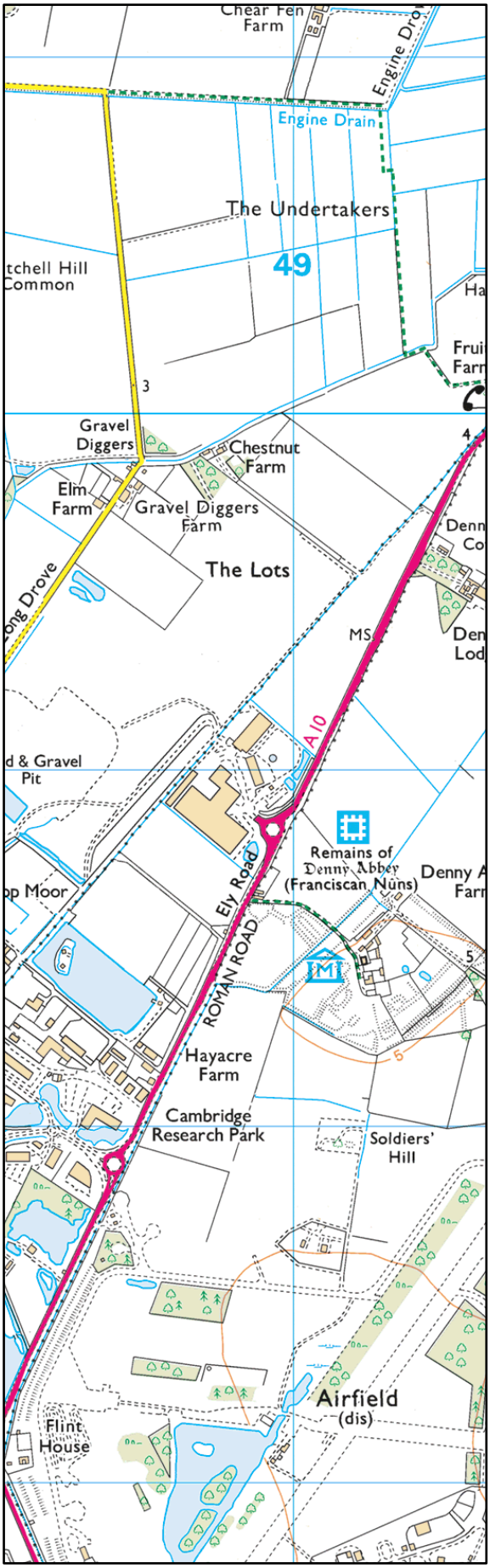

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Review of

Landscape and Visual Impacts

Prepared for

Cambridge Without Incineration (CBWIN)

LPA ref

S/3372/17/CW

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CONTENTS

APPENDICES

1 Introduction

1.1 Scope of this report

1.1.1 Michelle Bolger Expert Landscape Consultancy (MBELC) have been instructed by Cambridge Without Incineration (CBWIN) to review the landscape and visual effects of a proposed Waste Recovery Facility (WRF) at Levitt's Field, Waterbeach Waste Management Park (WWMP), Ely Road, Cambridge. The proposed WRF is the subject of planning application by AmeyCespa (East) Limited (Amey) and for which Cambridgeshire County Council (CCC) are the local planning authority.

1.1.2 The application reference is S/3372/17/CW and the proposed development comprises:

> *'…the erection and operation of an Energy from Waste Facility to treat up to 250,000 tonnes of residual waste per annum, Air Cooled Condensers and associated infrastructure: including the development of an internal access road; office/welfare accommodation; workshop; car, cycle and coach parking; perimeter fencing; electricity sub-stations; weighbridges; weighbridge office; water tank; silos; lighting; heat off-take pipe; surface water management system; hardstanding; earthworks; landscaping; and bridge crossings'.*

1.1.3 The planning application is accompanied by a Planning Application Document (PAD) which includes a Design Evolution Document (Part 2), appendices (including a arboricultural survey), and application drawings (Part 4). The PAD is accompanied by an Environmental Statement (ES). Chapter 5 of Volume 1 of the ES is titled Landscape and Visual Impact Assessment and was prepared by Axis. Volume 2 contains illustrative figures and Volume 3 of the ES contains the technical appendices. The appendices include a draft Landscape and Ecological Management Plan. Volume 5 of the ES is an addendum to the ES, which provides further information in relation to the impacts of the application.

1.2 Review Methodology

1.2.1 A desktop review of the LVIA together with published landscape character assessments has been undertaken. The local area surrounding the site was visited by the authors of this report on 15th August 2018.

1.2.2 This review has been undertaken in accordance with the *Guidelines for Landscape and Visual Impact Assessment*, Third Edition 2013 (GLVIA3) prepared by the Landscape Institute/Institute of Environmental Management and Assessment.

