LAND EAST OF CAMBRIDGE ROAD, HARDWICK

LANDSCAPE AND VISUAL APPRAISAL

LOCAL PLAN REPRESENTATIONS

HILL RESIDENTIAL LTD and CHIVERS FARMS (HARDINGTON) LLP

DECEMBER 2021

TERENCE O'ROURKE

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1.0 Introduction

1.1 Hill Residential Ltd and Chivers Farms (Hardington) LLP has instructed Terence O'Rourke to carry out a Landscape and Visual Appraisal for land east of Cambridge Road, Hardwick.

1.2 The site consists of two agricultural fields and is being promoted as a housing-led mixed used development. While a master plan has not yet been prepared, a number of high level development principles have been established, which are set out in this report, and have informed the assessment.

1.3 This assessment has been prepared in conjunction with a Green Belt Appraisal, also submitted in support of this site's allocation.

2.0 References and data sources

2.1 In preparing this report the published documents and plans set out in table 1.1 have been referred to.

Table 1.1: References and data sources
Cambridge Inner Green Belt Boundary Study, LDA Design (November 2015) Supplement, March 2016
Cambridgeshire Landscape Management Guidelines, A Manual for Management and Change in the Rural Landscape, 1991
Landscape Design Associates for South Cambridgeshire District Council, Cambridge Green Belt Study, A Vision of the Future for Cambridge in its Green Belt Setting, September 2002
Landscape Institute and Institute of Environmental Management and Assessment, 2013, Guidelines for Landscape and Visual Assessment (3rd edition)
Ministry of Housing, Communities and Local Government, July 2021, The National Planning Policy Framework
De Ministry of Housing, Communities and Local Government, National Planning Practice Guidance (NPPG)
Natural England National Character Area Profiles; website www.naturalengland.org.uk
Natural England, October 2014, An Approach to Landscape Character Assessment

South Cambridgeshire District Council, South Cambridgeshire Local Plan, Adopted September 2018
Greater Cambridge Partnership Landscape Character Assessment, 2021,

3.0 The site

3.1 Land at Hardwick consists of (refer to figure 1) a parcel (referred to from this point onwards as the site) of agricultural land, approximately 27ha, on the north eastern edge of Hardwick, immediately adjacent to Cambridge Road, to the west, and St. Neots Road, to the north.

The site and the village of Hardwick lie approximately 6km west of Cambridge.

4.0 Planning policy

4.1 In addition to the NPPF, the key planning document applicable to the study area is, on the local scale, the South Cambridgeshire Local Plan (SCLP). South Cambridgeshire Council adopted the SCLP and Policies Map on 28 September 2018. Upon adoption of the SCLP, the following Development Plan Documents have been superseded and no longer constitute the adopted Development Plan.

- Saved policies of the South Cambridgeshire Local Plan 2004
- South Cambridgeshire Core Strategy January 2007 (SCCS)
- South Cambridgeshire Development Control Policies Development Plan

4.2 The site lies within the administrative area of South Cambridgeshire District Council which forms part of the Greater Cambridge Partnership. The development proposals will potentially result in impacts on both the landscape and visual amenity of the South Cambridgeshire district and so appendix part A and B contain a review of the key planning documents from both districts.

4.3 A broad appraisal of the local policy documents has been carried out identifying the key landscape related planning policies and spatial designations. Some of the designations are illustrated on figure 3 and are summarised below. A full list of policy criteria can be found in appendix A part 1.

- Policy S/1 (Vision)
- Policy S/2 (Objectives of the Local Plan)
- Policy S/3 (Presumption in Favour of Sustainable Development)
- Policy S/4 (Cambridge Green Belt)
- Policy HQ/1 (Design Principles)
- Policy NH/2 (Protecting and Enhancing Landscape Character)
- Policy NH/3 (Protecting Agricultural Land)
- Policy NH/8 (Mitigating the Impact of Development in and adjoining the Green Belt)
- Policy NH/18 (Heritage Assets)
- Policy SC/9 (Lighting Proposals)
- Policy TI/8 (Infrastructure and New Developments)

5.0 Methodology

5.1 The appraisal judges the potential effects of the proposed development on the landscape and visual receptors that have been identified. The degree of effect of a landscape or visual receptor is determined by consideration of the sensitivity of the landscape and visual receptors and the magnitude of change as a result of the proposals. Further detail on the methodology used in the appraisal is set out in full in appendix A part 2 and in figures A2.1 to A2.6 at the end of this report. Details of the methodology used in the photographic survey are set out in technical appendix A part 3.

6.0 Landscape baseline

6.1 As part of the desktop appraisal, previous classifications and evaluations of the surrounding landscape within the study area have been examined. The purpose of the study was to identify the common characteristics of the local landscape and the contribution that the site makes. The baseline then allows an informed judgment to be reached on how the development proposals will alter the physical characteristics of the site and the severity of any impact this may have on the surrounding landscape character.

National Landscape character areas (refer to figure 4)

6.2 As part of the desktop assessment, previous classifications and evaluations of the surrounding landscape within the study area have been examined. The purpose of this was to assess whether the site shares any of these common landscape characteristics and to assess how typical or unique the site is within the landscape context. It also helps to understand the landscape characteristics of the study area and how the site interacts with them.

6.3 With reference to the Natural England's National Character Area Profiles, the site lies at the transition between Character Area 88, The Bedfordshire and Cambridgeshire Claylands, and Character Area 87, East Anglian Chalk. The key characteristics of Character Area 88 are:

- *'Gently undulating, lowland plateau divided by shallow river valleys.*
- *Underlying geology of clays overlain by glacial deposits of chalky boulder clay (till) and sand and gravel river terrace deposits within the river valleys.*
- *The River Great Ouse and its tributaries meander slowly across the landscape, and the River Nene and the Grand Union Canal are also features.*
- *Brickfields of the Marston Vale and Peterborough area form distinctive post-industrial landscapes*
- *Variable, scattered woodland cover comprising smaller plantations, secondary woodland, pollarded willows and poplar along river valleys, and clusters of ancient woodland.*
- *Predominantly open, arable landscape of planned and regular fields bounded by open ditches and trimmed hedgerows*
- *Wide variety of semi-natural habitats supporting a range of species*
- *Rich geological and archaeological history*

- *Diversity of building materials including brick, render, thatch and stone.*
- *Settlements cluster around major road and rail corridors, with smaller towns, villages and linear settlements widely dispersed throughout.*
- *Major transport routes cross the area.'*

County landscape character areas (refer to figure 5)

6.4 The Cambridgeshire Landscape Guidelines (1991) divide the county into a series of landscape character areas. Land to the south west of Cambridge lies on the fringe of Area 2 – 'Chalklands' and Area 3 – 'Western Claylands.'

6.5 The 'Chalklands', which lie south and east of Cambridge, are characterised by smooth rolling chalkland hills dissected by the gentle valleys of the Granta and Rhee, which converge and form the River Cam south of Cambridge. The landscape is of a broad scale with large fields covered by cereal crops. Hedges are low and mechanically trimmed with few trees. Small beech copses form features on some high points.

6.6 The 'Claylands' character area, which lies to the west and north of Cambridge, is a gently undulating and large-scale arable landscape. Fields are open and hedgerows sparse and gappy. Woodlands are isolated and villages scattered. Church spires and towers form features on the skyline.

Local landscape character areas (refer to figure 6)

6.7 There are a number of relevant local assessments which provide a description of the landscape at a sufficient resolution to inform and provide a framework for this assessment.

6.8 The Greater Cambridge Local Plan review has included a further updated assessment of the regions landscape character. This assessment has been carried out as part of the evidence base for the emerging Local Plan, currently out for public consultation, with a full draft Local Plan expected in 2022. This new assessment, together with the wider evidence base and emerging Local Plan, is currently the subject of review and comment and will be potentially amended before being adopted with the final GCP Local Plan. For this reason, a summary review of the Greater Cambridge Landscape Character Assessment has been carried out below. While its conclusions have been a key formative factor influencing the masterplan framework, due to its draft status, it does not form the baseline of this assessment.

6.9 The Greater Cambridge Landscape Character Assessment has been carried out within the framework of the Cambridgeshire Landscape Guidelines, 1991 (see above).

6.10 Also relevant to the study area are the previous Green Belt Study (2002) and the Cambridge Inner Green Belt Study (2015). However, while these assessments have been carried out at a high resolution, they extend to cover only a part of the study area. The remaining area is only covered by the county-wide assessment discussed above. The data from both the county and local studies have been compiled, appraised and validated through field and desk top studies. The landscape of the study area is broadly analogous with only small variations in landscape pattern, features, land use or perceptual characteristics observed. The

study area is characterised as and entirely consistent with the 'Western Claylands' (refer to figure 6) referred to in the aforementioned county and local studies.

Greater Cambridge Landscape Character Assessment

6.11 The Greater Cambridge Landscape Character Assessment describes the sites containing reagional landscape area, The Western Claylands (Cambridgreshire Landscape Guidelines, 1991) as:

> *'a gently rolling, elevated landscape with ancient woodland blocks and small, nuclear villages that covers a large part of the west of the Study Area and occurs again in the southeast. It is often an open landscape with long distance views, although woodland contains views particularly around settlements.'*

6.12 Within this framework, the Greater Cambridge Landscape Character Assessment defines a number of character areas within the broad 'Wooded Claylands' landscape type. Specifically relevant to the site and immediate containing landscape is the Lolworth to Longstowe Wooded Claylands. The summary description of this character area is stated as:

- *"Scattered, small blocks of woodland, including some ancient woodland, linked by mature, fragmented hedgerow network*
- *Irregular, generally rectilinear field pattern*
- *Distinctive repetition of designed parkland features including historic parkland and the American Cemetery*
- *Landscape divided by straight linear features including roads, tracks and a dismantled railway*
- *Dense settlement pattern of small and medium sized villages concentrated close to main roads*
- *Villages generally have well defined edges defined by mature hedgerows, woodlands and clumps of trees*
- *Distinctive wide, open views towards Cambridge from Coton Countryside Reserve and towards Ely from the American Cemetery"*

6.13 This assessment is consistent with the baseline assessment of the Western Claylands. Particularly pertinent and providing further detail on the site and its local environs is the dense settlement pattern and '*edges well defined by mature hedgerows, woodlands and clumps of trees providing visual enclosure.'*

6.14 The assessment also notes that *'tranquillity within the LCA is locally eroded close to the A14, A428 and A1198".* Again, this provides further detail and supplements the descriptions set out in the Cambridgeshire Landscape Guidelines.

6.15 The vision document sets out how the framework masterplan has sensitively responded to the sensitivities of the landscape and has sought to preserve key positive characteristics and mitigate any negative effects. The framework has aimed to deliver on all of the four specific Landscape Guidelines:

- *"Conserve parkland and enhance the specific features that give character and its context within the wider landscape in areas where it has been fragmented*
- *Conserve and enhance small-scale small fields and paddocks with mature hedgerows, woodlands and clumps of trees at village edges*
- *Conserve open views across the wider landscape towards Cambridge and Ely*
- *Ensure development enhances existing landscape features, creates links between villages and recreational assets and is in keeping with the open, rural character."*

L1 – The site and its setting

6.16 The site consists of two cultivated agricultural fields bounded by the Cambridge Road, to the west, and St. Neots Road, to the north. To the south and east of the site is further agricultural land extending to Coton and Cambridge, approximately 2.7km and 6km to the east respectively.

6.17 To the immediate west lies the majority of the settlement of Hardwick, the envelope of which extends to the east, incorporating a number of properties linearly distributed along St. Neots Road.

6.18 Landscape resources on site are limited to field boundaries and consist of relatively intact hedgerows on the northern and western boundaries up to approximately 2m in height. The field boundary with Cambridge Road is also vegetated with a number of significant trees, many of which are over-mature, in decline or in relatively poor condition. The trees do, however, contribute to the character and amenity of Cambridge Road in particular.

6.19 To the south, the site is bounded by Bin Brook, a narrow watercourse lined intermittently with native trees and shrubs, and, in part, by a small woodland block extending as far west as Cambridge Road.

6.20 The site's eastern boundary is, in part, open and, in part, bounded by a belt of native shrubs which follow a relatively deep drainage ditch between Bin Brook and residential properties to the north.

6.21 A further hedgerow separates the two fields, intersecting the site diagonally in the south western corner and containing a smaller field which, due to its size and limited inter-visibility with the surrounding landscape has a strong sense of enclosure.

6.22 The larger field, by virtue partly of its size and the absence of boundary vegetation to the east, is relatively open, allowing views over adjoining fields into the middle distance. The site has a rural character, influenced by urbanising elements, such as the existing settlement and the primary road network including the A428 which, although not visible, is highly audible and intrusive.

