the attenuation ponds, new primary roads and busway swales and new buildings

would involve substantial earth moving, stockpiling, vehicles and cranes. There would also be considerable construction traffic on the Airfield Perimeter Road intersecting Oakington Airfield and Oakington Barracks LCAs.

14.7.14 Given the removal of key features within these character areas and the extensive construction activity that would substantially alter the setting of these character areas, the magnitude of change is considered high.

14.7.15 The high magnitude of change assessed alongside the high/medium sensitivity of the character areas (low sensitivity for Oakington Barrack LCA) would result in a **moderate adverse** effect.

Longstanton Golf course LCA

14.7.16 The proposed Main Phase 2 development area lies immediately south of this LCA and therefore no landscape elements within the LCA would be directly impacted or removed. Some construction activity, including cranes and scaffolding would be apparent on the skyline to the south. However site accommodation, hoardings, traffic on site and stockpiles would be less noticeable due to the presence of construction activity on the site of Phase 1. Vegetation within the new Greenway between the two sites would be retained. Due to only a slight alteration to the character of the landscape and the presence of existing construction activity in Phase 1 within this LCA the magnitude of change is considered to be low.

14.7.17 The low magnitude of change assessed alongside the low sensitivity of the character area, would result in a **minor adverse** effect on the LCA during construction.

Oakington Farmlands LCA

14.7.18 The proposed Northstowe Phase 2 development lies outside of this LCA and therefore no landscape elements would be directly impacted or removed. However the proposed earthworks in the north east corner of the development site, associated with the creation of the water park and attenuation ponds, material stockpiles, cranes and earth moving machinery would be prominent features in this open flat landscape. Also the removal of mature vegetation including the line of mature poplars south of Rampton Drift and the removal of most trees west of Rampton Drift would be noticeable due to limited intervening vegetation along the CGB. Hoarding along the site boundary line with the CGB would also create a conspicuous element within the setting of this rural character area. Therefore the magnitude of change is considered to be medium.

14.7.19 The medium magnitude of change assessed alongside the medium sensitivity of the character area would result in a **moderate adverse** effect on the LCA during construction.

Westwick Village LCA

- 14.7.20 The majority of construction activity associated with the proposed Main Phase 2 development area would take place outside of this LCA, however works associated with the creation of the water park would take place on the north-west boundary of the Westwick Village LCA and would be a noticeable feature in the landscape. Movement of machinery involved in the creation of the attenuation ponds and re-profiling of the water park would also introduce new prominent features into the landscape however the existing mature vegetation aligning Beck Brook would screen a large proportion of the activity from Westwick Village. The majority of the construction works including cranes and scaffolding for the new buildings would take place approximately 860m from the character area and would be largely inconspicuous. Therefore the magnitude of change is considered to be low.
- 14.7.21 The low magnitude of change assessed alongside the medium sensitivity of the character area would result in a **minor adverse** effect on the LCA during construction.

Oakington Village LCA

- 14.7.22 The construction of the proposed new roundabout junction between the proposed Southern Access Road (West) and the Proposed Primary Road would intersect the north western corner of this LCA. Activities associated with the construction of the 80m wide roundabout and associated lighting provision would include earth works, stock piling, lighting and related infrastructure and construction traffic. This activity would form prominent new features in the local landscape and a noticeable change to the character of the north western corner of the village
- 14.7.23 However the setting of the Oakington Village Conservation Area would remain largely intact as the construction works associated with the proposed Main Phase 2 development area would be located 1.2km away (the proposed CGB tie in would be located 330m away) and largely inconspicuous due to the presence of intervening vegetation along the southern boundary of the proposed development.
- 14.7.24 The construction activities would result in the slight alteration in the landscape character as a whole therefore the magnitude of change is considered low.
- 14.7.25 The low magnitude of change assessed alongside the medium sensitivity of the character area would result in a **minor adverse effect**.

Longstanton Farmlands LCA

- 14.7.26 The construction of the proposed Southern Access Road (West), associated junctions and footbridge (proposed for the Wilson's Road byway) would be prominent within the arable fields in this LCA. Construction activity would include the removal of hedgerows, the addition of considerable earthworks associated with the ramped access to the bridge and the creation of drainage ditches for the road, stock piling and related infrastructure. Extensive lengths of hoardings would also be apparent, as would lighting at the site. Due to the lack of mature tree vegetation and the flat nature of the topography these construction works would add new prominent components into the landscape. Therefore the magnitude of change is considered medium.
- 14.7.27 The medium magnitude of change assessed alongside the low sensitivity of the character area would result in a **moderate adverse effect**.

A14 Corridor LCA and Bar Hill Village LCA

- 14.7.28 The proposed Northstowe Phase 2 development lies outside of these LCAs and therefore no landscape elements would be directly impacted or removed during the construction phase. The construction of the proposed Southern Access Road (West) and associated junction with Hatton's Road would be apparent. However due to the presence of many man made elements in these LCAs and the noise and movement associated with the A14 the increased construction activity including lighting at the Access Road would create a barely perceptible change to the setting of the character area. The construction activity would also be largely inconspicuous from the Bar Hill Village LCA due to the extensive mature vegetation boundary between Bar Hill and the A14. Therefore the magnitude of change is considered to be negligible.
- 14.7.29 The negligible magnitude of change assessed alongside the low sensitivity of the A14 corridor LCA (and the medium sensitivity of the Bar Hill village character area) would result in a **negligible** effect on the LCA during construction.

Construction Phase – Assessment of Visual Effects

- 14.7.30 The following section describes the likely significant effects on visual receptors during construction. However, visual effects during construction have not been assessed for the following viewpoints, as the proposed development in construction would be either not visible or barely perceptible. On this basis, the following viewpoints are considered to experience a negligible effect (which would be not significant):

- Viewpoint 6 – High Street, Oakington is located within close proximity of the proposed access roads to the proposed development but due to the extensive tree belt at the southern boundary of the former Oakington Barracks (approximately 50m wide) the proposed development would be entirely screened.
- Viewpoint 7- Oakington Road, Westwick Village: the background of the view is formed by a mature deciduous tree belt that would screen all views of the proposed development.
- Viewpoint 14 - Hill Row Causeway, Haddenham Ridge: due to the distance of the viewpoint from the proposed development (approximately 8km) and the intervening vegetation aligning the embankments of the River Ouse and field boundaries the proposed development would not be visible from this location.
- Viewpoint 16 - Crafts way, Bar Hill: Due to the localised topography and extensive tree belts and vegetation aligning the A14 boundary the proposed development would not be visible from this location.
- Viewpoint 17 - End of Cuckoo Lane, Lolworth: due to the distance of the viewpoint from the proposed development, approximately 4.5km away, and the extensive intervening vegetation surrounding Longstanton, the proposed development would not be visible from this location.
- Viewpoint 18 - School Lane, Boxworth - Due to the dense tree belts and hedge boundaries aligning the eastern boundary of the village and within arable land between Boxworth and Lolworth the proposed development would not be visible from properties in the east of Boxworth.
- Viewpoint 20 - The Boot PRoW and track, Aldreth: due to the distance of the viewpoint from the proposed development (approximately 6.5km) and the intervening vegetation aligning the embankments of the River Ouse and field boundaries the proposed development would not be visible from this location.