1.3 Review Structure

1.3.1 This review is structured as follows:

- Section 2 provides an executive summary with conclusions.
- Section 3 provides a review of relevant local planning policy.
- Section 4 provides a review of the applicant's LVIA.
- Section 5 provides a summary of the points raised in the landscape review of the application prepared on behalf of CCC.
- Section 6 describes the landscape character of the site and its surroundings.
- Section 7 describes the key landscape effects of the development.
- Section 8 describes the key visual effects of the development.

2 Executive Summary

2.1 Introduction

2.1.1 The proposed Waste Recovery Facility would be located at Levitt's Field in the Waterbeach Waste Management Park (WWMP), Ely Road, Cambridge.

2.2 LVIA Methodology

2.2.1 The following aspects of the LVIA submitted with the application have resulted in an underestimation of the landscape and visual impacts of the development:

- Restricted Study Area
- Failure to identify the importance of skyline views as a factor in landscape susceptibility and sensitivity;
- Failure to include a Zone of Theoretical Visibility analysis (ZTV);
- Viewpoint selection;
- Photomontage selection;
- Presentation of Photomontages which results in an underrepresentation of the scale of the development; and
- Lack of winter view photomontages.

2.3 Landscape Context

2.3.1 The site lies in a transitional area, close to a boundary between two different character areas. The low-lying (often below sea level) fenlands lie to the north of the site and the slightly more elevated Claylands are to the south. These landscapes share a number of characteristics including relatively flat topography, which is more pronounced in the fenlands. Both areas have large skies with far reaching views from any local high points, consequently new buildings and structures tend to be visible across large areas.

2.3.2 We consider that the landscape north and east of the site, which forms a slight basin enclosed by Haddenham ridge to the north, has greater value than identified in the LVIA. It includes Denny Abbey and several historic settlements and is highly representative of the Fenlands LCAs. We consider its value to be **medium-high**.

2.4 Landscape Effects

2.4.1 The landscape of the Fens has a strong horizontal nature, to which new tall vertical elements can provide a stark contrast. There are no buildings in the surrounding landscape that are anywhere near the scale (height and massing) of the proposed building and its chimney (up to 80m). Existing buildings generally complement the flat horizontal nature of the landscape. We consider that the susceptibility of the surrounding landscape to the development proposed is **medium-high** due to the incongruity of the building. The overall sensitivity of the surrounding landscape to the proposal is **medium-high**.

2.4.2 The LVIA concludes that significant change would be *'confined to the southern edge of the character area, within approx. 1-1.5km of the Site"*. We strongly disagree with this assessment. We consider that the area in which there would be a large magnitude of change would extend over a much greater area.

2.4.3 Such a large-scale industrial building will be visible over a wide area and incongruous within the largely rural character of the landscape surrounding the site. The building would be an isolated structure, with no other industrial buildings of a similar scale and height in the surrounding landscape, it would be a major visible detractor. The only local building of a similar scale and height is Ely Cathedral. The development would introduce a new industrial 'landmark' to the Fenlands.

2.4.4 The overall magnitude of change that would result if the site were developed for a WRF use would be **large** and the nature of the change is **adverse**. The overall effect on the landscape would be **moderate/major adverse** and would be experienced across a wide geographical area.

2.5 Visual Effects

2.5.1 The proposed development would have a significant adverse impact on a number of visual receptors both within the immediate context of the site, such as at Denny Abbey (an important historical site / visitor attraction) and on more distant, elevated locations (e.g. Haddenham ridge). Significant visual effects will not be localised as is suggested by the LVIA. They will occur across a much wider area, including up to and over 6km from the site. This is due to the degree of contrast that the proposal will introduce in relation to its

form and scale, relative to its visible context, and the sensitivity of the audiences affected.

2.5.2 From elevated locations such as the Haddenham Ridge, a new vertically prominent feature would introduced, breaking the skyline and unrelated to any existing features. The effects on both users of the A10 and people along the Haddenham ridge would be **moderate/major adverse** and would be significant

2.6 Conclusions

2.6.1 We consider that the proposed development would not be compliant with local policy objectives because the development:

- Is not capable of being assimilated into its surroundings without causing unacceptable harm to the visual amenity and the local landscape character; **Policy CS33 (Protection of Landscape Character)**
- Would cause significant harm to any existing neighbouring land uses and be significantly visually intrusive; **Policy CS34 (Protecting Surrounding Uses)**
- Have an adverse effect on the setting of a historic landscape; **Policy CS36 Archaeology and the Historic Environment:** and
- The design, including form, massing and size, does not respect the local context or reflect local distinctiveness. **(Location and Design of Waste Management Facilities SPD)**

3 Relevant Policy Context

3.1 Introduction

3.1.1 This section considers aspects of local planning policy only in so far as they relate to landscape and visual issues.