L3 – Western Claylands

6.23 To the west of Cambridge, the area is characterised by arable fields and scattered villages and farmsteads. Mature vegetation including deciduous woodland on ridge tops and hedgerows runs along boundaries and routes. Cambridge can be

seen in distant views at high points along ridges, mostly screened by vegetation, and particularly in summer. There is a significant view at an elevated position on the approach to the city from Bedford to Cambridge through the landscape area, beyond the American Cemetery.

7.0 Visual baseline

Views of the site

7.1 Figure 14 shows the ZTV of the proposed development. In order to produce the ZTV the landscape plan was imported into the digital surface model. Selected points across site were added with an elevation of 12m above existing ground levels (AOD) to represent the maximum 'worst case' height of development on site. The height from which the proposed development would be visible was set at 1.6m, equivalent with the average human eye height. For full details of the heights and methodology used, refer to appendix A part 2.

7.2 The combined ZTV for both land parcels indicates potential inter-visibility extending to cover the shallow northern and southern valley sides which extend west towards Coton and a relatively small area of the broad plateau, north of the A428. Through field testing, the precise extent of inter-visibility with each land parcel has been verified, identifying specific visual receptors in the public realm which would, potentially, be affected by development on site.

7.3 Inter-visibility is limited to two adjacent public roads / residential streets and a small number of locations on three public rights of way directly to the south of the site, within 0.8km of the site boundary. The site has a broad and gentle south westerly aspect, falling more steeply towards the southern boundary. It is this slope that is most exposed to views from these locations. Paragraphs 8.4-8.24 outline an initial mitigation strategy which should be embedded in the masterplan framework and is required to reduce potential adverse effects.

7.4 A number of representative viewpoint photographs have been selected within the study area to illustrate how the site is experienced by the identified visual receptors. The viewpoints chosen provide a representative selection of views from locations covering a range of receptors from varying directions and distances. The viewpoint locations are illustrated on figure 6 and the associated photographs can be found on figures 7 to 13.

Table 1.2 Visual receptors

Visual receptor	Location	Identified viewpoint(s)
Residential areas	***R1 – Residential areas to the west of Cambridge Road including Limes Road and Egremont Road*** Inter-visibility with adjoining residential areas is limited to a small section of Limes Road and Egremont Road. Receptors are road and footpaths users accessing residential properties. Narrow, level views along the length of both respective roads and framed by existing built development, allow very limited inter-visibility with the site beyond an existing hedgerow and hedgerow trees on the western boundary. In consideration of receptors' proprietary interest in views and the existing built context, sensitivity of receptors to further built development is judged to be medium.	-

Transport routes	***R2 – Users of St. Neots Road*** Receptors are cyclists, pedestrians and road users within the road corridor of St. Neots Road. Users are likely to be local residents or visitors whose attention is unlikely to be focused on the surrounding landscape. From the east, St. Neots Road runs parallel to the north of the A428, between Camborne and Highfields Caldecote, before crossing to the south and continuing west along the northern edge of Hardwick and the site to a junction with the A1303. The receptors' visual experience is varied along the length of the road. Although there is a sense of being in the open countryside, built development is prominent. The A428 is visible in parts, particularly to the west. Directly to the north of Hardwick, the overriding experience is of being on the edge of the settlement, with commercial and residential development predominating to the south, interspersed with mature hedgerows and trees, and the A428 to the north. The site itself forms a gap in the settlement edge between Cambridge Road and a row of properties directly to the east of the site. At this point, the site is visible through a narrow break in vegetation but otherwise is only perceived through a dense and intact hedgerow during the winter months. Views are transient, particularly for road users, and sensitivity to built development is judged to be medium.	Viewpoint 7
	R3 – Users of Cambridge Road Receptors are cyclists, pedestrians and road users within the road corridor of Cambridge Road. Between the junction of St. Neots Road and Kesters Close, glimpsed views of the western edge of the site are possible through an existing intact and high hedgerow which lies adjacent to the road edge. The visual experience is relatively constant along the length of Cambridge Road, contained on the west by a row of residential properties, the school and local shop, and to the east by vegetation which currently limits views to the agricultural land beyond. In consideration of receptors' proprietary interest in views and the existing built context, sensitivity of receptors to further built development is judged to be medium.	Viewpoints 1, 2 and 3
	R4 – Users of Long Road Receptors are road users and cyclists only (there is no footpath on the edge of Long Road). Views of the site are limited to narrow gaps and field gates in an otherwise dense and high hedgerow. Views are highly transient and experienced primarily by local road users. The sensitivity of receptors to built development on site is medium / low.	-
Recreational routes	**R6 – Users of permissive footpath, west of Long Road** Receptors are local walkers. Continuing west towards the site from Long Road, the path lies on an east-west axis at comparable elevations with the site, allowing views as far as the edge of Hardwick, which is partially screened by boundary vegetation on Cambridge Road and dense shelter belts and woodland blocks to the south of the site. The southern half of the site is visible as a narrow strip of open land in the distance, forming a small element of the wider view. The path then descends, before heading south towards Bin Brook and connecting with a public right of way (reference 114/2). The receptors' visual experience is broadly open and rural although the A428 is audible and intrusive. The sensitivity of receptors to built development on site is medium.	Viewpoint 6
	R7 – Users of Harcamlow Way / Whitwell Way Receptors are primarily local walkers. Harcamlow Way is a long distance walking route which follows a broad figure of eight between Harlow and Cambridge, crossing open countryside and a series of villages, towns, Cambridge and major infrastructure corridors. As a result, users' visual experience is particularly varied along its length. Within the study area, Harcamlow Way links Caldecote, along the southern edge of Hardwick to Coton in the east, passing through agricultural land between. Broadly, the long distance path follows hedgerow and tree lined field margins, allowing intermittent views of the open countryside, particularly to the south and south west where elevations fall away into the Cam Valley. Between Main Street and Starve Goose Plantation, views to the south are generally open and expansive. Views to the north and the site are limited to several small breaks in an otherwise dense and continuous hedgerow. From these narrow locations, inter-visibility with the site in the distance is further	Viewpoints 4 and 5

	restricted by intervening field boundary vegetation. To the east of Starve Goose Plantation and as far east as Long Road, the path falls in elevation and allows more open views to the north and north west. Due to the site's broad aspect, the southern slope is visible in the distance above intervening vegetation from a short section of the path at elevations of between 50-55m AOD. The sensitivity of receptors to built development on site is medium / high.	
	R8 – Users of Public Right of Way to the south of the site (Ref 114/3) Receptors are local walkers. The public right of way connects Harcamlow Way, north of Starve Goose Plantation, to Main Street. Inter-visibility with the site is possible from a short section of the path between Starve Goose Plantation and the connection with PROW 114/2. The site is visible as an area of agricultural land in the distance and is a small component of a wide open view. The sensitivity of receptors to built development on site is medium.	-
	R8 – Users of Public Right of Way to south west of the site (Ref 114/2) The public right of way connects Harcamlow Way, south of Northfield Farm at Long Road, and PROW 114/3. The majority of the path follows Bin Brook, adjacent to a continuous belt of vegetation which obstructs views of the site. The path then connects with the permissive footpath, directly south of a young plantation, before continuing along the northern edge of a field boundary hedgerow. This section of the path is approximately 250m in length and allows open views towards the site, which is partially visible in the distance. The roofline of a small number of homes on Cambridge Road are also visible. The footpath then cuts through a field gate and continues on the southern side of the boundary hedgerow which obstructs views of the site. The sensitivity of receptors to built development on site is medium.	-

8.0 Development proposals

8.1 The potential impacts on landscape and visual resources should be a significant consideration from the outset of the project. The need to retain and accommodate key landscape elements, and the likely effect on receptors both within and beyond the development boundaries, should influence and guide the proposals. As a result, the scheme will be developed to best protect the landscape resources of the site and its landscape setting.

8.2 The submitted vision document sets out a framework for development including the number of homes, type and extent of development, structuring principles and an open space strategy including distribution of structural and mitigation planting.

8.3 Simple assumptions relating to the parameters of the development have been made on which to base an preliminary assessment. This includes an outline mitigation strategy designed to reduce potential adverse landscape and visual effects.

Mitigation strategy

8.4 The mitigation strategy sets out basic structuring principles for the framework masterplan and represents simple measures which would be incorporated into application drawings for an outline application. These would typically include:

- Height strategy
- Density
- Broad arrangement of open space
- Structural planting

- Earthworks
- Phasing

8.5 These aspects of the development proposals are considered primary mitigation measures and have been expanded on below. They constitute an initial set of recommendations intended to inform the developing framework. For the purposes of this initial appraisal and to establish the suitability and capacity of the site for built development, it has been assumed that these measures will be incorporated into the masterplan in their entirety, accepting that they may be subject to some minor refinement following further technical assessment and consultation.

Height strategy

8.6 The extent of the landscape that shares potential inter-visibility with the site is relatively limited (refer to paragraphs 7.1-7.4). Various scenarios have been applied to test the visibility of built development at a range of heights from 2-4 storeys and in different areas of the site. This modelling was intended to, initially, determine the more visible areas of the site, particularly for sensitive visual receptors.

8.7 This testing also confirmed that increasing the potential height of development up to 4 storeys did not significantly increase the extent of inter-visibility. However, buildings of 3-4 storeys, particularly on the development's southern and western edges, significantly reduce the potential to create a soft development edge, sit above the tree canopy line and result in undue adverse effects on the character of the site's immediate setting.

8.8 Equally, to preserve the character of the existing townscape, development should be of a comparable scale and massing to the existing urban fabric, avoiding a perceived intensification and urbanisation, particularly on the settlement edge.

8.9 For these reasons, the development should be limited to a maximum **2-3 storeys**.

Density

8.10 A maximum average density of 40dph should be set across the site to avoid continuous or significant built masses, create a varied and open roofline and maximise the spaces between buildings.

8.11 Variation in density should be achieved to create a transition from urban to rural land uses. Further localised increases in density and scale will be concentrated around movement corridors, nodes or community facilities to improve legibility or enclosure and to enhance or intensify key areas of activity.

8.12 Specifically within the site, densities should be highest in streets adjacent to the new village centre and primary street linking St. Neots Road and Cambridge Road. Lowest densities will be applied to the southern and western edge of the development, minimising the overall scale and massing at the urban – rural interface and maximising views into and out of the site.

Structural planting

8.13 The existing structural vegetation on site is a key characteristic of the settlement edge and the wider landscape. Removal of on site vegetation will be considered with care and seek to incorporate into the masterplan framework. Currently, the existing boundary vegetation provides established mitigation for any future development and so removal would result in additional and undue adverse effects.

8.14 High hedgerows and hedgerow trees are characteristic of Cambridge Road/High Street particularly in the settlement's historic core, and will be preserved on this boundary of the site to preserve the character of the streetscape and protect the visual amenity of adjoining residential areas.

8.15 Minimal hedgerow loss is proposed to facilitate access improvements / pedestrian connections only.

8.16 The existing hedgerow boundary on Cambridge Road will be augmented where gappy, removing dead or dying trees and replacing with comparable native species.

8.17 Additional structural planting is proposed on the southern and western boundaries, consisting of high hedgerows and hedgerow trees, consistent with the wider landscape characteristics, to restore the historic landscape structure which has been lost through intensive agricultural practices. This planting will also serve to soften the new settlement edge, ensuring that only glimpsed views of the new development are possible. This approach is consistent with the pattern observed in the wider landscape where settlements sit comfortably in context. An abrupt urban – rural interface should be avoided to protect the amenity of local visual receptors.

Broad arrangement of open space

8.18 The green infrastructure strategy should be developed to provide multi-functional, appropriate and active spaces for recreation. Careful consideration should be given to the distribution and arrangement of open space to maximise its potential amenity value. The development's amenity value will be felt at a site but it is also important to ensure that open space plays a role in reducing the overall massing of the built development, maximises the sense of openness within and outside of the site and assimilates the development with the wider landscape.

8.19 To this end, generous green buffers should be provided on the southern and eastern boundaries of the site sufficient to accommodate the intended uses and structural planting. Green corridors permeating through the development from the new settlement edge should seek to create a fragmented and soft edge.

8.20 Furthermore, the south eastern slope falls away relatively steeply and is more exposed to wider and more sensitive visual receptors. The south eastern extent of built development on this slope will ultimately determine the potential adverse effects on these receptors but also reduce the potential to mitigate these affects through visual screening.

Earthworks

8.21 Soils arising on the site will be reused where possible. Features of floodwater attenuation will be naturalistic, avoiding incongruous or overly-engineered drainage solutions or landforms.

Phasing

8.22 Green infrastructure will be implemented early, along with any structural planting, in order to reduce the potential impact of construction.

Secondary mitigation measures

8.23 These devices would be supplemented by further secondary measures which will be developed at subsequent reserved matters stages and seek to remove or reduce any residual adverse effects that may occur. Such measures will include:

- Materiality
- Building articulation
- Roofline
- On plot and street planting
- Maintenance strategy

8.24 Anticipated secondary mitigation measures are not taken into account in this assessment, which is based on the basic development parameters, but will potentially significantly reduce the degree of adverse landscape or visual effects.

