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NORTHEAST CAMBRIDGE LANDSCAPE CHARACTER AND VISUAL IMPACT APPRAISAL: DEVELOPMENT SCENARIOS

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Executive Summary

This report provides a Landscape Character and Visual Impact Appraisal (LCVIA) of three development height scenarios on land (hereafter referred to as the 'Site') in the northeast of Cambridge. The Site has been identified by Cambridge City Council (CCC) and South Cambridgeshire District Council (SCDC) as an area of future sustainable economic growth for which an Area Action Plan (AAP) will be prepared. The AAP will set out the broad parameters for growth within the Site through a high level development framework. The AAP will become part of the Local Development Framework documents for CCC and SCDC. It will be underpinned by a number of evidence base studies of which this LCVIA is one.

The Site is shown on Figure 1 and comprises two parcels of land that lie on either side of Milton Road (A1309) and immediately to the south of the A14 and the grade separated junction of the A14, A10 and Milton Road. The western parcel includes Cambridge Science Park and is characterised by office and research buildings. The eastern parcel includes St Johns Innovation Centre, Cambridge Business Park, Cambridge Waste Water Treatment Plant (CWWTP) and miscellaneous other uses.

The purpose of the LCVIA is firstly to provide an appraisal of existing landscape character and visual amenity at the Site and surrounding Fen Edge landscape and secondly to provide an appraisal of the potential effects of high, medium and low development height scenarios at the Site from the Fen Edge. The LCVIA tests the three development height options to allow a better understanding of the height of development that could potentially be accommodated at the Site.

The Study method has been informed by industry guidance including Guidelines for Landscape and Visual Impact Assessment, Third Edition and Photography and Photomontage in Landscape and Visual Impact Assessment. The study method has involved desk-based policy and baseline analysis, fieldwork to appraise landscape and visual sensitivity and verify baseline assumptions, verifiable viewpoint photography and survey, modelling of development height scenarios and appraisal of effects of each development height scenario on viewpoints.

The baseline and sensitivity assessment identified that the landscape and views to the east and north east of the Site as potentially more sensitive to development. Six verifiable views were identified with five of these being to the east of the Site and one being to the northwest. The viewpoints are shown on Figures 4.1 and 4.2.

Modelling of development height scenarios indicated that potential effects on landscape and views to the east of the Site would be large and constitute a considerable degree of harm to the baseline. In light of that initial judgement a second iteration of the model for each development height scenario was prepared in order to give alternative options. An appraisal of overall effects undertaken for each viewpoint and for landscape character based on photomontages and wirelines prepared for each of the six viewpoints. The development height options are shown in Table 3 and on Figures 5.1 to 5.3 and the wirelines and final photomontages on Figures 7.1 to 7.18.

The appraisal of effects indicates that the High option would give rise to Major overall effects on the six viewpoints used in the LCVIA. The High option would also result in Major or Moderate overall effects on landscape character in a limited geographical area.

The Medium option would result in Major or Moderate overall effects on five of the six viewpoints used in the LCVIA. It would result in Moderate overall effects on Site landscape character and Moderate overall effects on the Eastern Fen Edge LCA and River Cam Corridor LCA in a limited geographical area.

The Low option would result in Moderate overall effects on Viewpoint 3 Harcamlow Way River Cam and Viewpoint 6 Mere Way Public Right of Way with Minor or Negligible overall effects on four viewpoints. The Low option would result in Minor or Negligible overall effects on landscape character of all areas appraised.

The testing and appraisal of development height options indicates that adverse effects could be reduced through selective massing and layout of building heights across the Site. The appraisal indicates there is scope for high and medium height development in the central part of the Site with the majority of the Site able to accommodate low development without harm to the landscape and visual baseline. The Study allows a better understanding of where higher development could occur.

Further modelling of development options and detailed townscape, landscape and visual impact assessment will be required for individual planning applications.

1.0 Introduction

- 1.1 The Environment Partnership (TEP) Limited was appointed in November 2018 to undertake a Landscape Character and Visual Impact Appraisal (LCVIA) of land (hereafter referred to as the 'Site') in the northeast of Cambridge. The Site is shown on Figure 1 in Appendix 1 to this report. The Site has been identified by Cambridge City Council (CCC) and South Cambridgeshire District Council (SCDC) as an area of future sustainable economic growth for which an Area Action Plan (AAP) will be prepared. The AAP will set out the broad parameters for growth within the Site through a high level development framework. The AAP will become part of the Local Development Framework documents for CCC and SCDC. It will be underpinned by a number of evidence base studies of which this LCVIA is one.
- 1.2 The Site comprises two parcels of land that lie on either side of Milton Road and immediately to the south of the A14 and the grade separated junction of the A14, A10 and A1309 Milton Road. The western parcel includes the entirety of Cambridge Science Park (CSP) lying to the north of a Guided Busway route and National Cycle Network (NCN) route 51 but excludes Cambridge Regional College campus. The eastern parcel includes all land between Milton Road in the west and the London Kings Cross to Kings Lynn railway line in the east. The eastern parcel includes Cambridge North Rail Station, St John's Innovation Park, Anglian Water Waste Water Treatment Work (WWTW) and Cambridge Business Park which lies to the south of Cowley Road and to the north of Maitland Avenue. It also includes the industrial area centred on Nuffield Road and Bramblefields Local Nature Reserve (LNR).
- 1.3 The purpose of the LCVIA is firstly to provide an appraisal of existing landscape character and visual amenity at the Site and surrounding area and Fen Edge setting of the city to the northeast, and secondly to provide an appraisal of the potential effects of three development height scenarios at the Site. The LCVIA tests the development height scenarios to allow a better understanding of the amount of development that could potentially be accommodated at the Site.
- 1.4 Further work will need to be done in masterplanning at the Site involving refinement of the layout and height of blocks, provision of infrastructure and green space and finally the design and massing of buildings. It is considered necessary that a more detailed landscape and visual impact assessment (LVIA) or landscape and visual appraisal (LVA) will be required for future planning applications at the Site. The scope of any such LVIA or LVA should be agreed with the planning authority and is likely to include townscape and residential areas in built up areas of Cambridge to the south of the Site.
- 1.5 The development height scenarios are informed by fieldwork and analysis of the baseline environment and sensitivities to development. The three development height scenarios have been modelled in 3D and verifiable visualisations have been prepared to provide an indication of the potential landscape and visual impacts. The process of arriving at the development height scenarios has been iterative involving modelling and testing of scenarios.

1.6 This report is structured as follows:

- 1.0 Introduction;
- 2.0 Study Method;
- 3.0 Legislation and Policy Context;
- 4.0 Landscape and Visual Baseline;
- 5.0 Appraisal of Effects of Development Height Options; and
- 6.0 Conclusions.

1.7 It is accompanied by the following Figures:

- Figure 1: Site Location;
- Figure 2: Environmental Designations;
- Figure 3: Landscape Character;
- Figures 4.1 and 4.2: Zone of Theoretical Visibility and Viewpoint Locations;
- Figures 5.1 to 5.3: Development Height Options;
- Figure 6: Landscape Framework;
- Figures 7.1 to 7.18: Verifiable View Photomontages.

1.8 It is accompanied by the following Appendices:

- Appendix A: Landscape and visual appraisal method;
- Appendix B: Verifiable viewpoint photography and photomontage method;
- Appendix C: Candidate viewpoints not used as verifiable views and reasons why; and
- Appendix D: Glossary.

2.0 Study Method

Introduction

- 2.1 This section describes the method used during the Study. Whilst the method follows the principles set out in Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3) it is bespoke to this Study. The detailed method used to assess the effects on landscape character and viewpoints is provided in Appendix A.
- 2.2 As mentioned in Section 1.0 of this report the purpose of the Study is firstly to provide an appraisal of existing landscape character and visual amenity at the Site and surrounding area and secondly to provide an appraisal of the potential effects of three potential development height scenarios at the Site to inform the Council's preferred approach to preparing the AAP. The key activities of the Study are:
- Desk-based baseline study;
 - Baseline fieldwork;
 - Viewpoint photography and survey;
 - Modelling of concept development height scenarios;
 - Preparation of photomontages;
 - Testing and refinement of concept development height scenarios;
 - Review of viewpoints with photomontage of final concept development height scenarios; and
 - Appraisal of potential landscape and visual effects of development height scenarios.
- 2.3 The approach to the Study is iterative, building on baseline analysis and preliminary appraisal findings to inform the selection of viewpoints and evolve the development model.
- 2.4 In addition to these key activities the Study team exchanged emails with the Client and had progress calls every two weeks. Progress calls were used to discuss work in progress and inform decisions on matters such as viewpoint selection and modelling of development height scenarios.

Desk-based baseline study

- 2.5 The desk-based baseline study involved a review of relevant information, guidance and planning policy relating to the proposed development height scenarios and the landscape (and views) including:
- National Planning Policy Framework (NPPF);
 - Cambridge City Council. (2018) Cambridge Local Plan;
 - South Cambridgeshire District Council. (2018) South Cambridgeshire Local Plan;
 - Other Local Plan policies and guidance;
 - Published Landscape Character Assessments;
 - Published walking and cycling routes;
 - Designated heritage assets;
 - Ecological designations;
 - Ordnance Survey mapping and aerial photography; and

- Consented developments

- 2.6 The documents reviewed during the desk-based baseline and which informed the Study are referenced in the report text and listed in the References section.
- 2.7 The purpose of the desk-based baseline study is to familiarise the Study team with the landscape and visual sensitivities at the Site and in the surrounding area prior to undertaking fieldwork and to identify potentially sensitive areas for further investigation. The desk-based research was also used to identify candidate viewpoints for further investigation in the field. During the desk-based baseline stage a zone of theoretical visibility (ZTV) map was prepared. The ZTV is a map of theoretical visibility of existing development at the Site that excludes narrow belts of trees and hedges but includes topography, areas of substantial woodland and buildings. The ZTV was based on existing buildings in the Site having a maximum height of four storeys or 15m. The ZTV modelled the consented hotel and office buildings at Cambridge North Station which are up to eight storeys in height.
- 2.8 Two ZTV drawings are shown on Figures 4.1 and 4.2 of this LCVIA. Figure 4.1 shows the degree of theoretical visibility based on buildings 15m in height across the Site and includes the consented hotel and office buildings at Cambridge North Station. It indicates relative visibility. Where the colours are darker more of the Site is visible. Figure 4.2 separates the taller hotel and office buildings from the rest of the Site. The brown colour indicates where both points in the Site and the hotel and office buildings are theoretically visible. The beige colour indicates where only points in the Site (and not including the hotel and office buildings) are theoretically visible. The blue colour indicates where only the hotel and office buildings are theoretically visible.
- 2.9 The ZTV and desk-based baseline research informed the Study area for the LCVIA which is 3km from the Site boundary. The focus of the Study is upon the rural areas to the north and east of the Site.
- 2.10 Environmental and cultural heritage designations and recreational features of importance such as long distance trails were mapped in GIS. This allowed the Study team to consider key features that may add value to landscape character and therefore have a bearing on landscape sensitivity.

Baseline fieldwork

- 2.11 A number of candidate viewpoints were identified following the desk-based baseline and discussion with the Client. The candidate viewpoints are a selection of viewpoints typical of those that may be experienced by visual receptors in the 3km study area. Given that the purpose of the Study is to establish the principle of different development height scenarios at the Site relative to the Fen Edge of Cambridge and setting of the city from the northeast, viewpoints in urban areas were not included. Planning applications for development at the Site are likely to require more detailed LVIA or LVA work to inform design with the scope of such work likely to include townscape and residential areas in Cambridge to the south of the Site. Viewpoints that best represented views of recreational users and cultural heritage receptors such as Fen Ditton Conservation Area and the River Cam corridor were considered of particular importance as these would potentially be more susceptible to changes to views as a result of development at the Site.

- 2.12 During fieldwork each candidate viewpoint was visited and additional viewpoint locations were considered. During fieldwork visibility of existing development at the Site and its influence on the Fen Edge landscape was considered. Landscape and townscape character area boundaries were verified and any changes in the relevant landscape character area or townscape character area compared to the published description were noted. Key landscape character and visual relationships were identified. Candidate viewpoints are listed at Table 4 and Appendix C.
- 2.13 Digital SLR camera photography was taken at each candidate viewpoint and at other locations in the Study area to assist in describing the landscape baseline. The viewpoint photography was discussed with the Client Team and a shortlist of verifiable views identified. Shortlisted viewpoints are shown at Table 4.
- 2.14 The following criteria were used to select shortlisted viewpoints:
- Representativeness - is the viewpoint typical or representative of views in the direction of the Site from the landscape to the north and east of Cambridge?
 - Sensitivity - does the viewpoint reflect views experienced by receptor groups at locations where views are highly valued or at locations more susceptible to the type of change proposed at the Site?
 - Skyline - does the viewpoint capture relevant features on the skyline characteristic of Cambridge?
 - Visual relationships - does the viewpoint provide an understanding of visual relationships within the study area?
 - Visibility of the Site - are there clear, uninterrupted views towards the Site from the viewpoint?

Viewpoint photography and survey

- 2.15 Following agreement of the shortlisted viewpoints a photographer and survey team undertook photography at each viewpoint. The resulting verifiable views would be used to prepare photomontages of each development height scenario.
- 2.16 The technical method for undertaking verifiable viewpoint photography is described in Appendix B.

Modelling of concept development scenarios

- 2.17 The Client Team provided TEP with three initial broad development height scenarios:
- Scenario 1 - Low: the majority of buildings on Site up to six storeys or 18m in height with buildings 7 storeys or 21 m in height at the proposed District Centre;
 - Scenario 2 – Medium: the majority of buildings on Site up to nine storeys or 27m in height with buildings 10 storeys or 30 m in height at the proposed District Centre; and
 - Scenario 3 – High: the majority of buildings on Site up to 12 storeys or 36m in height with buildings 13 storeys or 39 m in height at the proposed District Centre.

- 2.18 The tested development height options were informed by those provided by the Greater Cambridge Shared Planning Service. The lower limit was set to reflect the prevailing scale and massing of buildings within the AAP area including recently consented office and hotel developments at Cambridge North Station. The medium and high development scenarios reflect an incremental increase of 3 storeys each. The exception to this approach was Block 5 due to existing townscape sensitivities. This was considered an appropriate way to test the development height scenarios, in the first instance, when the edge of City context and best practice guidance were taken into account.
- 2.19 All three scenarios include the consented hotel and office buildings adjacent to Cambridge North Station. The planning application references are: hotel - S-2372-17-FL; and office - S-2403-17-FL.
- 2.20 Each scenario is modelled in three dimensions in 3D Studio Max software to AVR1 level of detail. AVR1 allows the scale and size of a proposed development to be judged. Architectural detail or external finishes are not shown. This level of detail is sufficient to allow judgements to be made about the principle of each development height scenario and the broad quantum of development that could potentially be accommodated. In each scenario the buildings are not shown in detail in individual plots but instead are modelled as large blocks covering a wide area as shown on Figures 5.1 to 5.3. The height of each block is as set out in Table 1.

Table 1: Concept Plan First Iteration

	Low Height		Medium Height		High Height	
NEC Area	Building heights (storeys)	Building heights (metres)	Building heights (storeys)	Building heights (metres)	Building heights (storeys)	Building heights (metres)
Block 1	4 to 6 storeys	12 to 18m	4 to 9 storeys	12 to 27m	4 to 12 storey	12 to 36m
Block 2	3 to 6 storeys	9 to 18m	3 to 9 storeys	9 to 27m	3 to 12 storey	9 to 36m
Block 3	3 to 6 storeys	9 to 18m	3 to 9 storeys	9 to 27m	3 to 12 storey	9 to 36m
Block 4	4 to 6 storeys	12 to 18m	4 to 9 storeys	12 to 27m	4 to 12 storey	12 to 36m
Block 5	2 to 4 storeys	6 to 12m	2 to 5 storeys	6 to 15m	2 to 6 storey	6 to 18m
Block 6	3 to 6 storeys	9 to 18m	3 to 9 storeys	9 to 27m	3 to 12 storey	9 to 36m

NEC District Centre	5 to 7 storeys	15 to 21m	5 to 10 storeys	15 to 30m	5 to 13 storey	15 to 39m
Cambridge Science Park and St Johns Innovation Park Blocks 7 to 15	4 to 6 storeys	9 to 18m	4 to 9 storeys	9 to 27m	4 to 12 storey	9 to 36m

N.B. The blocks shown in Table 1 and represented in all photomontages are modelled to the maximum development heights and block envelopes.

- 2.21 Each height scenario includes existing green/drainage infrastructure to be retained as well as additional proposed green space that would form the basic structure of the green infrastructure. The strategic green infrastructure has informed the position of Blocks in the Site. It is not modelled in 3D and is not shown as developed in the model for each scenario. The amount of green/blue infrastructure required for sustainable drainage and open space is outside the scope of this Study.
- 2.22 Preliminary modelling was discussed with the Client team in order to agree the colour and appearance of the blocks that would be shown in the photomontages.

Preparation of photomontages

- 2.23 Once the colour and appearance of blocks in the 3D model had been agreed wirelines and photomontages of each development height scenario were prepared for each viewpoint. The technical method used for preparing the photomontages and wirelines is described in Appendix B.

Scenario testing and refinement of concept development height

- 2.24 This stage was iterative involving review of the photomontages and appraisal using criteria informed by GLVIA3. The appraisal criteria are described in Appendix A. From an appraisal of each initial development height scenario an opinion was formed about the potential effects on the Fen Edge landscape and sensitive receptors in the Study area. The appraisal identified the eastern and northern edges of each development scenario as resulting in substantial overall effects on the landscape and views to the east and north of the Site. It was considered by the Study Team that the effects were of such magnitude that overall effects would be harmful to the baseline and unlikely to be successfully mitigated through architectural design or landscape planting.

- 2.25 The model for each development height scenario was amended to give alternative development height options in order to reduce the effects on the landscape character and views to the east and north of the Site and on the Fen Edge landscape. This involved sub-dividing blocks 2, 3, 4, 7, 9, 12 and 15 and adjusting building heights to allow a gradation from low in the east and north (the more sensitive landscape edge) to higher in the west and south (less sensitive). The remaining parts of these blocks and all other blocks were modelled in accordance with the low, medium, high scenarios allowing a comparison of three height scenarios with mitigation. The model amendments are shown in Table 2 and the amended blocks are shown on Figures 5.1 to 5.3.
- 2.26 Following testing of the amended model using selected viewpoints the amendments were agreed with the Client team and final photomontages were prepared. The building heights used in the model are shown in Table 3

Table 2: Concept Plan 2nd Iteration Amendments to Model

Concept Plan Area	Amendment to Model
Block 1	<ul style="list-style-type: none"> No change
Block 2	<ul style="list-style-type: none"> Area of green space added to the northeast corner. Height reduced on northern and eastern edges for all options. Gradation from up to four storeys at the eastern edge to up to six storeys next tier back followed by low, medium, high options in the remaining parts of the Block.
Block 3	<ul style="list-style-type: none"> Height reduced at eastern edge of the Block for all options. Gradation from up to four storeys at the edges to up to six storeys next tier back followed by low, medium, high options in the western part of the Block.
Block 4	<ul style="list-style-type: none"> Variable height within the Block with the same configuration for all options. Up to four storeys at the eastern edge grading up to six storeys in the northern part of the Block and up to seven storeys adjacent the Cambridge North Station Local Centre.
Block 5	<ul style="list-style-type: none"> No change
Block 6	<ul style="list-style-type: none"> No change
NEC District Centre	<ul style="list-style-type: none"> No change
Cambridge Science Park and St Johns Innovation	<ul style="list-style-type: none"> No change to Blocks 8, 10, 11, 13 and 14. Block 7: Height reduced at the northern edge to up to six storeys for all options. Remaining part of the Block follows heights of low, medium, high development options.

Park Blocks 7 to 15	<ul style="list-style-type: none">• Block 9: Height reduced to up to four storeys in the north western part of the Block for all options to achieve consistency with Block 12. Height reduced to up to six storeys in the north eastern part of the Block for all options. Remaining part of the Block follows densities of low, medium, high development options.• Block 12: Height reduced to up to four storeys on the northern edge for all options. Height reduced to up to six storeys in the southern part of the Block for all options.• Block 15: Height reduced to up to six storeys for all options.
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Table 3 Concept Plan Building Heights Modelled in the Final Photomontages

NEC Area	Low Height		Medium Height		High Height	
	Building heights (storeys)	Building heights (metres)	Building heights (storeys)	Building heights (metres)	Building heights (storeys)	Building heights (metres)
Block 1	6 storeys	18m	9 storeys	27m	12 storeys	36m
Block 2	6 storeys	18m	9 storeys	27m	12 storeys	36m
Block 3	6 storeys	18m	9 storeys	27m	12 storeys	36m
Block 4	7 storeys	21m	7 storeys	21m	7 storeys	21m
Block 5	4 storeys	12m	5 storeys	15m	6 storeys	18m
Blocks 6 to 11	6 storeys	18m	9 storeys	27m	12 storeys	36m
Block 12	6 storeys	18m	6 storeys	18m	6 storeys	18m
Block 13	6 storeys	18m	9 storeys	27m	12 storeys	36m
Block 14	6 storeys	18m	9 storeys	27m	12 storeys	36m
Block 15	6 storeys	18m	6 storeys	18m	6 storeys	18m
NEC District Centre	7 storeys	21m	10 storeys	30m	13 storeys	39m
Cambridge Science Park and St Johns Innovation Park Blocks 7 to 15	8 storeys	24m	8 storeys	24m	8 storeys	24m

N.B. The blocks shown in Table 3 and represented in all photomontages are modelled to the maximum development heights and block envelopes.

Appraisal of potential landscape and visual effects of development heights

- 2.27 This stage involved detailed assessment of the effects of each development height option on each viewpoint and on the Fen Edge Landscape. The method for the detailed assessment is described in Appendix A.
- 2.28 In summary it involves the following key steps:

- Review of the landscape and visual baseline;
- Analysis of the existing pattern of development and mitigation;
- Review of proposed development scenarios;
- Assessment of sensitivity of receptors to the proposed development;
- Assessment of magnitude of change;
- Assessment of overall effects; and
- Identification of potential mitigation.

2.29 The detailed assessment of effects is described in Section 5.0 of this report. As mentioned in Section 1.0, of this report it is considered necessary that further design work will be undertaken by developers submitting planning applications at the Site with any such planning applications including more detailed LVIA and LVA studies.

2.30 The appraisal of effects is based on the block heights shown in Table 3 and on Figures 5.1 to 5.3 and in Figures 7.1 to 7.18. The mass and scale of these blocks is greater than that likely to be accommodated on the Site. However, at this stage it is assumed that individual buildings could be situated anywhere in the areas shown by the blocks in Figures 5.1 to 5.3. Showing the blocks in this way allows the model to be tested against the prevailing landscape and visual sensitivities. Testing and appraisal of the model allows identification of which blocks and parts of blocks in each development option that contribute more to effects on landscape and visual sensitivities

Options review of viewpoints with photomontage of final concept development heights

2.31 Following preparation of photomontages with the final concept development scenario model all viewpoints were reviewed and it was concluded that further amendments to the model would not be required in order to inform the AAP.