3.2 Adopted Cambridgeshire and Peterborough Minerals and Waste Development Plan

3.2.1 The ***Minerals & Waste Core Strategy Development Plan Document***, Adopted July 2011 (CSDP) sets the framework for all minerals and waste developments until 2026. It includes a number of Development Control Policies relevant to this application. These are outlined below.

3.2.2 **Policy CS33 (Protection of Landscape Character)** which states:

> *'Mineral and waste management development will only be permitted where it can be demonstrated that it can be assimilated into its surroundings and local landscape character area in accordance with the Cambridgeshire Landscape Guidelines, local Landscape Character Assessments and related supplementary planning documents.'*[1]

3.2.3 The description of Policy CS33 states that '*The Plan area is relatively flat and open, and development can often be visible over long distances. It is, therefore, **crucial to address the visual impact of development**, and that efforts are made to suitably assimilate both temporary and permanent mineral and waste development into the landscape*'.[2] (emphasis added). It goes on to say that '*Assimilation will need to have regard to the local landscape context. For example, **in a flat open landscape the scope without mitigation may be very limited***'[3] and '*There may be instances where it will not be possible to satisfactorily assimilate development into the countryside without causing*

[1] Page 92, Minerals & Waste Core Strategy Development Plan Document Adopted July 2011
[2] Para 11.13, Minerals & Waste Core Strategy Development Plan Document Adopted July 2011
[3] Para 11.14, Minerals & Waste Core Strategy Development Plan Document Adopted July 2011

***unacceptable harm to the visual amenity and the landscape character**, and **in such cases planning permission will not be granted'**.*[4] (emphasis added).

3.2.4 **Policy CS34 (Protecting Surrounding Uses)** states:

> *'Mineral and waste management development will **only be permitted where it can be demonstrated that there would be no significant harm to** the environment, human health or safety, **existing or proposed neighbouring land uses**, **visual intrusion** or loss to residential or other amenities.*
>
> *Mitigation measures will be required, including where appropriate a buffer zone, between the proposed development and neighbouring existing or proposed sensitive land uses'.*[5] *(emphasis added)*

3.2.5 **Policy CS36 Archaeology and the Historic Environment** states:

> *'Mineral and waste development, including extraction and restoration, **will not be permitted where there is**:*
>
> *a. **an adverse effect on any designated heritage asset**, historic landscape, or other heritage asset of national importance, and / **or its setting** unless there are substantial public benefits that outweigh that harm or loss*
>
> *b. any significant adverse impact on a site of local architectural, archaeological or historical importance'*[6] *(emphasis added)*

3.2.6 The ***Minerals and Waste Site Specific Proposals Development Plan Document*** Adopted February 2012 (SSDP), sets out the Council's allocations for site specific proposals for future development and management of minerals and waste within Cambridgeshire and Peterborough. The application site is allocated within the SSDP as site W1K (Extension of Waste Management Park, Waterbeach). The following potential uses are identified for site W1K:

- '*Material Recovery Facility*

[4] Para 11.15, Minerals & Waste Core Strategy Development Plan Document Adopted July 2011
[5] Page 93, Minerals & Waste Core Strategy Development Plan Document Adopted July 2011
[6] Page 98, Minerals & Waste Core Strategy Development Plan Document Adopted July 2011

- *In Vessel Composting*
- *Energy from waste*
- *Inert Waste Recycling*
- *New waste management technologies'*

3.2.7 In relation to the development of W1K, the SSDP states that a '*detailed assessment of development impacts and mitigation techniques will be required as part of any individual development proposal through the planning process*'.[7] Particular regard to Denny Abbey and its setting is identified as needing to be addressed by any future planning applications.

3.2.8 Land immediately north and west of site W1K (and extending west to Long Drove road) is identified in the SSDP as having an existing Mineral and Waste use. This includes the existing Waterbeach landfill site and the Mechanical and Biological Treatment (MBT) facility). Beyond Long Drove, another site allocation W2B (Cottenham) is for an inert landfill with restoration back to agriculture and, further north, is an area of search for inert landfill.

3.3 Emerging Minerals and Waste Local Plan

3.3.1 The CSDP and SSDP are currently being reviewed and will form a new single joint Minerals and Waste Local Plan (MWLP) for Cambridgeshire and Peterborough.

3.3.2 The Preliminary Consultation Draft, May 2018 of the MWLP does not contain any new site allocations, or any amendments to the Policies Map.