9.0 Predicted sources of landscape and visual effects

9.1 The following description covers the specific aspects of the masterplan that will affect the landscape and visual resources.

9.2 The principal sources of change to landscape resources and visual amenity arise from the introduction of residential development and associated built and green infrastructure into an existing open agricultural site. The changes that will occur to the landscape can be separated into temporary (those that occur during construction) and permanent (changes that occur post construction). Some of these changes may be beneficial, resulting in an improvement in quality or landscape resources, while others may be adverse. Some changes may initially be adverse, but on establishment and maturity may result in a gradual improvement as new landscape resources replace old or supplement the existing. This makes qualitative evaluation more difficult. Experience indicates that the latter is frequently the case, as landscape perception inevitably determines an appraisal. Sudden change in a known landscape is almost always initially prominent, but perceived negative effects are often reduced with acceptance. The elements that will give rise to landscape and visual effects are summarised in the following paragraphs.

Potential permanent effects at completion (post-construction)

9.3 The following activities will cause permanent changes to landscape and visual receptors:

- Construction of residential development
- Very limited loss of existing vegetation
- Introduction of significant new areas tree and shrub planting
- Introduction of informal open space
- Introduction of new junction arrangements and new roads
- Introduction of lighting
- Earthworks including surface water attenuation basins
- Changes in visual appearance of the site
- Loss of openness or alteration of other perceptual characteristics of the landscape
- Changes to the experiential value of views

9.4 The following section predicts the potential effects of the development proposals on the resources and visual amenity of the site and surrounding landscape identified in the baseline section of this report.

Predicted effects on landscape character

9.5 The effects on the landscape resources identified in the baseline are set out below for each identified landscape character area within the ZTV (figure 14).

L1 – Potential effects on the site and its setting

9.6 Proposals will result in the loss of agricultural land and introduction of built development, extending the existing settlement boundary as far as an existing line of housing on St. Neots Road. Development will take the form of low density housing, associated built infrastructure and associated green and blue infrastructure, including new structural planting, floodwater attenuation basins and amenity areas.

9.7 The landscape resources of the site will be altered by the loss of agricultural land and the development and expansion of Hardwick urban fabric. The built form will consist of new houses comprising a range of 2-3 storeys in addition to associated infrastructure, including a new access junction on Cambridge / St. Neots Road.

9.8 A new landscape edge consisting of country park, parkland trees, woodland structure planting, and grassland will be created retaining the overall open nature of this area of the landscape and restoring a more naturalistic environment. The majority of field boundary vegetation within the site will be retained, preserving the more distinctive landscape resources. A section of hedgerow approximately 40m in length will be removed to facilitate access.

9.9 Long distance views and a sense of the wider landscape will be reduced within the fabric of the development at the core of the site. These locations do not currently permit public access and so the value of this aspect of the landsape's character is negligible.

9.10 Due to the constrained area of visual influence, the majority of the landscape will not experience direct or indirect effects resulting from the proposed development. The proposals will introduce new urban form into a predominantly rural landscape

and so will result in a change to the immediate landscape. The development will be located partly within the existing perceived village envelope and will be visible in the context of the existing urban fringe and the A428. A moderate localised effect on the landscape setting of the village is predicted, although steps to introduce a new country park including significant areas of planting and a fragmented development edge addressing the rural landscape will serve to restore the rural setting and soft settlement edge once established.

L3 – Potential effects on the Western Claylands

9.11 To the west of Cambridge, the area is characterised by arable fields and scattered villages and farmsteads. Mature vegetation including deciduous woodland on ridge tops and hedgerows runs along boundaries and routes. Cambridge can be seen in distant views at high points along ridges, mostly screened by vegetation, particularly in summer. There is a significant view at an elevated position on approach to the city from Bedford to Cambridge through the landscape area, beyond the American Cemetery, approximately 4.7km to the east of the site.

Potential effects on visual amenity

9.12 The effects on visual amenity to specific receptors are assessed below. To illustrate the visual effects, a number of representative viewpoints have been used.

Visual receptor	Location	Potential effects (post mitigation, at completion)	Identified viewpoint
Residential areas	**R1 – Residential areas to the west of Cambridge Road including Limes Road and Egremont Road**	To facilitate development, a section of hedgerow and hedgerow trees will need to be removed to facilitate access and associated built infrastructure including introduction of a new road junction and public footpath link. The development will introduce a continuous edge of development, set back by a minimum 10m from the road edge. The current visual experience is of a rural settlement edge and of a moderate quality and value. Visual receptors will experience a moderate shift towards a more typical suburban type townscape typology, with an understanding of and views to the wider countryside maintained along a series of open green corridors. These changes will be experienced by receptors along the majority of Cambridge Road.	-
Transport routes	**R2 – Users of St. Neots Road**	Similarly to Cambridge Road, and to facilitate development, a section of hedgerow and hedgerow trees will need to be removed to facilitate access and associated built infrastructure including the introduction of a new road junction and public footpath link. The development will introduce a continuous edge of development, set back by a minimum 10m from the road edge. The current visual experience along the length of St. Neots Road is	Viewpoint 7

		varied but broadly open, with intermittent views of the open countryside interspersed with linear and small clusters of built development and the continuous and significant intrusion of the A1428. Views are of a moderate quality and value. Visual receptors will experience a moderate shift towards a more typical settlement edge landscape typology in the locality of the site only but, broadly, the development's effect on the visual experience of users of St. Neots Road will be moderate/small adverse.	
	R3 – Users of Cambridge Road	To facilitate development, a section of hedgerow and hedgerow trees will need to be removed to facilitate access and associated built infrastructure including introduction of a new road junction and public footpath link. The development will introduce a continuous edge of development, set back by a minimum of 10m from the road edge. The current visual experience is of a rural settlement edge and of a moderate quality and value. Visual receptors will experience a moderate shift towards a more typical suburban type townscape typology with an understanding of and views to the wider countryside maintained along a series of open green corridors. These changes will be experienced by receptors along the majority of Cambridge Road. The development's effect on the visual experience of users of St. Cambridge Road will be moderate adverse.	Viewpoints 1, 2 and 3
	R4 – Users of Long Road	Glimpsed views of the new settlement edge will be partially visible in the distance from a small number of narrow breaks in field boundary hedgerows. The effect on visual receptors on Long Road will be transient and negligible adverse.	-
Recreational routes	**R6 – Users of permissive footpath, west of Long Road**	Continuing west towards the site from Long Road, the path lies on an east-west axis at comparable elevations with the site, allowing views as far as the edge of Hardwick, which is partially screened by boundary vegetation on Cambridge Road and dense shelter belts and woodland blocks to the south of the site. The southern half of the site is visible as a narrow strip of open land in the distance, forming a small element of the wider view. From these locations and when looking west, receptors will experience a slightly more enclosed visual experience, with new woodland planting on the eastern boundaries of the site restoring the degraded landscape structure and obstructing	Viewpoint 6

		views of the new settlement edge, once established. As the path then descends, before heading south towards Bin Brook and connecting with a public right of way (reference 114/2), the proposed built form will not be visible. During completion and for the first 5-7 years after implementation, these changes overall will be small adverse but, once the proposed woodland planting has established, the overall and long term effect on the visual experience will be small beneficial.	
	R7 – Users of Harcamlow Way / Whitwell Way	Between Main Street and Starve Goose Plantation, views to the north and the site are limited to several small breaks in an otherwise dense and continuous hedgerow. From these narrow locations, inter-visibility with the site in the distance is further restricted by intervening field boundary vegetation. These glimpsed views to future residential development will be further obstructed by new woodland planting on the southern slopes of the site, meaning the tops of rooftops only will be visible in the distance once this vegetation has established. To the east of Starve Goose Plantation and as far east as Long Road, the path falls in elevation and allows more open views to the north and north west. Due to the site's broad aspect, the southern slope is visible in the distance above intervening vegetation from a short section of the path at elevations of between 50-55m AOD. The masterplan has been conceived to ensure that the more open slopes remain undeveloped and instead the landscape structure will be improved, restoring field boundary vegetation on the site's eastern boundary. This mitigation planting will serve to improve the broader, and currently denuded, landscape structure and will reduce the overall visibility of built form to a negligible level. From these narrow locations, the existing soft settlement edge will be preserved. It is important also to note that the very large majority of the long distance footpath will remain unaffected by the proposals. For this reason, the magnitude of effects will be small adverse.	Viewpoints 4 and 5
	R8 – Users of Public Right of Way to the south of the site (Ref 114/3)	Inter-visibility with the site is possible from a short section of the path between Starve Goose Plantation and the connection with PROW 114/2. The site is visible as an area of agricultural land in the distance and a small	

		component of a wide open view. The proposals will be perceived from lower elevations with built form set on a low level plateau. The masterplan will introduce extensive woodland planting on the more exposed southern slopes which will, together with further structural planting within new informal public open space, will significantly reduce visibility of the most southern edge of the new built development. Once established, the new landscape structure will reduce visual effects to small adverse.	
	R8 – Users of Public Right of Way to south west of the site (Ref 114/2)	The majority of the path follows Bin Brook, adjacent to a continuous belt of vegetation which obstructs views of the site. The path then connects with the permissive footpath, directly south of a young plantation, before continuing along the northern edge of a field boundary hedgerow. This short section of path where the proposals will be theoretically be visible is approximately 250m in length and allows open views towards the site, which is partially visible in the distance. The proposals will mitigate views from this short section with the introduction of new woodland planting on the southern and eastern boundaries. Once established, this will reduce visual effects to small adverse.	

10.0 Summary of landscape and visual impact

10.1 The landscape and visual appraisal shows that the local pattern of topography, vegetation and development limits the extent to which the proposed site is visible in the landscape. The site itself is not covered by any form of designation.Views are largely restricted to locations within 1km of the site boundary. Although there is a small number of views available from the wider landscape, it was determined that where they occur, the pattern of landform and landscape structure, or viewing distance itself, significantly reduce the degree of visual effect.

10.2 With the effective mitigation proposed above, there is no overriding landscape or visual effect that should preclude the development of the site as proposed. In the longer term, there is the potential for some valuable landscape benefits in the form of new open access areas, public open spaces, improved footpath links and greater biodiversity through new native structure planting, tree planting and wetland planting.

10.3 Landscape effects on the site and its immediate setting are moderately high, typical of a green field development site. Wider effects on the Western Claylands are small.

A1.0 Appendix A, Part 1; Planning policy

National Planning Policy Framework (NPPF)

A1.1 The National Planning Policy Framework (NPPF) published by the Ministry of Housing, Communities and Local Government, came into effect on 24 July 2018 and was last updated in July 2021. It sets out the government's planning policies for England and how these are expected to be applied. The NPPF provides a framework within which councils can produce their own local and neighbourhood plans. The relevant guidance on landscape and visual issues is stated below:

Achieving sustainable development

A1.2 The purpose of the NPPF is to contribute to the achievement of sustainable development. Paragraph 8 sets out three key objectives of the NPPF which are achieved through the application of core policies, a number of which are relevant to this application.

> *"Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):*
>
> *a) an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;*
>
> *b) a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and*
>
> *c) an environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."*

Promoting healthy and safe communities

A1.3 The NPPF in paragraph 98 states:

> *"Access to a network of high quality open spaces and opportunities for sport and physical activity is important for the health and well-being of communities, and can deliver wider benefits for nature and support efforts to address climate change. Planning policies should be based on robust and up-to-date assessments of the need for open space, sport and recreation facilities (including quantitative or qualitative deficits or surpluses) and*

opportunities for new provision. Information gained from the assessments should be used to determine what open space, sport and recreational provision is needed, which plans should then seek to accommodate."

Making effective use of land

A1.4 The NPPF in paragraph 119 states:

"Planning policies and decisions should promote an effective use of land in meeting the need for homes and other uses, while safeguarding and improving the environment and ensuring safe and healthy living conditions. Strategic policies should set out a clear strategy for accommodating objectively assessed needs, in a way that makes as much use as possible of previously-developed or 'brownfield' land."

A1.5 The NPPF in paragraph 120 lists:

"Planning policies and decisions should:

a) encourage multiple benefits from both urban and rural land, including through mixed use schemes and taking opportunities to achieve net environmental gains– such as developments that would enable new habitat creation or improve public access to the countryside;

b) recognise that some undeveloped land can perform many functions, such as for wildlife, recreation, flood risk mitigation, cooling/shading, carbon storage or food production;

c) give substantial weight to the value of using suitable brownfield land within settlements for homes and other identified needs, and support appropriate opportunities to remediate despoiled, degraded, derelict, contaminated or unstable land;

d) promote and support the development of under-utilised land and buildings, especially if this would help to meet identified needs for housing where land supply is constrained and available sites could be used more effectively (for example converting space above shops, and building on or above service yards, car parks, lock-ups and railway infrastructure); and

e) support opportunities to use the airspace above existing residential and commercial premises for new homes. In particular, they should allow upward extensions where the development would be consistent with the prevailing height and form of neighbouring properties and the overall street scene, is well designed (including complying with any local design policies and standards), and can maintain safe access and egress for occupiers."