Viewpoint 1 - Magdalene Close, Longstanton

- 14.7.31 The construction of the proposed Main Phase 2 development area would be visible in the foreground of this view and construction site hoarding would dominate the view. Large construction plant including cranes and scaffolding would also be visible on the skyline. However views of the construction activities to the south side of Rampton Road (right of the image) would be restricted by existing mature vegetation aligning Rampton Road and the Byway.
- 14.7.32 These additional features would be highly visible and incongruous with the existing view. Given the scale of the construction within the view the magnitude of change is considered to be high.
- 14.7.33 The high magnitude of change assessed alongside the high sensitivity of the receptor would result in a **major adverse** effect.

Viewpoint 2 – Rampton Road cross roads, Viewpoint 3- Woodside Road, Longstanton and Viewpoint 4 - Mills Lane, Longstanton

- 14.7.34 These views have been grouped into one assessment as visual impacts are considered very similar.
- 14.7.35 The construction of the proposed Main Phase 2 development area would be partially visible in the foreground of these views. The evergreen hedges aligning Long Lane and Manor House would be retained but the removal of the smaller hedges in the middle ground would allow visibility of construction activity associated with the construction of the proposed primary cycle and pedestrian route through the existing paddocks area.
- 14.7.36 The trees in the background aligning Long Lane would be retained and would screen much of the construction activities relating to the main residential development including cranes and scaffolding. Therefore the magnitude of change is considered to be low.
- 14.7.37 The low magnitude of change assessed alongside the high sensitivity of the receptor would result in a **minor adverse** effect.

Viewpoint 5 – Wilson’s Road PRow, Longstanton

- 14.7.38 Construction activity associated with the proposed Southern Access Road (West) and the pedestrian bridge would be visible in the middle ground. Earthworks, stockpiles and machinery would create substantial new features that would be highly visible and at variance with middle ground views of arable fields and boundary vegetation. The taller structures including cranes would be visible on the skyline but would be viewed in the context of existing telegraph poles and vertical infrastructure running along the A14. Overall, the additional features would be continuously highly visible and incongruous with the exiting views. Therefore the magnitude of change is considered high.
- 14.7.39 The high magnitude of change assessed alongside the high sensitivity of the receptor would result in a **major adverse** effect.

Viewpoint 8 - Rampton Drift PRow, Westwick

- 14.7.40 Construction activity associated with the proposed Main Phase 2 development area would be noticeable in the middle ground of the view. Cranes, scaffolding and earth moving associated with the construction of the three and five storey high dwellings and re-profiling of the attenuation ponds within the water park would be prominent in the view and would interfere with key components of the skyline including the water tower and All Saints Church Spire. Due to the substantial change partially filtered by intervening

vegetation and at a distance from the visual receptor the magnitude of change is considered to be medium.

- 14.7.41 The medium magnitude of change assessed alongside the medium sensitivity of the receptor would result in a **moderate adverse** effect during construction.

Viewpoint 9 - Rampton Drift playground, Rampton Drift

- 14.7.42 There would be a major alteration to the view in close proximity during construction of the proposed Main Phase 2 development area. This would include the presence of hoarding, cranes and scaffolding, the removal of vegetation, including the scattered trees in the middle ground and extensive earth moving and stockpiling. Due to the close proximity of the construction works and substantial changes to the view the magnitude of change is considered high.

- 14.7.43 The high magnitude of change assessed alongside the high sensitivity of the receptor would result in a **major adverse** effect during construction.

Viewpoint 10 - Rampton Road Byway, Rampton Drift

- 14.7.44 Changes to the view during construction of the proposed Main Phase 2 development area would include the removal of some of the existing boundary hedge that dominates this view, to allow for the creation of new access points into the proposed development. Although much of the construction activity would be screened by the existing hedges, activity adjacent to the byway and including the construction of the attenuation ponds within the water park would be evident above the hedge line. Due to the proximity of the construction activity and addition of new components that would be highly visible and incongruous with the existing view the magnitude of change is considered to be high.

- 14.7.45 The high magnitude of change, assessed alongside the medium sensitivity of the view would give rise to a **major adverse** effect during construction.

Viewpoint 11 -CGB PRoW, Rampton Drift

- 14.7.46 Construction activity associated with the proposed Main Phase 2 development area would be visible in the foreground of the view. The existing planting alongside the CGB is still young and would not screen much of the construction activity and hoarding in the foreground. There would be views of activity associated with the construction of the water park attenuation ponds and the three and five storey high dwellings (approximately 475m from the CGB boundary fence). Due to the open views of construction activity in close proximity to the receptor, the magnitude of change is considered to be high.

- 14.7.47 The high magnitude of change, assessed alongside the high sensitivity of the receptor would result in a **major adverse** effect during construction.

Viewpoint 12 - Rampton Road, north of Cottenham

- 14.7.48 Construction activity associated with the proposed Main Phase 2 development area would be located approximately 2.2km away behind the fragmented hedge in the middle ground. The hoarding would form a noticeable and incongruous linear feature in the view. Construction traffic including cranes and scaffolding would also be visible.
- 14.7.49 The removal of the dominant line of poplars as well as other mature vegetation including the dense mature trees adjacent to the water tower would allow further views into the construction site. However the All Saints Church spire would still be visible in the background. This noticeable change to key characteristics of the view would result in a medium magnitude of change.
- 14.7.50 The medium magnitude of change, assessed alongside the medium sensitivity of the receptor would result in a **moderate adverse** effect during construction.