[7] Para 8.23, Minerals and Waste Site Specific Proposals Development Plan Document Adopted February 2012

3.4 The Location and Design of Waste Management Facilities, Supplementary Planning Document (SPD), Adopted July 2011

3.4.1 The Location and Design of Waste Management Facilities SPD provides design and locational guidance for waste management facilities in Cambridgeshire and Peterborough. Chapter 3 provides locational criteria. With regards to rural locations it states that '*facilities should reflect the scale and design of agricultural buildings, though there may be instances where more innovative design would be appropriate*'.[8] The following key principles apply to rural locations (*inter alia*):

- '*Designs should be in sympathy with local landscape character and distinctiveness*
- *Site design should minimise views to operational areas, particularly external storage and parking, and any other elements that present a more 'industrial' appearance.*
- *Designs should take account of existing rights of way and any views from them.*
- *Proposals, including planting, should not be harmful to the character, appearance, and setting of the historic environment and specific historic assets*'.[9]

3.4.2 Chapter 4 provides design criteria. Key principles include (*inter alia*):

- '*In both rural and urban locations built form should reflect local distinctiveness and be sympathetic in design, although where appropriate, design may also be imaginative.*
- *Any vents, chimneys or service infrastructure should be designed positively as part of the scheme, and not added as an afterthought.*
- *Consideration should be given to the massing of the buildings, in order to reduce the bulk of the proposals overall*'.[10]

3.4.3 Chapter 5 provides facility specific guidelines. Those concerning 'energy from waste' state that such '*facilities are likely to be large in scale and need sizeable sites to accommodate the plant and associated site works. An urban or rural location could be appropriate. With*

[8] Para 3.6, The Location and Design of Waste Management Facilities Adopted July 2011
[9] Para 3.8, The Location and Design of Waste Management Facilities Adopted July 2011
[10] Para 4.12, The Location and Design of Waste Management Facilities Adopted July 2011

good quality design and mitigation, facilities could be located up to 250m from sensitive receptors'.[11] In consideration of landscape and visual issues, the guidelines identify the following potential impacts and mitigation measures:

- *'Design of building and stack will depend on local context, but should take an appropriate form, massing and size as well as use appropriate materials, colours and detailing.*
- *Careful consideration of chimneys / exhaust stacks.*
- *Appropriate orientation ground profiling*
- *Tree and hedgerow planting.*
- *Appropriate design, positioning and colour of boundary treatment'.*[12]

3.5 Conclusions

3.5.1 The application site is allocated within the SSDP as site W1K (Extension of Waste Management Park, Waterbeach).

3.5.2 To satisfy local policy objectives the development should:

- Be capable of being assimilated into its surroundings without causing unacceptable harm to the visual amenity and the local landscape character;
- Not cause significant harm to any existing or proposed neighbouring land uses, or be significantly visually intrusive;
- Not have adverse effects on any designated heritage asset or historic landscape (including its setting) unless there are substantial public benefits that outweigh that harm. Particular regard to Denny Abbey and its setting is therefore required; and
- The design, including form, massing and size, should respond to the local context and reflect local distinctiveness.

[11] Para 5.13, The Location and Design of Waste Management Facilities Adopted July 2011
[12] Page 49, The Location and Design of Waste Management Facilities Adopted July 2011

4 Review of Application LVIA

4.1 Introduction

4.1.1 ES Appendix 5.1 sets out the methodology used in the LVIA. The LVIA correctly addresses both landscape effects and visual effects separately. Landscape effects are effects on the fabric and character of the landscape. Visual effects are effects on people and are concerned with the impact of the proposals on the amenity of those people who will experience visual changes.

4.1.2 Although the methodology generally accords with established best practice principles in GLIVA3 we consider that the following aspects of the LVIA have resulted in an underestimation of the landscape and visual impacts of the development:

- Restricted Study Area
- Failure to identify the importance of skyline views as a factor in landscape susceptibility and sensitivity;
- Failure to include a Zone of Theoretical Visibility analysis (ZTV);
- Viewpoint selection;
- Photomontage selection;
- Presentation of Photomontages; and
- Lack of winter view photomontages.

4.2 Methodology: Sensitivity Criteria

4.2.1 The assessment of the sensitivity of the landscape is directly related to the type of development proposed and is recorded within the LVIA on a verbal scale of low, medium and high. Landscape sensitivity is derived from: '*combining judgements about* ***susceptibility*** [of the landscape] *to the type of change or development proposed and the* ***value*** *attached to the landscape'.*[13] (emphasis added)

[13] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 88, Paragraph 5.39

- **The value of a landscape** is: '*the relative value that is attached to different landscapes by society, bearing in mind that a landscape may be valued by different stakeholders for a variety of reasons...A review of existing landscape designations is usually the starting point in understanding landscape value but the value attached to undesignated landscapes also needs to be carefully considered*'.[14]

4.2.2 The methodology correctly identifies that judgements concerning the value of a landscape should be made independent of the development proposal. It also correctly notes that the absence of a designation does not mean that a landscape does not have value. The methodology lists the factors given in GLVIA3 Box 5.1 which can be used to identify valued landscapes and provides (at Table 2.1) indicators of higher and lower value.