Achieving appropriate densities

A1.6 The NPPF in paragraph 124 lists:

"Planning policies and decisions should support development that makes efficient use of land, taking into account:

a) the identified need for different types of housing and other forms of development, and the availability of land suitable for accommodating it;

b) local market conditions and viability;

c) the availability and capacity of infrastructure and services – both existing and proposed – as well as their potential for further improvement and the scope to promote sustainable travel modes that limit future car use;

d) the desirability of maintaining an area's prevailing character and setting (including residential gardens), or of promoting regeneration and change."

A1.7 The NPPF in paragraph 125 lists:

"Area-based character assessments, design guides and codes and masterplans can be used to help ensure that lad is used efficiently while also creating beautiful and sustainable places. Where there is an existing or anticipated shortage of land for meeting identified housing needs, it is especially important that planning policies and decisions avoid homes being built at low densities, and ensure that developments make optimal use of the potential of each site. In these circumstances:

a) plans should contain policies to optimize the use of land in their area and meet as much of the identified need for housing as possible. This will be tested robustly at examination, and should include the use of minimum density standards for city and town centres and other locations that are well served by public transport. These standards should seek a significant uplift in the average density of residential development within these areas, unless it can be shown that there are strong reasons why this would be inappropriate;

b) the use of minimum density standards should also be considered for other parts of the plan area. It may be appropriate to set out a range of densities that reflect the accessibility and potential of different areas, rather than one broad density range; and

c) local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in this Framework. In this context, when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight, where they would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards)."

Achieving well-designed places

A1.8 The NPPF in paragraph 126 confirms:

"The creation of high quality beautiful and sustainable buildings and places is fundamental to what the planning and development process should achieve. Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities. Being clear about design expectations, and how these will be tested, is essential for achieving this. So too is effective engagement between applicants, communities, local planning authorities and other interests throughout the process."

A1.9 The NPPF in paragraph 129 confirms:

> *"Design guides and codes can be prepared at an area-wide, neighbourhood or site specific scale, and to carry weight in decision-making should be produced either as part of a plan or as supplementary planning documents. Landowners and developers may contribute to these exercises, but may also choose to prepare design codes in support of a planning applications for sites they wish to develop. Whoever prepares them, all guides and codes should be based on effective community engagement and reflect local aspirations for the development of their area, taking into account the guidance contained in the National Design Guide and the National Model Design Code. These national documents should be used to guide decisions on applications in the absence of locally produced design guides or design codes."*

A1.10 The NPPF in paragraph 130 states:

> *"Planning policies and decisions should ensure that developments:*
>
> *a) will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;*
>
> *b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;*
>
> *c) are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);*
>
> *d) establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;*
>
> *e) optimize the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and*
>
> *f) create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience."*

A1.11 The NPPF in paragraph 131 states:

> *"Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly-planted trees and the existing trees are retained wherever possible. Applicants and local planning authorities should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users."*

Conserving and enhancing the natural environment

A1.12 Paragraph 174 states:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services– including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate."

A1.13 Paragraph 175 states that:

"Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries."

A1.14 Paragraph 176 states that:

"Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and the Broads. The scale and extent of development within these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas."

F1.1 Paragraph 177 states that:

"When considering applications for development within National Parks, the Broads and Areas of Outstanding Natural Beauty, permission should be refused for major development other than in exceptional circumstances, and

where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:

a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;

b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and

c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated."

Conserving and enhancing the historic environment

A1.15 Paragraph 189 states:

"Heritage assets range from sites and buildings of local historic value to those of the highest significance, such as World Heritage Sites which are internationally recognised to be of Outstanding Universal Value. These assets are an irreplaceable resource, and should be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations."

A1.16 Paragraph 190 states that:

"Plans should set out a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. This strategy should take into account:

a) the desirability of sustaining and enhancing the significance of heritage assets, and putting them to viable uses consistent with their conservation;

b) the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring;

c) the desirability of new development making a positive contribution to local character and distinctiveness; and

d) opportunities to draw on the contribution made by the historic environment to the character of a place."

Proposals affecting heritage assets

A1.17 Paragraph 194 states that:

"In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities

should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation."

A1.18 Paragraph 195 states that:

"Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise. They should take this into account when considering the impact of a proposal on a heritage asset, to avoid or minimise any conflict between the heritage asset's conservation and any aspect of the proposal."

A1.19 Paragraph 197 states that:

"In determining applications, local planning authorities should take account of:

a) the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;

b) the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and

c) the desirability of new development making a positive contribution to local character and distinctiveness."

Considering potential impacts

A1.20 Paragraph 199 states that:

"When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance."

A1.21 Paragraph 200 states that:

"Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification. Substantial harm to or loss of:

a) Grade II listed buildings, or grade II registered parks or gardens, should be exceptional;

b) Assets of the highest significance, notably scheduled monuments, protected wreck sites, registered battlefields, grade I and II listed buildings, grade I and II registered parks and gardens, and World Heritage Sites, should be wholly exceptional."

A1.22 Paragraph 201 states that:

"Where a proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial

harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply:

g) the nature of the heritage asset prevents all reasonable uses of the site; and

h) no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and

i) conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and

j) the harm or loss is outweighed by the benefit of bringing the site back into use."

A1.23 Paragraph 202 states that:

"Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use."

A1.24 Paragraph 203 states that:

"The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset."

National Planning Practice Guidance (NPPG)

A1.25 The National Planning Practice Guidance contains government guidance, the following of which is relevant to this appraisal.

Design: process and tools

A1.26 Planning for well-designed places (paragraph: 001, reference ID: 26-001-20191001), revised 01.10.2019) states that:

"Well-designed places can be achieved by taking a proactive and collaborative approach at all stages of the planning process, from policy and plan formulation through to the determination of planning applications and the post approval stage. This guidance explains the processes and tools that can be used through the planning system and how to engage local communities effectively.

To be read alongside this guidance, the National Design Guide sets out the characteristics of well-designed places and demonstrates what good design means in practice.

As set out in paragraph 130 of the National Planning Policy Framework, permission should be refused for development of poor design that fails to take the opportunities available for improving the character and quality of an area and the way it functions, taking into account any local design standards or style guides in plans or supplementary planning documents. Conversely, where the design of a development accords with clear expectations in plan

policies, design should not be used by the decision-maker as a valid reason to object to development.

Good design is set out in the National Design Guide under the following 10 characteristics

- *Context*
- *Identity*
- *Built form*
- *Movement*
- *Nature*
- *Public spaces*
- *Uses*
- *Homes and buildings*
- *Resources*
- *Lifespan*

The National Design Guide can be used by all those involved in shaping places including in plan-making and decision making.

Natural environment – Green Infrastructure

A1.27 Importance of green infrastructure (paragraph: 005, reference ID: 8-005-20190721, revised 21.07.2019) states that:

"Green infrastructure is a natural capital asset that provides multiple benefits, at a range of scales. For communities, these benefits can include enhanced wellbeing, outdoor recreation and access, enhanced biodiversity and landscapes, food and energy production, urban cooling, and the management of flood risk. These benefits are also known as ecosystem services."

A1.28 Green infrastructure planning goals (paragraph 006, reference ID: 8-006-20190721, revised 21.07.2019) states that:

"Green infrastructure can help in:

Building a strong, competitive economy

Green infrastructure can drive economic growth and regeneration, helping to create high quality environments which are attractive to businesses and investors.

Achieving well-designed places

The built environment can be enhanced by features such as green roofs, street trees, proximity to woodland, public gardens and recreational and open spaces. More broadly, green infrastructure exists within a wider landscape context and can reinforce and enhance local landscape character, contributing to a sense of place and natural beauty.

Promoting healthy and safe communities

Green infrastructure can improve the wellbeing of a neighbourhood with opportunities for recreation, exercise, social interaction, experiencing and caring for nature, community food-growing and gardening, all of which can bring mental and physical health benefits. Outdoor Recreation Value (ORVal) is a useful online tool that can be used to quantify the recreational values provided by greenspace. Green infrastructure can help to reduce health inequalities in areas of socio-economic deprivation and meet the needs of families and an ageing population. It can also help to reduce air pollution and noise.

Mitigating climate change, flooding and coastal change

Green infrastructure can contribute to carbon storage, cooling and shading, opportunities for species migration to more suitable habitats and the protection of water quality and other natural resources. It can also be an integral part of multifunctional sustainable drainage and natural flood risk management."

Conserving and enhancing the natural environment

High-quality networks of multifunctional green infrastructure contribute a range of benefits, including ecological connectivity, facilitating biodiversity net gain and nature recovery networks and opportunities for communities to undertake conservation work."

A1.29 Consideration of green infrastructure in planning decisions (paragraph 008, Ref ID: 8-008-20190721, revised 21.07.2019) states that:

"Green infrastructure opportunities and requirements need to be considered at the earliest stages of development proposals, as an integral part of development and infrastructure provision, and taking into account existing natural assets and the most suitable locations and types of new provision.

Depending on individual circumstances, planning conditions, obligations, or the Community Infrastructure Levy may all be potential mechanisms for securing and funding green infrastructure.

Green infrastructure will require sustainable management and maintenance if it is to provide benefits and services in the long term. Arrangements for funding need to be identified as early as possible, and factored into the design and implementation, balancing the costs with the benefits. Local community engagement can assist with management and tailoring provision to local needs."

Natural environment – Landscape

A1.30 Planning policies to conserve and enhance landscapes (paragraph 036, Ref ID: 8-036-20190721, revised 21.07.2019) states that:

"The National Planning Policy Framework is clear that plans should recognise the intrinsic character and beauty of the countryside, and that strategic policies should provide for the conservation and enhancement of landscapes. This can include nationally and locally-designated landscapes but also the wider countryside.

Where landscapes have a particular local value, it is important for policies to identify their special characteristics and be supported by proportionate evidence. Policies may set out criteria against which proposals for development affecting these areas will be assessed. Plans can also include policies to avoid adverse impacts on landscapes and to set out necessary mitigation measures, such as appropriate design principles and visual screening, where necessary. The cumulative impacts of development on the landscape need to be considered carefully."

A1.31 Assessing landscape character (paragraph: 037 Ref ID: 8-037-20190721, revised 21.07.2019) states that:

"For a designated landscape, the relevant management plan will contain further information on the area's particular character and beauty.

Where appropriate, landscape character assessments can be prepared to complement Natural England's National Character Area profiles. Natural England provides guidance on undertaking these assessments.

To help assess the type o and scale of development that might be able to be accommodated without comprising landscape character, a Landscape Sensitivity and Capacity Assessment can be completed."

Historic environment

A1.32 Conserving and enhancing the historic environment (paragraph 002, Ref ID: 18a-002-20190723 revised 23.07.2019) states that:

"Conservation is an active process of maintenance and managing change. It requires a flexible and thoughtful approach to get the best out of assets as diverse as listed buildings in every day use and as yet undiscovered, undesignated buried remains of archaeological interest.

In the case of buildings, generally the risks of neglect and decay of heritage assets are best addressed through ensuring that they remain in active use that is consistent with their conservation. Ensuring such heritage assets remain used and valued is likely to require sympathetic changes to be made from time to time. In the case of archaeological sites, many have no active use, and so for those kinds of sites, periodic changes may not be necessary, though on-going management remains important.

Where changes are proposed, the National Planning Policy Framework sets out a clear framework for both plan-making and decision-making in respect of applications for planning permission and listed building consent to ensure that heritage assets are conserved, and where appropriate enhanced, in a manner that is consistent with their significance and thereby achieving sustainable development. Heritage assets are either designated heritage assets or non-designated heritage assets.