Viewpoint 13 - Rampton Road, south of Rampton

- 14.7.51 Construction activity associated with the proposed Main Phase 2 development area would be located approximately 1.3km from the receptor, and would be visible in the background, beyond the fragmented hedge in the middle ground. The removal of the existing mature vegetation in the middle ground, including the line of poplars, would be a substantial loss to a key characteristic of the view. Cranes and scaffolding would also be visible in the background between the intermittent boundary vegetation. This noticeable change to this view would result in a medium magnitude of change.
- 14.7.52 The medium magnitude of change assessed alongside the high sensitivity of the receptor would result in a **moderate adverse** effect during construction.

Viewpoint 15- Hatton's Road

- 14.7.53 Construction activity associated with the proposed Southern Access Road (West) junction with Hatton's Road and the new Wilson's Road pedestrian bridge would be visible in the middle ground. Earthworks, stockpiles and machinery would create substantial new features that would be highly visible and at variance with middle ground views of arable fields and boundary vegetation. Construction traffic using this site entrance would also form a dominant feature in this view.

- 14.7.54 Views of mature trees and Oakington Village in the background would be screened by the construction activity. Due to the close proximity of the works construction elements would be continuously highly visible in this view. Therefore the magnitude of change is considered to be high.
- 14.7.55 The high magnitude of change, assessed alongside the high sensitivity of the receptor would result in a **major adverse** effect during construction.

Viewpoint 19 - Dry Drayton Road

- 14.7.56 Construction activity associated with the proposed Southern Access Road (West) would be evident in the background of the view. The removal of the hedges and trees to accommodate the Access Road and junction would be evident and would increase visibility of construction activity within the proposed Main Phase 2 development area beyond. Due to the slight loss of characteristic vegetation in the view but at some distance from the visual receptor the magnitude of change is considered to be low.
- 14.7.57 The low magnitude of change assessed alongside the high sensitivity of the receptor would result in a **minor adverse** effect during construction.

Operational Phase - Assessment of Effects on Landscape Character Areas

- 14.7.58 The operational assessment of impacts has been undertaken with reference to parameter plans, highways general arrangements plans (C1100 – C1004), descriptions and illustrations of the proposed development and is based on the first year of completion of the proposed development (2031). A process of iterative design and assessment has been employed to avoid or reduce adverse effects during the operation of the proposed development. Measures that have been incorporated into the design are included in section 6. This section describes the likely effects on landscape character areas during Year 1 of operation.
- 14.7.59 Following the findings of the construction assessment, the proposed development would be barely perceptible in the wider setting of these six landscape character areas. On this basis, the following LCAs are considered to experience a negligible (and therefore not significant) effect:
- Longstanton Golf Course LCA
 - Oakington Farmlands LCA
 - Westwick Village LCA
 - Oakington Village LCA
 - A14 corridor LCA

- Bar Hill LCA

Longstanton Village LCA

- 14.7.60 The proposed Main Phase 2 development area would be located outside of this LCA and therefore there would be no direct landscape impacts on this LCA.
- 14.7.61 Access to Rampton Drift and the proposed development via Rampton Road would be closed to vehicular traffic. Instead the road would be transformed into a new pedestrian/ cycle route and 'Greenway' into the development. The proposed Southern Access Road (West) and Primary Road via Hatton's Road would by-pass traffic south of the village. This reduction in traffic within the historic core of the village would enhance the character of the village and setting of All Saints Church.
- 14.7.62 The proposed 'Green Separation' bordering this LCA would be in keeping with the existing green rural character of the landscape. The loss of some of the existing hedges separating the small fields and Long Lane to make way for the new principal cycle/ pedestrian route would be evident but the space would be further enhanced with the addition of new orchards, meadows and further hedgerows. There would be a slight alteration to the character of this LCA and therefore the magnitude of change is considered to be low.
- 14.7.63 As the new development would improve and enhance the existing character of this LCA the low magnitude of change, assessed alongside the medium sensitivity of the character areas would result in a **moderate beneficial** effect on the LCA during Year 1 of Operation.

Longstanton Paddocks and Pastures LCA

- 14.7.64 The proposed Main Phase 2 development area would be located within this LCA and would encompass the area bordering the Manor House, north of the Toad Acres Caravan Park and the field immediately south of this.
- 14.7.65 The introduction of the proposed cycle and pedestrian route and new dwellings in close proximity to this character area would change the rural nature of the landscape. The majority of the existing mature boundary vegetation would be retained and improved. The introduction of new orchards and further hedgerows within this LCA would create a screen between Toad Acres Park and the proposed three storey high residential units close to the LCA boundary.
- 14.7.66 Overall the proposed development would retain the key characteristics of this LCA and therefore the magnitude of change is considered low.

- 14.7.67 The low magnitude of change, assessed alongside the medium sensitivity of the character areas, would result in a **minor adverse** effect on the LCA during Year 1 of Operation.

Village Farmlands LCA

- 14.7.68 The proposed Main Phase 2 development area would be very evident in this landscape. The loss of existing trees and hedges aligning the existing fields as well as the vegetation enclosing Brook Field would be a noticeable alteration to a key characteristic of this character area. However the mature belt of trees aligning Rampton Road, and which forms an important component in the setting of this landscape character, would be retained.
- 14.7.69 New meadows and tree planting along the two proposed informal Greenways bordering this character area would provide an open parkland setting that would be in keeping with this LCA. The 'Green Separation' to the west of this area would contain sports pitches but also a pattern of hedge and shrub planting that mimics the original small scale field pattern that existed in this area. The extensive tree planting throughout the proposed development would also enhance the setting of the buildings and help integrate them into the landscape.
- 14.7.70 Overall the proposed development would alter the land use of the area, changing the existing rural character of medium sized fields to a suburban character of housing and open space. The proposed development would add new prominent features that would be uncharacteristic of the existing setting of the LCA. Therefore the magnitude of change is considered to be medium.
- 14.7.71 The medium magnitude of change, assessed alongside the medium sensitivity of the character areas, would result in a **moderate adverse** effect on the LCA during Year 1 of operation.

Oakington Barracks LCA

- 14.7.72 The proposed Main Phase 2 development area would extend over the majority of Oakington Barracks LCA.
- 14.7.73 Direct landscape impacts would include a noticeable change in land use from agricultural fields and abandoned buildings to a new residential settlement of extensive and varied open green spaces, road network and community facilities.
- 14.7.74 The extensive new recreational areas including the water park and Greenways would introduce new planting and tree belts that would create strong features in the landscape that would improve and enhance the existing character of the area.