- **The susceptibility to change of a landscape** is: '*the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular landscape type or areas, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies*'.[15] The assessment of susceptibility must be tailored to individual projects and '*should not be recorded as part of the landscape baseline but should be considered as part of the assessment of effects*'.[16]

4.2.3 The LVIA methodology correctly notes that the susceptibility of a landscape to change is dependent on the characteristics of the landscape and is specific to the nature of the change being proposed. The methodology goes on to list five factors which influence the susceptibility of a landscape to a WRF development, these are[17]:

- Scale
- Pattern/Complexity

[14] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 80, Paragraph 5.19
[15] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 88, Paragraph 5.40
[16] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 89, Paragraph 5.42
[17] 2.4, ES Appendix 5.1

- Development/ Human Influence
- Connections with adjacent areas
- Visual Interruption.

4.2.4 The general principles implied by the factors above are correct. They are appropriate criteria for assessing the susceptibility of the landscape to WRF development. However, a key factor which relate specifically to this landscape and the proposed WRF should have been considered, namely:

- **Skyline -** Prominent and distinctive skylines, or skylines with important landmark features that are identified in the landscape character assessment, are likely to be more susceptible to a WRF development because the height of the building and chimney may detract from these skylines as features in the landscape or draw attention away from existing landform or landmark features on skylines.

4.2.5 It is also important to consider the implications of the presence of exiting development in the landscape surrounding the site (e.g. whether there are strong horizontal or vertical forms present). This matter is addressed in more detail in section 6.5 of this review.

4.3 Methodology: Landscape Magnitude of Change

4.3.1 Judgements about the magnitude of change for landscape effects are recorded in the LVIA on a verbal scale of negligible, small, medium and large. They are based on the principles set out in GLVIA3 paragraphs 5.48-5.52 which includes a consideration of scale, geographical extent and the duration and reversibility of the landscape effects.

4.3.2 The LVIA correctly states that '*The geographical extent of an effect is the area over which effects will be experienced. It is not the same as size/scale, as a small-scale change may be experienced over a wider area, or vice-versa*'.[18]

[18] 2.12, ES Appendix 5.1

4.4 Methodology: Visual Effects

4.4.1 The criteria for susceptibility of visual receptors (people), the determining of value and the magnitude of change are set out clearly in the LVIA and are consistent with GLVIA3. The LVIA notes correctly that residents at home, people engaged in outdoor recreation (with an interest in the views around them) and visitors to heritage assets are amongst the receptors with typically the highest susceptibility to change.

4.5 Methodology: Significance

4.5.1 The LVIA employs an effects scale of minor-moderate-major but does not define these terms. Effects greater than 'moderate' are considered more likely to be EIA significant. The LVIA notes that effects of moderate or lower may also be significant and effects greater than moderate may not be significant. The methodology appropriately states that: '*the final assessment of the level of effect and whether this is significant for decision makers is one of professional judgement*'.

4.5.2 Table 4.1 in ES Appendix 5.1 provides an indicative matrix for determining the level of effect and correctly indicates that such judgements are derived from combining judgments on sensitivity and magnitude of change – and that typically the greatest effects occur where there is a large magnitude of change to receptors with a high sensitivity.

4.6 Study Area

4.6.1 GLIVA3 recommends that a study area includes:

> '*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'*.[19]

[19] 5.2 GLIVA3

4.6.2 The LVIA has a study area which extends from the site to slightly short of 5km to the south, slightly over 5km to the east and over 6km to the north and west. The study area was chosen based upon '*the assessor's knowledge of the area, and their previous experience of similar developments*'.[20]

4.6.3 Unhelpfully the application does not include a Zone of Theoretical Visibility analysis (ZTV). The preparation of a ZTV is typically the first step in informing the delineation of a study area. While it is evident the development would be visible across a wide area, a ZTV analysis could have usefully demonstrated:

- from where the main building and chimney are most likely to be visible;
- how much of the development would be visible from any given location; and
- the extent and pattern of theoretical visibility.

4.6.4 This information would have helped to refine the study area, which we consider should have been greater in extent.

4.6.5 We note that ZTVs (for bare earth, winter and summer scenarios) were included as part of the LVIA submitted with the Waterbeach Barracks Development application[21] (refer **Appendix 1**). These ZTV clearly demonstrate (via the extensive visibility of even a two-storey building) how even low-level buildings are visible across a very wide area, due to the flat nature of the surrounding landscape.

4.6.6 The proposed WRF is a much larger building than any proposed at Waterbeach Barracks (in both height and bulk) with an even taller chimney structure (approximately twice the height of the main building). These structures will be set within the same very low-lying and typically flat landscape. This combination means that the development would be visible across an extensive area. The extent to which the surrounding landscape is impacted is understated by the restricted size of the study area used in the LVIA, as is discussed in greater deal in section 6.5 of this review.

[20] 5.2.10 ES Chapter 5
[21] Waterbeach Barracks – an outline application for up to 6,500 new dwellings (and other business, retail and leisure uses) is currently being consulted on (Planning Application Ref: S/0559/17/OL).