2.32 The photomontages are accompanied by guidance on massing and positioning of buildings that could further reduce the potential effects of development in Section 5.0 of this report.

Study Limitations

2.33 The basis of the Study is to inform the AAP document of the potential for landscape and visual effects arising from development at the site by identifying the level of effects that may be anticipated from the different development height scenarios.

2.34 The focus of the Study is upon the landscape and views within 3km of the site, and particularly within an immediate arc northwest to northeast, as that is where the greatest effects would potentially occur.

2.35 The testing and assessment of development height scenarios uses a block model that assumes all land will be built up to the specified maximum building height in each scenario. This allows the identification of areas in the surrounding landscape of differing sensitivity to different building heights. It also gives an indication of where taller buildings could potentially be accommodated at the Site and areas where lower buildings would be more appropriate. It is beyond the scope of the Study to identify specific plots where taller buildings could be located.

- 2.36 The Study does not include a townscape assessment and does not include an assessment of views outside of the 3km ZTV. This includes locations to the south and west of the city.

3.0 Legislation and Policy Context

- 3.1 This section provides a summary of relevant legislation, guidance and national and local planning policy relevant to the assessment of potential effects on landscape and views.

National Planning Policy

- 3.2 The National Planning Policy Framework (NPPF) (2018) sets out the Government planning policies for England. It advises how planning policy should be applied in development plans and in planning applications for new development. The NPPF places great emphasis on plans and developments contributing to sustainable development.
- 3.3 The following sections of the NPPF are most relevant to this chapter:
- Section 12: Achieving well-designed places
 - Section 15: Conserving and enhancing the natural environment

NPPF Section 12: Achieving well-designed places

- 3.4 Section 12, paragraph 124 explains the importance of good design to be "...the creation of high quality buildings and places is fundamental to what the planning and development process should achieve" and that "...good design is a key aspect of sustainable development."
- 3.5 Paragraph 127 advises that planning policies and decisions should ensure that developments are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change.

NPPF Section 15: Conserving and Enhancing the Natural Environment

- 3.6 Paragraph 170 of Section 15 advises that the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, as well as recognising the intrinsic character and beauty of the countryside.
- 3.7 Paragraph 180 advises that planning policies and decisions should limit the impact of light pollution from artificial light on local amenity.

Planning Practice Guidance

- 3.8 The NPPF is accompanied by Planning Practice Guidance (PPG) available online. The following advice within PPG is of most relevance to this chapter.

Design

- 3.9 PPG emphasises the importance of good quality design as an integral part of sustainable development and advises that good design should:
- "Ensure that development can deliver a wide range of planning objectives;

- *Enhance the quality of buildings and spaces, by considering, amongst other things, form and function; efficiency and effectiveness and their impact on well-being; and*
- *Address the need for different uses sympathetically."*

Natural Environment

- 3.10 PPG reinforces the NPPF's commitment to recognising the intrinsic character and beauty of the countryside and supports the use of landscape character assessment as a tool for understanding local distinctiveness and the use of Natural England's guidance on landscape character assessment.

Open Space, Sports and Recreation Facilities, Public Rights of Way and Local Green Space

- 3.11 PPG provides support for Public Rights of Way (PRoWs) as important components of sustainable transport links, seeking protection and enhancement where possible.

Local Planning Policy

South Cambridgeshire Local Plan (2018)

- 3.12 The South Cambridgeshire Local Plan was adopted on 27 September 2018. The policies relevant to this LCVIA are outlined below.

Policy S/2 Objectives of the Local Plan

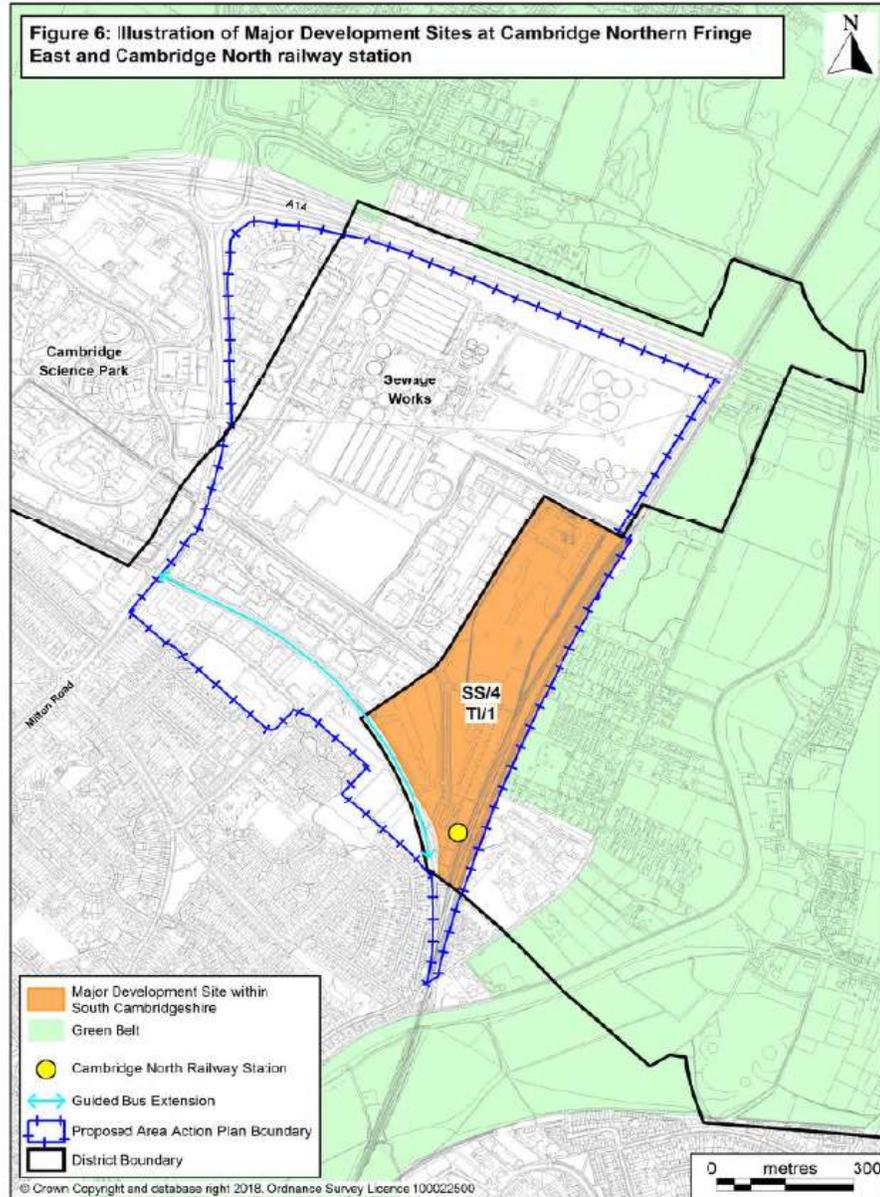
- 3.13 Policy S/2 outlines six key objectives that must be met in order for the Plan to achieve its vision. Objective B is most relevant to Landscape and Views:

"To protect the character of South Cambridgeshire, including its built natural heritage, as well as protecting the Cambridge Green Belt. New development should enhance the area, and protect and enhance biodiversity."

Policy SS/4 Cambridge Northern Fringe East and Cambridge North Railway Station

- 3.14 Policy SS/4 allocates the land to the south of the A14, in the eastern parcel of the Site for high quality mixed-use development, primarily for employment and a range of supporting uses including commercial, retail, leisure and residential as shown in Extract 1. An Area Action Plan (AAP) will be developed for the site jointly between SCDC and CCC.
- 3.15 The policy advises that proposals for the redevelopment of this site should:
- Take into account existing site conditions and environmental and safety constraints;
 - Ensure that appropriate access and linkages, including for pedestrians and cyclists, are planned for in a high quality and comprehensive manner; and

- Recognise the existing local nature reserve at Bramblefields, the protected hedgerow on the east side of Cowley Road which is a City Wildlife Site; the First Public Drain, which is a wildlife corridor, and other ecological features.



Map Extract 1: Cambridge Northern Fringe East Major Development Site allocation (Source: South Cambridgeshire Local Plan, 2018)

Policy HQ/1 Design Principles

3.16 Policy HQ/1 advises that new development must be high quality. The policy advises that development proposals should:

- Preserve or enhance the character of the local urban and rural area and respond to its context in the wider landscape; and
- Conserve and enhance important natural and historic assets and their setting.

Policy NH/2 Protecting and Enhancing Landscape Character

- 3.17 Policy NH/2 advises that development will only be permitted where it respects and retains, or enhances the local character and distinctiveness of the local landscape and of the National Character Area in which it is located.

Policy NH/6: Green Infrastructure

- 3.18 Policy NH/6 advises that the Council will aim to conserve and enhance green infrastructure within the district, and all new developments will be required to contribute towards the enhancement of the existing green infrastructure network. The Council will encourage development proposals which:

- Reinforce, link, buffer and create new green infrastructure; and
- Promote, manage and interpret green infrastructure and enhance public enjoyment of it.

Policy NH/8 Mitigating the Impact of Development in and Adjoining the Green Belt

- 3.19 The Site is located adjacent to the Green Belt boundary although it is not located within the Green Belt. Policy NH/8 advises that development on the edges of settlements which are surrounded by the Green Belt must include careful landscape proposals and design measures of high quality.

Policy E/1: New Employment Provision near Cambridge Science Park

- 3.20 Policy E/1 advises the appropriate proposals for employment development and redevelopment on Cambridge Science Park will be supported. Cambridge Science Park lies within the west of the Site.

Supplementary Planning Documents

- 3.21 The following Supplementary Planning Documents (SPD) have been adopted by South Cambridgeshire District Council.

Landscape in New Developments

- 3.22 The Landscape in New Developments SDP was adopted in March 2010 to ensure that landscape is fully integrated into a design. The SPD provides additional advice on landscape, whilst supporting the objective:

"To protect and enhance the character of appearance and natural heritage."

- 3.23 The SPD promotes a 'Landscape Scheme' which is stated to assist in achieving the following objectives related to this LVA:

- Promote Landscape Character
- Promote 'A Sense of Place'
- To reduce the visual impact of development
- To provide opportunities for recreation

Cambridge Local Plan (2018)

- 3.24 The Cambridge Local Plan was adopted by Cambridge City Council on 18 October 2018. The policies and proposals within Cambridge Local Plan that are relevant to this LCVIA are outlined below.

Policy 15: Cambridge Northern Fringe East and new railway Station Area of Major Change

- 3.25 Policy 15 relates to policy SS/4 from the South Cambridgeshire District Local Plan introduced in paragraph 1.6. Similarly, Policy 15 outlines the same eastern parcel land as that identified in Policy SS/4 as an 'Area of Major Change' and is allocated for the same development type, taking the same factors into consideration.

Policy 55: Responding to context

- 3.26 Policy 55 advises that development should demonstrate that it positively responds to its context and has drawn inspirations from the key characteristics of its surroundings to create distinctive, high quality spaces, to ensure that the special character of Cambridge is protected and enhanced.

Policy 57: Designing new buildings

- 3.27 Policy 57 provides criteria to be demonstrated by new development. In relation to landscape character and visual amenity, policy 57 advises that developments must have a positive impact on their setting in terms of wider townscape and landscape impacts and available views.

Policy 60: Tall buildings and the skyline in Cambridge

- 3.28 Policy 60 advises that proposals for structures that break the existing skyline and/or are significantly taller than the surrounding built form, should demonstrate through visual assessment or appraisal with supporting accurate visual representations, how the proposals fit within the existing landscape and townscape.

Cambridge Skyline Guidance

- 3.29 Appendix F: Tall Buildings and the Skyline forms part of the Cambridge Local Plan and offers further advice on tall buildings and the skyline in Cambridge. The guidance states that the overall character of the city's skyline is one of relatively few taller buildings that emerge as 'incidents' above the prevailing lower buildings and trees. Paragraph F.4 states that buildings between five and ten residential storeys are taller than the prevailing built form across the city.

- 3.30 In the Cambridge context, a tall building is defined as:

“Any structure that breaks the existing skyline and/or is significantly taller than the surrounding built form.”

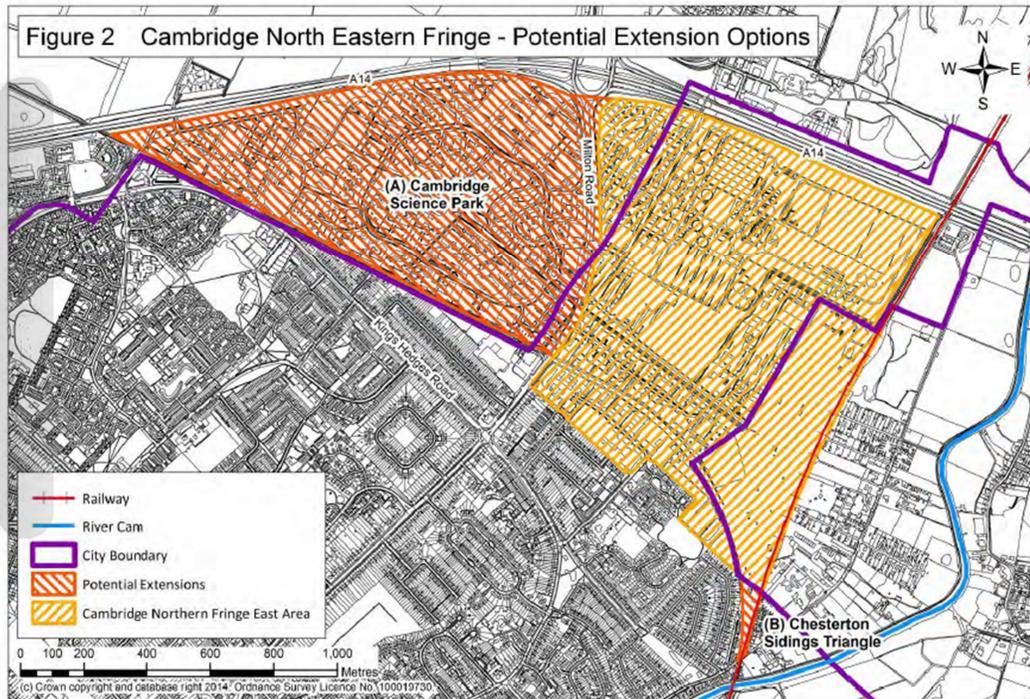
- 3.31 The overall aims of Appendix F are to:

- Maintain the character and quality of the Cambridge skyline;
- Ensure that tall buildings which break the established skyline are well considered and appropriate to their context;

- Support only new buildings which are appropriate to their context and contribute positively to both near and distant views.

Cambridge Northern Fringe East Area Action Plan: Issues and Options Report (2014)

- 3.32 As outlined above, CCC and SCDC have committed to the regeneration of the Cambridge Northern Fringe area through respective policies in their Local Plans.
- 3.33 In December 2014, SCDC and CCC jointly produced an Issues and Options Report for the Cambridge Northern Fringe East (CNFE) Area Action Plan (AAP) which includes only the eastern parcel of the Site. The Issues and Options Report indicates that the western parcel of the Site, and subject of this LCVIA, is a potential extension to the area included within CNFE as shown in Extract 2. The Issues and Options Report indicates that the new Cambridge North railway station will act as a catalyst for wider regeneration of the area.



Map Extract 2: CNFE Potential Extension Options

- 3.34 A boundary for the CNFE is proposed, which takes into account a number of factors. The 'physical and visual envelope factor' is particularly relevant to landscape and views, and states:

"Both the physical and visual envelope for the area is contained by the screening landscape alongside the A14 to the north, the highway environment along Milton Road to the west (with structural landscaping beyond), and the railway environment to the east created by the presence of the Cambridge to Ely line. The latter boundary feature will need to be strengthened by planting and potentially acoustic

barriers to mitigate against the noise impact particularly for the existing residential uses to the east of the railway. To the south, the visual boundary is less clear. The Cambridgeshire Guided Busway provides a visual break, but it is proposed to use the residential edge as the primary defining feature."

Cambridgeshire Green Infrastructure Strategy (2011)

- 3.35 The Cambridgeshire Green Infrastructure Strategy was prepared in 2011, updating the previous 2006 study. In relation to specific Green Infrastructure elements within Cambridgeshire, the Site is located in the 'Cambridge and surrounding areas' Strategic Area and more specifically the Cambridge Target Area.
- 3.36 The Green Infrastructure Strategy identifies the following opportunities for the Cambridge Target Area:
- Heritage: by the protection and enhancement of the historic built and natural environment
 - Landscape: by ensuring that the growth of Cambridge protects and enhances the setting of the historic City and enhances the character of the City through maintaining and contributing to green corridors linking the wider countryside within the heart of Cambridge; and
 - Rights of Way: by ensuring that all communities have access to sustainable modes of movements and enhanced links to the wider countryside as required by the plans for the major developments to provide for countryside recreation.

4.0 Landscape and Visual Baseline

- 4.1 As mentioned in Section 2.0 of this report any development at the Site will need to take account of the prevailing landscape and townscape character of the Site and its surroundings. This section therefore describes the baseline landscape character, townscape character and visual baseline with reference to published landscape character assessments and information regarding landscape designations.

The Site

- 4.2 An outline description of the Site was provided at paragraph 1.2 and a more detailed description of townscape character is presented at paragraph 4.56.
- 4.3 The immediate context of the Site is formed by:
- The A14 which runs along the northern and north western Site boundary, beyond which is Green Belt land with an open Fenland and arable agricultural character with the village of Milton, Milton Industrial Estates and Milton Country Park;
 - Cambridge North Railway Station and the Fen Road Traveller Site at the south eastern Site boundary;
 - Residential streetscapes which run along the south western edge of the Site along Lovell Road and King Hedges Road and along the south eastern edge at Maitland Avenue, Discovery Way and Long Reach Road;
 - A mix of residential and commercial development along the south eastern boundary with Cambridge Regional College defining the western setting to the Site;
 - The Cambridgeshire Guided Busway which marks the southern boundary of the western parcel and pockets of industrial and retail development are present at Kirkwood Road in the west and at the junction of Milton Road and the Guided Busway in the east; and
 - The Cam river corridor and open countryside which lie to the south east.

Designations

- 4.4 There are no landscape, ecological or cultural heritage designations in the Site. There are no landscape designations in the wider study area. A summary of cultural heritage and ecological designations present within the study area is set out below. Environmental, cultural heritage and landscape designations are shown on Figure 2.

Cultural Heritage

- 4.5 The nearest Listed Buildings are four Grade II buildings approximately 540m east of the Site in Fen Ditton Conservation Area. 640m to the northeast of the Site there is Grade II* Listed Biggin Abbey and Grade II Listed Wildfowl Cottage at Baits Bite Lock both in the northern part of Fen Ditton Conservation Area. Outside Fen Ditton Conservation Area there is a cluster of Grade II and Grade II* Listed Buildings in Milton Conservation Area and to the south of Fen Road and along High Street in the village of Milton. The Grade II Listed Church of St George 950m to the west of the Site is a noticeable feature in views from Ditton Meadows.

Fen Ditton Conservation Area

- 4.6 The Fen Ditton Conservation Area, encompassing the village of Fen Ditton, was first designated on 2 March 1973 before being extended on 24 September 1991.
- 4.7 Fen Ditton is approximately 0.6km to the southeast of the Site. It is a linear village, almost completely absent of backland development, except for a few modern houses. The River Cam creates a well-defined western edge to the village which has a rural setting.
- 4.8 Fen Ditton is surrounded by agricultural land of good to moderate quality (Natural England, 2011) and distinctive water meadows lie between the village and the river, visually separating the village from the city.
- 4.9 In the west of the village there are views of the Church of St Mary the Virgin and the Old Rectory which are visible above the water meadows and mature tree canopy. The grouping of these buildings along with a war memorial create a village focal point.
- 4.10 Ditton Hall, a Grade II Listed building is located on rising ground overlooking Ditton Meadows, connected to the village High Street via its garden walls. A Scheduled Monument is located to the east of Fen Ditton, comprising a multi-phased settlement.

Areas of Search

- 4.11 Data was gathered for all designated heritage assets within 1km of the Site.
- 4.12 This study has not examined in detail non-designated heritage assets within or around the development site boundary. A single known non-designated heritage asset located within the development area has however been identified through consultation with CCC. The asset is at 18 Cowley Road, The Old Cottage and is a very late 19th or early 20th century sewage works building on the east side of Cowley Road opposite the Jeffreys Building.
- 4.13 The following sources were consulted:
- The National Heritage List for current data on designated heritage assets;
 - The National Monuments Record maintained by Historic England;
 - Ordnance survey historic mapping;
 - Archaeological Data Service;
 - Aerial photographs and satellite images;
 - British Geological Survey mapping
- 4.14 The Historic Environment Record was not consulted as part of this study as that level of detail is not required to inform the purpose of the LCVIA.

Ecology

Bramblefields Local Nature Reserve (LNR)

- 4.15 Bramblefields LNR is located in the south east of the site, and is managed by Cambridge City Council. The site is surrounded by residential development on three sides and allotment gardens to the north-east. It is accessible from Laxton Way, Long Reach Road and Discovery Way.

- 4.16 The scrub and grassland are relatively recent habitats, with planted trees and bushes around the perimeter of the site.

Ditton Meadows and Stourbridge Common

- 4.17 Ditton Meadows and Stourbridge Common lie on the south side of the River Cam approximately 0.6km southeast of the Site. They are publicly accessible open green spaces formed of riverside floodplain. Stourbridge Common and Ditton Meadows are City Wildlife Sites, County Wildlife Sites and LNR. They make an intrinsic contribution to the character of the city as part of a network of riverside open spaces.

Milton Country Park

- 4.18 Milton Country Park is located to the southeast of Milton village, approximately 0.2km northeast of the Site. The 95 acre park was created from old gravel pits and consists of woodland, lakes and pathways.