Part of the public value of heritage assets is the contribution that they can make to understanding and interpreting our past. So where the complete or partial loss of a heritage asset is justified (noting that the ability to record evidence of our past should not be a factor in deciding whether such loss should be permitted), the aim then is to:

- *capture and record the evidence of the asset's significance which is to be lost*
- *interpret its contribution to the understanding of our past;*
- *and make that publicly available (National Planning Policy Framework paragraph 199)"*

A2.0 Appendix A, Part 2; Local planning policies

South Cambridgeshire District Council, South Cambridgeshire Local Plan, Adopted September 2018

Design Principles

A2.1 Policy HQ/1 states:

'All new development must be of high quality design, with a clear vision as to the positive contribution the development will make to its local and wider context. As appropriate to the scale and nature of the development, proposals must:

- *Preserve or enhance the character of the local urban and rural area and respond to its context in the wider landscape;*
- *Conserve or enhance important natural and historic assets and their setting; c. Include variety and interest within a coherent, place-responsive design, which is legible and creates a positive sense of place and identity whilst also responding to the local context and respecting local distinctiveness;*
- *Be compatible with its location and appropriate in terms of scale, density, mass, form, siting, design, proportion, materials, texture and colour in relation to the surrounding area;*
- *Deliver a strong visual relationship between buildings that comfortably define and enclose streets, squares and public places, creating interesting vistas, skylines, focal points and appropriately scaled landmarks along routes and around spaces;*
- *Achieve a permeable development with ease of movement and access for all users and abilities, with user friendly and conveniently accessible streets and other routes both within the development and linking with its surroundings and existing and proposed facilities and services, focusing on delivering attractive and safe opportunities for walking, cycling, public transport and, where appropriate, horse riding;*
- *Provide safe and convenient access for all users and abilities to public buildings and spaces, including those with limited mobility or those with other impairment such as of sight or hearing;*
- *Ensure that car parking is integrated into the development in a convenient, accessible manner and does not dominate the development and its surroundings or cause safety issues;*
- *Provide safe, secure, convenient and accessible provision for cycle parking and storage, facilities for waste management, recycling and collection in a manner that is appropriately*
- *integrated within the overall development;*
- *Provide a harmonious integrated mix of uses both within the site and with its surroundings that contributes to the creation of inclusive communities providing the facilities and services to meet the needs of the community;*
- *Ensure developments deliver flexibility that allows for future changes in needs and lifestyles, and adaptation to climate change;*
- *Mitigate and adapt to the impacts of climate change on development through location, form, orientation, materials and design of buildings and spaces;*

- *Include high quality landscaping and public spaces that integrate the development with its surroundings, having a clear definition between public and private space which provide opportunities for recreation, social interaction as well as support healthy lifestyles, biodiversity, sustainable drainage and climate change mitigation; n. Protect the health and amenity of occupiers and surrounding uses from development that is overlooking, overbearing or results in a loss of daylight or development which would create unacceptable impacts such as noise, vibration, odour, emissions and dust;*
- *Design-out crime and create an environment that is created for people that is and feels safe, and has a strong community focus.*
- *Larger and more complex developments will be required to submit Masterplans and Design Codes to agree an overall vision and strategy for a development as a whole that demonstrates a comprehensive and inclusive approach.'*

Protecting and Enhancing Landscape Character

A2.2 Policy NH/2 states:

'Development will only be permitted where it respects and retains, or enhances the local character and distinctiveness of the local landscape and of the individual National Character Area in which is it located.'

Mitigating the Impact of Development In and Adjoining the Green Belt

A2.3 Policy NH/8 states:

'1.) Any development proposals within the Green Belt must be located and designed so that they do not have an adverse effect on the rural character and openness of the Green Belt.

2.) Where development is permitted, landscaping conditions, together with a requirement that any planting is adequately maintained, will be attached to any planning permission in order to ensure that the impact on the Green Belt is mitigated.

3.) Development on the edges of settlements which are surrounded by the Green Belt must include careful landscaping and design measures of a high quality.'

Biodiversity

A2.4 Policy NH/4 states:

'1. Development proposals where the primary objective is to conserve or enhance biodiversity will be permitted.

2. New development must aim to maintain, enhance, restore or add to biodiversity. Opportunities should be taken to achieve positive gain through the form and design of development. Measures may include creating, enhancing and managing wildlife habitats and networks, and natural landscape. The built environment should be viewed as an opportunity to fully integrate biodiversity within new development through innovation. Priority for

habitat creation should be given to sites which assist in the achievement of targets in the Biodiversity Action Plans (BAPs) and aid delivery of the Cambridgeshire Green Infrastructure Strategy.

3. If significant harm to the population or conservation status of a Protected Species, Priority Species1 or Priority Habitat resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission will be refused.

4. Where there are grounds to believe that a proposal may affect a Protected Species, Priority Species or Priority Habitat, applicants will be expected to provide an adequate level of survey information and site assessment to establish the extent of a potential impact. This survey information and site assessment shall be provided prior to the determination of an application.

Previously developed land (brownfield sites) will not be considered to be devoid of biodiversity. The reuse of such sites must be undertaken carefully with regard to existing features of biodiversity interest. Development proposals on such sites will be expected to include measures that maintain and enhance important features and appropriately incorporate them within any development of the site.

6. Planning permission will be refused for development resulting in the loss, deterioration or fragmentation of irreplaceable habitats, such as ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss.

7. Climate change poses a serious threat to biodiversity and initiatives to reduce its impact need to be considered.'

Green Infrastructure

A2.5 Policy NH/6 states:

'1. The Council will aim to conserve and enhance green infrastructure within the district. Proposals that cause loss or harm to this network will not be permitted unless the need for and benefits of the development demonstrably and substantially outweigh any adverse impacts on the district's green infrastructure network.

2. The Council will encourage proposals which:

a. Reinforce, link, buffer and create new green infrastructure; and

b. Promote, manage and interpret green infrastructure and enhance public enjoyment of it.

3. The Council will support proposals which deliver the strategic green infrastructure network and priorities set out in the Cambridgeshire Green Infrastructure Strategy, and which deliver local green infrastructure.

4. All new developments will be required to contribute towards the enhancement of the green infrastructure network within the district. These

contributions will include the establishment, enhancement and the on-going management costs.'

Mitigating the Impact of Development In and Adjoining the Green Belt

A2.6 Policy NH/8 states:

'1. Any development proposals within the Green Belt must be located and designed so that they do not have an adverse effect on the rural character and openness of the Green Belt.

2. Where development is permitted, landscaping conditions, together with a requirement that any planting is adequately maintained, will be attached to any planning permission in order to ensure that the impact on the Green Belt is mitigated.

3. Development on the edges of settlements which are surrounded by the Green Belt must include careful landscaping and design measures of a high quality.'

Green Belt and Recreation Uses

A2.7 Policy NH/10 states:

'Proposals for new buildings to provide appropriate facilities for outdoor sport and outdoor recreation will be permitted where they will not (either individually or cumulatively) harm the openness of the Green Belt and the purposes of including land within it.'

Important Countryside Frontage

A2.8 Policy NH/13 states:

'1. Important Countryside Frontages are defined where land with a strong countryside character either:

a. Penetrates or sweeps into the built-up area providing a significant connection between the street scene and the surrounding rural area; or

b. Provides an important rural break between two nearby but detached parts of a development framework.

2. Planning permission for development will be refused if it would compromise these purposes.'

Heritage Assets

A2.9 Policy NH/14 states:

'1. Development proposals will be supported when:

a. They sustain and enhance the special character and distinctiveness of the district's historic environment including its villages and countryside and its building traditions and details;

b. They create new high quality environments with a strong sense of place by responding to local heritage character including in innovatory ways.

2. Development proposals will be supported when they sustain and enhance the significance of heritage assets, including their settings, as appropriate to their significance and in accordance with the National Planning Policy Framework, particularly:

c. Designated heritage assets, i.e. listed buildings, conservation areas, scheduled monuments, registered parks and gardens;

d. Non-designated heritage assets including those identified in conservation area appraisals, through the development process and through further supplementary planning documents;

e. The wider historic landscape of South Cambridgeshire including landscape and settlement patterns;

f. Designed and other landscapes including historic parks and gardens, churchyards, village greens and public parks;

g. Historic places;

h. Archaeological remains of all periods from the earliest human habitation to modern times.'

Lighting Proposals

A2.10 Policy SC/9 states:

'1.) Development proposals which include new external lighting will only be permitted where it can be demonstrated that:

- *The proposed lighting scheme and levels are the minimum required for reasons of public safety, crime prevention / security, and living, working and recreational purposes;*
- *Light spillage and glare are minimised;*
- *There is no unacceptable adverse impact on the local amenity of neighbouring or nearby properties, or on the surrounding countryside;*
- *There is no dazzling or distraction to road users including cyclists, equestrians and pedestrians;*
- *Road and footway lighting meets the County Council's adopted standards.*

2.) Proposed development that is adversely affected by existing artificial lighting outside the development site will not be permitted unless any significant impact can be mitigated to an acceptable level.'

A3.0 Appendix A, Part 3; Appraisal methodology

A3.1 The landscape appraisal judges the potential effects of the proposals on the landscape receptors that have been identified. The potential landscape effects are determined by consideration of the sensitivity of the landscape receptors and the magnitude of the landscape effect as a result of the proposals. These are defined in the following paragraphs.

Criteria for assessing potential degree of landscape effects

Sensitivity of landscape receptor

A3.2 The sensitivity of the landscape is assessed by combining the considerations of two factors:

- Value
- Susceptibility to specific change.

A3.3 The value of the landscape receptor is defined in the Guidelines for Landscape and Visual Impact Assessment (paragraph 5.19) as:

> *'The relative value that is attached to different landscapes by society, bearing in mind that a landscape may be valued by different stakeholders for a whole variety of reasons.'*

A3.4 The value of the landscape receptor is established at the baseline stage and considers two key categories as highlighted in paragraph 5.44 of the GLVIA:

> *'The value of the landscape character types or areas based on review of any designations at both national and local levels, and, where there are no designations, judgements based on criteria that can be used to establish landscape value;*
>
> *The value of individual contributors to landscape character, especially the key characteristics, which may include individual elements of the landscape, particular landscape features, notable aesthetic, perceptual or experiential qualities, and combinations of the contributors.'*

A3.5 Landscape designations should not be over relied upon to signify the value of the landscape receptors. Other factors that can help in the identification of valued landscapes include:

- Landscape quality (condition)
- Scenic quality
- Rarity
- Representativeness
- Conservation interests
- Recreational value
- Perceptual aspects including wildness and/or tranquillity
- Associations.

A3.6 In the absence of a formal landscape designation or landscape character area, judgement on the value of a landscape is based on the criteria set out in paragraph A3.5.

A3.7 The landscape receptors susceptibility to specific change is defined in the GLVIA (paragraph 5.40) as follows:

> *'The ability of the landscape receptor (whether it be the overall character or quality/condition of a particular landscape type or area, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and /or achievement of landscape planning policy and strategies.'*

A3.8 Paragraph 5.42 of the GLVIA also states that:

> *'Since landscape effects in LVIA are particular to both the specific landscape in question and the specific nature of the proposed development, the assessment of susceptibility must be tailored to the project.'*

A3.9 Factors for judging susceptibility to change include:

- Vulnerability or robustness of elements of the landscape
- The tolerance, i.e. the extent to which elements of the landscape can be replaced, restored or may be altered
- The level or role elements of the landscape have in defining the character of the landscape
- The landscape sensitivity to the specific type of development proposed.

A3.10 The guidance set out in figure 14 has been used in this appraisal to arrive at an overall evaluation of landscape sensitivity. Both susceptibility to change and value are judged, based on the criteria shown. There may be circumstances where the weighting given to some criteria may be greater than others. The combination of susceptibility and value produces an overall evaluation of landscape sensitivity.

Magnitude of landscape effect

A3.11 The magnitude of effect is assessed in terms of:

- Size/scale
- Geographical extent
- Duration
- Reversibility.

A3.12 The **size or scale** of an effect is assessed by determining the degree of change that would arise from the proposals, based on the criteria set out in figure 15. The judgements may take into account:

- The extent of existing landscape elements that will be lost (this may be quantified)

- The degree to which aesthetic or perceptual aspects of the landscape are altered through the loss of or addition of landscape resources / elements. For example removal of hedges may change a small-scale intimate landscape into a large scale, open one.
- Whether the effect changes any of the key characteristics which are distinctive to the landscape character.

A3.13 The **geographical extent** of effects is assessed by determining the area over which the landscape effects will be felt, based on the criteria set out in figure 15. In general, the effects will vary according to the nature of the project and may not be relevant on every occasion.

A3.14 The **duration** of effects is assessed by the period of time over which the degree of change to the landscape would arise from the development, based on the criteria set out in figure 15.

A3.15 The **reversibility** of an effect assesses the prospects or practicality of the effect being reversed.

A3.16 Duration and reversibility can be considered together so that a temporary or partially reversible effect is linked to definition of how long that effect may last.

A3.17 The guidance notes and criteria set out in figure 15 have been used to make a judgement on the magnitude of landscape effect for this appraisal. The magnitude of landscape effect is determined by combining the judgements of the four individual factors of size/scale, geographical extent, duration and reversibility. There may be circumstances where the weighting given to some criteria may be greater than others. The combination of all four factors produces an overall evaluation of magnitude of landscape effect, which is ultimately a matter of professional judgement.

Judging the overall degree of landscape effect

A3.18 The degree of the effects on the landscape resources is considered from a sequentially combined evaluation of the landscape sensitivity and the magnitude of effect. The matrix in figure 15 has been used to guide this judgement. The definitions used are included in that figure.