- 14.7.75 The proposed development would also retain many of the key landscape features within the area including the mature Maple and Poplar trees, the existing avenue of trees leading to the Officer's Mess building, trees east of the Rampton Drift boundary and the hedgerows aligning Long Lane. The characteristic line of poplars along the northern track would be lost.
- 14.7.76 The area would be further enhanced with the addition of proposed ditches and swales running throughout the scheme, which are characteristic of the area.
- 14.7.77 The substantial changes to topography around the proposed attenuation ponds in the north east corner of the site would be prominent and at variance with the existing character of the landscape but associated marginal planting and low lying meadows within the water park would form inconspicuous new landscape features that are largely characteristic of the local environment.
- 14.7.78 The existing landscape of poor quality abandoned land would be replaced with a housing developing incorporating a high quality landscape that substantially alters the character and setting of the area. Therefore the magnitude of change is considered to be high.
- 14.7.79 The high magnitude of change assessed alongside the low sensitivity of the LCA would result in a **moderate beneficial** effect on the landscape in Year 1 of operation as the development would markedly improve and enhance the existing character of the area.

Oakington Airfield LCA

- 14.7.80 The proposed Main Phase 2 development area would be located in the north eastern corner of the Oakington Barracks LCA. However, most of this area would be formed of the extensive water park and associated recreational facilities along the eastern boundary. The substantial changes to topography would be at variance with the existing character of the surrounding landscape but the new planting and meadows would generally improve and enhance the existing character of the area. The existing listed pillboxes scattered in the area would also be retained and their setting would be enhanced by the new landscape integrated with its surroundings.
- 14.7.81 The proposed primary road and busway would pass through the central southern section of the LCA. The loss of mixed plantations, deciduous tree belts and scattered trees would be a noticeable alteration to a key characteristic of the character area. However new hedge and tree planting along the length of the access road would help to integrate it into the landscape. Due to the addition of new features that are largely characteristic of the setting of the character area but the noticeable loss of some vegetation that forms a key component of the landscape the magnitude of change is considered medium.

- 14.7.82 The medium magnitude of change at Oakington Airfield, assessed alongside the high sensitivity of the character areas would result in a **minor adverse** effect on the LCA during Year 1 of operation.

Longstanton Farmlands LCA

- 14.7.83 The proposed Southern Access Road (West) would pass through this LCA. The dual carriageway road and associated junctions would sever fields and several mature field boundary hedgerows traversing the arable fields in the area. New hedgerow planting would be installed along the length of the proposed road but would do little to reduce the impact of this wide road within the rural setting. This road would also be out of keeping with the setting of the existing network of roads and tracks currently intercepting this LCA. Furthermore, new lighting associated with the road would also alter the character of the LCA locally (refer also to the lighting assessment in Chapter 15).
- 14.7.84 A new footbridge for the Wilson's Road PRow, associated earthworks and 12m high lighting columns at both roundabouts would add new prominent elements in this flat landscape and would also permanently change the alignment of this historic lane. Therefore the magnitude of change is considered to be high.
- 14.7.85 The high magnitude of change, assessed alongside the low sensitivity of the character areas, would result in a **moderate adverse** effect on the LCA during Year 1 of Operation.

Operational Phase - Assessment of Visual Effects

- 14.7.86 The following section describes the likely significant effects on visual receptors during year 1 of operation. The assessment has been taken over the winter and summer to account for seasonal change in the visibility of the proposed development.
- 14.7.87 Following the findings of the construction assessment, there are a number of viewpoints where the proposed development would be either not visible or barely perceptible. On this basis, the following viewpoints are considered to experience a negligible effect (which would be not significant):
- Viewpoint 6 - High Street, Oakington.
 - Viewpoint 7 - Oakington Road, Westwick Village.
 - Viewpoint 14 - Hill Row Causeway, Haddenham Ridge.
 - Viewpoint 16 - Crafts way, Bar Hill.
 - Viewpoint 17 - End of Cuckoo Lane, Lolworth.
 - Viewpoint 18 - School Lane, Boxworth

Viewpoint 20 - The Boot PRow and track, Aldreth Viewpoint 1 - Magdalene Close, Longstanton

- 14.7.88 There would be close up views of new tree and shrub planting within the new landscape known as the 'Green Separation'. Whilst the proposed Northstowe Phase 2 development would alter the nature of the existing view of agricultural fields, the proposed 30m thick planting strip would help to screen middle ground views of the proposed three storey high residential development. Although the new planting would be largely characteristic of the existing view the proposed residential units and sports hubs would still be visible above the young planting. However in the context of the Phase 1 development they would be largely characteristic of the existing view. Therefore the magnitude of change is considered to be low.
- 14.7.89 The addition of the 'Green Separation' together with the loss of the fence would discernibly improve the existing view however the intermittent views of the proposed development beyond the immature vegetation would result in a discernible deterioration in the views. The low magnitude of change assessed alongside the high sensitivity of the receptor would result in a **minor adverse** effect in winter of Year 1 of operation.
- 14.7.90 In the summer, the abundance of intervening vegetation in leaf would filter views further. As planting establishes and matures the 'Green Separation' could provide improved screening in this view which could reduce predicted effects in the future.

Viewpoint 2 - Rampton Road cross roads, Longstanton, and Viewpoint 3 - Woodside Road, Longstanton

- 14.7.91 These views have been grouped into one assessment as visual impacts are considered very similar.
- 14.7.92 There would be close up views of the enhanced 'Green Separation' in the foreground of the views. The characteristic planting within the views would be retained and complimented with new wildflower meadows and orchard planting. The post and wire fence in the foreground of the view would also be enhanced. The proposed Main Phase 2 development area would be almost entirely obscured by existing intervening vegetation in the background of the view. Therefore the magnitude of change is considered to be low.
- 14.7.93 The enhanced planting within the 'Green Separation' would create a noticeable improvement in the foreground of the view. The low magnitude of change assessed alongside the high sensitivity of the receptor would result in a **moderate beneficial** effect in the winter of Year 1 of operation.
- 14.7.94 There would be no change in the summer assessment due to the close proximity of the proposed 'Green Separation' and lack of

intervening vegetation. However, in the background of the view the existing trees in leaf would further filter views to the proposed development.

Viewpoint 4 – Mills Lane, Longstanton

- 14.7.95 The view of the paddock in the foreground of the view would remain unchanged. The existing tree belts in the middle ground and background of the view would screen the majority of views of the proposed development beyond, although the taller residential and town centre five storey development would be visible above the tree canopy. New planting along the boundary between the 'Green Separation' and the proposed development would provide a screen of vegetation between the middle ground and background views. Due to the slight alteration to the planting in the view and the filtered view of the proposed development in the background of the view the magnitude of change is considered to be low.
- 14.7.96 The low magnitude of change assessed alongside the high sensitivity of the receptor would result in a **minor adverse** effect, in the winter of Year 1 of operation, as there would be a discernible deterioration in the view.
- 14.7.97 In summer, the existing and proposed trees in leaf in the background of the view would further filter views to the proposed development. As planting establishes and matures it would provide improved screening in this view and could reduce predicted effects in the future.