Landscape Baseline

National Landscape Character

National Character Area (NCA) 88 Bedfordshire and Cambridgeshire Claylands

- 4.19 Landscape character areas are shown on Figure 3. The Site is in the northeast of NCA 88 Bedfordshire and Cambridgeshire Claylands. It is described in the NCA Profile as: *'...sparsely populated...A feeling of urbanisation is brought by the numerous large towns, including...Cambridge...and major transport routes, including the M1, A1 and A14 and the Midlands and East Coast mainline railways. Tranquillity within the NCA has declined, affected by visual intrusion, noise and light pollution from agriculture, settlement expansion and improvements in road infrastructure.'*

- 4.20 Key characteristics of the NCA of relevance to this LCVIA include:

- *'Gently undulating, lowland plateau divided by shallow river valleys that gradually widen as they approach The Fens NCA in the east.*
- *Variable, scattered woodland cover comprising smaller plantations, secondary woodland, pollarded willows and poplar along river valleys, and clusters of ancient woodland, particularly on higher ground to the northwest representing remnant ancient deer parks and Royal Hunting Forests.*
- *Predominantly open, arable landscape of planned and regular fields bounded by open ditches and trimmed, often species-poor hedgerows which contrast with those fields that are irregular and piecemeal.*
- *Wide variety of semi-natural habitats supporting a range of species – some notably rare and scarce – including sites designated for species associated with ancient woodland, wetland sites important for birds, great crested newt and species of stonewort, and traditional orchards and unimproved grassland supporting a rich diversity of wild flowers.*
- *Rich geological and archaeological history evident in fossils, medieval earthworks, deserted villages and Roman roads. A number of historic parklands, designed landscapes and country houses...*
- *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, giving a more rural feel. Small villages are usually nucleated around a church or village green, while fen-edge villages are often in a linear form along roads.*
- *Major transport routes cross the area, including the M1, M11, A1, A6, A5 and A14 roads, the East Coast and Midlands mainline railways, and the Grand Union Canal.*
- *Recreational assets include Grafham Water, the Grand Union Canal, Forest of Marston Vale Community Forest, Chilterns AONB, woodland and wetland sites, an extensive rights-of-way network and two National Cycle Routes. The cities of Cambridge and Peterborough and several of the historic market towns in the NCA are popular tourist destinations.'*

4.21 The NCA profile identifies Statements of Environmental Opportunities (SEO) of which the following are relevant to this LCVIA:

- *'SEO 3: Plan and create high-quality green infrastructure to help accommodate growth and expansion, linking and enhancing existing semi-natural habitats...'*
- *SEO 4: Protect, conserve and enhance the cultural heritage and tranquillity of the Bedfordshire and Cambridgeshire Claylands NCA, including its important geodiversity, archaeology, historic houses, parkland, and Second World War and industrial heritage, by improving interpretation and educational opportunities to increase people's enjoyment and understanding of the landscape.'*

NCA 46 The Fens

4.22 The Site lies to the south of NCA 46 which includes the level fenland landscape to the northeast of the A14 along the valley of the River Cam. The majority of the NCA, which covers an area of 3,826km², encompasses the level landscapes that lie between Peterborough, Cambridge and The Wash. The NCA Profile describes the area as *'...notable for its large scale, flat, open landscape with extensive vistas to level horizons. The level, open topography shapes the impression of huge skies which convey a strong sense of place, tranquillity and inspiration.'*

4.23 Key characteristics of the NCA of relevance to this LCVIA include:

- *'Expansive, flat, open, low-lying wetland landscape influenced by the Wash estuary, and offering extensive vistas to level horizons and huge skies throughout, provides a sense of rural remoteness and tranquillity.'*
- *Overall, woodland cover is sparse, notably a few small woodland blocks, occasional avenues alongside roads, isolated field trees and shelterbelts of poplar, willow and occasionally leylandii hedges around farmsteads, and numerous orchards around Wisbech. Various alders, notably grey alder, are also used in shelterbelts and roadside avenues.'*
- *Open fields, bounded by a network of drains and the distinctive hierarchy of rivers (some embanked), have a strong influence on the geometric/rectilinear landscape pattern. The structures create local enclosure and a slightly raised landform, which is mirrored in the road*

network that largely follows the edges of the system of large fields. The drains and ditches are also an important ecological network important for invertebrates, fish including spined loach, and macrophytes.

- *Settlements and isolated farmsteads are mostly located on the modestly elevated 'geological islands' and the low, sinuous roddon banks (infilled ancient watercourses within fens). Elsewhere, villages tend to be dispersed ribbon settlements along the main arterial routes through the settled fens, and scattered farms remain as relics of earlier agricultural settlements. Domestic architecture mostly dates from after 1750 and comprises a mix of late Georgian-style brick houses and 20th century bungalows.'*

4.24 Statements of Environmental Opportunities of relevance to this LCVIA are:

- *'SEO 4: Conserve, manage and enhance the Fens landscape and increase educational opportunities to access its geodiversity, archaeology and cultural heritage to enhance enjoyment and understanding for those who live and work in and visit the Fens.'*

NCA 87 East Anglian Chalk

4.25 The Site lies to the west of the NCA 87 which is described in the NCA Profile as '*...a visually simple and uninterrupted landscape of smooth, rolling, chalkland hills with large regular fields enclosed by low hawthorn hedges, with few trees, straight roads and expansive views to the north. ...over the last 50 years, towns – including the university city of Cambridge – and commuter villages have grown rapidly. There is pressure for more development, which is adding to the demand for water and is likely to further reduce the tranquillity of the NCA.'*

4.26 Key characteristics of the NCA of relevance to this LCVIA include:

- *'Archaeological features include Neolithic long barrows and bronze-age tumuli lining the route of the prehistoric Icknield Way; iron-age hill forts, including that at Wandlebury; impressive Roman burial monuments and cemeteries such as the Bartlow Hills; a distinctive communication network linking the rural Roman landscape to settlements and small towns, such as Great Chesterford; the four parallel Cambridgeshire dykes that cross the Chalk: the Anglo-Saxon linear earthworks of Devil's Dyke, Fleam Dyke, Heydon/Bran Ditch and Brent Ditch; ridge-and-furrow cultivation remains of the open field systems of the earlier medieval period; and large numbers of later moated enclosures, park lands, sheepwalks, arterial routes and nucleated villages that emphasise the land use change of this period.*
- *Settlement is focused in small towns and in villages. There are a number of expanding commuter villages located generally within valleys. Letchworth Garden City is a nationally significant designed garden city.*
- *In and around the wider area of Newmarket, stud farms impose a distinctive geometric, enclosed and manicured pattern to the landscape.*
- *The NCA is traversed by the Icknield Way, an ancient route that is now a public right of way. Roads and lanes strike across the downs perpendicularly and follow historical tracks that originally brought livestock*

to their summer grazing. Today major roads and railways are prominent landscape characteristics of the NCA.'

4.27 Statements of Environmental Opportunities of relevance to this LCVIA are:

- *'SEO 3: Conserve and promote the landscape character, geodiversity, historic environment and historical assets of the chalklands, including the open views of undulating chalkland, large rectilinear field pattern and linear ditches, strong equine association and the Ickniel Way prehistoric route. Improve opportunities to enhance people's enjoyment of the area while protecting levels of tranquillity.*
- *SEO 4: Conserve the settlement character and create or enhance sustainable urban drainage systems and green infrastructure within existing and new developments, particularly in relation to the urban fringe and growth areas such as south-east Cambridge, to provide recreation opportunities, increase soil and water quality and enhance landscape character.'*

Regional and Local Landscape Character

Cambridge Landscape Character Assessment (2003)

4.28 Regional and local landscape character is described in the Cambridge Landscape Character Assessment (2003) (LCA) which identifies seven Landscape Character Types (LCT) and 24 Landscape Character Areas (LCA). The LCA described below are relevant to this LCVIA.

Rural Lowland Mosaic - Northern Fringe

- 4.29 The Site is in the Rural Lowland Mosaic - Northern Fringe Landscape Character Area (LCA). This LCA sits on the hard urban edge of King's Hedges Road and the A14, and is described as an urban rural interface which 'contains' the city. The LCA has mixed land use including industrial units, Cambridge Regional College, open fields and some ancient hedgerows.
- 4.30 The A14, which is elevated along the majority of its route through this LCA, is described as being a visual intrusion in the landscape.
- 4.31 The landscape is described as degraded, *'only partly offset by the farmed arable land, the Science and Business Parks.'* One feature, the Mere Way, is the site of a Roman road and is now a public bridleway along most of its length.
- 4.32 A key feature of the Rural Lowland Mosaic - Northern Fringe LCA is the extensive tree planting running parallel to the A14 at Chesterton Sidings and on a high embankment at Cambridge Regional College.
- 4.33 In relation to views...*'A14 users receive elevated, wide panoramic views across Cambridge, including church spires, notably the Catholic Church and St Luke's, King's College Chapel, the University Library, Addenbrooke's chimney and Museum of Technology chimney.'* Well established planting within the A14 corridor to the north and east of the Site tends to restrict uninterrupted views across Cambridge.

- 4.34 The landscape character assessment indicates that the Rural Lowland Mosaic - Northern Fringe LCA is not a defining character area of Cambridge. However, the following important features are identified:
- *'Urban rural interface which 'contains' the City;*
 - *In parts, degraded urban edge;*
 - *Noise and visual intrusion of traffic using the A14; and*
 - *Ancient trackways and hedgerows.'*
- 4.35 The landscape character description outlines some opportunities for the area. Those relevant to this LCVIA include:
- *'Integrate the northern edge of Cambridge into the greater landscape as befits this major interface between the town and its setting;*
 - *Balance the need for screening the A14 corridor with the need for retaining important views of the landmarks which indicate the presence of the city to the south*
 - *Ensure development respects existing features and maximises opportunities to extend and improve ecological diversity;*
 - *Implement pedestrian and cycle links across the A14 to gain access to countryside and beyond; and*
 - *In association with new development, encourage the use of trees and shrubs which are appropriate to the area in visual and cultural terms and which, where appropriate, benefit wildlife.'*

The River Corridor - Open Rural LCA

- 4.36 This LCA lies to the west of the Rural Lowland Mosaic - Northern Fringe LCA and includes land between Fen Road, Horningsea Road and the A14. The landscape has a rural character emphasised by the River Cam that flows through it. Land use is a mix of agriculture with a caravan park on the west side of the River Cam. The village of Fen Ditton lies on the east side of the River Cam with its setting to the west strongly influenced by the level floodplain and bankside vegetation that truncates views in the direction of the Site. To the east of Fen Ditton there are large rectilinear arable fields that rise gradually towards Horningsea Road. The LCA description explains that... *'This part of the river corridor is isolated, with no through road, and is evocative of the previously widespread form of land husbandry.'*
- 4.37 The LCA description identifies the River Corridor - Open Rural LCA as *'...a key resource and essential to the special qualities of Cambridge. It is a defining character of Cambridge.'*
- 4.38 The following characteristic features are identified:
- *'Shallow valley landscape;*
 - *Ancient hedgerows, veteran trees including pollard willow and important habitat including river bank and associated flood meadows; and*
 - *Views over the water meadows, across the floodplain and the river, especially where it is lined with willows.'*
- 4.39 Opportunities of relevance to this LCVIA include:

- *"Care of the long term landscape with strategies implemented for pollarding cycles, opportunities taken to plant willows along the river bank to continue the tradition of river bank willows, opportunities taken to plant black poplars in selected location to provide local features;*
- *Encourage the allocation of riverside zones to create new habitat...;*
- *Continuation of grazing as a management regime where appropriate;*
- *Maximise the resource for the future enjoyment of people;*
- *Form partnerships with adjacent authorities, landowners and organisations to encourage and capitalise on the links between town and countryside and through the city with riverside walks and increased biodiversity along the river corridor; and*
- *In association with adjacent and overlooking development, encourage the use of trees and shrubs which are appropriate to the Character Type in visual and cultural terms and which benefit wildlife. Encourage the use of trees and shrubs of native or local provenance where appropriate.'*

The River Corridor - Commons LCA

- 4.40 There are a number of commons in Cambridge that lie adjacent the River Cam including Stourbridge Common and Ditton Meadows which lie to the south of the Site. Stourbridge Common is Open Access land and is described in the landscape character assessment as having '*...a horizon of mostly randomly planted trees...well used footways and cycleways...good views across the Common from the River...'*
- 4.41 The River Corridor - Commons LCA is described as '*...a defining character and essential to the special qualities of Cambridge.'*
- 4.42 The following characteristic features are identified:
- *'Commons tradition;*
 - *Character of individual commons;*
 - *Open areas linking green space right through the City; and*
 - *Views across the meadows to the river and beyond to other Commons.'*
- 4.43 Opportunities identified for the River Corridor - Commons LCA of relevance to this LCVIA and not identified for the River Corridor Open Rural LCA include:
- *'Commons are important landscape, recreational, cultural and biodiversity resource. Increase accessibility and linkages between the commons, and biodiversity where appropriate;*
 - *Link Stourbridge Common and Coldham's Common by way of Barnwell junction;*
 - *Plan and manage tree stock for future generations; and*
 - *Provision for recreational use could be very visually intrusive but may outweigh the detrimental effect on the environment - mitigation should be sought.'*

Cambridge Inner Green Belt Boundary Study (2015)

- 4.44 The purpose of the Cambridge Inner Green Belt Boundary Study 2015 was to identify land within the Cambridge Green Belt that could potentially be released for development thereby contributing to the Council's future housing requirements. The Study updated the 2003 Cambridge Landscape Character Assessment to bring it in line with current guidance and to ensure that the Study was underpinned by a robust baseline assessment. The Study identified six Landscape Types and 13 Landscape Character Areas of which those described below are relevant to this LCVIA.

1A Waterbeach - Lode Fen LCA

- 4.45 *'The key characteristics of the Waterbeach-Lode Fen stem from the flatness of the landscape. These are the senses of space and openness, and the importance of the horizon and skylscapes in the panoramic distant views. It is a very regular landscape, with straight roads, ditches, shelter belts and field boundaries. The peaty soils are dark brown in colour, and support intensive arable agriculture. Lines of willows and poplars mark the course of the river Cam. Settlement is dispersed, and is restricted to scattered farms strung out on the higher land alongside roads. Most buildings are of brick construction and date from the draining of the land in the 18th and 19th centuries.*
- 4.46 *Views to Cambridge are restricted to the southern edge of the character area, where they are dominated by the hangars of the airport. Links with the city are through an extension to the Cam Corridor, which is a green corridor into the city, and contains a long distance footpath and a railway line.'*

2A Western Fen Edge LCA

- 4.47 *'The Western Fen Edge landscape character area extends to the north and north west of Cambridge. It is a relatively low-lying landscape, and undulates very gently between 5 and 20m above sea level. It is slightly higher than the Fen proper. It is a flat and expansive landscape, where sky and horizons are dominant features. Arable agriculture is the principal land use, and the land is divided into medium sized regular fields. Hedges and shelterbelts between fields, plus several orchards, add a distinctive pattern of vegetation into the landscape.*
- 4.48 *Views to Cambridge are restricted by the low-lying topography and the A14. Therefore the only key views to Cambridge from the western fen edge are from the A14 itself. The A14 also acts as an artificial edge to the city, and undermines the gentle transition between the city and the fen edge.*

4.49 *There are several villages within the western fen edge, the majority of which developed on 'islands' of higher ground to reduce the risk of flooding. They display a variety of historic forms: Some, such as Landbeach developed along routeways and are linear in form, whilst others such as Histon are nucleated around a village green. The villages closest to Cambridge (Girton, Histon and Milton) have all expanded considerably in the 20th century, and are now often perilously close to being linked to Cambridge by suburban routes. However, each has retained its individual village character. The Fen edge villages were traditionally wealthy and contain several fine medieval churches. Building materials traditionally used in the fen edge villages include gault brick, render, and thatch. Only the wealthiest buildings were constructed of stone.'*

2B Eastern Fen Edge LCA

4.50 *'The Eastern Fen Edge is a transitional landscape between the Fenlands and the Chalklands. One of the key characteristics of this landscape character area is the pockets of Fen and Chalk landscapes around and within it, which contribute to the transition and bring different influences.*

4.51 *The Eastern Fen Edge is open in character, and is generally arable farmland, divided by hawthorn hedges. Views are generally long, and often include the surrounding landscape character areas. In the northern part of the area, variety in the landscape is achieved through designed landscapes at Anglesey Abbey and Bottisham Hall.*

4.52 *There is a gradual transition between the farmland of the Eastern Fen Edge and the chalk hills to the east and south. From this slightly higher land there are distant views to Cambridge, with the city set in a green landscape. There are immediate views to the edge of Cambridge from the western part of the landscape character area. The airport dominates many of these views.*

4.53 *Settlement in the Eastern Fen Edge includes scattered farms and a number of small villages separated by farmland. The villages are located on relatively high ground and their church towers are prominent in the landscape. Of these villages, only Fulbourn has expanded with significant areas of modern housing.'*

4A River Cam Corridor LCA

4.54 *'The River Cam Corridor Landscape Character Area runs through Cambridge, on a roughly south west to north east course. It is distinctive from other river valley landscapes because of its key views to the landmark towers and spires of Cambridge, and because of its rural and pastoral character, even close to the city centre. It forms distinctive approaches to Cambridge from the south west and the north east, along green corridors into the city via footpaths alongside the river. To the north, a long distance footpath provides a link between Cambridge and the open countryside, and a railway also runs within the valley. The Cam Valley further enriches the setting of Cambridge through the historic association between the city and its river, and through the works of Rupert Brook, Byron, and other poets who described the Cam valley around Grantchester. Grantchester contains a very attractive historic core containing timber-framed and rendered buildings.'*

Townscape Character

- 4.55 Townscape is defined as the landscape where built form predominates and is about...*'The character and composition of the built environment including the buildings and relationships between them, the different types of urban open space, including green spaces, and the relationship between buildings and open spaces.'*
- 4.56 Important or valued areas of townscape or landscape in relation to building form or structures are designated as Conservation Areas. These are shown on Figure 2 and those closest to the Site are described at paragraphs 4.5 - 4.14. Listed Buildings are features of value and their presence indicates that townscape may be of higher quality or value. Locally designated historic buildings also indicate that townscape may be of higher quality or value. The distribution of Conservation Areas and Listed Buildings indicates that higher value areas of townscape are located in and around Cambridge City centre with other areas of importance in satellite villages to the north and east of Cambridge.
- 4.57 South Cambridgeshire District Council's Cambridge Green Belt Study (CGBS) (2002) identifies and describes the townscape character of Cambridge. The purpose of the CGBS was to identify areas of land within the Cambridge Green Belt that could potentially be released without compromising the setting and special character of Cambridge.
- 4.58 The CGBS identified 15 townscape character areas (TCA) of which those described in summary below are of most relevance to this LCVIA. The TCA are shown on Figure 3. The Cambridge Inner Green Belt Boundary Study describes the same TCA as the CGBS and uses the same TCA boundaries. Townscape character of the Site is described in more detail in paragraphs 4.60 to 4.83.

5A Cambridge Science Park and St John's Innovation Park TCA

- 4.59 This TCA includes the western part of the Site and a small part of the eastern parcel at St John's Innovation Park. It is enclosed to the north by the A14 which runs on embankment with dense tree planting on its slopes.
- 4.60 *'Cambridge Science Park, St John's Innovation Park and Cambridge Regional College are located on the northern edge of the city off Milton Road adjacent to the A14. Cambridge Science Park, in particular, is a high quality business park with large-scale high quality commercial buildings in innovative styles housing mainly high technology companies. The buildings and car parks are partly screened by earth mounding and planting, giving it a very green and suburban character. The main spine road through the development is a meandering loop road. St John's Innovation Park also contains high quality commercial buildings, but has a more built-up character.'*

5B Railway Corridor TCA

- 4.61 This TCA includes the eastern part of the Site to the east of St John's Innovation Park and to the north of Maitland Avenue. Its eastern boundary is the London Kings Cross to Kings Lynn railway line with the A14 in cutting forming the northern boundary to this TCA. This TCA also includes two further areas south of the River Cam and to the east of Cambridge City centre.

4.62 *'The railway corridor is characterised by medium and large-scale commercial, light industrial and office development on both sides of the railway line. There are also extensive areas of hard surfacing for car parks and little vegetation. The approach to Cambridge along Newmarket Road has been particularly affected by commercial development with many closed facades to the street. The northern part of the railway corridor contains the railway sidings and the sewage works.'*

7A Northern Suburban Estates TCA

4.63 This TCA lies immediately to the south of both TCA 5A and 5B. A small area of the eastern part of the Northern Suburban Estates TCA lies within the eastern Site parcel.

4.64 *'The Northern Suburban Estates, including the Arbury and Kings Hedges estates and Chesterton, comprise inter- and post-war housing. 1920's and 1930's redbrick semi-detached houses with front and rear gardens and Arts and Crafts style rendered houses were built along the approach roads (Huntingdon Road, Histon Road and Milton Road). Post-war housing development has been built between the approach roads and extends close to the A14, and surrounds the historic village of Chesterton. The largest post-war council housing estate, North Arbury, built in the 1970's, contains a range of housing types including buff brick flats and terraced housing and the Kings Hedges estate comprises high density two storey red brick terraced houses around courts.'*

4.65 The following TCA do not lie within the Site but are contiguous with it or there is potentially intervisibility between them and the Site.

3A River Cam Corridor TCA

4.66 The River Cam Corridor TCA follows the course of the River Cam and includes the floodplain and several of the Commons mentioned in the description of The River Corridor - Commons LCA. The northern part of the TCA lies to the east of the eastern Site parcel and includes the western part of Fen Ditton Conservation Area.

4.67 *'The Cam Corridor is a distinctive feature of Cambridge and forms part of an unbroken green finger through the city. The river corridor forms a landscape setting to the historic core unique to Cambridge. The river corridor comprises Sheeps Green, Paradise/Lammas Land and Coe Fen to the south, The Backs in the centre and Midsummer Common and Stourbridge Common to the north east. Along the river there are foot and cycle paths, including two long distance paths, Fen River Way and Harcamlow Way, linking Cambridge with the surrounding countryside. The Cam Corridor is characterised by water meadows grazed by cows, and the river is popular for rowing, boating, fishing and the Cambridge tradition of punting.'*

6C Newmarket Road Suburban Estates

4.68 This TCA lies to the south of the northern part of the River Cam Corridor TCA. The residential area backs onto Ditton Meadows and provides containment to views from the River Cam Corridor.

- 4.69 *'The suburb around Newmarket road, separated from Cambridge by Coldham's Common, consists mainly of red brick semi-detached houses with front and rear gardens built in the 1920's and 1930's. The character area also includes the City Cemetery, a post-war housing development and the Abbey Stadium.'*

Townscape Character of the Site

- 4.70 As mentioned above townscape character at the Site is predominantly defined as falling within two areas: 5A Cambridge Science Park and St John's Innovation Park and 5B Railway Corridor TCA. The characteristics described below are relevant to this LCVIA.

Topography

- 4.71 Land within the Site is generally flat with a gradual fall towards the east and the River Cam; the relief of the site is between approximately 5 and 10m above ordnance datum (AOD).

Land Use

- 4.72 Land use is predominantly commercial and business use to the west of Milton Road. To the east of Milton Road the WWTW occupies a large proportion of the Site with some commercial uses such as St John's Innovation Park and the Cowley Park area also occupying the eastern parcel. Residential as well as some industrial uses can be found adjacent to the Site.

Urban Grain

- 4.73 The urban grain of the western parcel is largely made up of stand-alone buildings on subdivided plots with large footprints set back from the circular access road, surrounded by car parking, public realm and green space.
- 4.74 Buildings in the western parcel are set in a well-established landscape that complements the built form and provides green and blue infrastructure within the Science Park. The arrangement of the semi-mature trees in the amenity grassland between the road edge and the building plots creates a sense of space with the varying texture and colour against the geometric outlines of buildings. An existing green network runs north-south and east-west through the site, aligned with pedestrian routes. Despite the variety of building styles there is a strong sense of order and legibility in the western parcel.
- 4.75 Urban grain of the eastern parcel is fragmented and disparate with a variety of different land uses including utilities, warehouse/shed industrial units and transport. There are a series of car parks for individual industrial units and areas of unmanaged vegetation and derelict land. There is no unifying characteristic within the eastern parcel although Cambridge North Rail Station identifies as a destination and potential urban quarter.