A3.19 The GLVIA guidance also states that thought must be given to whether the likely degree of landscape effects are judged to be positive (beneficial) or negative (adverse). The GLVIA (paragraph 5.37) suggests that when judging the effects to be adverse or beneficial the factors to be considered should include, but not be restricted to the following:

- *'The degree to which the proposal fits within the existing landscape character*
- *The contribution to the landscape that the development may make in its own right, usually by virtue of good design, even if it is in contrast to existing character.'*

Criteria for assessing potential degree of visual effects

A3.20 The visual appraisal judges the potential effects of the proposals on the visual receptors that have been identified. The degree of a visual effect is determined by

consideration of the sensitivity of the visual receptors and the magnitude of the visual effect on visual amenity. These are defined in the following paragraphs.

Sensitivity of visual receptors

A3.21 A visual receptor is a particular person or group of people who would be experiencing the view or are likely to be affected at a specific viewpoint.

A3.22 The sensitivity of the visual receptor is assessed by combining the judgements of two factors:

- Value attached to views
- Susceptibility of visual receptors to change

A3.23 The GLVIA suggests that when judging the value attached to the views experienced (paragraph 6.37), account should be taken of:

- *'recognition of the value attached to particular views, for example in relation to heritage assets, or through planning designations;*
- *indicators of the value attached to views by visitors, for example through appearances in guidebooks or on tourist maps, provision of facilities for their enjoyment and references to them in literature or art'*

A3.24 The value attached to the views experienced is established at the baseline stage and considers these two key categories:

- The quality of the view/visual experience i.e. attractive unspoilt landscape
- The associations which contribute to the visual experience i.e. cultural/historical/ecological interests and planning designations

A3.25 The visual receptors' susceptibility to change is defined in the GLVIA (paragraph 6.32) as follows:

- *'the occupation or activity of people experiencing the view at particular locations; and*
- *the extent to which their attention or interest may therefore be focused on the views and the visual amenity they experience at particular locations.'*

A3.26 The guidance set out in figure 16 has been used in this appraisal to arrive at an overall evaluation of the sensitivity of the visual receptors. There may be circumstances where the weighting given to some criteria may be greater than others. The combination of susceptibility and value produces an overall evaluation of visual receptor sensitivity.

Magnitude of visual effect

A3.27 The magnitude of visual effect is assessed in terms of:

- Size/scale
- Geographical extent
- Duration

- Reversibility

A3.28 The **size or scale** of a visual effect is assessed by determining the degree of change that would arise from the proposals. The effect of loss, addition or change to the composition of the view through the introduction of development is judged, based on the criteria set out in figure 17. The GLVIA (paragraph 6.39) suggests that when judging the visual effects the following be taken account of:

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

A3.29 The geographical extent of visual effects is assessed by determining the area over which the visual effects will be seen. The visual effect is considered across varying scales and based on the criteria set out in figure 17. The GLVIA (paragraph 6.40) suggests that extent is likely to reflect:

- *'the angle of view in relation to the main activity of the receptor;*
- *the distance of the viewpoint from the proposed development;*
- *the extent of the area over which the changes would be visible.'*

A3.30 The **duration** of effects is assessed by the period of time over which the degree of change to the visual receptor would arise from the development (figure 17).

A3.31 The **reversibility** of an effect assesses the prospects and the practicality of the effect being reversed (figure 17).

A3.32 The guidance notes and criteria set out in figure 17 have been used to make a judgement on the magnitude of visual effect for this appraisal. The magnitude of visual effect is determined by combining the judgements of the four individual factors of size/scale, geographical extent, duration and reversibility. There may be circumstances where the weighting given to some criteria may be greater than others. The combination of all four factors produces an overall evaluation of magnitude of visual effect.

Judging the overall degree of visual effects

A3.33 The degree of the effects on the visual receptor is considered from a sequentially combined evaluation of the visual receptor sensitivity and the magnitude of effect. The matrix in figure (figure 17) has been used to guide this judgement.

A3.34 The GLVIA guidance also states that thought must be given to whether the likely degree of visual effects is judged to be positive (beneficial) or negative (adverse). This is based on professional judgement as to whether the effects will affect the

quality of the visual experience for those people who will see the proposed development, given the nature of the existing views.

A4.0 Appendix A, Part 4; Photographic images methodology

Photographic survey

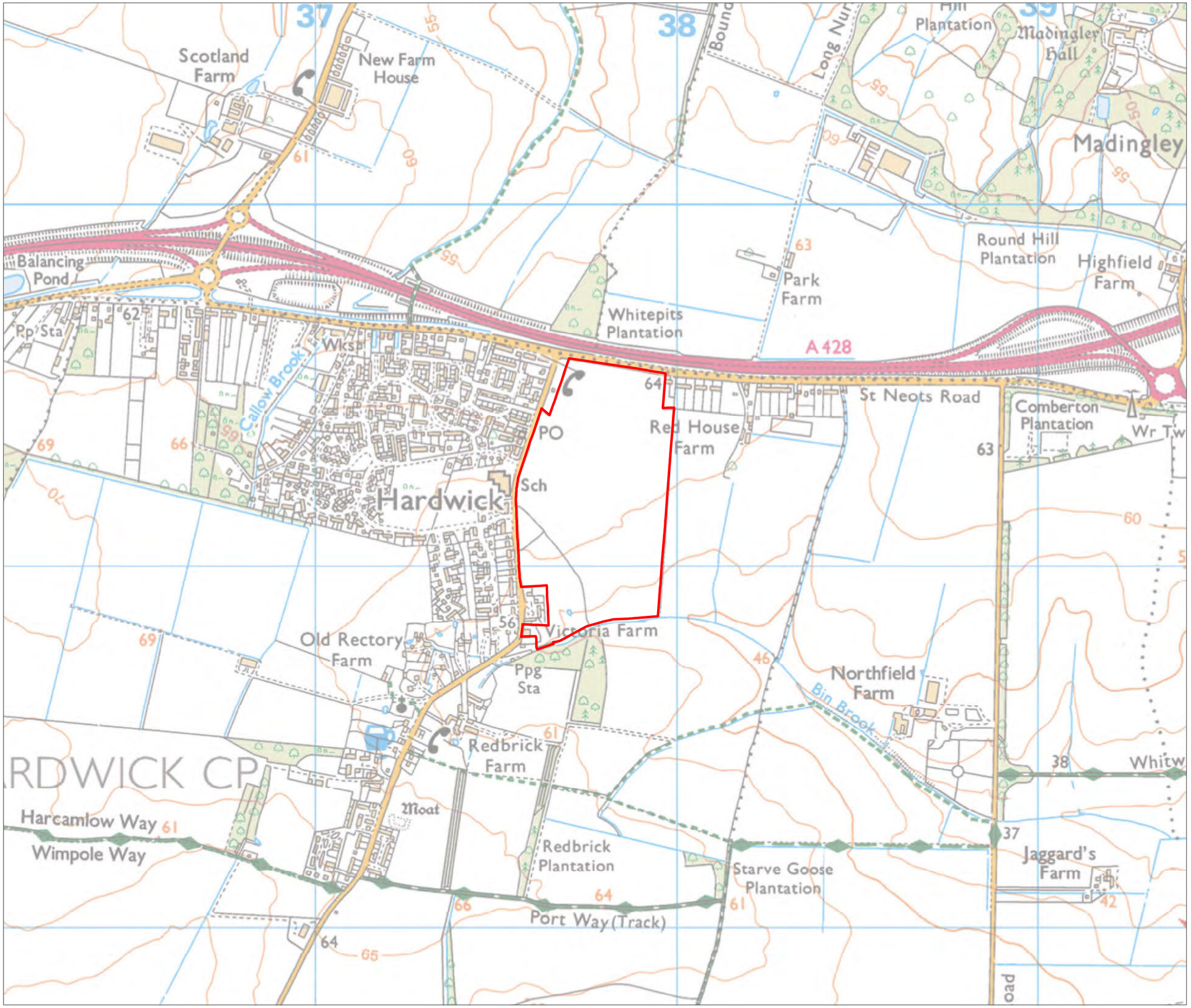
A4.1 The aim is to recreate as closely as possible what the human eye can see. 50 mm is a traditionally agreed focal length for matching a photograph to the actual view seen, but a range between 45 mm to 55 mm is often used.

A4.2 For this assessment, a Canon EOS 6D camera was used in conjunction with a 50mm prime lens. The EOS 6D employs a sensor of similar size to a traditional SLR therefore the 50mm lens used results in a focal length of 50mm as no modification factor is applied. This methodology is in accordance with the LI Advice note 01/11, Photography and photomontage in landscape and visual impact assessment.

A4.3 In this assessment, the photographs are taken at approximately 1.6 m above ground level using a tripod.

A4.4 GPS is used to provide a six-figure National Grid reference for the view. The accuracy of this device can vary (depending on factors such as satellite coverage, proximity of buildings, tree coverage etc.) so these figures are then checked on detailed OS survey plans to give a more accurate reference.

A4.5 For panoramic photographs an overlap of between 35% and 50% of each frame is used to allow the creation of a seamless panoramic, using Photoshop.



Land East of Hardwick, South Cambridgeshire

Hill Residential and Chivers Farms (Hardington) LLP

0 400 m

N

Figure 1: Site location

Dwg no/239105/01	Revision
Status	06 December 2021
Scale: 1:10,000 @A3	Drawn by: JC Checked by: TF

TERENCE O'ROURKE

LONDON
23 Heddon Street
London W1B 4BQ

BIRMINGHAM
Enterprise House 115 Edmund Street
Birmingham B3 2HJ

BOURNEMOUTH
Everdene House Deansleigh Road
Bournemouth BH7 7DU

TELEPHONE
020 3664 6755

www.torltd.co.uk

Site boundary

2.5km study area

Land East of Hardwick, South Cambridgeshire

Hill Residential and Chivers Farms (Hardington) LLP

0 1,000 m

N

Figure 2: Topography

Dwg no/239105/02	Revision
Status	06 December 2021
Scale: 1:25,000 @A3	Drawn by: JC / Checked by: TF

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23 Heddon Street
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BIRMINGHAM
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Birmingham B3 2HJ

BOURNEMOUTH
Everdene House Deansleigh Road
Bournemouth BH7 7DU

TELEPHONE
020 3664 6755

www.torltd.co.uk

- Site boundary
- 2.5km study area
- Rights of way
- Permissive footpaths
- Woodland
- Listed buildings
- Registered parks and gardens
- Ancient woodland
- Site of Special Scientific Interest
- Green belt
- Conservation areas

Land East of Hardwick, South Cambridgeshire

Hill Residential and Chivers Farms (Hardington) LLP

0 1,000 m

N

Figure 3: Designations

Dwg no/239105/003	Revision
Status	06 December 2021
Scale: 1:25,000 @A3	Drawn by: JC / Checked by: TF

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BOURNEMOUTH
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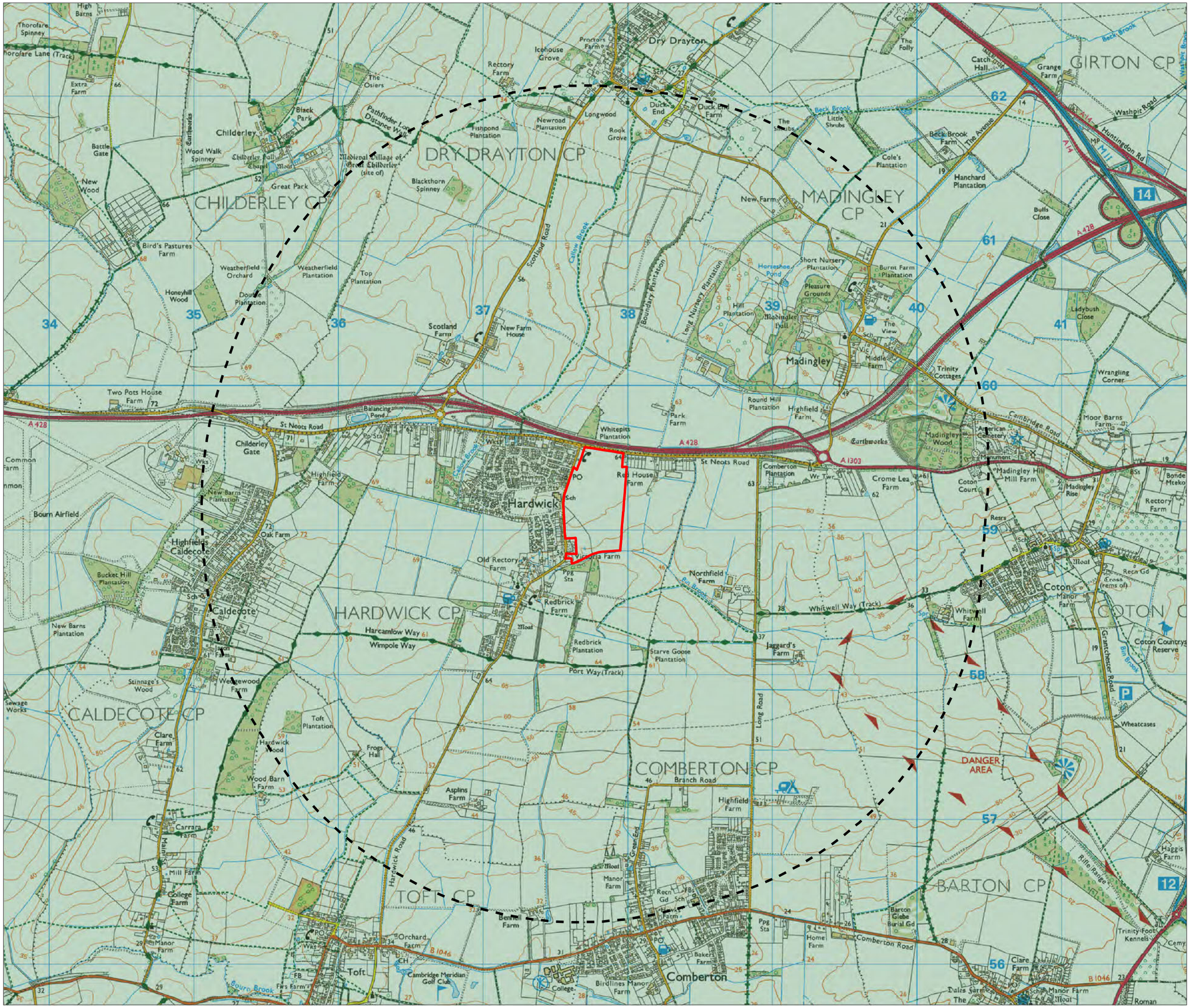