Viewpoint 5 – Wilson's Road PRow, Longstanton

- 14.7.98 The foreground of the view would remain unchanged but the proposed Southern Access Road (West) junctions and associated lighting provision and pedestrian footbridge would be clearly visible intersecting the footpath and the open fields in the middle ground. Despite new planting along the length of the new road these new features and associated earthworks would be incongruous with the existing view. The new footbridge in close proximity to the visual receptor would also be highly visible against this open long distance view but would be seen in the context of vertical features and infrastructure of the A14 in the background of the view. Therefore the magnitude of change is considered to be medium.
- 14.7.99 The medium magnitude change assessed alongside the high sensitivity of the visual receptor would give rise to a **moderate adverse** effect, in the winter of Year 1 of operation.
- 14.7.100 There would be no change in the summer assessment due to the lack of intervening vegetation.

Viewpoint 8 - Rampton Drift PRow, Westwick

- 14.7.101 The foreground and middle ground views would remain unchanged. However the proposed housing development would be visible approximately 1km away in the background of the view.
- 14.7.102 The new vegetation within the proposed school grounds, sports hub and water park would be visible on the skyline and together with the existing vegetation would screen lower parts of development. However the three to five storey high development would be visible above the trees and would block views of the existing water tower and All Saints Church Spire. Due to loss of visibility of these characteristic features in the view and the addition of the new development in the background of the view the magnitude of change is considered to be medium.
- 14.7.103 The medium magnitude of change assessed alongside the high sensitivity of the receptor would result in a **moderate adverse** effect in the winter of Year 1 of operation.
- 14.7.104 In the summer the vegetation would further screen the lower levels of the proposed development in the background of the view but the taller elements of the development would still be visible above the vegetation.

Viewpoint 9 - Rampton Drift playground, Rampton Drift

- 14.7.105 The proposed development would be visible in close proximity in the middle ground of this view. It is assumed that most of the existing mature trees in the middle ground would be lost however new tree planting would be visible along the street running directly in front of this view and along the 'Greenways' which would be intermittently visible in between the development filling the middle ground of the view.
- 14.7.106 In the background, views of existing vegetation, including the line of mature poplars would be lost and would be replaced with views of three and five storey high residential buildings and community facilities which would dominate the skyline. Due to the major alteration to key characteristics of the view and the addition of new highly visible features within the view the magnitude of change is considered to be high.
- 14.7.107 The high magnitude of change assessed alongside the high sensitivity of the receptor would result in a **major adverse** effect on Year 1 of operation.
- 14.7.108 In summer, the proposed tree planting in leaf in the middle ground of the view would help to filter views to the proposed development and as planting establishes and matures it would provide improved screening, however this would not be sufficient to reduce predicted effects further.

Viewpoint 10 - Rampton Road Byway, Rampton Drift

- 14.7.109 The foreground and middle ground views would remain largely unchanged assuming that the existing tall hedges would be retained. The surface of the byway in the foreground of the view would be upgraded and new planting, including meadows, grass swales and tree planting would be visible where the existing byway would be integrated into the new northern Greenway. A new entrance point into the development would also be visible as a break in the hedgerow.
- 14.7.110 There would also be views above the hedgerow of the three and five storey high residential and town centre buildings. Due to noticeable changes in the view, but largely filtered by existing vegetation, the view the magnitude of change is considered to be medium.
- 14.7.111 The medium magnitude of change assessed alongside the high sensitivity of the receptor would result in a **moderate adverse** effect in the winter of Year 1 of operation.
- 14.7.112 In summer, the existing hedge and proposed trees in leaf view would further filter views to the proposed development but not enough to reduce predicted effects further.

Viewpoint 11 - CGB PRoW, Rampton Drift

- 14.7.113 There would be views of the proposed school grounds and water park in the foreground of the view through the existing boundary vegetation along the Guided Busway. Extensive new planting and extensive land raising around the attenuation ponds would be prominent in the view.
- 14.7.114 The proposed Main Phase 2 development area would be located approximately 450m away in the middle ground of the view, partly screened by the new planting in the foreground. However the five storey town centre buildings would be highly visible above the tree canopies and would screen existing views of the mature belt of vegetation on the sky line. Due to noticeable alterations to key characteristics of the view but in the context of the presence of Phase 1 the magnitude of change is considered to be medium.
- 14.7.115 Some elements in the view, including the extensive planting and formation of attenuation ponds would form a discernible improvement in the existing views. However the visibility of the new three to five storey development in the background of the view and on the skyline would create a noticeable deterioration in the existing view. On balance the medium magnitude of change assessed alongside the high sensitivity of the receptor would result in a **moderate adverse** effect in the winter of year 1 of operation.

- 14.7.116 In summer, the existing boundary planting in the foreground and new planting around the water park and school grounds in leaf would further filter views to the proposed development. In addition, as planting establishes and matures it would provide improved screening and could reduce predicted effects in the future.

Viewpoint 12 - Rampton Road, north of Cottenham

- 14.7.117 The proposed Main Phase 2 development area would be visible just beyond the dense hedge in the middle ground view and would screen the dense deciduous tree belt on the horizon. The extensive land raising around the attenuation ponds and new planting in the water park and school grounds would also be visible in front of the housing development. The rooftops of the three to five storeys proposed residential dwellings and town centre would be clearly visible above the line of proposed vegetation and would screen views of the All Saints Church spire, the water tower and the mature tree belt on the skyline. The new development would add new features into the middle ground of the view but which would be seen in the context of Phase 1. Therefore the magnitude of change is considered to be medium.

- 14.7.118 The medium magnitude of change assessed alongside the low sensitivity of the receptor would result in a **moderate adverse** effect in the winter of year 1 of operation.

- 14.7.119 In summer, the proposed planting around the water park and school grounds in leaf would further filter views to the proposed development. In addition, as planting establishes and matures it would provide improved screening which could reduce predicted effects in the future.

Viewpoint 13 - Rampton Road, south of Rampton

- 14.7.120 The proposed Main Phase 2 development area would be visible approximately 1.3km away in the background of the view and beyond the fragmented hedge in the middle ground. The vegetation associated with the water park and school grounds would partly screen the residential development but the roof tops of the three to five storeys residential dwellings and town centre would be visible on the skyline. The loss of tall mature trees including the poplars would alter the background of the view and would allow increased views towards the proposed development. The new development would add new features that would be visible in the background of the view in the context of Phase 1. Therefore the magnitude of change is considered to be medium.