Scale and Massing

- 4.76 Cambridge Science Park consists of large-scale, commercial buildings, with low pitched roofs housing mainly technology companies. Building materials range from brown brick and render to glass frontages, representing the expansion of the science and business park over time. There is a consistent density of layout and building heights are predominantly three or four storeys.
- 4.77 The eastern parcel includes St John's Innovation Park where buildings occur at a similar density to Cambridge Science Park and are of similar height. To the east of St John's Innovation Park the Anglian Water Waste Water Treatment Works (WWTW) occupies a large proportion of the land with open areas and clusters of utilities infrastructure including tall silos. In the southeast of the eastern parcel there is a small industrial park at Cowley Road where businesses operate from warehouse buildings set behind palisade security fences on narrow roads with minimal green infrastructure and tree planting. In the south of the eastern parcel Cambridge Business Park contains a number of modern office buildings laid out in a grid pattern along Cowley Park (road) which is only accessible from Milton Road. Each building plot includes formal landscape treatment with amenity grassland, shrubs and street trees in narrow borders. To the south of Cambridge Business Park and on the south side of the Guided Busway there is an industrial area at Nuffield Road with a smaller area (Trinity Hall Farm) to the west of this backing on to Milton Road. Cambridge North Rail Station is in the south east corner of the parcel with road access and car parking. There is wooded undeveloped land next to the station development. Adjacent to the Rail Station planning applications for a hotel and separate office building have been consented. These buildings are eight storeys and seven storeys in height and will create a localised area of densification.

Movement and Linkages

- 4.78 Vehicular access into the Site is limited with one main route into and out of the east and west parcels from Milton Road. There is controlled access to Cambridge Science Park where it meets Cambridge Regional College.
- 4.79 Cambridge Science Park is served by a single orbital road, off which stem roads servicing individual building plots and car parks. The WWTW is accessible from one point off Cowley Road which serves the eastern parcel to the north of the Guided Busway. The industrial area at Nuffield Road is accessed via Nuffield Road which connects to Green End Road to the south of the Site.
- 4.80 A Guided Busway runs along the south eastern Site boundary linking the Site to and from Cambridge North Rail Station. There are two bus stops serving the Science Park; the first near to Milton Road and the second is at the eastern fringe of the Science Park.
- 4.81 National Cycle Route (NCR) 51 passes next to Cambridge Science Park along the guided bus route (west of Milton Road).
- 4.82 There are other local cycle routes linking the Site to the wider area. This includes a cycle route from Cambridge North station heading west along Cowley Road. There is also a cycle route linking Milton (via overbridge to A14) onto Cowley Road.

Visual Baseline

- 4.83 This section provides an overview of visual character of the study area and describes the key verifiable views that have been selected for analysis and modelling during Stage 2 of the Study.

Overview of Visual Character

- 4.84 As mentioned above townscape character of the Site itself is mixed. The western parcel and the western and southern parts of the eastern parcel have a more unified character of modern office buildings and technology campus than the remaining part of the eastern parcel. While there is variation in architectural design and streetscape of the office buildings and technology campus it creates an area of similar visual character. The industrial, commercial and infrastructure uses of the remaining part of the eastern parcel give a more varied visual character.
- 4.85 Between the Site and the River Cam the landscape has an urban fringe character and is of relatively low scenic quality. South and east of the River Cam and west of the B1047 the river corridor has a semi-rural character influenced by the village of Fen Ditton and the residential area on Newmarket Road. East of the B1047 the landscape has a more rural character with a horizontal emphasis although Cambridge Airport and the A14 influence visual character. To the north of the A14 and east of Horningsea Road the landscape is expansive and large scale. The level landscape with sparse woodland and tree cover means that the sense of scale and perception of distance is lessened.
- 4.86 Between Horningsea and Milton the land is more modified with roads, settlements, the River Cam, the Kings Lynn railway line and field enclosure. While it has a rural character the built environment is noticeable. The A14 and vegetation on its northern side screen the Site in views from the north although there are glimpsed views where the road crosses the railway line at the northeast corner of the Site.
- 4.87 There are views of the Site from the River Cam corridor between Ditton Meadows in the south and Horningsea in the north.
- 4.88 To the northwest of the Site and the A14 between Milton and Impington the landscape is not typical of the Fen Edge. It contains wide tree belts, a mounded landfill site and a park and ride. It is also influenced by the northern edge of Cambridge Science Park and by buildings in Cambridge Regional College. There are views of the western parcel from the A14 and from Mere Way byway to the north of the A14.
- 4.89 To the west of Impington and west of the B1049 the Site is not visible or barely discernible and seen against a backdrop of residential and industrial development.

Verifiable Viewpoints

- 4.90 A number of candidate viewpoints were identified through desk-based study followed by site verification to provide a final shortlist. The viewpoints were selected in collaboration with the Client Team and were informed by the factors listed in paragraph 2.12.

4.91 The viewpoints listed in Table 4 and shown on Figure 4.1 and 4.2 and Figures 7.1 to 7.18 were shortlisted. Those viewpoints considered unsuitable for the purposes of the LCVIA are listed in Appendix C with reasons for excluding them from further analysis. A survey and photography team undertook viewpoint photography on 10th December 2018 of the six shortlisted viewpoints.

Table 4 Verifiable Viewpoints used in the LCVIA

Viewpoint number	Viewpoint Description	Distance and Direction to the Site	Reason for Inclusion in the LCVIA
1	Ditton Meadows on NCN Route 51.	0.5km to the north.	Represents short distance views from a national cycle route and a well-used recreational area.
2	Ditton Meadows on Harcamlow Way.	0.6km to the west.	Represents short distance views from the Harcamlow Way, Fen Ditton Conservation Area and from a well-used recreational area
3	Harcamlow Way, River Cam.	0.5km to the west.	Represents short distance views from the Harcamlow Way and from the River Cam.
4	Harcamlow Way, Horningsea Road.	1.15km to the southwest.	Represents medium distance views from the Harcamlow Way across the River Cam floodplain encompassing Biggin Abbey.
5	NCN Route 11 at Jane Coston Overbridge	0.05km to the south.	Represents short distance views from NCN Route 11 towards the eastern parcel.
6	Mere Way Byway north of the A14	0.4km to the northwest.	Represents short distance views of the western parcel from the north and west.

Viewpoint Baseline Description

Viewpoint 1 Ditton Meadows on NCN Route 51

- 4.92 The viewpoint is on NCN Route 11 where it runs parallel to the northern boundary of a residential area. Properties along Misty Meadows and Howard Close front onto Ditton Meadows. The viewpoint is slightly elevated above the River Cam and set back from the river such that there is an open character to views.
- 4.93 Figure 7.1 shows that views in the direction of the Site are partly screened and filtered by mature trees and lower shrub species growing on the north side of the River Cam. In the centre of the view the white building is the premises of 'White House Arts' and immediately to the left there are two apartment buildings at the south end of Fen View Court which overlook the River Cam and Ditton Meadows. To the left of these buildings properties on the north side of Fen Road are visible. The railway overbridge that carries the Cambridge to Kings Lynn railway line is a notable feature. To the left of the overbridge the tower of the Church of St George is barely discernible behind intervening trees.
- 4.94 To the right of centre built form at Cambridge North station is discernible although heavily filtered by trees. The consented hotel and office buildings mentioned previously will be noticeable through gaps in trees and through trees in winter. To the right of these buildings the communications mast (approximately 45m in height) which is located to the northeast of Cambridge North Rail Station and outside the Site is discernible. To the right of the mast a chimney associated with the sand and gravel works in the eastern part of the Site is noticeable.

Viewpoint 2 Ditton Meadows on Harcamlow Way

- 4.95 The viewpoint is on the route of the Harcamlow Way where it emerges from the village of Fen Ditton. The viewpoint is in Fen Ditton Conservation Area and at the eastern edge of Ditton Meadows. The viewpoint is representative of the immediate setting and context to Fen Ditton and views in the direction of the Site on leaving the village to walk alongside the River Cam.
- 4.96 Figure 7.4 shows that views are more enclosed than from the western part of Ditton Meadows. A hedge field boundary in the left of the views and woodland growing alongside a drain in the right of the view provide enclosure. Views in the direction of the Site are screened and filtered in the centre and right of the view by trees and lower shrubs growing along the north bank of the River Cam particularly around Black House which is the building to the right of centre.
- 4.97 To the left of centre built form associated with Long Reach House is discernible and to the right of Black House the communications mast is visible. The consented hotel and office buildings will not be visible from this location.

Viewpoint 3 Harcamlow Way, River Cam

- 4.98 The viewpoint is on the Harcamlow Way where it runs parallel to the River Cam to the southwest of Poplar Hall in Fen Ditton Conservation Area. It provides views from a slightly elevated location above the River Cam and allows views in the direction of the Site.
- 4.99 Figure 7.7 shows there are views towards the Site across an undulating pasture field on the south side of the River Cam which runs left to right parallel to the edge of the pasture field in the mid ground. In the centre of the view a lattice pylon approximately 25m in height is visible through a gap in vegetation. The pylon is in the north eastern part of the Site in the WWTW. To the left of the pylon, silos approximately 20m in height associated with the WWTW are discernible. To the right of the pylon traffic using the A14 is discernible.
- 4.100 To the left of centre through gaps in vegetation built form associated with the sand and gravel works in the Site can be seen including a chimney approximately 22m in height. Other built form is discernible at lower levels to the left of the chimney. In the left of the view the communication mast is visible. Behind it the consented hotel and office buildings will be noticeable.

Viewpoint 4 Harcamlow Way, Horningsea Road

- 4.101 The viewpoint is located where the Harcamlow Way and Fen Rivers Way head west from Horningsea Road to Baits Bite Lock. It provides views from a slightly elevated location before descending onto the floodplain of the River Cam.
- 4.102 Figure 7.10 shows that the view is enclosed on the right by a hedge alongside which runs the route of the Harcamlow Way and Fen Rivers Way. The footpath leads to Baits Bite Lock which lies in Baits Bite Lock Conservation Area. To the right of centre Grade II* Listed Biggin Abbey is partly visible in a setting of well-established vegetation. On the horizon to the right of Biggin Abbey and behind it there are three lattice pylons each between 28m and 35m in height. The left and right pylons are closer to the viewpoint and outside the Site boundary at the substation adjacent to the northeast corner of the Site. The central pylon of these three is in the Site in the northeast of the WWTW. Built form within the Site is discernible to the right of these pylons and traffic using the A14 is visible.
- 4.103 In the left of the view more pylons are noticeable features in the view which has a horizontal emphasis that is reinforced by the formal avenue of trees on the approach to Biggin Abbey. The three pylons to the left of Biggin Abbey lie to the north of the A14 and are outside the Site. To the left of the central pylon the communications mast is visible.

Viewpoint 5 NCN Route 11 at Jane Coston Overbridge

- 4.104 The viewpoint is on the north end of the Jane Coston Overbridge that carries NCN Route 11 over the A14. Figure 7.13 shows the view looking east from the bridge to the eastern Site parcel.

- 4.105 A thick belt of mature vegetation screens the Site from view. Built form associated with the WWTW can be glimpsed through the trees in the right of the view and to the right of centre. To the left of centre a pylon (approximately 35m in height) is visible through and above the belt of trees. The pylon is situated in the Site in the northeast of the WWTW. The three pylons in the left of the view are situated outside the Site with the right hand pair associated with the substation that lies adjacent to the Site.
- 4.106 Views from the bridge and the experience of using NCN Route 11 at this location are dominated by the noise and movement of traffic using the A14 and by the linear infrastructure of the A14 itself.
- 4.107 To the right of the view and not shown on Figure 7.13 buildings in St John's Innovation Park overlook the A14 and are not wholly screened by trees.

Viewpoint 6 Mere Way Public Right of Way (Byway)

- 4.108 The viewpoint is at a gap in the hedge the runs alongside Mere Way which is a public right of way (byway) that runs northeast from NCN Route 51 at Cambridge Guided Busway to the west of Cambridge Regional College. The byway passes beneath the A14 connecting with Butt Lane and continuing north of Butt Lane to joining Akeman Street to the west of the village of Landbeach.
- 4.109 Figure 7.16 shows that buildings in the north western part of the Site are very noticeable features on the skyline. In general views of the Site from the southern part of Mere Way are intermittent due to the presence of the hedge on the east side of the route. The A14 is on embankment as it passes to the north of the Site and traffic is clearly visible through gaps in the hedge growing alongside Mere Way.

Viewpoint selection rationale

- 4.110 The six viewpoints are predominantly to the east of the Site. Visibility towards the eastern part of the Site from the north and northwest is restricted by vegetation, landform or built form. In particular vegetation and landform between Impington and Milton restrict views towards the Site. The landscape between Impington and Milton is not typical of the open fenland landscape that is important to the setting of Cambridge. It has been modified by a landfill site and contains a number of well-established linear tree belts that enclose pastoral fields and restrict views.
- 4.111 The landscape between Impington and Milton is not recognised in published landscape character assessments and townscape assessments as making an important contribution to the setting of Cambridge. It contains few notable landscape or cultural heritage designations with very few public rights of way and no recreational routes of regional or national importance. In addition the A14 corridor runs on embankment parallel to the northern boundary of Cambridge Science Park. This well wooded corridor restricts views towards the western parcel although there is a notable gap in vegetation cover between the traveller's site and the woodland to the west of the eastbound off ramp at the Milton Junction. Both the A14 and buildings on the northern edge of Cambridge Science Park influence landscape and visual character to the north.

- 4.112 A well wooded embankment alongside the A14 and intervening woodland restricts views from Milton Country Park such that the focus of peoples' attention is likely to be views within the Country Park rather than views outward to the south.
- 4.113 The more sensitive areas of landscape, townscape and visual character with the potential to be affected by development at the Site are to the east, northeast and southeast of the Site. The distribution of viewpoints reflects the higher sensitivity of these areas and the purpose of the LCVIA is to analyse the potential effects of development upon the fenland landscape at the northern fringe of Cambridge and on cultural heritage assets that contribute to the landscape and visual amenity of this area.

Landscape and Visual Baseline Conclusions

- 4.114 Analysis of baseline publications and observations during fieldwork indicate that the boundaries of national and local landscape character areas and local townscape areas are fit for purpose in the context of this LCVIA. While there have been some changes to land use and new development has been constructed or consented since the publications, changes have been relatively minor. There has been no substantial change to landscape and townscape character that affects the boundaries of each distinctive area.
- 4.115 The Cambridge Landscape Character Assessment and the Cambridge Inner Green Belt Study identified some of the characteristics, special qualities and sensitivities of the River Cam corridor and fringes of the Site (paragraphs 4.38, 4.42 and 4.54). In addition, fieldwork observations indicate that the sensitive areas of landscape, townscape and visual amenity lie to the northeast, east and southeast of the Site and can be summarised as follows:
- The River Cam corridor with its network of recreational routes and green infrastructure;
 - The Commons of Ditton Meadows and Stourbridge Common that are important to the green network and provide important areas of open space enclosed by built form;
 - The open, rural fenlands to the north of the A14 and east of Fen Ditton that form the setting to northeast Cambridge;
 - The horizontal emphasis of the skyline in views towards the Site from the northeast;
 - The fact that Cambridge is largely 'hidden' from view behind vegetation and landform in views from the north and east;
 - The influence of the A14 corridor on perceptual and aesthetic qualities of landscape and views and its influence on movement through the landscape; and
 - The absence of notable historic skyline features in views towards the Site from the north and east.

5.0 Appraisal of Effects

Introduction

- 5.1 This section describes an appraisal of the effects of each development height option upon landscape character and views. The appraisal of each development option is informed by the six verifiable views for which photomontages are provided in Figures 7.1 to 7.18. These are referred to in the appraisal of effects on both landscape character and views.
- 5.2 The appraisal is undertaken on the blocks as shown on Figures 5.1 to 5.3 and on Figures 7.1 to 7.18. At this stage the layout, massing and design of buildings is not known nor is the layout of infrastructure and open space. It is assumed that buildings could be present anywhere in Areas 1 to 15 at the heights shown on Figures 5.1 to 5.3. The blocks represented in the photomontages are modelled to the maximum development heights and block envelopes.
- 5.3 The appraisal of effects is undertaken in accordance with the detailed method described in Appendix A to this report which complies with the advice of GLVIA3. The appraisal provides a comparison of options and identifies further guidance on design development that could be undertaken to inform the layout and massing of buildings at the Site.
- 5.4 As mentioned in Section 2.0 of this report, planning applications for development at the Site will be required to undertake more detailed LVIA or LVA work to inform design and to provide sufficient assessment information to the planning authorities to inform a decision on each planning application. It is recommended that the scope of any further LVIA and LVA studies undertaken at the planning application stage are agreed in consultation with the planning authorities and other relevant stakeholders and may include townscape and residential areas in Cambridge to the south of the Site.

Appraisal of Effects on Viewpoints

- 5.5 The appraisal of effects on viewpoints is described in Tables 5 to 10 and includes conclusions for each viewpoint and guidance on massing to inform a preferred development option.

Table 5 Viewpoint 1 Ditton Meadows on NCN Route 51

Baseline Summary Description					
<p>The viewpoint is on NCN Route 11 where it runs parallel to the northern boundary of a residential area. Properties along Misty Meadows and Howard Close front onto Ditton Meadows. The viewpoint is slightly elevated above the River Cam and set back from the river giving an open character to views. The viewpoint represents recreational users of Ditton Meadows and NCN 51 who are of High sensitivity to change from the Development.</p>					
Appraisal of effects of height options					
High (Figure 7.1)		Medium (Figure 7.2)		Low (Figure 7.3)	
Magnitude of change: High	Overall effect: Major	Magnitude of change: Medium	Overall effect: Moderate	Magnitude of change: Medium-Low	Overall effect: Moderate-Minor
<p>Development would occupy a large proportion of the field of view with blocks in the eastern parcel being more noticeable than those in CSP.</p> <p>Block 4 would be very noticeable in the centre of the view with Block 6 above it to the rear.</p> <p>Block 3 also would be very noticeable to the right of centre and Block 2 is discernible.</p> <p>Blocks 11 and 14 in CSP would be visible on the horizon above trees.</p> <p>Development would introduce large scale features</p>	<p>Views of existing development through trees growing along the River Cam are intermittent and glimpsed such that existing development has a limited influence on the character and quality of views.</p> <p>Development would become a new focal point in views from Ditton Meadows where currently views have a rural character reflecting the character of the River Cam.</p> <p>While views would be filtered by existing vegetation development</p>	<p>Block 4 would be the more noticeable part of the eastern parcel occupying a small proportion of the central part of the view. The consented hotel and office developments are in this block.</p> <p>Block 6 would be barely discernible as it would be screened by Block 4 and vegetation. Taller areas of Blocks 2 and 3 would be noticeable with views of the lower, eastern areas of these Blocks being filtered by vegetation on the west side of the River Cam.</p> <p>Block 4 would be a prominent element while vegetation would</p>	<p>Block 4 would be a focal point in views. The consented hotel and office developments in this Block will be very noticeable features in the future baseline.</p> <p>However, Block 4 would be a large scale feature in comparison to built form visible in the present baseline.</p> <p>Blocks 2 and 3 would add a backdrop of development to views through vegetation growing alongside the River Cam thereby intensifying the appearance of development in views.</p>	<p>Block 4 would be the more noticeable part of development in the Low option. Blocks 2 and 3 would be largely screened by intervening vegetation while blocks in CSP are not visible.</p> <p>The magnitude of change is assessed as Moderate-Low taking into account the presence of the consented hotel and office buildings in the future baseline.</p>	<p>Block 4 would be a focal point in views. The consented hotel and office developments in this Block will be very noticeable features in the future baseline.</p> <p>However, Block 4 would be a large scale feature in comparison to built form visible in the present baseline.</p> <p>While Blocks 2 and 3 would be discernible they would have a limited influence on views due to the presence of intervening vegetation that screens the majority of built form.</p>

<p>uncharacteristic of the baseline.</p>	<p>would be very noticeable.</p>	<p>provide partial screening of other Blocks. Blocks in CSP would barely be discernible.</p>			
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Overall conclusions

The photomontages shown on Figures 7.1 to 7.3 indicate that the consented hotel and office buildings and the proposed Cambridge North Station Local Centre would form a localised nucleus of development seen in combination with existing buildings on the west side of the River Cam. The lower eastern edges of Blocks 2 and 3 provide a gradation to higher parts of these blocks and reduce effects on views. The High option would create a substantial new area of development that would affect the experience and character of views. The Medium option would reduce such effects to more localised areas whereas the Low option gives a barely discernible increase in development.

Guidance on massing

Each option benefits from lower building heights at the eastern edges of Blocks 2 and 3. The High option indicates that some higher development potentially could be achieved in Block 4, the eastern and southern parts of Block 6 without a substantial increase in the perception of development in views when compared to the future baseline with the consented hotel and office buildings. Figure 7.2 indicates that Medium height could be achieved in the southern part of Block 3, Block 6 and Blocks 11, 14 and 15 without greatly increasing effects on views. Medium height development at the northern part of Block 2 would extend development across the skyline. Figure 7.3 indicates that low height development could be potentially be achieved across the Site without compromising the character and quality of views. The northern part of Block 2 would be noticeable although mitigation planting could screen built form. An irregular edge, interspersed with landscape to all northern and eastern blocks would be more appropriate in assisting the reduction of development mass and softening the abrupt transition from urban to rural.