4.7 Viewpoint Selection

4.7.1 Initially sixteen viewpoints (Vp) were submitted to CCC in a Scoping Report. Following further consultation with SCDC and Historic England / Denny Abbey Trust, the number of potential viewpoints for inclusion in the LVIA was increased to thirty. ES Appendix 5.3 sets out the justification for why only twenty viewpoints were taken forward to the LVIA.

4.7.2 Of the ten omitted viewpoints, we disagree with the reasoning for the following omissions:

- **The omission of Vp 4** from Footpath 11 in favour of VP11 from School Lane in Chittering. Vp 11 is described as being representative of the views available to local residents yet is taken from the eastern edge of the settlement along the road, by a break in the roadside vegetation. Residential properties along the southern side of School Lane tend to be enclosed by amenity planting. Vp 4 is more likely to represent the views of local residents as it is the only PRoW which connects the hamlet with the wider countryside. Moreover, views south from Vp 4 would have provided a view looking directly towards the development, more closely representative of views from the A10. An audience underrepresented in the LVIA.

- **The omission of Vp 18** from a first-floor window in Denny Abbey. Such a view would have provided a more elevated viewing position, relative to the site, and better represented how the landscape setting of the heritage asset (specifically the Grade 1 listed Abbey) is experienced from inside the asset and how this setting would be impacted by the proposal.

- **The omission of Vp 23** from the north-eastern end of the proposed Waterbeach Barracks application site. This site is not a 'very similar view to VP24' as described in ES Appendix 5.3. Under the current proposal Vp 24 would be flanked immediately to the north by new buildings. Vp 23 is 650m north-east of Vp 24 and would be located within an area of proposed public open space, where the nature of views would be notably different to those at Vp 24.

- **The omission of Vp 29** from Ely Cathedral. The justification for its omission is that '*Tours of the octagon tower are available but ascend the north side of the cathedral, from which views south are blocked by the Cathedral structure*'. The LVIA initially failed to recognise that tours are also available of the West Tower

(66m), which is taller than the Octagon Tower (52m) and offers visitors 360-degree views from the roof. In which the proposed development would be visible. The additional information provided in ES Chapter 5 rectifies this error and acknowledges the views from the West Tower.[22]

4.7.3 In addition to these specific omissions, we also consider that views from the A10 are under-represented and that there is a general lack of long-distance views within the LVIA. The latter is partly a result of a ZTV analysis being omitted from the LVIA, as outlined above.

4.7.4 In relation to viewpoint selection, GLVIA3 states that "*The emphasis must always be on proportionality in relation* ***to the scale and nature of the development proposal*** *and its likely significant effects, and on agreement with the competent authority and consultation bodies*". (emphasis added).

4.7.5 Given the nature of the development relative to that of its landscape context, the LVIA ought to have included viewpoints (and at least one photomontage) from key distant locations. This would have better represented the full range of views and audiences affected. Such viewpoints could have included the aforementioned Ely Cathedral and the views north from the American War Cemetery at Madingley. Photomontages from Viewpoints e.g. 15 or 16 would have been used to usefully demonstrate the appearance of the proposal from more distant elevated locations. There are no examples of distant elevated views in the submitted photomontages. Of the photomontages, only Vp 26 is taken from over 5km away and it is just beyond 5km. All of the photomontages were taken from low-lying areas (albeit Vp 22 is from the control tower at Waterbeach Barracks).

[22] 6.1.6, ES Volume 5 Chapter 6

4.8 Photomontages: General

4.8.1 The landscape review prepared by The Landscape Partnership on behalf of CCC indicates that a methodology for the preparation of the photomontages has been prepared.[23] However, we have not been able to find this within the material available to us. We note the Landscape Partnership review refers to an earlier report (25 January 2018) which they prepared, and which was responded to by Axis (the applicant's landscape consultants) on 9th February 2018.[24] It may be that the photomontage methodology was contained in that response, however neither the 25th January report or the 9th February response appears to be publicly available.

4.8.2 The LVIA references the guidance prepared by the Landscape Institute on photography and visualisations: *Landscape Institute Advice Note 01/11, Photography and photomontage in landscape and visual impact assessment* (Advice Note 01/11).[25] Since the release of Advice Note 01/11, the Landscape Institute has revised its guidance and the updated Guidance Note is at a consultation draft stage.

4.8.3 Seven of the twenty viewpoints included within the LVIA have been used to prepare photomontages. The photomontages included with the application show an existing view and the view upon completion of the development (ES Figures 5.3a-5.3g). A separate set of photomontages has been prepared which illustrate a view (at the same seven viewpoints) after 15 years, showing the maturation of the proposed mitigation planting (ES Appendix 5.6).