Land East of Hardwick, South Cambridgeshire

Hill Residential and Chivers Farms (Hardington) LLP

Figure 4: National landscape character areas

Dwg no/239105/004	Revision
Status	06 December 2021
Scale: 1:25,000 @A3	Drawn by: JC / Checked by: TF

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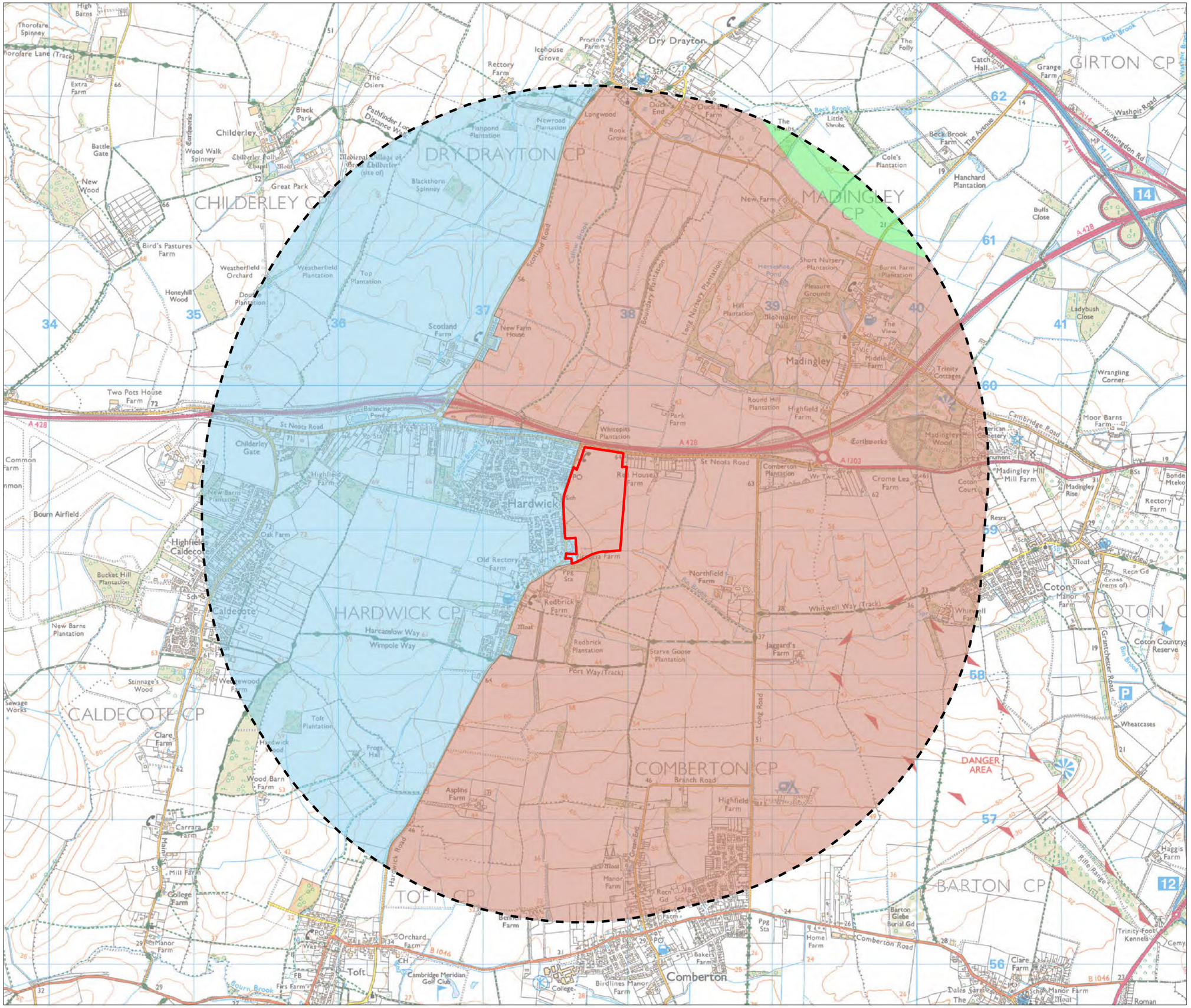

Land East of Hardwick, South Cambridgeshire

Hill Residential and Chivers Farms (Hardington) LLP

0 1,000 m

N

Figure 5: Local landscape character areas

Dwg no/239105/005	Revision
Status	06 December 2021
Scale: 1:25,000 @A3	Drawn by: JC / Checked by: TF

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TELEPHONE
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Site boundary

2.5km study area

Viewpoint location

Land East of Hardwick, South Cambridgeshire

Hill Residential and Chivers Farms (Hardington) LLP

0 1,000 m

N

Figure 6: Viewpoint locations plan

Dwg no/239105/006	Revision
Status	06 December 2021
Scale: 1:25,000 @A3	Drawn by: JC / Checked by: TF

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TELEPHONE
020 3664 6755

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Land East of Harwick, South Cambridgeshire
Hills Residential Ltd., and Chivers Farms (Hardington)LLP

OS ref: 537657,259585
Eye level:66mAOD

Direction of view: SE
Horizontal field of view: 90°

Principal dist: 50m
Camera height: 1.6m AGL

Camera: EOS 6D
Lens: 50mm (Canon EF)

Summer Date&time: 28/08/19
Winter Date&time: -

Photograph taken from the junction of St. Neots Road and Cambridge Road looking south east towards the site.

Figure 7.0, Viewpoint 1
December 2021

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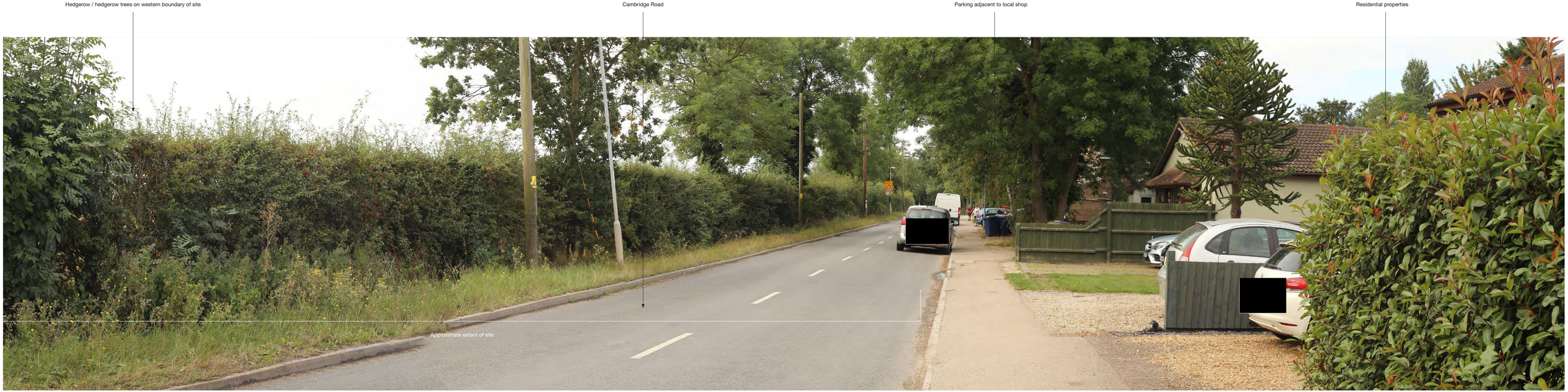

Land East of Hardwick, South Cambridgeshire
Hills Residential Ltd., and Chivers Farms (Hardington)LLP

OS ref: 537601,259382
Eye level:65mAOD

Direction of view: E
Horizontal field of view: 90°

Principal dist: 10m
Camera height: 1.6m AGL

Camera: EOS 6D
Lens: 50mm (Canon EF)

Summer Date&time: 28/08/19
Winter Date&time: -

Photograph taken from Cambridge Road (adjacent to property no. 117) looking south east towards the site.

Figure 8.0, Viewpoint 21
December 2021

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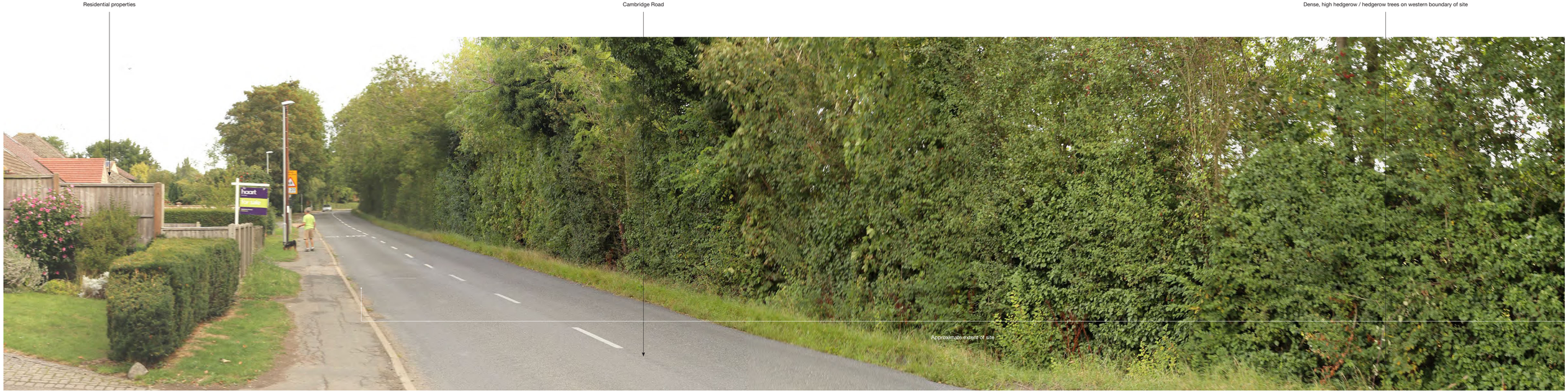

Land East of Hardwick, South Cambridgeshire
Hills Residential Ltd., and Chivers Farms (Hardington)LLP

OS ref: 537555,259004
Eye level:60mAOD

Direction of view: E
Horizontal field of view: 90°

Principal dist: 10m
Camera height: 1.6m AGL

Camera: EOS 6D
Lens: 50mm (Canon EF)

Summer Date&time: 28/08/19
Winter Date&time: -

Photograph taken from Cambridge Road (adjacent to property no. 29) looking north east towards the site.

Figure 9.0, Viewpoint 3
December 2021

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Redbrick Plantation

Agricultural barn to the south of St. Neots Road

Vegetation adjacent to drainage ditch, south of public right of way (ref: 114/3)

Hedgerow on northern edge of Harcamlow Way / Whitwell Way

Land East of Hardwick, South Cambridgeshire
Hills Residential Ltd., and Chivers Farms (Hardington)LLP

OS ref: 537586,258084
Eye level:65mAOD

Direction of view: N
Horizontal field of view: 90°

Principal dist: 650m
Camera height: 1.6m AGL

Camera: EOS 6D
Lens: 50mm (Canon EF)

Summer Date&time: 28/08/19
Winter Date&time: -

Photograph taken from Port Way adjacent to Redbrick Plantation looking north towards the site.