Table 6 Viewpoint 2 Ditton Meadows on Harcamlow Way

Baseline Summary Description					
<p>The viewpoint is on the route of the Harcamlow Way where it emerges from the village of Fen Ditton. The viewpoint is in Fen Ditton Conservation Area and at the eastern edge of Ditton Meadows. The viewpoint is representative of the immediate setting and context to Fen Ditton and views in the direction of the Site on leaving the village to walk alongside the River Cam.</p> <p>The viewpoint represents recreational users of Ditton Meadows and Harcamlow Way who are of High sensitivity to change from the Development.</p>					
Appraisal of effects of height options					
High (Figure 7.4)		Medium (Figure 7.5)		Low (Figure 7.6)	
Magnitude of change: Low	Overall effect: Minor	Magnitude of change: Negligible	Overall effect: Negligible	Magnitude of change: Negligible	Overall effect: Negligible
Block 3 would be discernible behind trees in the right of the view. Blocks 4 and 5 and the local centre at Cambridge North Rail Station would be screened by a group of trees on the opposite side of the River Cam.	Given the screening effect of vegetation there will be very limited change to views.	Development will be barely discernible due to the screening effect of vegetation.	The change to views will be barely perceptible.	Development is unlikely to be discernible.	Development is unlikely to be discernible.
<p><u>Overall conclusions</u></p> <p>The photomontages shown on Figures 7.4 to 7.6 indicate that blocks in all three options will be largely screened by existing vegetation growing alongside the River Cam. In the High option Blocks 4 and 5 and the local centre at Cambridge North Rail Station would be discernible although heavily filtered by vegetation thereby substantially reducing the influence of development on views. In the Medium and Low options development will barely be discernible.</p> <p><u>Guidance on massing</u></p> <p>Given the limited influence on views indicated by Figures 7.4 to 7.6, it is considered that further refining massing of the development would not result in a substantial reduction in overall effects on the existing view. An irregular edge, interspersed with landscape to all northern and eastern blocks would be more appropriate in assisting the reduction of development mass and softening the abrupt transition from urban to rural. In the event that vegetation along the River Cam ceases to effectively screen development it is considered that Blocks 4 and 5 and the District Centre would represent a coherent nucleus of development of similar scale and mass to the proposed Cambridge North Station Local Centre at Cambridge North Rail Station. The taller parts of Blocks 2 and 3 would extend development across the field of view and it is considered that lower densities in the eastern extents of these taller areas would minimise effects on views from Ditton Meadows at Fen Ditton where viewpoint 2 is situated.</p>					

Table 7 Viewpoint 3 Harcamlow Way River Cam

Baseline Summary Description					
<p>The viewpoint is on the Harcamlow Way where it runs parallel to the River Cam to the southwest of Poplar Hall in Fen Ditton Conservation Area. It provides views from a slightly elevated location above the River Cam and allows views in the direction of the Site. The A14 is visible in the right of the view as are pylons and silos associated with the Anglian WWTW. There are glimpses of plant in the Lafarge sand and gravel works and the shape of buildings is visible beyond.</p> <p>The viewpoint represents recreational users of the Harcamlow Way who are of High sensitivity to change from the Development.</p>					
Appraisal of effects of height options					
High (Figure 7.7)		Medium (Figure 7.8)		Low (Figure 7.9)	
Magnitude of change: High	Overall effect: Major	Magnitude of change: High	Overall effect: Moderate	Magnitude of change: Medium	Overall effect: Moderate
<p>Development would occupy a large proportion of the field of view with only blocks in the eastern parcel being visible.</p> <p>Blocks 2 and 3 are prominent features in views with Block 4 visible in the left of the view.</p> <p>While a small amount of development is visible in the baseline the Development would introduce large scale features uncharacteristic of the baseline.</p> <p>The skyline would be strongly influenced by built form across most</p>	<p>Views of the Development would be partly screened by vegetation. However, given the scale of change to the baseline view and the fact that the Development would be a prominent new focal point the overall effect is predicted to be Major.</p> <p>The semi-rural character of views would change to being strongly influenced by built form.</p>	<p>Development would occupy a large proportion of the field of view. The higher parts of Blocks 2 and 3 and the lower eastern edge of Block 2 would be the more noticeable elements. Block 6 would barely be discernible due to screening by vegetation.</p> <p>The skyline would be strongly influenced by built form in the right of the view.</p>	<p>While the Development would be of lower height than the High option it would occupy a large proportion of the field of view and be a prominent new feature in views.</p> <p>The semi-rural character of views would change to being influenced by built form.</p>	<p>Vegetation would screen approximately 50% of the Development in views from this location. Buildings would be visible through gaps in vegetation although Block 2 would be very noticeable in the right of the view.</p> <p>The influence of the Development on the skyline would not be as evident as it is in the Medium and High options although it would influence the skyline in the right of the view and the semi-rural character of views would be affected.</p>	<p>While the majority of the Development would be less noticeable than in the Medium and High options the lower eastern edge of Block 2 would be a prominent feature of the Development.</p> <p>Other parts of the Development would be visible through gaps in vegetation leading to the perception of an intensification of development when compared to the baseline.</p>



of the view resulting in considerable change.					
<p><u>Overall conclusions</u></p> <p>The photomontages shown on Figures 7.7 to 7.9 indicate that all three options would change the character of views experienced at this point on the Harcamlow Way. The High option would result in substantial change and built form would tend to dominate the skyline in views. The Medium option also would tend to dominate the skyline in views. The Low option would largely sit below the skyline with the exception of the northern part of Block 2 which would extend development towards the A14.</p> <p><u>Guidance on massing</u></p> <p>Figure 7.7 indicates that higher development could potentially be achievable in Block 6 and potentially the southern part of Block 3 where buildings would be associated with Block 4 and at Cambridge North Rail Station Local Centre. Higher development in the majority of Block 3 and in Block 2 is considered detrimental to the character and quality of views as is medium height development. Figure 7.9 indicates that Low development option could be achieved across the majority of the Site without substantially altering the rural character of views. Low development option in the north and east of Block 2 would change the composition of views and it is considered that a further reduction to a lower option would be more appropriate. An irregular edge, interspersed with landscape to all northern and eastern blocks would be more appropriate in assisting the reduction of development mass and softening the abrupt transition from urban to rural.</p>					

Table 8 Viewpoint 4 Haracamlow Way, Horningsea Road

Baseline Summary Description					
<p>The viewpoint is located where the Haracamlow Way and Fen Rivers Way head west from Horningsea Road to Baits Bite Lock. It provides views from a slightly elevated location before the route descends onto the floodplain of the River Cam. To the right of centre Grade II* Listed Biggin Abbey is partly visible in a setting of well-established vegetation. Pylons are a noticeable feature of the skyline in views from this location.</p> <p>The viewpoint represents recreational users of the Haracamlow Way and the Fen Rivers Way who are of High sensitivity to change from the Development.</p>					
Appraisal of effects of height options					
High (Figure 7.10)		Medium (Figure 7.11)		Low (Figure 7.12)	
Magnitude of change: High	Overall effect: Major	Magnitude of change: Medium	Overall effect: Moderate	Magnitude of change: Low	Overall effect: Minor
<p>Development would occupy a large proportion of the field of view introducing large scale features not characteristic of the baseline.</p> <p>The taller parts of blocks 2 and 3 would be the more noticeable elements and contribute proportionately more to the effects on views. Block 7 would also be a very noticeable feature in the right of the view.</p> <p>Development would form the back drop to Grade II* Listed Biggin Abbey.</p> <p>The skyline would be strongly influenced by built form across 50%</p>	<p>The lower parts of blocks 2, 3 and 7 would be screened by vegetation. However, the taller parts of these blocks would result in development becoming a prominent new focal point in views.</p> <p>Development would not be in keeping with the prevailing scale and character of built form visible in the baseline.</p> <p>The rural character of views would change to being strongly influenced by built form.</p>	<p>While development would occupy a large proportion of the field of view introducing large scale features not characteristic of the baseline, the blocks would not be as dominant as they are in the High option.</p> <p>Development would change the skyline and strongly influence the rural character of views although the influence would not be as pronounced as it is in the High option.</p> <p>Development would form the backdrop to Grade II* Listed Biggin Abbey but would not</p>	<p>Blocks 2, 3 and 7 would be very noticeable features extending across a large proportion of the field of view. However, the scale and mass of development would be less than in the High option and the influence on views would be considerably less.</p> <p>However, the rural character of views would be strongly influenced and development would be a very noticeable feature although not a prominent focal point.</p>	<p>Development would be largely screened by vegetation. Blocks 2, 3 and 4 would be partly discernible with visibility of built form through gaps in vegetation. The blocks would influence the skyline by introducing horizontal elements into a horizon which has a horizontal emphasis but with vegetation giving elements of varying height creating an irregular profile. The blocks would introduce a uniform character to the skyline.</p> <p>Development would partly form the</p>	<p>There would be considerably less development visible than in the Medium and High options.</p> <p>Development would introduce features not characteristic of the baseline although these would be largely screened by existing vegetation.</p> <p>The blocks would not be large in scale or introduce a prominent new focal point into views.</p> <p>However, they would adversely influence the skyline in views by introducing a uniform character where at present it is irregular.</p>



of the view resulting in considerable change.		appear taller than the Listed Building.		backdrop to Grade II* Listed Biggin Abbey	
<p><u>Overall conclusions</u></p> <p>Figures 7.10 to 7.12 indicate that Blocks 2, 3, 6 and 7 would result in a substantial change to the skyline in views from this point on the Harcamlow Way in the High option with effects reducing slightly in the Medium Option. Figure 7.11 indicates that Medium development would alter the skyline considerably by the introduction of large built forms. The Low option would substantially reduce effects compared to the High and Medium options resulting in development compatible with the prevailing view composition.</p> <p><u>Guidance on massing</u></p> <p>Figure 7.10 indicates that a small amount of High development could be achievable in the southern part of Block 3 and in Block 6. Figure 7.11 indicates that Medium height development could potentially be achieved in Block 6 and potentially the western part of Block 3 without substantial changes to the composition of skyline views. In the north eastern part of Block 2 a small number of taller buildings could potentially be introduced. An irregular edge, interspersed with landscape to all northern and eastern blocks would be more appropriate in assisting the reduction of development mass and softening the abrupt transition from urban to rural.</p>					

Table 9 Viewpoint 5 NCN Route 11 at Jane Coston Overbridge

Baseline Summary Description					
<p>The viewpoint is on the north end of the Jane Coston Overbridge that carries NCN Route 11 over the A14. Views are strongly influenced by the A14 and by the Jane Coston Overbridge itself. To the right of the view buildings in St John’s Innovation Park influence views to the southwest.</p> <p>The viewpoint represents recreational and commuter users of NCN Route 11 who are of Medium sensitivity to change from the Development. While the method described in Appendix A would indicate that users of NCN are of High sensitivity, the baseline view at this point on NCN Route 11 is heavily influenced by infrastructure and built form meaning sensitivity to the type of change proposed is less than if the immediate context to the viewpoint was rural in character.</p>					
Appraisal of effects of height options					
High (Figure 7.13)		Medium (Figure 7.14)		Low (Figure 7.15)	
Magnitude of change:	Overall effect:	Magnitude of change:	Overall effect:	Magnitude of change:	Overall effect:
High	Major	Medium	Moderate	Low	Minor
<p>Block 2 would be the only Block visible in the High option. It would be a prominent new feature in views and would introduce large scale elements across a large proportion of the view.</p> <p>The existing view is strongly influenced by the A14 and to a lesser degree by pylons and roadside vegetation.</p>	<p>Vegetation growing alongside the A14 would partly screen development although it would result in substantial amounts of change and would occupy a large proportion of the field of view.</p>	<p>Development would be set lower down than the High option and would not be visible above the skyline formed by existing vegetation. Block 2 would be visible through gaps in vegetation and would form a new skyline feature within those gaps.</p> <p>Development would influence views introducing new large scale features.</p>	<p>Development would shorten views reinforcing the linear character of the A14 by introducing a new frontage to the dual carriageway albeit set back from the road.</p> <p>Development would not be as prominent as in the High option although it would introduce substantial change into the baseline.</p>	<p>Development would be visible through gaps in existing vegetation and would not be prominent in views.</p> <p>Development would introduce elements uncharacteristic of the baseline view although existing views to the southwest from this point are influenced by buildings in St John’s Innovation Park.</p>	<p>Existing vegetation would provide an effective screen to development.</p> <p>While development would be visible it would not be prominent in views or introduce features out of scale with the baseline environment.</p>
<p><u>Overall conclusions</u></p> <p>Figures 7.13 to 7.15 indicate that development would be very noticeable in the High and Medium options with some development visible in the Low option infilling gaps between trees.</p> <p><u>Guidance on massing</u></p>					

Figure 7.14 indicates the potential for Medium height development in the northwest of Block 2. Figure 7.15 indicates that Low height development potentially could be achieved across the majority of the eastern part of the Site without compromising the quality and composition of views. An irregular edge, interspersed with landscape to all northern and eastern blocks would be more appropriate in assisting the reduction of development mass and softening the abrupt transition from urban to rural.

Table 10 Viewpoint 6 Mere Way Public Right of Way (Byway)

Baseline Summary Description					
<p>The viewpoint is at a gap in the hedge that runs alongside Mere Way which is a public right of way (byway) that runs northeast from NCN Route 51 at Cambridge Guided Busway to the west of Cambridge Regional College. Buildings in the north western part of the Site are very noticeable features on the skyline. The A14 is on embankment as it passes to the north of the Site and traffic is clearly visible through gaps in the hedge growing alongside Mere Way. The viewpoint represents recreational users of Mere Way byway who are of High sensitivity to change from the Development.</p>					
Appraisal of effects of height options					
High (Figure 7.16)		Medium (Figure 7.17)		Low (Figure 7.18)	
Magnitude of change: High	Overall effect: Major	Magnitude of change: High	Overall effect: Major	Magnitude of change: Medium	Overall effect: Moderate
<p>Blocks in CSP and St John’s Innovation Park would be prominent features occupying a large proportion of the field of view.</p> <p>Development would extend across a large proportion of the field of view in which large office blocks and research buildings are a characteristic. Existing buildings and traffic moving on the A14 strongly influence views.</p> <p>However, higher development would introduce very large new features that would dominate views.</p>	<p>The scale of change to the baseline is such that development would become the focal point in views.</p> <p>Development would be out of scale with features present in the baseline and would very strongly influence views.</p>	<p>The reduced height and mass of development would have less of an influence on views although Blocks 12, 14 and 15 would be prominent occupying a large proportion of the field of view.</p> <p>Block 12 would be of similar height to existing buildings although its massing would result in substantial effects as would the massing of Blocks 14 and 15.</p> <p>While views would not be dominated development would introduce very large features into the view.</p>	<p>The scale of change to the baseline is such that development would become the focal point in views.</p> <p>Development would be out of scale with features present in the baseline and would strongly influence views.</p>	<p>Development would be very noticeable in views and would occupy a large proportion of the field of view forming a continuous developed edge alongside the A14.</p> <p>While the scale of development would be less than in the Medium and High options, the ‘infilling’ of gaps between existing buildings and the massing of Block 15 would result in considerable change.</p>	<p>Development would be a focal point in views.</p> <p>The height of development would be in keeping with the height of buildings present in the baseline although the massing would be denser than existing and would strongly influence views.</p>

Overall conclusions

Figures 7.16 and 7.17 indicate that development in the High and Medium options would dominate the skyline in views from Mere Way. Figure 7.18 indicates that the Low option would result in substantial change with Block 15 being a focal point in the right of the view.

Guidance on massing

Figure 7.16 indicates that some high development could potentially be achievable in Block 12 and in Blocks 7 and 9 without substantially altering the skyline. Figure 7.17 indicates that medium height development could potentially be achievable in the majority of Blocks 7 and 9 with some Medium height development in Block 12 where buildings would be of comparable height to those visible in the existing view. Some low Height development would potentially be achievable in Block 12 and Block 15 although infilling behind the low edge of Block 12 would reinforce the abrupt transition from urban Cambridge to the countryside north of the A14. An irregular edge, interspersed with landscape to all northern and eastern blocks would be more appropriate in assisting the reduction of development mass and softening the abrupt transition from urban to rural.

Appraisal of Effects on Landscape Character

- 5.6 The appraisal of effects on landscape character focusses upon the Site itself, the three national character areas shown on Figure 3 and the four local landscape character areas also shown on Figure 3. The appraisal of effects on landscape character described in Tables 11 to 17 should be read in conjunction with the appraisal of effects on viewpoints described above and with Figures 7.1 to 7.18.
- 5.7 ZTV mapping and fieldwork indicated that landscape character of NCA 88 Bedfordshire and Cambridgeshire Claylands and NCA 46 The Fens could potentially be substantially affected by development at the Site in a limited geographical area. It was judged that landscape character of NCA 87 East Anglian Chalk was unlikely to be affected by development at the Site due to the distance between the Site and NCA 87 and because views towards the Site are interrupted by landform and vegetation with the A14 acting as a physical and visual barrier. NCA 87 is not discussed further in this report.

Table 11 Site Landscape Character

Baseline Summary Description					
<p>The Site is of variable character containing existing office and research development and a variety of uses in the eastern part of the Site.</p> <p>The sensitivity of Site landscape character to development is Low because there is existing development on the Site. Important features such as existing green infrastructure, watercourses, pedestrian and cycle linkages can largely be retained or enhanced with all three development options as indicated by the Landscape Framework shown on Figure 6.</p>					
Appraisal of effects of height options					
High		Medium		Low	
Magnitude of change: High	Overall effect: Major	Magnitude of change: High	Overall effect: Moderate	Magnitude of change: Medium	Overall effect: Minor
The High option would result in substantial change across the Site with the potential for buildings of up to 12 storeys in height across the majority of the Site. Existing buildings are up to five or six storeys in height with two consented buildings of seven and eight storeys in height at Cambridge North Rail Station.	While there is existing development at the Site, the High option would introduce tall buildings that would be at a variance with the height and scale of the buildings in the baseline.	The Medium option would result in substantial change across the Site with the potential for buildings of up to nine storeys in height across the majority of the Site. Existing buildings are up to five or six storeys in height with two consented buildings of seven and eight storeys in height at Cambridge North Rail Station.	The Medium option would introduce tall buildings that would be at a variance with the height and scale of the majority of buildings in the baseline.	The Low option would result in buildings of up to six storeys in height across the majority of the Site. In CSP, St John’s Innovation Park and Cambridge Business Park where there are existing buildings of up to six storeys in height the Low option would potentially ‘infill’ gaps between buildings and result in a slight increase in building heights across that part of the Site. In the eastern part of the Site development would change the character of the Site giving a more unified character.	Development would be in keeping with the scale and height of development in the baseline or would introduce a well-designed and coherent urban quarter to the Site.

Table 12 NCA 88 Bedfordshire and Cambridgeshire Claylands

Baseline Summary Description					
<p>The Site is in the northeast of NCA 88 Bedfordshire and Cambridgeshire Claylands. It is described in the NCA Profile as: ‘...sparsely populated...A feeling of urbanisation is brought by the numerous large towns, including...Cambridge...and major transport routes, including the M1, A1 and A14 and the Midlands and East Coast mainline railways. Tranquillity within the NCA has declined, affected by visual intrusion, noise and light pollution from agriculture, settlement expansion and improvements in road infrastructure.’</p> <p>NCA 88 is judged to be of Low sensitivity to change from the Development due to the fact there is existing development at the Site which is embedded in the built up area of Cambridge and separated from rural parts of the Bedfordshire and Cambridgeshire Claylands by the A14 dual carriageway. Viewpoints 5 and 6 are in NCA 88 and Figures 7.13 to 7.18 give an indication of how development could influence aesthetic and perceptual aspects of character.</p>					
Appraisal of effects of height options					
High		Medium		Low	
Magnitude of change: Medium	Overall effect: Moderate	Magnitude of change: Medium	Overall effect: Low	Magnitude of change: Low	Overall effect: Negligible
As indicated in Table 11 development at the Site would result in substantial change in the Site itself. This would occur in a relatively small geographical area in NCA 88 although such changes would be uncharacteristic of the baseline due to their scale. Development in CSP would have the potential to affect longer distance views from the area of NCA 88 to the north of the A14 thereby influencing	Development would be of a different scale to that existing in the Site with the potential to result in effects beyond the Site boundary.	Development would be of a scale greater than that in the present baseline and would result in a large scale of change to the character of the landscape across a small geographical area.	Development would be of a different scale to that existing in the Site with the potential to result in effects beyond the Site boundary.	Development would be of a similar scale to that present in the baseline. The appearance of development would be intensified slightly although such effects would extend a limited distance beyond the Site.	In the context of the NCA 88 as a whole development would be in keeping with that which is present in the baseline. Pattern would be altered markedly in the eastern part of the Site although it would be consistent with the uniform or regular layout of built form in the western part of the Site.



aesthetic and perceptual aspects.					
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Table 13 NCA 46 The Fens

Baseline Summary Description					
<p>The Site lies to the south of NCA 46 which includes the level fenland landscape to the northeast of the A14 along the valley of the River Cam. The majority of the NCA, which covers an area of 3,826km², encompasses the level landscapes that lie between Peterborough, Cambridge and The Wash. The NCA Profile describes the area as ‘...notable for its large scale, flat, open landscape with extensive vistas to level horizons. The level, open topography shapes the impression of huge skies which convey a strong sense of place, tranquillity and inspiration.’</p> <p>NCA 46 is judged to be of Medium sensitivity to change from development as it has the potential to affect the qualities of rural remoteness and tranquillity and views of level horizons and big skies although development would not result in effects on physical features of NCA 46. Viewpoint 4 is in NCA 46 and shows a typical view towards the Site from the River Cam valley. There are limited views of the Site from the wider NCA.</p>					
Appraisal of effects of height options					
High		Medium		Low	
Magnitude of change: High	Overall effect: Moderate	Magnitude of change: Medium	Overall effect: Low	Magnitude of change: Negligible	Overall effect: Negligible
As mentioned in Table 12, development would introduce features not characteristic of the baseline and would impinge upon views of Grade II* Listed Biggin Abbey. It would strongly influence views of rural character.	While development would not be situated in NCA 46 it would affect views from the southern part of the NCA to the Site and Cambridge. Existing development at the Site is not discernible and NCA 46 retains its rural character close to Cambridge and the A14. Development would diminish the setting to the southern part of NCA 46 in a limited geographical area.	As mentioned in Table 8, development would alter the skyline in views towards the Site and would strongly influence the rural character of views.	While views of development would be introduced into a largely rural landscape the influence on landscape character would occur in a relatively limited geographical area.	Development would barely be discernible and would have minimal influence on aesthetic and perceptual aspects of landscape character.	Given that development would barely be discernible it would have a very limited effect on landscape character of NCA 46 The Fens.