4.9 Photomontages: Presentation of Images

4.9.1 There is no definitive guidance on how visualisations should be presented except for guidance on visualisations for windfarms in Scotland. Scottish Natural Heritage *Visual Representation of Wind Farms: Version 2.2* (SNH Guidance). Extracts from the SNH Guidance are included in **Appendix 2**. Whilst this guidance is not directly applicable to

[23] 2.3 Landscape Review for Waterbeach Waste Recovery Facility, The Landscape Partnership
[24] 1.2 Landscape Review for Waterbeach Waste Recovery Facility, The Landscape Partnership
[25] 5.2.9, ES Volume 1 Chapter 5

England or to other forms of development it is helpful in establishing the principles for preparing visualisations that give an accurate sense of scale and distance.

4.9.2 The SNH Guidance stresses that for visualisations to give an accurate sense of scale and distance the way they are presented is as important as the content of the visualisations. Annex B of the SNH Guidance sets out standard requirements for horizontal and vertical field of views (HFOV & VFOV) and printed size of images with which wind farm visualisations should comply.

4.9.3 The requirements for HFOV & VFOV and printed size of images have been developed as it is well known that wide panoramas (i.e. wider than 53.5°) printed at a small size inevitably under-represent scale and distance. Images with the correct HFOV & VFOV printed at the correct size better represent scale and distance and can be viewed at a comfortable arm's length.

4.9.4 The SNH Guidance requires that where planar panoramas are used they should presented on A1 sheets and have the following dimensions: *'Image size 260 by 820mm on A1 sheet. HFOV[26] 53.5° and VFOV[27] 18.2°'*[28] The photomontages which accompany the LVIA are presented on an A3 page and measure 129mm by 324mm. They have a HFOV of approximately 63°. These images are less than half the height recommended by SNH for wind farm visualisations.

4.9.5 The SNH Guidance for wind farm visualisations sets out the dimensions for Single Frame images where these are requested. Single Frame images can be presented on A3 pages rather than A1 pages and are therefore easier to use on site. It is recognised that A3 single frame images provide a good impression of scale and distance. *'The image height should be 260mm by 390mm wide. The horizontal field of view should be 27° and the vertical field of view should be 18.2°.* [29] Given that the photomontages submitted with the application have been presented at A3, a single frame image would have been

[26] Horizontal field of View
[27] Vertical Field of View
[28] Scottish Natural Heritage (2014) *Visual Representation of Windfarms: Version 2.2* Annex B Standard requirements which all visualisations should comply with.
[29] Scottish Natural Heritage (2014) *Visual Representation of Windfarms: Version 2.2 Page 39.*

appropriate. This could have been accompanied by a wider panorama to illustrate the context of each view.

4.9.6 In summary, the photomontages would have given a more accurate impression of scale and distance if they had either been printed at a larger size or had contained only a single frame.

4.10 Photomontages: Mitigation Planting

4.10.1 Central to the mitigation planting proposed is a triple row of 'hybrid poplar' trees to the south and east of the WRF. It is understood that these could be Populus 'Balsam Spire' (Landscape and Ecological Management Plan (LEMP) (ES Appendix 5.7)). In general poplars are fast growing and the growth rates stated on Figure 1 in ES Appendix 5.6 are generally accurate (i.e. predicting 1.5m growth per year). The photomontages illustrate the proposed poplar trees at 27m tall after fifteen years, which is towards their upper growth limit but is achievable with adequate maintenance. We note that the photomontages from within Denny Abbey do not account for the additional planting proposed as mitigation, as shown on Figure 5.1 in ES Volume 5.

4.10.2 The photomontages, most notably Vps 17 and 20 (Denny Abbey), do not show a winter view. The photography for these two viewpoints was taken on the 26th April 2017 when most of the surrounding trees were in leaf. The simulated poplar trees have therefore also been shown in full leaf and this presents a more favorable image with regards to the success of the proposed mitigation planting in screening views of the development. When preparing photomontages, it is generally considered best practice to show a worst-case scenario in terms of visibility. Views through the poplar trees will be possible for a large part of the year during winter.

5 Cambridgeshire County Council Landscape Reviews

5.1 Introduction

5.1.1 A review of the applicant's LVIA has been prepared by The Landscape Partnership (TLP) on behalf of CCC. The review is dated 27 February 2018. Additional comments were also provided by TLP in response to Volume 5 of the ES (additional information) (undated).

5.1.2 This section provides a summary of TLP's findings. Further details regarding TLP's reasoning of their effects judgments are referred to throughout the following sections of this report in relation to our consideration of specific landscape and visual effects.

5.2 Summary of Findings

5.2.1 The TLP review concurs with 'most of the content' within the LVIA methodology.[30] They agree with the judgements regarding the omitted viewpoints[31] and they also agree with the methodology used to prepare the photomontages.[32]

5.2.2 The TLP review takes an approach of using the receptors identified within the LVIA to structure their review. They provide their judgements with regard to the assessment of effects on each receptor and show a comparison with the LVIA findings in a summary table (Table 5.1). In summary, TLP's review finds several instances where they consider the effects would be greater than stated in the LVIA. In particular TLP find that significant effects would occur across a wider geographical area than indicated in the LVIA.