- 14.7.121 The medium magnitude of change assessed alongside the high sensitivity of the receptor would result in a **moderate adverse** effect in the winter of year 1 of operation.

- 14.7.122 In summer, the proposed planting around the water park and school grounds in leaf would further filter views to the proposed development. In addition, as planting establishes and matures it would provide improved screening which could reduce predicted effects further.

Viewpoint 15 - Hatton's Road

- 14.7.123 The proposed Southern Access Road (West), junctions and associated lighting provision and Wilson's Road pedestrian bridge and embankments would be visible intersecting the arable fields in the middle ground.
- 14.7.124 Despite new planting the new infrastructure would constitute incongruous new features in the view that would be continuously visible in the middle ground. Therefore the magnitude of change is considered to be high.
- 14.7.125 The high magnitude of change assessed alongside the high sensitivity of the receptor would result in a **major adverse** effect in the winter of year 1 of operation.
- 14.7.126 Due to the lack of intervening vegetation the view in summer would be largely unchanged.

Viewpoint 19 – Dry Drayton Road

- 14.7.127 The loss of existing mature trees and hedges to accommodate the proposed Southern Access Road (West) connection to the site boundary would be visible in the middle ground of the view. However at ground level the deciduous hedge in the foreground would screen views of the proposed access road. The proposed Wilson's Road pedestrian bridge would be visible and incongruous with existing views in the background although it would be partly filtered by intervening vegetation. Due to the slight loss and alteration of characteristic features in the view, the magnitude of change is considered low.
- 14.7.128 The low magnitude of change assessed alongside the high sensitivity of the receptor would result in a **minor adverse** effect in the winter of year 1 of operation.
- 14.7.129 In summer, the existing intervening planting in leaf view would further filter views to the proposed development but not enough to reduce predicted effects further.

Mitigation

- 14.7.130 No supplementary mitigation during construction is possible due to the highly visible nature of the construction activities, although further discussion about mitigation will be required with SCDC to agree the sub phase CEMPs and therefore some fencing/ screening may be required.
- 14.7.131 The success of the proposed development would partly depend on the creation of a place that respects existing landscape character by integrating new buildings, infrastructure and open spaces into the landscape. The development of appropriate places and spaces would also be reliant on the high quality design and detailing of built form as well as public space and the creation of connectivity and permeability.
- 14.7.132 Measures that would be integrated into the detailed design/ design code for the proposed development at the reserved matters stage include the following:
- It is important to note that vegetation and especially trees can take time to have a marked impact on the landscape and visual character of the environment. It is suggested that where street trees are planted and where an immediate effect is required that appropriate, advanced nursery stock trees are considered. The planting of trees is considered an important part of the development.
 - It will be important to ensure that the design of the proposed attenuation ponds in the water park achieves integration into the surrounding landform with the addition of sculpted edges, marginal plating and pedestrian access.
 - To retain existing mature vegetation on site, namely the line of poplars and tree planting around Rampton Drift to help integrate the development into the landscape and help screening.
 - All boundary vegetation to be undertaken as early as practicable in the construction programme so that it is fully established and an effective screen in the first operational year.
 - Rampton Road Byway - More development needed to ensure that all retained hedgerows are sensitively integrated into the new planting design and that the identity of the 'Historic Green lane' is retained.
 - Planting around Rampton Drift is currently not extensive enough - new large and improved buffer landscape to southern side of existing development should be provided to achieve a green separation and new recreational space linking the existing playground with the development.
- 14.7.133 Finally, the detailed design for the proposed Southern Access Road (West) and pedestrian bridge should be refined on site to ensure that the new landforms are seamlessly integrated into existing

topography and that boundary roadside vegetation reflect local species and hedgerow patterns.

Residual Effects

Construction

- 14.7.134 As no further mitigation is practicable the residual construction effects remain as described in Section 7.1 above.

Operation

- 14.7.135 Following mitigation it is considered that in most cases significant effects would be reduced. These benefits would result from improvements in landscape/townscape character and enhanced views. The summary of residual effects is outlined below in Table 15.10 below.
- 14.7.136 However, the following residual effects on views from residential properties would remain:
- Viewpoint 9: Rampton Drift playground - residential properties within Rampton Drift would have close up views of the proposed development despite increased planting.
 - Viewpoint 15: Hatton's Road – residential properties on Hatton's Road would have middle ground views of the proposed Southern Access Road and associated junctions.

Cumulative Effects

Construction

- 14.7.137 During the peak construction phase the proposed Northstowe Phase 2 development, Phase 1 Northstowe and the A14 Improvement Scheme would be under construction.
- 14.7.138 The combined effect of construction at these developments would further elevate the significant effects identified as a result of the proposed development at viewpoints 5, 11, 12 and 13.
- 14.7.139 Due to the presence of construction activities at these two sites alongside construction activity at the proposed development the significant adverse effects on, Oakington Farmlands LCA and Longstanton Farmlands LCA would be further elevated. The non significant effect arising from the Northstowe Phase 2 development on Longstanton Golf course LCA would be elevated to be significant when taking into account these other surrounding developments.

- 14.7.140 The construction of housing (21ha), a business park (6.3ha), extension to village recreation ground (2.8ha), and village green at Home Farm in the North West of Longstanton would represent minimal change to the landscape character areas and viewpoints as it is located too far away from the proposed development.

Operation

- 14.7.141 By year 1 of operation, the A14 Improvement Scheme, Northstowe Phase 1 and Home Farm would be complete. The cumulative effects from these developments considered alongside the proposed development would alter the following receptors:
- The non significant residual effects at Oakington Farmlands LCA and Longstanton Farmlands LCA would be elevated to be significant due to the wider influence of housing development on the rural landscape;
 - The non significant residual effects on Viewpoints 1, 11, 12 and 13 would be elevated to be significant due to the more extensive visibility of built development as uncharacteristic features in the views; and
 - The significant residual effect on Viewpoint 15 would be further elevated.