Table 14 1A Waterbeach – Lode Fen LCA

Baseline Summary Description					
<p>The Site lies to the southwest of the LCA.</p> <p><i>'The key characteristics of the Waterbeach-Lode Fen stem from the flatness of the landscape. These are the senses of space and openness, and the importance of the horizon and skylscapes in the panoramic distant views.</i></p> <p><i>Views to Cambridge are restricted to the southern edge of the character area, where they are dominated by the hangars of the airport. Links with the city are through an extension to the Cam Corridor, which is a green corridor into the city, and contains a long distance footpath and a railway line.'</i></p> <p>Waterbeach – Lode Fen LCA is judged to be of Medium sensitivity to change from development as it has the potential to affect the horizons and skylscapes mentioned as key characteristics although development would not result in effects on physical features of the LCA. Viewpoint 4 is on the edge of the LCA and shows a typical view towards the Site from the River Cam valley. There are very limited or no views of the Site from the majority of the LCA.</p>					
Appraisal of effects of height options					
High		Medium		Low	
Magnitude of change: High	Overall effect: Moderate	Magnitude of change: Medium	Overall effect: Low	Magnitude of change: Negligible	Overall effect: Negligible
As mentioned in Table 8, development would introduce features not characteristic of the baseline and would impinge upon views of Grade II* Listed Biggin Abbey. It would strongly influence views of rural character and the horizon in views from the southwestern part of the LCA.	While development would not be situated in the LCA it would affect views of the horizon from the southern part of the LCA to the Site and Cambridge. Existing development at the Site does not extend above the existing horizon which reinforces the rural character of the LCA close to Cambridge and the A14. Development would diminish the quality of views of the horizon from the southern part	As mentioned in Table 8, development would alter the horizon in views towards the Site and would strongly influence the rural character of views.	While views of development would be introduced into a largely rural landscape the influence on landscape character would occur in a relatively limited geographical area.	Development would barely be discernible and would have minimal influence on the horizon in views from the LCA.	Given that development would barely be discernible it would have a very limited effect on landscape character of the LCA.



	of LCA in a limited geographical area.				
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Table 15 2A Western Fen Edge LCA

Baseline Summary Description					
<p>The Site lies to the south of the LCA which includes the villages of Milton, Impington and Girton. The LCA lies in NCA 88 Bedfordshire and Cambridgeshire Claylands, the effects on which are described in Table 12.</p> <p><i>'It is a relatively low-lying landscape, and undulates very gently between 5 and 20m above sea level. It is slightly higher than the Fen proper. It is a flat and expansive landscape, where sky and horizons are dominant features. Hedges and shelterbelts between fields, plus several orchards, add a distinctive pattern of vegetation into the landscape.</i></p> <p><i>Views to Cambridge are restricted by the low-lying topography and the A14. Therefore the only key views to Cambridge from the western fen edge are from the A14 itself. The A14 also acts as an artificial edge to the city, and undermines the gentle transition between the city and the fen edge.'</i></p> <p>Western Fen Edge LCA is judged to be of Medium sensitivity to change from development as it has the potential to affect horizons in views from the LCA and views from the A14. Viewpoint 6 is in the south of the LCA and shows a typical short distance view towards the Site immediately to the north of the A14. There are very limited or no views of the Site from the majority of the LCA.</p>					
Appraisal of effects of height options					
High		Medium		Low	
Magnitude of change: High	Overall effect: Moderate	Magnitude of change: Medium	Overall effect: Low	Magnitude of change: Low	Overall effect: Low
As mentioned in Table 10, development in CSP would be visible from the landscape to the north of the A14 Site. Development would introduce features characteristic of baseline views from the southern part of the LCA opposite the Site. The size and scale of development would reinforce the abrupt transition between Cambridge and the Fen edge that occurs at the	While development would not be situated in the LCA it would affect views to the south from the area between Impington and Milton Road. The High option would increase the amount of development visible and it would be of a scale not present in baseline views from this part of the LCA. Development would become the dominant feature on the skyline	In the Medium option development would introduce features characteristic of baseline views from the southern part of the LCA opposite the Site. The size and scale of development would be less than the High option although it would reinforce the abrupt transition between Cambridge and the Fen edge to a lesser degree.	It is predicted that the geographical area across which Development would potentially be visible will be less than in the High option with consequently less influence on landscape character.	Development would be of a similar scale to that present in the baseline and would introduce features similar to those present in the baseline. The appearance of development would be intensified slightly although such effects would extend only a limited distance beyond the Site. Potential infilling of gaps between existing buildings at the Site would slightly increase	It is predicted that the geographical area across which Development would potentially be visible will be similar to the present baseline. The Low option would result in a slight increase in height relative to the baseline and increase slightly the abrupt transition between Cambridge and the Fen edge landscape.

<p>A14 which runs along the southern boundary to the LCA opposite the Site.</p>	<p>from a small part of the LCA. To the north of Milton Road and Butt Lane development is unlikely to be discernible from the LCA. Between Impington and Girton there may be distant glimpses of development at the Site which would have a very limited influence on landscape character given the presence of the A14 and areas of residential development to the west of the Site.</p>			<p>the amount of development visible.</p>	
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Table 16 2B Eastern Fen Edge LCA

Baseline Summary Description					
<p>The Site lies to the southwest of the LCA.</p> <p><i>'The Eastern Fen Edge is open in character, and is generally arable farmland, divided by hawthorn hedges. Views are generally long, and often include the surrounding landscape character areas.</i></p> <p><i>There is a gradual transition between the farmland of the Eastern Fen Edge and the chalk hills to the east and south. From this slightly higher land there are distant views to Cambridge, with the city set in a green landscape. There are immediate views to the edge of Cambridge from the western part of the landscape character area. The airport dominates many of these views.'</i></p> <p>The Eastern Fen Edge LCA is judged to be of Medium sensitivity to change from development at the Site. Development has the potential to affect views from the western part of the LCA and distant views from eastern parts. Viewpoints 3 and 4 are on the western edge of the LCA and show typical views towards the Site from the River Cam valley. There are limited or no views of the Site from the majority of the LCA.</p>					
Appraisal of effects of height options					
High		Medium		Low	
Magnitude of change: High	Overall effect: Major	Magnitude of change: Medium	Overall effect: Moderate	Magnitude of change: Low	Overall effect: Minor
The description of effects on Viewpoints 3 and 4 gives an indication on how development in a High option could affect aesthetic and perceptual aspects of landscape character in the western part of the LCA. To the east of Horningsea Road the effects on aesthetic and perceptual aspects of landscape character would reduce and to the east of Low Fen Drove way it is predicted	While development would not be situated in the LCA it would affect views from the western part of the LCA across the River Cam valley. Existing development at the Site does not extend above the existing horizon although there are glimpses of the Lafarge plant and distant built form on the Site. Development would diminish the quality of views across the River	Development in a Medium option would influence aesthetic and perceptual aspects of landscape character although the magnitude of change would be less than in a High option.	Development would diminish the quality of views across the River Cam valley from the western part of LCA in a limited geographical area.	In the Low option development would be a noticeable feature although it would be lower in height and massing would be more compact. Development would affect the rural character of views across the River Cam valley from a limited part of the LCA.	Development would diminish slightly the quality of views across the River Cam valley from the western part of LCA in a limited geographical area.



that only isolated glimpses of development would be visible seen in the context of existing development in the northeast of Cambridge.	Cam valley from the western part of LCA in a limited geographical area.				
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Table 17 4A River Cam Corridor LCA

Baseline Summary Description					
<p>The Site lies to the west of the LCA.</p> <p><i>'The River Cam Corridor is distinctive from other river valley landscapes because of its key views to the landmark towers and spires of Cambridge, and because of its rural and pastoral character, even close to the city centre. It forms distinctive approaches to Cambridge from the south west and the north east, along green corridors into the city via footpaths alongside the river. To the north, a long distance footpath provides a link between Cambridge and the open countryside, and a railway also runs within the valley. The Cam Valley further enriches the setting of Cambridge through the historic association between the city and its river, and through the works of Rupert Brook, Byron, and other poets who described the Cam valley around Grantchester.'</i></p> <p>The River Cam Corridor LCA is judged to be of High sensitivity to change from development at the Site. Development has the potential to affect views from the LCA which contains recreational routes and open space. Development at the Site has the potential to affect the rural character of the LCA by introducing built form of a type uncharacteristic to that present in baseline views. Viewpoints 1 and 2 are in the LCA and show typical views towards the Site from the River Cam valley. Viewpoint 3 is just outside the LCA and provides a typical view from land overlooking the River Cam.</p>					
Appraisal of effects of height options					
High		Medium		Low	
Magnitude of change: High	Overall effect: Major	Magnitude of change: Medium	Overall effect: Moderate	Magnitude of change: Low	Overall effect: Minor
In the High option development would be very noticeable forming an abrupt transition between the LCA and built up areas of Cambridge. While development would not be overwhelming it would alter the rural character of views from the LCA and the transition to the village of Fen Ditton and the open countryside to the north of the A14.	Views of existing development through trees growing along the River Cam are intermittent and glimpsed such that existing development has a limited influence on the character and quality of views. The essential rural character of the LCA is largely unaffected by development. The introduction of development at the Site would impinge upon the rural character of the	In the Medium option development would be very noticeable although it would substantially reduce in scale. As a result its influence on the LCA would reduce. However, it would influence the rural character of views and the setting to the LCA.	While the introduction of development at the Site would impinge upon the rural character of the LCA and its setting, the effects would be less than in the High option with greater effects in the north of the LCA.	In the Low option building heights would be below the horizon with the majority of buildings screened by existing vegetation. The consented hotel and office buildings at Cambridge North Station would be the more noticeable elements. In the northern part of the LCA development would be more noticeable.	Given the presence of the consented hotel and office buildings in the future baseline and the fact that the majority of development would not be visible from the LCA, with the exception of views from the northern part, overall effects would reduce considerably.



	LCA and its setting and diminish its quality				
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Design Guidance

- 5.8 In addition to the guidance on massing provided in Tables 5 to 10 guidance is provided in this section to inform further work undertaken in the AAP. The guidance is based on analysis of the landscape and visual baseline and through the appraisal of landscape and visual effects as described in Tables 5 to 17. The potential impact of development on the Fen Edge and the sensitive landscapes adjacent to the edges of the site should be carefully considered.
- 5.9 It would be expected that a whole site approach is taken, as described within the AAP, when considering the layout, massing, height, development layering, individual building design, including colours of material, as opposed to an individual parcel approach.

Massing and Height

- 5.10 The appraisal of visual effects described in Tables 5 to 10 indicates that the eastern and northern edges of the Site are sensitive to high and medium height development. However, some high and medium height development could potentially be achieved elsewhere on the site, in areas that have less effect on the sensitive Fen Edge landscape. These areas are indicatively shown on Diagram 1.

Low height on the sensitive edges (shown in yellow):

- The eastern and northern parts of Blocks 2 and 3 and,
- The eastern parts of Block 6 and Block 12,
- The westernmost edge of Block 9.

Medium height / transition areas (shown in brown):

- Central part of Blocks 2, 3 and 6,
- The northern parts of Blocks 7 and 9,
- The western part of Block 12,
- Block 15 and Cambridge North Station Local Centre

Medium/high height (shown in blue):

- Blocks 1, 4, 5, 8, 10, 11, 13 and 14, 15,
- The western parts of Block 3 and 6,
- The southern part of Blocks 7 and 9; and

The southwestern part of Block 2. High (shown in purple): District Centre.

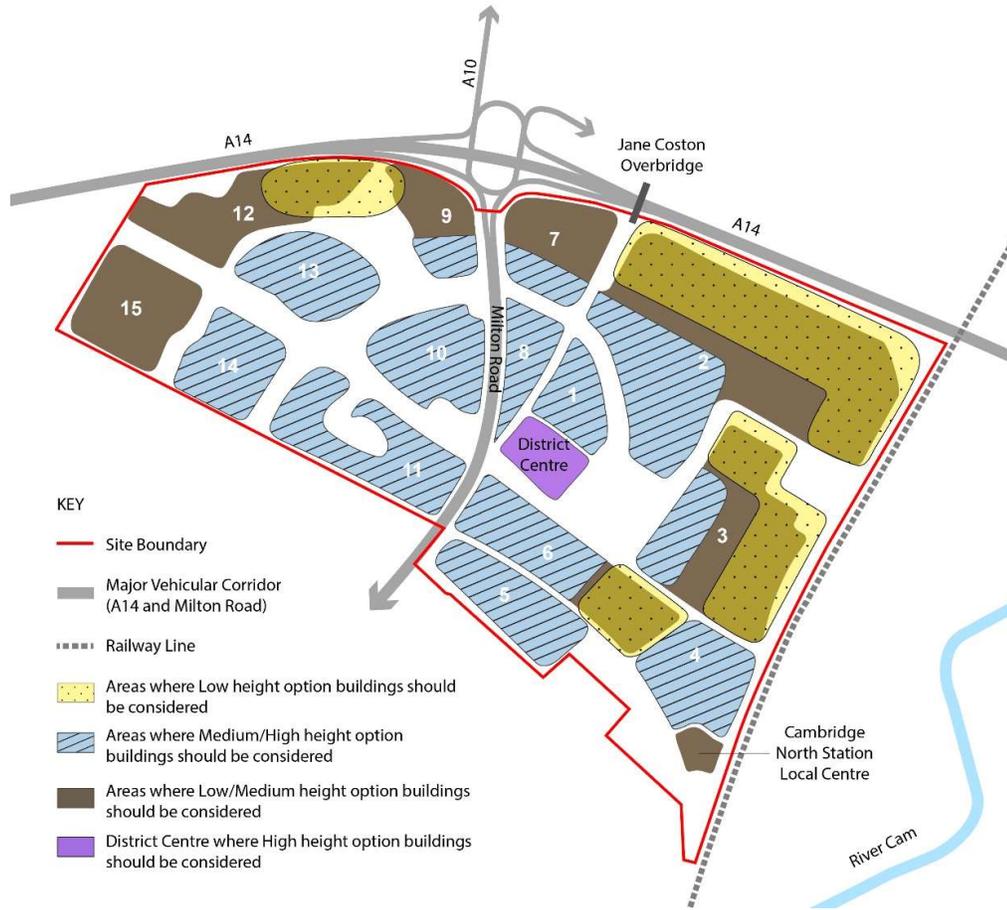


Diagram 1: Graphic showing potential areas of development heights

- 5.11 The height and massing of buildings should avoid dominating views of the skyline from the east and should avoid creating an abrupt transition from development to rural edge. The consented hotel and office buildings of up to eight storeys in height at the Cambridge North Station Local Centre present an opportunity for further medium or high development in this location. However, the height and massing of further development would need careful consideration to avoid compromising the quality and character of views and landscape in the River Cam Corridor LCA and the western part of the Eastern Fen Edge LCA and to avoid extending development across the skyline.
- 5.12 In the western part of the Site at Cambridge Science Park (CSP) development is very noticeable in views from the A14 and from Mere Way Byway to the north. Buildings are of four or five storeys set in an extensive framework of formal landscape and green infrastructure. There is an abrupt transition from CSP to countryside to the north which is accentuated by the presence of the A14. While there is scope for further development in Blocks 7, 9 and 12 further development should avoid extensive infilling between existing plots to avoid reinforcing the abrupt edge.

Roofscape

- 5.13 The introduction of potential development into views of the skyline would need to be of high architectural quality and sensitive design. Views to Cambridge from the west are known for the unique character of views that include many of Cambridge's historic university buildings and church spires. Development at the Site has the potential to introduce buildings that will be new features in views of the skyline from the north and east. While new buildings at the Site would not compromise views of any historic buildings in Cambridge the introduction of potential development into views of the skyline would need to be of high architectural quality.
- 5.14 Views from the east and northeast are particularly sensitive to changes to the skyline as development is not presently a feature although the introduction of consented hotel and office buildings at Cambridge North Station will add new elements. Design codes should include guidance for the design of sensitively articulated upper storeys and roofs of buildings throughout the Site.

Materials

- 5.15 The external appearance of buildings is important to the identity and character of a place. Cambridge Science Park is notable for its wide variety of architectural styles and materials used to finish buildings. The buildings in CSP have evolved over several decades and reflect the particular uses and activities occurring within them. In the eastern part of the Site there is an opportunity to create a strong identity and different character areas. The use of a common palette of materials in each character area would enhance the appearance of development and legibility of the Site. Design codes should be used to achieve consistent use of high-quality materials throughout each character area and throughout the Site. A colour palette for individual parcels of development, considered against the wider district colour palette will be particularly important, in particular in order to avoid pale and reflective materials unnecessarily impacting views.

Areas of Landscape Focus

- 5.16 The Indicative Concept Plan drawing replicated in Figure 6 shows existing green infrastructure that will be retained and indicative proposed green infrastructure. Both will form part of the landscape framework for development at the Site. Planning applications for development will also require landscape proposals that integrate successfully with that shown on Figure 6. The following will be particular areas of landscape focus:
- The eastern edge to the Site where there is a transition to the countryside of the River Cam valley and views from the east;
 - The north east corner of the Site where there are views into the Site from the A14 as it crosses the railway line;
 - The northern edge of the eastern part of the Site adjacent the A14 where existing planting should be retained, enhanced and managed;

- The northern edge of CSP where currently there is an abrupt transition from development to countryside and where further tree planting and landscape could create a better edge;
- The area around Cambridge North Station Local Centre and in Block 4; and
- Within each block landscape proposals should enhance permeability through the Site by green links with the main area of green infrastructure shown on Figure 6. These links will also form part of the SUDs and cycling and walking system.

Edges

5.17 As mentioned above the edges of the Site are sensitive to development as they are the interface between the Site and surrounding areas. The eastern edge is particularly sensitive due to the potential effects on views and landscape character as described in Tables 5 to 17. The following principles could apply to development at the eastern edge of the Site:

- Variable set-back of buildings on plots
- Variable roofline;
- Minimal hard boundary treatment such as fences and walls;
- Use of semi-mature trees;
- Creation of an irregular parkland edge of adequate space to accommodate forest scale trees;
- Permeability of built form and landscape allowing views into the Site along green corridors of adequate space to accommodate forest scale trees; and
- Avoiding an abrupt transition between development and countryside.

6.0 Conclusions

- 6.1 This Landscape Character and Visual Impact Appraisal (LCVIA) provides an objective and systematic appraisal of the potential effects on landscape and visual amenity of three development height options.
- 6.2 The LCVIA baseline indicates that those areas potentially more sensitive to change from development are to the southeast, east and northeast of the Site. These areas include a number of public rights of way, cycle routes and long distance trails in addition to being landscapes important to the setting and identity of Cambridge. Although 'edge' landscapes to the north and northwest of the Site have also been appraised, the LCVIA has focussed on the most sensitive areas.
- 6.3 As a starting point a model of development at the Site, prepared by the Council, was provided to TEP for preliminary analysis. The analysis indicated that proposed heights of development in the north and east of the Site should be decreased to reduce potential effects on the sensitive edge areas. A second iteration of the model was prepared and further analysis and appraisal of potential effects undertaken. The results are described in Section 5.0 of this report.
- 6.4 The appraisal of effects indicates that the High development height option would give rise to Major overall effects on the six viewpoints used in the LCVIA. The High option would also result in Major or Moderate overall effects on landscape character in a limited geographical area.
- 6.5 The Medium option would result in Major or Moderate overall effects on five of the six viewpoints used in the LCVIA. It would result in Moderate overall effects on Site landscape character and Moderate overall effects on the Eastern Fen Edge LCA and River Cam Corridor LCA in a limited geographical area.
- 6.6 The Low option would result in Moderate overall effects on Viewpoint 3 Harcamlow Way River Cam and Viewpoint 6 Mere Way Public Right of Way with Minor or Negligible overall effects on four viewpoints. The Low option would result in Minor or Negligible overall effects on landscape character of all areas appraised.
- 6.7 The appraisal of effects is based on Blocks 1 to 15 shown on Figures 5.1 to 5.3 and in Figures 7.1 to 7.18. As explained in Section 2.0 of this report the mass and scale of these blocks is greater than that likely to be accommodated on the Site. However, at this stage it is assumed that individual buildings could be situated anywhere in the areas shown by the blocks in Figures 5.1 to 5.3. Showing the blocks in this way allows the model to be tested against the prevailing landscape and visual sensitivities. Testing and appraisal of the model allows identification of which blocks and parts of blocks in each development option that contribute more to effects on landscape and visual sensitivities.
- 6.8 Further block refinement will happen at planning application stage to include a variation of individual building heights and massing resulting in a rich layering of buildings, open spaces with large trees and edge treatments.

- 6.9 The results of the testing and appraisal presented in Section 5.0 include guidance on height and massing. The guidance describes how the greater effects of development options could potentially be mitigated and indicates that there are opportunities for higher development within the Site without compromising the qualities and character of landscape and visual amenity of the Fen edge landscapes to the east and north of the Site.
- 6.10 Higher development would be more appropriate in the central part of the Site at Milton Road and at the proposed District Centre. In particular blocks 1, 6 (western part), 8, 10 and 11 present opportunities for higher development associated with the District Centre with medium to high beyond these blocks before a lower edge is reached. It is not expected that medium or high development would be uniform throughout these areas and, as indicated in Section 5.0 of this report, planning applications for future development proposals in the AAP are likely to require LVA or LVIA to fully assess their impact.

References

- Cambridge City Council. (2018) *Cambridge Local Plan*. Available from <https://www.cambridge.gov.uk/local-plan-2018> [Accessed October 2018].
- Cambridge City Council and South Cambridgeshire District Council. (2014) *Cambridge Northern Fringe East Area Action Plan. Issues and Options Report*.
- Cambridge City Council. (2003) *Cambridge Landscape Character Assessment*.
- Landscape Design Associates. (2002) *Cambridge Green Belt Study*.
- Landscape Institute. (2017) *Landscape Institute Technical Guidance Note 02/17 Visual Representation of Development Proposals*.
- Landscape Institute. (2011) *Landscape Institute Advice Note 01/11 Photography and Photomontage in Landscape and Visual Impact Assessment*.
- Landscape Institute and Institute of Environmental Management and Assessment. (2013) *Guidelines for Landscape and Visual Impact Assessment, 3rd Edition*.
- LDA Design. (2015) *Cambridge Inner Green Belt Boundary Study*.
- LDA Design. (2011) *Cambridgeshire Green Infrastructure Strategy*.
- Ministry of Housing, Communities and Local Government. (2018) *National Planning Policy Framework*.
- Ministry of Housing, Communities and Local Government. (2018) *Planning Practice Guidance*. Available from <https://www.gov.uk/government/collections/planning-practice-guidance> [Accessed January 2019].
- Natural England. (2015) *National Character Area Profile: 46. The Fens*.
- Natural England. (2015) *National Character Area Profile: 87. East Anglian Chalk*.
- Natural England. (2014) *National Character Area Profile: 88. Bedfordshire and Cambridgeshire Claylands*.
- Natural England. (2014) *An Approach to Landscape Character Assessment*.
- South Cambridgeshire District Council. (2018) *South Cambridgeshire Local Plan*. Available from <https://www.scambs.gov.uk/localplan> [Accessed October 2018].
- South Cambridgeshire District Council. (2005) *Fen Ditton Conservation Area. Draft Council Policy (Ref: DCV 0029)*.

APPENDIX A: Landscape and Visual Appraisal Method

APPENDIX A – LANDSCAPE AND VISUAL APPRAISAL METHOD

- A1.1 The following method has been used to provide an appraisal of effects on landscape character and on views, as a result of the potential development options.
- A1.2 The method for the landscape and visual appraisal is based on the guidance contained in the 'Guidelines for Landscape and Visual Impact Assessment - Third Edition', Landscape Institute/Institute of Environmental Management and Assessment, 2013 (GLVIA3). Paragraph 1.20 of GLVIA3 explains that the guidance:
- “concentrates on principles while also seeking to steer specific approaches where there is a general consensus on methods and techniques. It is not intended to be prescriptive, in that it does not provide a detailed ‘recipe’ that can be followed in every situation. It is always the primary responsibility of any landscape professional carrying out an assessment to ensure that the approach and methodology adopted are appropriate to the particular circumstances.”*
- A1.3 There are five stages to the method of appraisal of landscape and visual effects as detailed in GLVIA3, Chapters 5 and 6. These comprise:
- scope;
 - establishing the landscape and visual baseline;
 - predicting and describing landscape and visual effects;
 - assessing the significance or importance of landscape and visual effects; and
 - judging the overall landscape and visual effects.
- A1.4 The five stages identified above are discussed below.

Landscape Appraisal Method

Scope of the Landscape Appraisal

- A1.5 In accordance with paragraph 5.2 of GLVIA3 *“Scoping should...identify the area of landscape that needs to be covered in assessing landscape effects. This should be agreed with the competent authority, but it should also be recognised that it may change as the work progresses, for example as a result of fieldwork, or changes to the proposal. The study area should include the site itself and the full extent of the wider landscape around it which the proposed development may influence in a significant manner. This will usually be based on the extent of Landscape Character Areas likely to be significantly affected either directly or indirectly. However, it may also be based on the extent of the area from which the development is potentially visible, defined as the Zone of Theoretical Visibility, or a combination of the two.”*
- A1.6 The physical scope of this landscape appraisal has been informed by consideration of the following:
- Published Landscape Character Areas and landscape designations;
 - the approximate extent of visibility for the potential development options;
 - The Zone of Theoretical Visibility for the future baseline of development up to eight storeys; and
 - field assessment.