Figure 10.0, Viewpoint 4
December 2021

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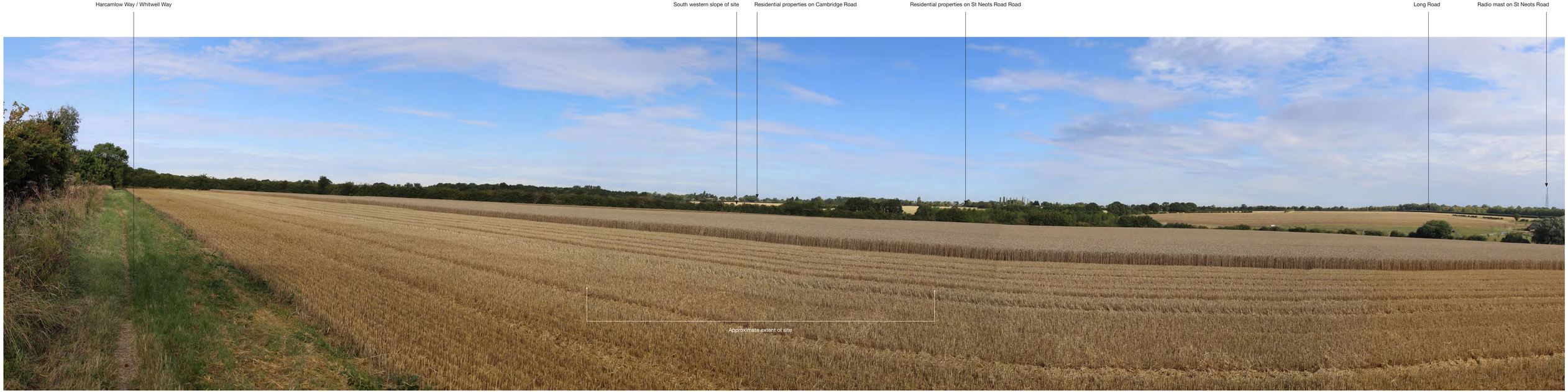

Land East of Hardwick, South Cambridgeshire
Hills Residential Ltd., and Chivers Farms (Hardington)LLP

OS ref: 538257,258259
Eye level:58mAOD
Direction of view: E
Horizontal field of view: 90°
Principal dist: 700m
Camera height: 1.6m AGL
Camera: EOS 6D
Lens: 50mm (Canon EF)
Summer Date&time: 28/08/19
Winter Date&time: -

Photograph taken from Port Way east of Starve Goose Plantation looking north east towards the site.

Figure 11.0, Viewpoint 5
December 2021

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Land East of Hardwick, South Cambridgeshire
Hills Residential Ltd., and Chivers Farms (Hardington)LLP

OS ref: 538471,259029
Eye level:58mAOD

Direction of view: E
Horizontal field of view: 90°

Principal dist: 510m
Camera height: 1.6m AGL

Camera: EOS 6D
Lens: 50mm (Canon EF)

Summer Date&time: 28/08/19
Winter Date&time: -

Photograph taken from permissive footpath west of Long Road looking north west towards the site.

Figure 12.0, Viewpoint 6
December 2021

TERENCE O'ROURKE

Land East of Harwick, South Cambridgeshire
Hills Residential Ltd., and Chivers Farms (Hardington)LLP

OS ref: 537979,259535
Eye level:63mAOD

Direction of view: E
Horizontal field of view: 90°

Principal dist: 10m
Camera height: 1.6m AGL

Camera: EOS 6D
Lens: 50mm (Canon EF)

Summer Date&time: 28/08/19
Winter Date&time: -

Photograph taken from St Neot's Road (adjacent to property no. 75) looking south west towards the site.

Figure 13.0, Viewpoint 7
December 2021

TERENCE O'ROURKE

Site boundary

2.5km study area

ZTV

Land East of Hardwick, South Cambridgeshire

Hill Residential and Chivers Farms (Hardington) LLP

0 1,000 m

N

Figure 14: Zone of theoretical visibility

Dwg no/239105/014	Revision
Status	06 December 2021
Scale: 1:25,000 @A3	Drawn by: JC / Checked by: TF

LONDON
23 Heddon Street
London W1B 4BQ

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Receptor sensitivity (landscape receptor)

	Value	Susceptibility
High	Internationally/nationally designated landscape / townscape e.g world heritage sites, areas of outstanding natural beauty and national parks / national scenic areas (Scotland) A very distinctive landscape / townscape with strong, widespread and defining characteristics. High quality with no detracting features. Contains features that could be described as unique or are nationally scarce. Considerable conservation and / or recreational / heritage	Landscape / Townscape can not accommodate any change related to the proposed development without undue consequences arising on the condition or quality of its defining characteristics
	Locally designated e.g public open space Reasonably distinctive landscape / townscape or with some strong contributing characteristics. Average quality with features that are locally commonplace which may exhibit some detracting features. Intermediate conservation and/or recreational / heritage interest. A strong sense of place.	Landscape / Townscape is able to accommodate a small change related to the proposed development without undue consequences arising on the condition or quality of its defining characteristics
	Not designated. Relatively bland or commonplace landscape / townscape or with limited positive characteristics. Features that make little contribution to local distinctiveness. Some detracting features. Limited conservation and/or recreational / heritage interest. Poor sense of place.	Landscape / Townscape is able to accommodate a medium change related to the proposed development without undue consequences arising on the condition or quality of its defining characteristics.
Negligible	Not designated. A degraded or featureless landscape with little or no characteristics of quality or interest. No sense of place.	Landscape is able to accommodate a large change related to the proposed development without undue consequences arising on the condition or quality of its defining characteristics

Value \ Susceptibility	High	Medium	Low	Negligible
High	High	High / Medium	Medium	Medium / Low
Medium	High / Medium	Medium	Medium / Low	Low
Low	Medium	Medium / Low	Low	Low / Negligible
Negligible	Medium / Low	Low	Low / Negligible	Negligible

Impact magnitude (landscape receptor)

Magnitude of landscape effects

The magnitude of effects is assessed by combining the judgments on the size or scale and the geographical extent of the landscape effect resulting from the proposals. The table provides an overall profile of these criteria for each factor. In determining the magnitude of effects during the construction phase and at completion, further consideration is also given to the duration and reversibility of the landscape effect.

Duration
Duration is a material consideration when determining the magnitude of effect and, where relevant, will be qualified in the data sheets contained within this report.

Where the construction or life of the project is proposed to be in excess of 25 years it is, although temporary, considered to be a substantial length of time and so is assigned a magnitude of effect equivalent to a permanent development.

Where the construction or operational phase is less than 25 years, the period over which the effects will be experienced is judged as short (less than 5 years), medium (5-10 years) or long (10-25 years) term.

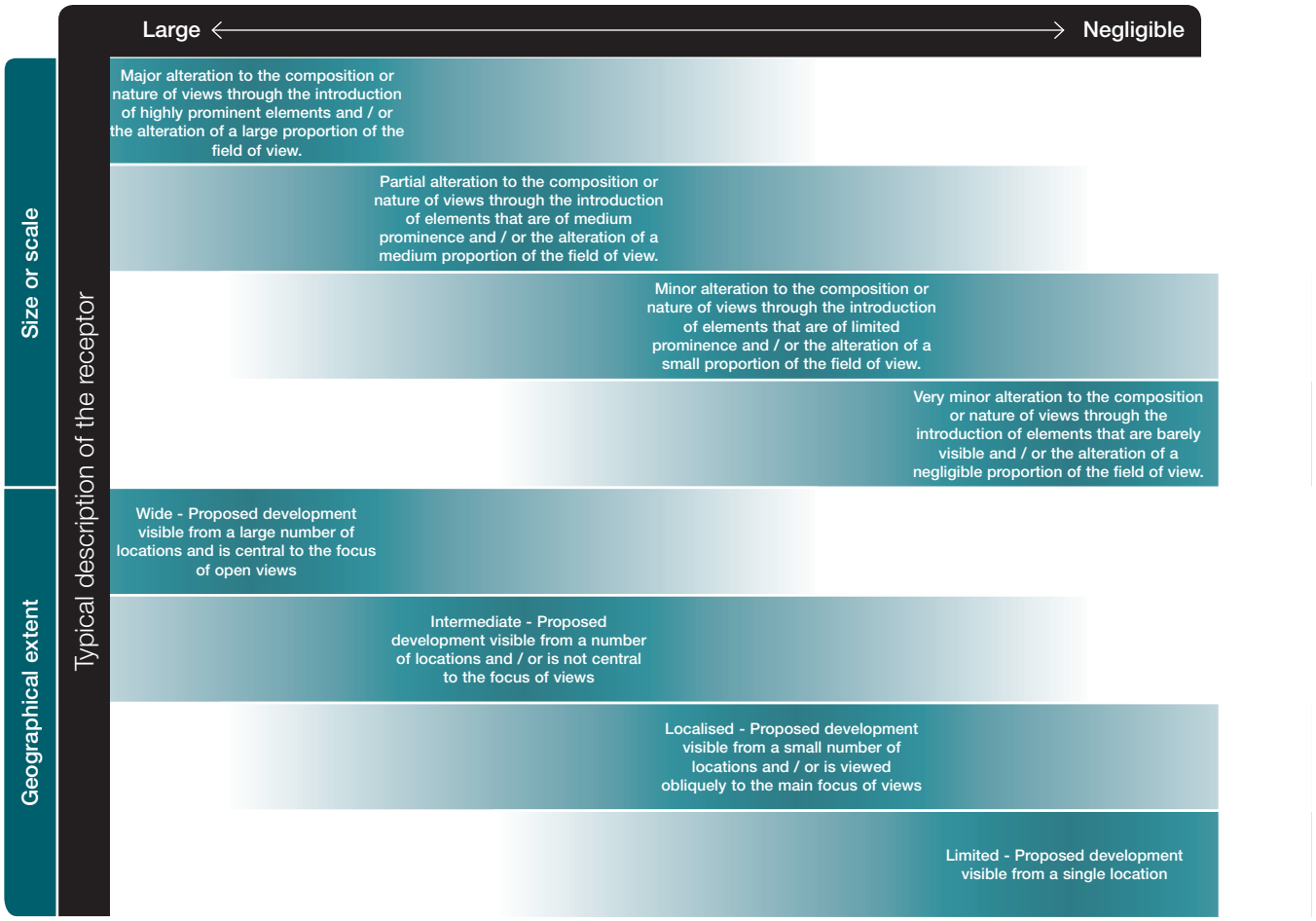
Reversibility
The reversibility of an effect defines the prospects or practicality of the effect being reversed. Reversibility is judged as fully, partially or unable to reinstate/restore the original baseline situation

Receptor sensitivity (visual receptor)

	Value	Susceptibility
High	Views from internationally / nationally designated landscapes / townscapes or landscapes recognised nationally as the best in the UK e.g areas of outstanding natural beauty, national parks/ national scenic areas (Scotland) national trails, registered parks and gardens or world heritage sites Internationally / Nationally recognised views with a strong cultural association or well known references or promoted views in literature / art / guide books / viewpoints marked	Users of residential street / areas or users of long distance recreation routes / National Trail whose primary focus is on the landscape / townscape Visitors to heritage assets or other attractions where the landscape setting is an important contributor to the experience
	Views from local planning designations e.g country parks, Local Nature Reserves and conservation areas. Views from landscapes and townscapes well used by local residents who have a strong proprietary interest in the view or from landscapes with recognisable features that promote a strong sense of place	Views from public rights of way, rural roads, tourist routes or railway users with secondary focus on the landscape / townscape
	Views from undesignated landscapes or townscapes Views from commonplace landscapes / townscapes with a weak sense of place, limited cultural associations and / or where receptors have limited proprietary interest in the view.	Users of urban roads, railways and footways whose attention is unlikely to be on the landscape / townscape People engaged in outdoor sporting activities which does not depend upon appreciation of views
Negligible	Views from degraded landscapes or townscapes with very limited value to local residents or from landscapes / townscapes that require significant restoration	People at places of work, educational or social venues who have very limited focus on the landscape / townscape. People driving along motorways.

Value \ Susceptibility	High	Medium	Low	Negligible
High	High	High / Medium	Medium	Medium / Low
Medium	High / Medium	Medium	Medium / Low	Low
Low	Medium	Medium / Low	Low	Low / Negligible
Negligible	Medium / Low	Low	Low / Negligible	Negligible

Impact magnitude (visual receptor)



Magnitude of visual effects

The magnitude of effects is assessed by combining the judgments on the size or scale and the geographical extent of the visual effect resulting from the proposals. The table provides an overall profile of these criteria for each factor. In determining the magnitude of effects during the construction phase and at completion, further consideration is also given to the duration and reversibility of the visual effect.

Duration
Duration is a material consideration when determining the magnitude of effect and, where relevant, will be qualified in the data sheets contained within this report.

Where the construction or life of the project is proposed to be in excess of 25 years it is, although temporary, considered to be a substantial length of time and so is assigned a magnitude of effect equivalent to a permanent development.

Where the construction or operational phase is less than 25 years, the period over which the effects will be experienced is judged as short (less than 5 years), medium (5-10 years) or long (10-25 years) term.

Reversibility
The reversibility of an effect defines the prospects or practicality of the effect being reversed. Reversibility is judged as fully, partially or unable to reinstate/restore the original baseline situation