Limitations and Assumptions

Limitations

- 14.7.142 As is common with a visual assessment, during the baseline survey there were some areas such as private land and residential buildings which were inaccessible. In these instances professional judgement has been used to approximate the view from these visual receptors.
- 14.7.143 The ZTV for the baseline has been generated using open data OS Terrain 50 topographic data, which was the only data readily and reasonably available for the assessment areas. Existing building heights were set at 8m and significant vegetation belts were set at 12m. For the construction ZTV, cranes were set at 30m and hoardings at 2.4m. It is acknowledged that changes in the assessment area through new development and/or demolition have not been included in the model. A datum of 1.6m above ground level was used to represent the eye level view of an average height person. The validity of the ZTV was checked on site, using professional judgement, to ensure the output is a fair representation of the theoretical visibility of the proposed development, in line with guidance provided by the Landscape Institute.
- 14.7.144 The construction and operational assessment has been undertaken with reference to parameter plans only. This

assessment has therefore been carried out according to the worst case scenario as suggested by the Landscape Institute's 'Guidelines for Landscape and Visual Impact Assessment.' . In carrying out the assessment assumptions were made on certain types of planting within the proposed development and these are summarised below.

Assumptions

- 14.7.145 The new highway link from the proposed development to Hatton's Road would include hedgerows and scattered tree planting to reflect local field patterns.
- 14.7.146 Existing hedgerows and tree planting within the Longstanton Paddocks and pastures landscape character area would be retained.
- 14.7.147 Artificial lighting has the potential to impact landscape character and sensitive visual receptors, including residents, through light spill, glare and sky glow. Lighting is unlikely to cause landscape and visual effects for this type of residential development, set within the context of existing built up areas and highways infrastructure, Where the lighting assessment has identified significant effects in the vicinity of the Southern Access Road (West), this does not additionally generate significant landscape effects (refer to Chapter 15 for the lighting assessment). In addition any flood lighting in the proposed Sports Hub to the east of the proposed development is likely to be lit during early evening hours when street lights are on and homes are extensively lit. A lighting assessment is included as Appendix H2.

Assessment Summary Matrix

- 14.7.148 Table 14.8 summarises the landscape and visual effects that have been predicted for the proposed Northstowe Phase 2 development.

Table 14.8: Assessment Summary Matrix Landscape Character Areas

Description of Effects	Significance of Effects:	Description of Mitigation Measures and Enhancement	Description of Residual Effects	Significance of Effects
Site enabling works and construction assessment				
Landscape character assessment				
Longstanton Village LCA:	Significant temporary (Moderate adverse)	No further mitigation practicable	Effect unchanged	Significant temporary (Moderate adverse)
Longstanton Paddocks and Pastures LCA:	Not significant (Minor adverse)	None	Effect unchanged	Not significant (Minor adverse)
Village Farmlands LCA, Oakington Barracks LCA and Oakington Airfield LCA	Significant temporary (Moderate adverse)	No further mitigation practicable	Effect unchanged	Significant temporary (Moderate adverse)
Longstanton Golf course LCA	Not significant (Minor adverse) This effect would be elevated to be significant when considering other cumulative developments	None	Effect unchanged	Not significant (Minor adverse) Significant considering other cumulative developments.
Oakington Farmlands LCA	Significant temporary (Moderate adverse) This effect would be elevated when considering other cumulative developments	No further mitigation practicable	Effect unchanged	Significant temporary (Moderate adverse) Significant considering other cumulative developments.

Description of Effects	Significance of Effects:	Description of Mitigation Measures and Enhancement	Description of Residual Effects	Significance of Effects
Westwick Village LCA	Not significant (Minor adverse)	None	Effect unchanged	Not significant (Minor adverse)
Oakington Village LCA	Not significant (Minor adverse)	None	Effect unchanged	Not significant (Minor adverse)
Longstanton Farmlands LCA	Significant temporary (Moderate adverse) This effect would be elevated when considering other cumulative developments	No further mitigation practicable	Effect unchanged	Significant temporary (Moderate adverse) Significant considering other cumulative developments.
A14 Corridor LCA and Barhill Village LCA	Not significant (Negligible)	None	Effect unchanged	Not significant (Negligible)
Visual assessment				
Viewpoint 1 : Magdalene Close	Significant temporary (Major adverse)	No further mitigation practicable	Effect unchanged	Significant temporary (Major adverse)
Viewpoint 2: Rampton Road, Viewpoint 3: Woodside Road, and Viewpoint 4: Mills Lane	Not significant Minor adverse	None		Not significant Minor adverse
Viewpoint 5: Wilson's Road PRow	Significant temporary (Major adverse) This effect would be elevated when considering other cumulative developments	No further mitigation practicable	Effect unchanged	Significant temporary (Major adverse) Significant considering other cumulative developments.

Description of Effects	Significance of Effects:	Description of Mitigation Measures and Enhancement	Description of Residual Effects	Significance of Effects
Viewpoint 6: High Street Oakington	Not significant (Negligible)	None	Effect unchanged	Not significant (Negligible)
Viewpoint 7: Oakington Road, Westwick	Not significant (Negligible)	None	Effect unchanged	Not significant (Negligible)
Viewpoint 8: Rampton Drift PRoW	Significant temporary (Moderate adverse)	No further mitigation practicable	Effect unchanged	Significant temporary (Moderate adverse)
Viewpoint 9: Rampton Drift playground	Significant temporary (Major adverse)	No further mitigation practicable	Effect unchanged	Significant temporary (Major adverse)
Viewpoint 10: Rampton Road Byway	Significant temporary (Major adverse)	No further mitigation practicable	Effect unchanged	Significant temporary (Major adverse)
Viewpoint 11: CGB PRoW	Significant temporary (Major adverse) This effect would be elevated when considering other cumulative developments	No further mitigation practicable	Effect unchanged	Significant temporary (Major adverse) Significant considering other cumulative developments.
Viewpoint 12: Rampton Road, north of Cottenham	Significant temporary (Moderate adverse) This effect would be elevated when considering other cumulative developments	No further mitigation practicable	Effect unchanged	Significant temporary (Moderate adverse) Significant considering other cumulative developments.