Establishing the Landscape Baseline

Desk Based Appraisal

- A1.7 A review of relevant information, guidance and planning policy relating to the potential development options and the landscape (and views) has been undertaken including:
- National Planning Policy Framework (NPPF);
 - Local Plan policies and guidance;
 - Published Landscape Character Assessments;
 - Published walking and cycling routes;
 - Designated heritage assets;
 - Ecological and landscape designations; and
 - Ordnance Survey mapping and aerial photography.

Site Appraisal

- A1.8 Desk study and field survey work was undertaken to gather landscape baseline information to inform and assess the potential development options.
- A1.9 Site appraisal of landscape character and of the potential development options has involved visits to the area by car and on foot. In accordance with GLVIA3 Paragraph 5.15 fieldwork has been used to check the applicability of published character assessments within the study area, identifying variations in character at a more detailed scale. The landscape within the study area has been experienced, and landscape characteristics and features recorded from publicly accessible locations with reference to the latest guidance provided in Natural England's 'An Approach to Landscape Character Assessment' (October 2014).

Reporting on the Baseline Situation

- A1.10 Following desk-based and site appraisals the landscape baseline has been described and supported with illustrations where necessary, including maps illustrating published landscape character areas.
- A1.11 National and local level published landscape character assessments have been used as the basis for establishing the baseline environment for the landscape appraisal. In accordance with GLVIA3 Paragraphs 5.15 and 5.16, these existing assessments have been reviewed and have been supplemented with more detailed survey of the site itself and immediate surroundings, noting any differences or refinements when compared to the key characteristics of the published assessments.
- A1.12 The landscape baseline has been informed by published historic landscape characterisation and Conservation Area Appraisals (where available and relevant), and the presence of designated heritage assets such as Listed Buildings and Scheduled Monuments, although the landscape appraisal does not consider effects on the historic landscape or heritage assets.
- A1.13 GLVIA3 paragraph 5.33 states that *“individual elements and aesthetic and perceptual aspects of the landscape”* should be identified and described, with a particular emphasis on any key characteristics that contribute to the distinctive character of the landscape. GLVIA3 paragraph 5.33 also states that *“the condition of the landscape, including the condition of elements or features such as buildings, hedgerows or woodland”* should be identified.

Landscape Value

- A1.14 As part of establishing the baseline situation the value of the landscape potentially affected is evaluated. This is in accordance with paragraph 5.44 of GLVIA3. Landscape value is also referred to below as part of the method for 'Assessing the Overall Landscape Effects'.
- A1.15 Highly valued landscapes typically are identified by national level designations such as National Parks and AONB. Landscapes of local value may be identified by designations in the local planning process such as Areas of Great Landscape Value and Special Landscape Areas, although a 'criteria-based' approach to landscape protection and enhancement may be advocated in preference to these designations.
- A1.16 Undesignated landscapes and features are also valued. Paragraph 5.19 of GLVIA3 identifies that following a review of existing landscape designations *"the value attached to undesignated landscapes also needs to be carefully considered and individual elements of the landscape – such as trees, buildings or hedgerows – may also have value."*
- A1.17 GLVIA3 also states in Box 5.1 under paragraph 5.28, those factors that can help in the identification of valued landscapes include;
 - landscape quality (condition);
 - scenic quality;
 - rarity;
 - representativeness;
 - conservation interest;
 - recreation value;
 - perceptual aspects; and
 - associations.
- A1.18 These factors have been considered when determining landscape value although in this appraisal a specific documented assessment has not been undertaken. Local landscape character assessments also have been reviewed to inform judgements made on landscape value.
- A1.19 Paragraph 5.19 of GLVIA3 states that *"landscapes or their component parts may be valued at the community, local, national or international levels."* This word-scale is used to define the level of landscape value in the baseline appraisal. Table 1 provides typical criteria for judgements on landscape value.

Table 1 - Landscape Value

Landscape Value	Typical Example
International	<p>Land within a World Heritage Site where the scenic qualities of the particular landscape in question contributes to the designation.</p> <p>A landscape closely associated with an artist or writer of international renown (for example, Monet's garden at Giverny).</p>

Landscape Value	Typical Example
National	Land within a National Park or AONB where the scenic qualities of the particular landscape in question are consistent with the designation. A landscape closely associated with an artist or writer of national renown (many such landscapes are also designated a National Park or AONB, for example Constable's connections with the Dedham Vale AONB or Wordsworth's connections with the Lake District National Park).
Regional	A landscape which has a scenic quality and rarity, or recreational or tourist offer, which results in its renown at a regional or county-level.
Local	A landscape which has scenic quality and rarity, or a recreational or tourist offer, which results in its renown at a borough or district-level. A landscape with a local plan designation which relates to landscape quality, or a local plan designation which relates to a conservation interest (historic or wildlife) where the landscape contributes to the designation.
Community	Landscapes which are valued by residents and workers within a the community, but for which there is no particular indication of a higher value.

A1.20 In this appraisal, the value of the landscape using professional judgement has been considered as Local.

Predicting and Describing Landscape Effects

A1.21 Once the landscape baseline has been established, baseline information is combined with an understanding of the components of the potential development that would potentially be introduced into the landscape, to identify and describe the landscape effects. This is in accordance with paragraph 5.34 of GLVIA3.

A1.22 Paragraph 5.34 of GLVIA3 refers to two steps when predicting landscape effects. These are summarised below:

- The first step is to identify the components of the landscape that are likely to be affected by the scheme; and
- The second step is to identify interactions between these landscape receptors and the different components of the potential development at all its different stages.

A1.23 Landscape effects in this appraisal have been predicted based on the above approach. The description of landscape effects has been presented as appropriate for this appraisal. The type of landscape effects predicted as a result of the potential development options include, where relevant, effects that are direct, indirect, short, medium and long term, permanent and temporary, positive (or beneficial) and negative (or adverse). These are discussed further below.

Assessing the Overall Landscape Effects

A1.24 The following method for the appraisal of the likely overall effects of the potential development options on the landscape is in accordance with the guidelines at paragraph 5.38 to 5.52 of GLVIA3. Assessing the overall landscape effects requires an appraisal of

the sensitivity of the landscape affected (its susceptibility to change and value), and an appraisal of the magnitude of the effect (size or scale, geographical extent, nature of the effect (adverse or beneficial), and its duration and reversibility on the landscape).

Landscape Sensitivity

A1.25 In accordance with paragraph 5.39 of GLVIA3, landscape sensitivity sequentially combines judgements of the landscape’s susceptibility to change to the type of potential development (i.e. the degree to which the landscape can accommodate the proposed change without suffering detrimental effects on its character), and the value attached to the landscape.

Susceptibility to Change

A1.26 The susceptibility of a landscape to change is dependent on the characteristics of the receiving landscape and the type and nature of the potential development. Landscape character types or areas have varying sensitivity to the types of development they are able to accommodate. In accordance with paragraph 5.42 of GLVIA3, the appraisal of susceptibility is tailored to the type of potential development, and is considered as part of the appraisal of effects, and is not recorded as part of the landscape baseline.

A1.27 The judgement on the susceptibility of a landscape to the change proposed is recorded as high, medium or low. The susceptibility of the landscape to the potential development options has been assigned to the landscape in the project study area, where one or more of the following typical criteria in **Table 2** (below) applies.

Table 2 - Susceptibility to Change

Susceptibility to Change	Typical Criteria
High	<ul style="list-style-type: none"> • There are no existing buildings in the landscape and the presence of existing development has a very limited influence on landscape character. • There is limited or no existing screening by trees, woodland, hedgerow, landform, and or built form. • The potential for mitigation in keeping with existing landscape character is very limited. • The landscape cannot accommodate the operation (and construction) of the potential development option without affecting defining or key characteristics.
Medium	<ul style="list-style-type: none"> • There are some buildings in the landscape and existing development has a limited influence. • There is some existing screening provided by trees, woodland, hedgerow, landform, and or built form. • The potential for mitigation in keeping with existing landscape character is limited. • The landscape generally can accommodate the operation (and construction) of the potential development option with limited effects on it defining or key characteristics.

Susceptibility to Change	Typical Criteria
Low	<ul style="list-style-type: none"> Existing buildings and development are a notable characteristic of the landscape. There is existing screening by trees, woodland, hedgerow, landform, and or built form. There is potential for mitigation in keeping with existing landscape character. The landscape generally can accommodate the operation (and construction) of the potential development option with very limited effects on landscape character.

Value of the Landscape

A1.28 As stated and discussed above, the value of the landscape potentially affected by a development proposal is evaluated when establishing the landscape baseline.

Landscape Sensitivity

A1.29 As identified above landscape sensitivity considers the landscape's susceptibility to change to the potential development options, and the value attached to the landscape potentially affected. The appraisal of landscape sensitivity has been assigned to the landscape within the study area, with consideration to the typical criteria identified in Table 3 below.

Table 3 - Landscape Sensitivity

Landscape Sensitivity	Typical Criteria
High	<p>The landscape has a high susceptibility to change and has regional, national or international value; or</p> <p>The landscape has a medium susceptibility to change and has national or international value.</p>
Medium	<p>The landscape has a high susceptibility to change and has community or local value; or</p> <p>The landscape has a medium susceptibility to change and has local or regional value; or</p> <p>The landscape has a low susceptibility to change and has national or international value.</p>
Low	<p>The landscape has a medium susceptibility to change and has community value; or</p> <p>The landscape has a low susceptibility to change and has community, local or regional value.</p>

A1.30 Consideration also has been given to paragraph 5.46 of GLVIA3, where it states that there can be complex relationships between the value of a landscape and the landscape's

susceptibility to change, which are noted as being especially important when considering change within or close to designated landscapes. GLVIA3 provides the following examples:

- *“an internationally, nationally or locally valued landscape does not automatically, or by definition, have high susceptibility to all types of change;*
- *it is possible for an internationally, nationally or locally important landscape to have relatively low susceptibility to change resulting from the particular type of development in question, by virtue of both the characteristics of the landscape and the nature of the proposal;*
- *the particular type of change or development proposed may not compromise the specific basis for the value attached to the landscape.”*

A1.31 In accordance with paragraph 5.42 of GLVIA3, landscape sensitivity is considered as part of the appraisal of effects, where the judgements on susceptibility to change are identified.

Magnitude of Effect

A1.32 In accordance with paragraphs 5.48 to 5.52 of GLVIA3 the magnitude of effect on the landscape is considered with regard to the size or scale of change in the landscape likely to be experienced as a result of a development; the geographical extent of the area influenced; and the duration and reversibility of the effect.

A1.33 More weight usually is given to effects that are greater in scale and long-term in duration. In assessing the duration of the effect, consideration is given to the effectiveness of mitigation, particularly where planting is proposed as part of the works which would change the scale of the landscape effect. The following aspects are taken into consideration in determining the magnitude of effects on landscape character.

Size or Scale

A1.34 Determining the size or scale of landscape effect takes account of the loss or the addition of features in the landscape and the changes anticipated in its composition as a result of the potential development option. Changes in composition have the potential to affect aesthetic or perceptual aspects of the landscape. Consideration is also given to whether the predicted landscape effect changes the key characteristics of the landscape that influences the distinctive character of the landscape.

Geographical Extent

A1.35 The geographical area over which the size or scale of landscape effects will extend also forms part of the magnitude of effect judgement. Within a landscape study area particular landscape effects might be experienced at the site level (i.e. within the Site), at the level of the immediate setting of the site; within the landscape type or character area within which the potential development option is; and also at a larger scale where the potential development option would influence several landscape types or character areas.

Duration and Reversibility of Landscape Effects

A1.36 These are separate but linked considerations. Duration has been judged to be long term and irreversible in this appraisal.

Magnitude of Effect

A1.37 The magnitude of effect considers the scale of change (i.e. whether it is high, moderate, low or negligible); its nature (adverse, beneficial or neutral); and its duration (short, medium or long-term) and its reversibility.

A1.38 **Table 4** below describes the magnitude criteria for the landscape appraisal, which can be adverse or beneficial.

Table 4 - Criteria for the Appraisal of the Magnitude of Effect on Landscape Character

Magnitude of Effect	Typical Criteria
High	<p>Major alteration to key features or characteristics of the existing landscape.</p> <p>Introduction of a large scale or prominent feature or features into the landscape uncharacteristic of the existing character.</p> <p>Large scale of change to the character of the landscape across a large geographical area relative to the prevailing landscape character area.</p>
Moderate	<p>Partial alteration to key features or characteristics of the existing landscape.</p> <p>Introduction of noticeable elements into the landscape uncharacteristic of the existing character.</p> <p>Large scale of change to the character of the landscape across a small geographical area relative to the prevailing landscape character area or moderate scale of change across a medium geographical area.</p>
Low	<p>Minor alteration to key features and characteristics of the existing landscape.</p> <p>Introduction of small scale features or features which may already be present in the landscape.</p> <p>Small scale of change to the character of the landscape across a small geographical area relative to the prevailing landscape character area.</p>
Negligible	<p>A very minor alteration to key features or characteristics of the existing landscape.</p> <p>Introduction of features noticeable in a very limited geographical area or features which are characteristic of the landscape.</p>

Judging the Overall Landscape Effects

- A1.39 GLVIA3 paragraph 5.53 states that:
“to draw final conclusions about significance the separate judgements about the sensitivity of the landscape receptors and the magnitude of the landscape effects need to be combined, to allow a final judgement about whether each different effect is significant or not.”
- A1.40 GLVIA3 and related clarification notes confirm that significance of effect should be judged when EIA is undertaken. In this appraisal the magnitude and sensitivity judgements have been combined to reach an overall level of, or degree of effect. This accords with the guidance provided in the GLVIA3 Statement of Clarification 1/13. In this appraisal, the overall level or degree of effect is referred to as **the ‘overall effect’**.
- A1.41 The appraisal of the overall effect of the potential development option on the landscape is not an absolute scale. GLVIA3 paragraph 3.23 states that the appraisal of overall effect *“is an evidence-based process combined with professional judgement”*, and that the basis of these judgements *“is transparent and understandable, so that the underlying assumptions and reasoning can be understood by others.”*
- A1.42 Paragraph 5.56 of GLVIA3 states that it is reasonable to say that the effects of the greatest importance are likely to be those which would result in *“major loss or irreversible negative (adverse) effects, over an extensive area, on elements and/or aesthetic and perceptual aspects that are key to the character of nationally valued landscapes.”*
- A1.43 At the other end of the spectrum effects that could be determined as being less important would relate to *“reversible negative (adverse) effects of short duration over a restricted area, on elements and/or aesthetic and perceptual aspects that contribute to but are not key characteristics of the character of landscapes of community value.”*
- A1.44 The overall effect on landscape character is determined through the sequential combination of judgements on the landscape sensitivity and magnitude of effect. The overall effect on landscape character can be beneficial (enhance the landscape) or adverse (at odds with or harmful to the landscape’s key features or character) consider the typical criteria presented in **Table 5** below.
- A1.45 The typical criteria do not represent every appraisal scenario which may be encountered. There always will be an element of professional judgement needed, which must be applied on a case-by-case basis. Generally each of the typical criteria in the table below, would not on their own result in the overall effect judgement attributed to it. Rather the overall effect judgement is more likely to be based on a combination of factors, which influence the magnitude of effect and landscape sensitivity.

Table 5 – Overall Landscape Effects

Effect	Typical Criteria
Major adverse	<p>A major adverse effect is judged to occur as a result of a high adverse magnitude of effect on a receptor of high or medium sensitivity.</p> <p>For example, when the potential development option would:</p> <ul style="list-style-type: none"> • Be at complete variance with the landform, scale and pattern of the landscape. • Would permanently degrade, diminish or destroy the integrity of valued characteristic features and/or their setting. • Would substantially damage a high quality part of a landscape of regional or greater value.
Moderate adverse	<p>A moderate adverse effect is judged to occur as a result of a moderate adverse magnitude of effect on a receptor of high or medium sensitivity.</p> <p>For example, when the potential development option would:</p> <ul style="list-style-type: none"> • Be at considerable variance with the landform, scale and pattern of the landscape. • Would degrade, diminish or destroy the integrity of some characteristic features and/or their setting. • Would cause damage to the character of a landscape of local or greater value.
Minor adverse	<p>A minor adverse effect is judged to occur as a result of a low adverse magnitude of effect on a receptor of high, medium or low sensitivity.</p> <p>For example, when the potential development option would:</p> <ul style="list-style-type: none"> • Not quite fit into the landform, scale and pattern of the landscape. • Have an adverse effect on an area of recognised landscape character (of community or greater value).
Negligible / neutral	<p>A negligible adverse effect is judged to occur as a result of a negligible adverse magnitude of effect on a receptor of high, medium or low sensitivity.</p> <p>For example, when the potential development option would:</p> <ul style="list-style-type: none"> • Be in keeping with the scale, landform and pattern of the existing landscape. • Maintain the existing landscape quality.

Effect	Typical Criteria
<p>Minor beneficial</p>	<p>A minor beneficial effect is judged to occur as a result of a low adverse magnitude of effect on a receptor of high, medium or low sensitivity.</p> <p>For example, when the potential development option would:</p> <ul style="list-style-type: none"> • Fit with the scale, landform and pattern of the landscape; or • Have a beneficial effect on an area of recognised landscape character (of community value or above), for example through the restoration of a characteristic feature partially lost through other land uses.
<p>Moderate beneficial</p>	<p>A moderate beneficial effect is judged to occur as a result of a moderate beneficial magnitude of effect on a receptor of high or medium sensitivity.</p> <p>For example, when the potential development option would:</p> <ul style="list-style-type: none"> • Fit well with the existing scale, landform and pattern of the landscape; or • Improve the quality of a landscape of local or greater value, for example through the removal of damage caused to landscape features and or their setting by previous or existing land uses.
<p>Major beneficial</p>	<p>A major beneficial is judged to occur as a result of a high beneficial magnitude of effect on a high or medium sensitivity landscape receptor.</p> <p>For example, when the potential development option would:</p> <ul style="list-style-type: none"> • Completely fit with the existing scale, landform and pattern of the landscape; • Enhance and redefine the landscape character in a beneficial manner; or • Substantially repair or restore a high quality part of a valued landscape (typically regional or greater value), which was badly damaged or degraded through previous or existing land uses.

Visual Appraisal Method

Scope of the Visual Appraisal

- A1.46 In accordance with paragraph 6.2 of GLVIA3 *“scoping should identify the area that needs to be covered in assessing visual effects, the range of people who may be affected by these effects and the related viewpoints in the study area that will need to be examined.”*
- A1.47 The physical scope of this visual appraisal has been informed by the following:
- desk-based analysis of OS mapping and aerial photography; and
 - field survey work to verify extent of visibility.
- A1.48 Land from where there may potentially be a view of existing development has been identified from desk-based analysis and at the outset in accordance with paragraph 6.6 of GLVIA3. During the subsequent site visit the approximate extent of visibility of the Site

and potential development options has been determined from publicly accessible locations.

- A1.49 The following visual receptors included in the visual appraisal were identified:
- public viewpoints, including public rights of way (PRoW) and roads, where there are views experienced by motorists and any passengers, cyclists and pedestrians; and
 - private viewpoints, including residential properties and places where people work.

Establishing the Visual Baseline

Desk Based Appraisal

- A1.50 A review of relevant information, guidance and planning policy relating to the proposed development options, landscape and views has been undertaken including:
- NPPF (2019);
 - Local Plan policies and guidance;
 - Published Landscape Character Appraisals;
 - Published walking and cycling routes;
 - Designated heritage assets;
 - Ecological and landscape designations; and
 - Ordnance Survey mapping and aerial photography.

Site Appraisal

- A1.51 Desk study and field survey work was undertaken to gather landscape and visual baseline information to inform and assess the potential development options. Site appraisal of the potential development options involved visits to the area by car and on foot. Where the views from private properties have been considered, the appraisal has been carried out from the nearest publicly accessible viewpoint.

Reporting on the Baseline Situation

- A1.52 Following desk based and site appraisals, the nature of existing views within the study area is described as part of the baseline reporting. In addition, the baseline views are described for the public and private visual receptors.

Predicting and Describing Visual Effects

- A1.53 In accordance with paragraphs 6.26 to 6.29 of GLVIA3 preparation of the visual baseline is followed by the systematic identification of likely effects on potential visual receptors. Site survey tables and desk based appraisal are used to consider the different sources of visual effects alongside visual receptors that would be affected. This assists with the initial identification of likely overall effects for further study. In order to assist in the description and comparison of the effects on views, site survey tables will include information on:
- the nature of the view of the potential development options with consideration of the angle of the view (direct or oblique); proportion of filtering or screening by vegetation, landform or built form; topography (looking down to, level or up to);
 - the proportion or extent of the view affected by the potential development options;
 - the distance of the receptor or viewpoint from the potential development options;
 - description of the baseline view and the value attached to the view; and
 - degree of change from the baseline view including scale and proximity, distance and extent of view affected, creation of a new visual focus in the view, introduction of new

man-made objects, alteration of visual scale, and change to the degree of visual enclosure.

- A1.54 An informed professional judgement is then made as to whether the visual effects are beneficial or adverse (or in some cases negligible or no change) in their consequences for views and visual amenity. This is based on a judgement about whether the change will affect the quality of the view given the nature of existing views.

Assessing the Overall Visual Effects

- A1.55 The following method for the appraisal of the likely overall visual effects of the potential development options is in accordance with the guidelines at paragraph 6.30 to 6.45 of GLVIA3, and considers receptor sensitivity (determined by susceptibility to change and value of the view), the magnitude of the effect (size or scale; geographical extent; adverse or beneficial nature of the effect and its duration and reversibility) resulting from the proposed change to the view and the overall effect.

Receptor Sensitivity

- A1.56 Visual receptors are people who potentially would have a view of the potential development options. The sensitivity of a visual receptor depends on the susceptibility of the visual receptor to change and the value of the view.

Susceptibility to Change

- A1.57 The susceptibility of different visual receptors to potential changes in views and visual amenity is mainly a function of:

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

- A1.58 The land use planning system considers that public views are of greater value than views from private property. This visual appraisal considers the effects on public views only.

- A1.59 In accordance with paragraph 6.33 of GLVIA3 the visual receptors most susceptible to change generally are likely to include:

- residents at home;
- people, whether residents or visitors, who are engaged in outdoor recreation, including use of PRoW, whose attention or interest is likely to be focused on the landscape and on particular views;
- visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience; and
- communities where views contribute to the landscape setting enjoyed by residents in the area.

- A1.60 Travellers on roads, rail or other transport routes tend to fall into an intermediate category of medium susceptibility to change. Where travel involves recognised scenic routes such as rural lanes and tourist routes, awareness of views is likely to be higher. Where travel involves main roads or motorways awareness of views is likely to be lower.

- A1.61 In accordance with paragraph 6.34 of GLVIA3 visual receptors likely to be less sensitive to change include:

- people engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the landscape; and
- people at their place of work whose attention may be focused on their work or activity, not on their surroundings, and where the setting is not important to the quality of working life (although there may on occasion be cases where views are an important contributor to the setting and to the quality of working life).

A1.62 In accordance with paragraph 6.35 of GLVIA3 “each project needs to consider the nature of the groups of people who will be affected and the extent to which their attention is likely to be focused on views and visual amenity. Judgements about the susceptibility of visual receptors to change should be recorded on a scale (for example high, medium or low) but the basis for this must be clear, and linked back to evidence from the baseline study”.

A1.63 For this assessment the focus of the appraisal has been upon recreational users in the Fen Edge landscapes to the north and east of the Site Susceptibility to Change. These receptors have been assigned Susceptibility to Change as shown in Table 7 below.

Table 7 - Susceptibility to Change

Receptor	Susceptibility to Change
Users of PRow and other recreation routes	High
Public Open Space/visitor attractions where surroundings are important to the experience	High

Value of the View

A1.64 Judgements about the value attached to the views experienced is considered in the context of the value placed on a scene, alternatives available and the relative scenic quality of a view. Most views are appreciated by the person experiencing them as they are preferable to not having a view and they provide some interest. The judgement of the value of a view is subjective and in accordance with paragraph 6.37 of GLVIA3 takes account of:

- recognition of the value attached to particular views, for example in relation to heritage assets, or through planning designations; and
- indicators of the value attached to views by visitors, for example through reference to a view in a guidebook or on a tourist map, provision of facilities for their enjoyment (such as parking places, sign boards and interpretative material) and references to them in literature and art that indicates a highly valued view, which often can be experienced by many people.

A1.65 In this appraisal views have been ascribed a value using the scale set and typical examples set out in the **Table 8** below.

Table 8 – Value of View

Value of View	Typical Example
International	Public views experienced from a World Heritage Site, in recognition of the value likely to be placed on views, including by tourists.
National	Public views experienced from a National Park or AONB, in recognition of the scenic quality of views and the value likely to be placed on views, including by tourists, within a nationally designated landscape. The views from national footpaths and cycle routes, in recognition of their wider recreational use (at a national level) and the value likely to be attached to views by visitors.
Regional	Views from walks, cycle routes or public open spaces publicised at a county or regional level, in recognition of their wider recreational use and the value likely to be attached to views by visitors from the county or wider region.

Value of View	Typical Example
Local	Views from walks, cycle routes, or public open spaces publicised at a local or borough level, in recognition of their recreational use and the value likely to be attached to views experienced by visitors from the local area. Public views from or within a local plan designation relating to landscape quality or a conservation interest (such as a Conservation Area or Local Nature Reserve).
Community	Public or private views which are valued by residents and workers within the community, but for which there is no particular indication of a higher value.

A1.66 The value of the views considered in this appraisal has been considered as Local.

Receptor Sensitivity

A1.67 As identified above, the sensitivity of visual receptors depends on the susceptibility of the view to change, and the value attached to the view experienced. Receptor sensitivity is assigned to receptors in accordance with **Table 9** below.

Table 9 - Receptor Sensitivity

Receptor Sensitivity	Typical Criteria
High	The receptor view has a high susceptibility to change and has international, national, or regional value; or The receptor view has a medium susceptibility to change and has international or national value.
Medium	The receptor view has a high susceptibility to change and has community or local value; or The receptor view has a medium susceptibility to change and has community, local or regional value. The receptor view has a low susceptibility to change and has international or national value.
Low	The receptor view has a low susceptibility to change and has community, local or regional value.

A1.68 Visual receptors considered in this appraisal have been ascribed medium sensitivity.

Magnitude of Effect

A1.69 In accordance with paragraphs 6.38 to 6.41 of GLVIA3, the magnitude of effect evaluates the visual effects identified in terms of the size or scale of each component of a development options; the geographical extent of the area influenced; and its duration and reversibility. The appraisal of magnitude also refers to the nature of the effect (adverse or beneficial). More weight usually is given to effects that are greater in scale and long-term in duration. In assessing the duration of the effect, consideration is given to the effectiveness of mitigation, particularly where planting is proposed as part of the works which would change the scale of visual effect. The following aspects have been taken into consideration in determining the magnitude of visual effects on a receptor.

Size or Scale

- A1.70 The scale of change from the present views experienced is considered with respect to the loss or addition of features in the view and changes in its composition, including the proportion of view occupied by the potential development options. For example the introduction of a new housing development into a view where housing is already present is more likely to result in a lower scale of change than the introduction of housing into a view where there is no housing development present.
- A1.71 The appraisal of size or scale also takes account of the degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements, for example in terms of form, scale, colour and texture.
- A1.72 Consideration also is given to the relative amount of time over which views of the potential development options would be experienced on each occasion, for example along a short length of a PRow, and whether views would be full, partial or glimpsed. Any filtering or screening of a view by vegetation, landform or built form as the filtering or screening of even part of a development can reduce the scale of change on the view.

Geographical Extent

- A1.73 The geographical extent of visual effects varies with different viewpoints and reflects the following.
- The angle of view, with changes to direct views generally considered to be of greater importance than changes in oblique views.
 - The distance between the receptor and the potential development options.
 - The height of the visual receptor compared to the height of the potential development options (affecting whether the potential development options would be looked down to, looked up to or whether it would be viewed on a level).
 - The extent of the area over which the changes would be visible.

Duration and Reversibility of Visual Effects

- A1.74 The effects on views in this appraisal have been considered permanent and irreversible.
- A1.75 Table 10 below describes the magnitude criteria for visual appraisal, which can be adverse or beneficial.

Table 10 - Criteria for Appraisal of Magnitude of Effect on Views

Magnitude of Effect	Typical Criteria
High	<p>Major alteration to the existing view and or the introduction of elements considered totally uncharacteristic in the view.</p> <p>Typically this would be where a development would be seen in close proximity with a large proportion of the view affected with little or no filtering and there would be a great scale of change from the present situation for the long or medium-term.</p>

Magnitude of Effect	Typical Criteria
Moderate	<p>Partial alteration to the existing view and or the introduction of prominent elements in the view.</p> <p>Typically this would be where a development would be seen in views for the long or medium-term where a moderate proportion of the view is affected. There may be some screening, which would minimise the scale of change from the present situation.</p> <p>This would also be where a development would be seen in close proximity with a large proportion of the view affected for the short-term.</p>
Low	<p>Low alteration to the existing view and or the introduction of features, which may already be present in views.</p> <p>Typically this would be where a moderate or small proportion of the view would be affected for the short-term or development would be visible for the long-term in distant views; where only a small proportion of the view is affected in the medium-term or long-term; where the medium-term or long-term effect is reduced due to a high degree of filtering and or screening or where there is a low scale of change from the existing view.</p>
Negligible	<p>Very low alteration to the existing view.</p> <p>Typically this would be where, in the short, medium or long-term, a development would be barely perceptible within a long distance panoramic view and or where a very small proportion of the view is affected. The scale of change from the existing view would be barely perceptible.</p>

Judging the Overall Visual Effects

- A1.76 In accordance with paragraph 6.42 of GLVIA3 *“to draw final conclusions about significance the separate judgements about the sensitivity of the visual receptors and the magnitude of the visual effects need to be combined, to allow a final judgement about whether each different effect is significant or not”*. *“Significance of visual effects is not absolute and can only be defined in relation to each development and its specific location.”*
- A1.77 The study comprises an appraisal rather than EIA and the separate magnitude and sensitivity judgements have been combined to reach an overall level of, or degree of effect. This accords with the guidance provided in the GLVIA3 Statement of Clarification 1/13. In this appraisal, the overall level or degree of effect is referred to as the ‘overall effect’.
- A1.78 Large-scale changes which introduce new, discordant or intrusive elements into the view of a sensitive receptor are considered to be more likely to be more important than small changes or changes involving features already present in the view or changes in the views of less sensitive receptors. Changes in views from recognised and important viewpoints, such as scheduled monuments or outdoor tourist attractions, or from important amenity routes, such as long distance footpaths or national cycle routes, are likely to be most important.
- A1.79 The overall effect on views is determined through the sequential combination of judgements on visual receptor sensitivity and the magnitude of effect. The overall visual

effects can be either adverse or beneficial or be recorded as 'no effect'. The appraisal of overall visual effects considers the typical criteria shown in **Table 11** below.

Table 11 - Overall Visual Effects

Overall Effect	Typical Criteria
Major	A major effect is judged to occur as a result of a high magnitude of effect on a high or medium sensitivity receptor. For example where there would be an unobstructed view of the potential development option and/or would occupy a large proportion of the view from a recreational footpath where views are presently open and of high scenic quality.
Moderate	An moderate effect is judged to occur as a result of a moderate magnitude of effect on a receptor of high or medium sensitivity. For example where part of a development is visible from a private property for the long or medium-term, but where it does not comprise the whole view; or where an unobstructed view of development is visible for the short-term.
Minor	An minor overall effect generally relates to a low magnitude of effect experienced by a receptor of high, medium or low sensitivity. A minor overall effect often relates to a change in a view for the short-term; to a change in a distant view or a change in only a small part of a view, possibly because the view is already screened to a large extent.
Negligible	An negligible overall effect is where the change to a view will be barely perceptible from the view presently experienced by a receptor of high, medium or low sensitivity.

APPENDIX B: Photography and Photomontage Method

METHOD FOR THE PRODUCTION OF VERIFIED PHOTOMONTAGES

1. TEP's method for preparing photomontages accords with the guidance contained in the Landscape Institute Advice Note 01/11 Photography and Photomontage in Landscape and Visual Impact Assessment (currently under review) as well as 02-17 Visual Representation. Consideration has also been given to guidance included in 'Visual Representation of Windfarms Version 2 for Scottish Natural Heritage (SNH) July 2014. LI Advice Note 01/11 strongly advises (LI) members to take a proportional approach to SNH guidance previously referenced, where applicable in preference to any other guidance or methodology. Further reference material includes Historic England' Seeing History in the View, London View Management Framework and Windfarm Visualisation, Perspective or Perception by Alan Macdonald RIBA.
2. A photograph from each viewpoint is taken using a 50mm lens on a 21.1-megapixel full frame digital Single Lens Reflex (SLR) camera (Canon EOS 5d Mark II with a 50mm EF 50mm F/1.4 USM lens). A 50mm lens is used as recommended in guidance because this offers an equivalent view to the vision of the human eye and has long been used in comparative and photomontage techniques in environmental assessment.
3. The camera is sited level on a tripod with a panoramic head (Manfrotto 338 Leveling base with Manfrotto 308 Panoramic Head). The camera's position is adjusted so that the nodal point of the lens is on the rotating axis of the panoramic head and also 1.6m above ground level in normal situation (based on Historic England Guidance). The nodal point of the camera lens is accurately surveyed. Grid co-ordinates and height above ordnance datum (AOD) are recorded. A 'baseline' photograph is taken. A second photograph is taken with a minimum of three specific reference points accurately surveyed. Reference points include surveyor's ranging rods and where possible, existing long distance features in the view which can be surveyed. Reference points are arranged so that one is in the centre of the photograph. The camera remains fixed on the tripod in position for the second photograph so that the only difference is that the reference points are inserted. This is repeated at each viewpoint.
4. From some viewpoints where there is a wide view, 'panorama' baseline photographs are taken by rotating the camera on the tripod (the nodal point of the camera lens is on the rotating axis) to take in a wide expanse of view equivalent to the viewer moving their head when stood still at one place. The rotating angle between adjacent photographs is approximately 20° (about 50% overlap on field of view). This means that each panoramic photograph is constructed using only the centre 50% of each shot with the 25% left and right hand edges being discarded (NB: the far left and right photos only lose 25% edges on one side). Panorama baseline photographs are joined together in Adobe Photoshop, and once joined together are clearly labelled 'panoramic views'.
5. In relation to exposure settings on site, the AV (Aperture-Priority) mode is used. For the greatest depth of view the aperture is set to the minimum available (normally f/16 to f/22, depending on light conditions). If a greater

resolution is required a slightly larger aperture of f8 is used. In some circumstances where the best quality image of the view cannot be achieved using the AV mode, the manual setting is used. Photographs are taken in RAW and high quality JPG formats, and will be further adjusted in Adobe Photoshop to achieve the best quality images.

6. A three-dimensional (3D) model of the proposed development, generally including the proposed landform and landscape proposals, is built in computer aided design software (CAD) with material finishes being assigned to the proposed development. The camera positions and surveyed reference points are also modelled in CAD. The virtual camera is located at equivalent co-ordinates and height, and with the same 'lens', orientation and settings as used in the photograph at each viewpoint. The 'virtual ranging rods' and/or 'virtual features' (reference points) are set at the same heights and co-ordinates as those used as reference points in the photographs.
7. 'Photographs' of the model are taken or rendered with 'virtual' cameras in the 3D CAD software (3ds Max Design) in positions equivalent to the locations from which the actual photographs were taken at each representative viewpoint. Each photograph view is taken / rendered twice – one with associated reference points and one without).
8. The photograph of the model is compared to the equivalent photograph of the representative viewpoint, with particular emphasis on ensuring the correct alignment of the 'reference points' to align the model correctly in the image. Once the alignment is made using Adobe Photoshop software, the model is 'dropped' into the photograph. The process of using ranging rods to check the appropriate alignment is shown below in Figure 1. This is an image of proposed new buildings and landform. The model being imported shows the building and changed landform in the distance and the 'virtual' ranging rods (black lines) being aligned with the surveyor's ranging rods used on site (red and white poles) in the foreground. The parts of the model that would be behind land, trees, buildings or other structures has been removed, so that only the visible parts of the model remain in Figure 1.



Figure 1 Aligning model in photograph to reference points (surveyor's rods)

9. Once the model is correctly aligned in each reference photograph, the first 'baseline' photograph is used instead of the reference photograph with high confidence that the position of the development is accurately shown.
10. Presentation of photomontages includes a baseline photograph displayed above the relevant photomontage/s for each viewpoint where practicable. Viewpoint OS grid coordinates and viewpoint height above ordnance datum (AOD) are noted on the photomontage figure. Additional information on the photomontage figure (or in the Landscape and Visual Impact Assessment) includes details of the camera, the lens focal length, the horizontal field of view, the date and time when photographs were taken, the orientation of the view, and the distance of the viewpoint from the site. The correct viewing distance of the photomontage (between 300mm and 500mm between the eye and the photomontage image) is also identified as is the paper size the figure should be printed at. When printing photomontage images, the desired pixels per inch (DPI) is 300. Test prints are produced to ensure the best print quality is achieved within the limitations of the print process.
11. A photograph is a representation of a view and a photomontage shares that limitation. Many people comment that their souvenir or holiday photographs fail to fully convey the experience had at the time they were taken. Baseline photographs are a representation of a view and the photomontages on which they are prepared, regardless of accuracy, share the limitations of the baseline photograph with regard to conveying the overall impression of the final development.

APPENDIX C: Candidate Viewpoints not used as Verifiable Views

Viewpoint Description	Distance and Direction to the Site	Reason for Exclusion from the LCVIA
Villa Road.	2.5km to the southeast.	There are no views of the Site due to the presence of intervening built form in the southern part of Impington.
National Cycle Network (NCN) Route 51 between Impington and the A14.	1.6km to the southeast.	Views in the direction of the Site are channelled by vegetation on either side of the route. Views of the Site itself are screened by Cambridge Regional College.
Butt Lane.	1km to the west.	There are no views to the Site from Butt Lane due to the screening effects of the landfill site and Park and Ride in the east and well established hedges and belts of woodland in the west.
Stourbridge Common.	0.5km to the north.	It was considered that views from the adjacent Ditton Meadows would be representative of views from Stourbridge Common. Important views across Stourbridge Common occur from the River Cam and not towards the Site.
Harcamlow Way south side of River Cam at Ditton Meadows.	0.35km to the northwest.	Views in the direction of the Site are screened by mature trees growing on the north side of the River Cam. It was considered that a more open view could be obtained from a point to the south.
NCN Route 51 south side of Ditton Meadows opposite Howard Crescent.	0.55km to the northwest.	A more open location further to the east on the same section of NCN Route 51 was selected.
Pedestrian footway on west side of Horningsea Road opposite Musgrave Way.	1.1km to the west.	While there are open views towards the Site with some existing development noticeable the viewpoint is not considered to be representative of higher sensitivity receptors.

Viewpoint Description	Distance and Direction to the Site	Reason for Exclusion from the LCVIA
Harcamlow Way and Fen Rivers Way to the north of Biggin Abbey.	0.98km to the southwest.	The viewpoint is at a low lying location where intervening vegetation screens the Site. A viewpoint at a slightly elevated location to the east was selected as this provides more context to views.
Low Fen Drove Way.	1.33km to the west.	While the viewpoint is slightly elevated above the surrounding land it is not representative of higher sensitivity receptors. A large proportion of the view is occupied by well established vegetation in the mid ground that screens views in the direction of the Site.
A14 overbridge at Honey Hill.	2.5km to the west.	While the viewpoint is elevated above the surrounding land and provides uninterrupted views towards the Site, it is not typical of views from the A14, Low Fen Drove Road or from this part of the landscape. It is an isolated, transitory viewpoint.
Public right of way and Harcamlow Way at Quy Water Bridge off the A1303.	3.7km to the west northwest.	Intervening vegetation a short distance to the west and layers of vegetation in the intervening landscape screen views in the direction of the Site from the Harcamlow Way. Landform screens views from the public right of way.
Harcamlow Way at southwestern edge of Stow cum Quy.	3.9km to the west.	Intervening vegetation a short distance to the west and layers of vegetation in the intervening landscape screen views in the direction of the Site. A gap in mid ground vegetation allows slightly clearer views to the Site along a short section of the route. The views are not typical of the Fenland landscape.

Viewpoint Description	Distance and Direction to the Site	Reason for Exclusion from the LCVIA
Harcamlow Way north of Stow cum Quy.	4km to the west.	Views in the direction of the Site are heavily filtered by layers of intervening vegetation comprising of well established hedges with mature trees and by slightly elevated land to the east of Horningsea Road.
Milton Road east of Impington.	1.8km to the northwest.	Views in the direction of the Site are heavily filtered by layers of intervening vegetation comprising of well established tree belts and hedges.
NCN Route 11 at Jane Coston Overbridge looking southwest.	50m to the north.	Views to the southwest are strongly influenced by the A14 and buildings on the northern edge of St John's Innovation Park. It is considered more important to understand the degree of change to views to the southeast from the overbridge where currently there is very little development visible.

In addition to the viewpoints listed which were identified during the desk-based baseline work and visited during fieldwork, the following locations were considered with reasons given why a viewpoint is not included in the LCVIA:

- Stourbridge Common. It was considered that views from the adjacent Ditton Meadows would be representative of views from Stourbridge Common. Important views across Stourbridge Common occur from the River Cam and not towards the Site.
- Cambridge Castle Mound. Castle Mound is a Scheduled Monument located 0.9km to the northwest of Cambridge city centre and approximately 3km to the southwest of the Site. Views towards the Site are heavily filtered by mature trees. The focus of views from Cambridge Castle Mound is to the southeast where the majority of historic buildings are located.
- Little Wibraham Road. Little Wibraham Road is an unclassified road that crosses over the A14 on an overbridge joining the A1303 Newmarket Road between Stow cum Quy and Bottisham approximately 5.6km east of the Site. Intervening landform and vegetation and separation distance from the Site meant that it was not considered further.

APPENDIX D: Glossary and Acronyms

ACRONYMS

AAP	Area Action Plan
AVR	Accurate Visual Representation
CCC	Cambridge City Council
CGBS	Cambridge Green Belt Study
CNFE	Cambridge North Fringe East
CSP	Cambridge Science Park
DSM	Digital Surface Model
DTM	Digital Terrain Model
GLVIA3	Guidelines for Landscape and Visual Impact Assessment 3rd Edition
LCA	Landscape Character Area
LCVIA	Landscape Character and Visual Impact Assessment
LIDAR	Light Detection and Ranging
LNR	Local Nature Reserve
LVA	Landscape and Visual Assessment or Appraisal
LVIA	Landscape and Visual Impact Assessment
NCA	National Character Area
NCN	National Cycle Network
NEC	North East Cambridge
NPPF	National Planning Policy Framework
PPG	Planning Policy Guidance
PRoW	Public Right of Way
SCDC	South Cambridgeshire District Council
SEO	Statement of Environmental Opportunity
SLR	Single Lens Reflex
SPD	Supplementary Planning Document
TCA	Townscape Character Area
WWTW	Waste Water Treatment Works
ZTV	Zone of Theoretical Visibility

GLOSSARY

3D model

A three dimensional digital model of a proposed development showing its length, breadth and height and which can be rotated through any plane to show the form of the development from different angles.

Accurate Visual Representation (AVR)

A still image intended to convey reliable visual information about a proposed development to assist the process of visual assessment.

Bare earth

A 3D model of the Earth's ground surface that does not include buildings, vegetation or features other than terrain itself.

Cumulative development

Development of a similar type to the subject of the LCVIA that is consented but not yet built or development that is subject of a valid planning application that is yet to be determined.

Development scenario or option

A theoretical height of development at the Site illustrated by the use of large blocks or areas on a plan with a table listing potential building heights.

Digital Surface Model (DSM)

A digital model of the Earth's surface created using LiDAR that shows natural and built features.

Digital Terrain Model (DTM)

A digital model of the Earth's surface composed of regularly spaced points that characterise the shape of the Earth's terrain.

Effects

Change resulting from an action or impact.

Forest scale trees

Mature trees of large scale growth form such as lime.

Landscape

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

Landscape character

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

Landscape receptor

Defined aspects of the landscape resource that have the potential to be affected by a proposed development.

Landscape and visual appraisal

A type of landscape and visual impact assessment that is used for development not considered to require Environmental Impact Assessment or undertaken at the early stages of a project to aid design and decision making.

Landscape and visual impact assessment

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

LiDAR or Light Detection and Ranging

Airborne LiDAR measures the height of the ground surface and other features such as trees, hedges, buildings using pulsed laser light. It is highly accurate and of high resolution.

Magnitude of effect

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

Overall effect

A measure of the importance or gravity of the effect.

Photomontage

A visualisation which superimposes an image of a proposed development upon a photograph or series of photographs.

Sensitivity to change

A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor.

Site

The area of land within which the development could take place.

Storey

A part of a building comprising all the rooms that are on the same level.

Susceptibility

The ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences.

Townscape

The character and composition of the built environment including buildings and the relationship between them, the different types of urban open space, including green spaces, and the relationship between buildings and open spaces.

Value

The relative value attached to landscape and views as evidenced by the presence of designated features or recreational uses.

Viewpoint

A point in the landscape used to represent or illustrate the types of views and the visual amenity experienced by people.

Views

A specific point in the landscape recognised as providing views of a particular feature.

Visual amenity

The overall pleasantness of the views people enjoy of their surroundings.

Visual receptor

Individuals and/or defined groups of people who have the potential to be affected by a proposed development.

Zone of theoretical visibility (ZTV)

A digitally produced map showing areas of land from which a development is theoretically visible.



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