Description of Effects	Significance of Effects:	Description of Mitigation Measures and Enhancement	Description of Residual Effects	Significance of Effects
Viewpoint 13: Rampton Road, south of Rampton	Significant temporary (Moderate adverse)	No further mitigation practicable	Effect unchanged	Significant temporary (Moderate adverse)
Viewpoint 14: Hill Row, Haddenham	Not significant (Negligible)	None	Effect unchanged	Not significant (Negligible)
Viewpoint 15: Hatton's Road	Significant temporary (Major Adverse)	No further mitigation practicable	Effect unchanged	Significant temporary (Major Adverse)
Viewpoint 16: Crafts Way, Viewpoint 17: End of Cuckoo Lane and Viewpoint 18: School Lane	Not significant (Negligible)	None	Effect unchanged	Not significant (Negligible)
Viewpoint 19: Dry Drayton Road	Not significant (Minor Adverse)	None	Effect unchanged	Not significant (Minor Adverse)
Viewpoint 20: The Boot PRoW	Not significant (Negligible)	None	Effect unchanged	Not significant (Negligible)
Operational assessment				
Landscape character assessment				
Longstanton Village LCA	Significant permanent (Moderate beneficial)	None	Effect unchanged	Significant permanent (Moderate beneficial)
Longstanton Paddocks and Pastures LCA	Not significant (Minor adverse)	None	Effect unchanged	Not significant (Minor adverse)
Village Farmlands LCA	Not significant (Minor	None	Effect unchanged	Not significant

Description of Effects	Significance of Effects:	Description of Mitigation Measures and Enhancement	Description of Residual Effects	Significance of Effects
	adverse)			(Minor adverse)
Longstanton Golf course LCA	Not significant (Negligible)	None	Effect unchanged	Not significant (Negligible)
Oakington Barracks LCA	Significant permanent (Moderate beneficial)	None	Effect unchanged	Significant permanent (Moderate beneficial)
Oakington Airfield LCA	Not significant (Minor adverse)	None	Effect unchanged	Not significant (Minor adverse)
Oakington Farmlands LCA	Not significant (Negligible) This effect would be elevated to be significant when considering other cumulative developments	None	Effect unchanged	Not significant (Negligible) Significant considering other cumulative developments.
Westwick Village LCA and Oakington Village LCA	Not significant (Negligible)	None	Effect unchanged	Not significant (Negligible)
Longstanton Farmlands LCA	Significant (Moderate adverse) This effect would be elevated when considering other cumulative developments	New landforms of the proposed Southern Access Road (West) and pedestrian bridge integrated into existing topography and boundary vegetation is designed to reflect local species and	Integrated road and bridge into landscape. Cumulative effects unchanged	Not significant (Minor adverse) Significant considering other cumulative developments.

Description of Effects	Significance of Effects:	Description of Mitigation Measures and Enhancement	Description of Residual Effects	Significance of Effects
		hedgerow patterns.		
A1 4 Corridor LCA	Not significant (Negligible)	None	Effect unchanged	Not significant (Negligible)
Bar Hill LCA	Not significant (Negligible)	None	Effect unchanged	Not significant (Negligible)
Visual assessment				
Viewpoint 1 – Magdalene Close	Not Significant permanent (Minor adverse) This effect would be elevated to be significant when considering other cumulative developments	Advanced planting as early as practicable and the use of advanced nursery stock trees.	Maximising effect of screening. Cumulative effects unchanged.	Not Significant permanent (Negligible) Significant considering other cumulative developments.
Viewpoint 2: Rampton Road and Viewpoint 3: Woodside Road,	Significant permanent (Moderate beneficial)	None.	Effect unchanged	Significant permanent (Moderate beneficial)
Viewpoint 4: Mills Lane	Not significant (Minor adverse)	None.	Effect unchanged	Not significant (Minor adverse)
Viewpoint 5:Wilson's Road PRow	Significant permanent (Moderate adverse)	Extensive planting and integrated landform. Advanced planting as early as practicable and the use of advanced nursery	Maximising effect of screening and integrating features in landscape	Not significant (Minor adverse)

Description of Effects	Significance of Effects:	Description of Mitigation Measures and Enhancement	Description of Residual Effects	Significance of Effects
		stock trees.		
Viewpoint 6:High Street Oakington	Not significant (Negligible)	None	Effect unchanged	Not significant (Negligible)
Viewpoint 7:Oakington Road, Westwick	Not significant (Negligible)	None	Effect unchanged	Not significant (Negligible)
Viewpoint 8: Rampton Drift PRoW	Significant permanent (Moderate adverse)	Retention of existing line of poplars and trees. Advanced planting as early as practicable and the use of advanced nursery stock trees.	Improved integration of development	Not significant (Minor adverse)
Viewpoint 9: Rampton Drift playground	Significant permanent (Major adverse)	The use of advanced nursery stock trees and further planting within buffer landscape to east of Rampton Drift	Maximising effect of screening	Significant permanent (Moderate adverse)
Viewpoint 10: Rampton Road Byway	Significant permanent (Moderate adverse)	Historic greenway enhanced and sensitive integration with existing planting	Improved integration of development	Not significant (Minor adverse)
Viewpoint 11: CGB PRoW	Significant permanent (Moderate adverse) This effect would be elevated when considering other cumulative	Improved integration of landform. All boundary vegetation to be undertaken as early as practicable.	Improved integration of development. Cumulative effect unchanged.	Not significant (Minor adverse)Significant considering other cumulative developments.

Description of Effects	Significance of Effects:	Description of Mitigation Measures and Enhancement	Description of Residual Effects	Significance of Effects
	developments			
Viewpoint 12: Rampton Road, north of Cottenham	Significant permanent (Moderate adverse) This effect would be elevated when considering other cumulative developments	Retention of existing line of poplars and trees	Improved integration of development	Not significant (Minor adverse) Significant considering other cumulative developments.
Viewpoint 13: Rampton Road, south of Rampton	Significant permanent (Moderate adverse) This effect would be elevated when considering other cumulative developments	Retention of existing line of poplars and trees	Improved integration of development	Not significant (Minor adverse) Significant considering other cumulative developments.
Viewpoint 14: Hill Row, Haddenham	Not significant (Negligible)	None	Effect unchanged	Not significant (Negligible)
Viewpoint 15: Hatton's Road	Significant permanent (Major adverse) This effect would be elevated when considering other cumulative developments	Extensive planting and integrated landform. Advanced planting as early as practicable and the use of advanced nursery stock trees.	Integrated road and bridge into landscape	Significant permanent (Moderate adverse) Significant considering other cumulative developments.
Viewpoint 16: Crafts Way, Viewpoint 17: End of Cuckoo Lane and Viewpoint 18: School Lane	Not significant (Negligible)	None	Effect unchanged	Not significant (Negligible)

Description of Effects	Significance of Effects:	Description of Mitigation Measures and Enhancement	Description of Residual Effects	Significance of Effects
Viewpoint 19: Dry Drayton Road	Not significant (Minor adverse)	None.	Effect unchanged	Not significant (Minor adverse)
Viewpoint 20: The Boot PRow	Not significant (Negligible)	None	Effect unchanged	Not significant (Negligible)