5.2.3 In relation to landscape receptors, the LVIA divides the study area into two landscape areas ('Fenlands' to the north and the 'Claylands' to the south based on landscape character areas (LCA) identified in published assessments). The LVIA assesses the effects on each in relation to the 'localised' area around the site, and the wider area 'generally'. In Table 5.1 of their review, TLP quantify these areas ('localised' and 'generally') by including a judgement for each landscape area 'up to 1.5kms' and a second '1.5-2.5kms'.

[30] 3.1 Landscape Review for Waterbeach Waste Recovery Facility, The Landscape Partnership
[31] 2.5 Landscape Review for Waterbeach Waste Recovery Facility, The Landscape Partnership
[32] 2.3 Landscape Review for Waterbeach Waste Recovery Facility, The Landscape Partnership

The LVIA finds that significant effects would be localised only in both landscape areas. The TLP review finds significant effects would occur up to 2.5kms away in both landscape areas.

5.2.4 The review considers that significant effects would extend up to 2.15km distant (Vp 10) and identifies an additional four locations where significant adverse effects would occur (Vps 6, 7, 10, 24). The LVIA finds no significant adverse visual effects beyond 700m from the site (Vp 20).

5.2.5 TLP, in response to the additional information (ES Volume 5) provided by the applicant, comment on the cumulative effects of the Mitchell Hill planning application and a proposed new access road into Denny Abbey. While TLP identify additional viewpoints at which cumulative effects would occur (to those identified in ES Volume 5) as a result of the Mitchell Hill proposal, they otherwise concur with the effects identified and consider the access road proposal to be appropriate, subject to supplementary planting.[33]

[33] 6.1 Landscape Further Review, The Landscape Partnership

6 Review of the Landscape Effects of the Proposal

6.1 Introduction

6.1.1 Landscape and visual effects are considered separately as the former are considered as effects on the environment and the later as effects on people. Landscape effects can be effects on the fabric of the landscape or on landscape character. Effects on landscape character often extend beyond the site itself and are a consequence of visual changes which affect the pattern and character of the landscape.

6.2 Landscape Baseline: Published Character Assessments

6.2.1 The site and its surroundings are considered in a number of different landscape character assessments. This section considers the key information in those studies and, where included, any strategies or guidance for the management of change within the landscape.

6.2.2 The site is located within National Character Area (NCA) 88: Bedfordshire and Cambridgeshire Claylands, approximately 1km south of the boundary with NCA 46: The Fens. Key characteristics of NCA 88 include: [34]

- '***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*'. (emphasis added)

6.2.3 The key characteristics of NCA46 include:[35]

- '***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***.

[34] Page 6 National Character Area Profile, NCA 88
[35] Pages 7 and 8 National Character Area Profile, NCA 46

- *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 patter**n.*

- ***Large, built structures exhibit a strong vertical visual influence**, such as … Ely Cathedral on the highest part of the Isle of Ely **dominating** its surrounding fen, wind farms and other modern large-scale industrial and agricultural buildings, while drainage and flood storage structures and embanked rail and road routes **interrupt the horizontal fen plain**'.* (emphasis added)

6.2.4 NCAs are important in providing the overall understanding of the context to the landscape in which the site is located. However, the broad scale at which NCAs are described means that they are usually unsuitable for assessing the effects of a single development.

6.2.5 At a regional level, within the East of England Landscape Framework, the site is within the Planned Peat Fen Landscape Character Type (LCT). The summary description states:[36]

- *'**A flat, low lying and sparsely populated landscape** characterised by dark peaty soils**, a grid like pattern of large arable fields** bounded by drainage ditches and **wide views to distant, often dramatic skies**'.* (emphasis added)

6.2.6 The following are noted in relation to 'perceptions' within the Planned Peat Fen LCT: [37]

- *'A quiet, remote landscape where the sky plays a particularly dominant role in creating mood and interest.*

- ***The flat horizontal nature of the landscape can give vertical features (eg church towers and more recently wind farms) unusual prominence**'.* (emphasis added)

6.2.7 Similar perceptions are noted in relation to the Lowland Village Farmlands LCT, which begins immediately south of the site:[38]

[36] Available online: http://landscape-east.org.uk/lct/planned-peat-fen
[37] Available online: http://landscape-east.org.uk/lct/planned-peat-fen
[38] Available online: http://landscape-east.org.uk/lct/lowland-village-farmlands

- *'Away from major transport routes this landscape has a greater sense of tranquillity although intensive farming activity and a high density settlement pattern mean that many areas retain a busy feel.*
- *Sparse woodland cover giving rise* ***to open character and extensive views****'.*

6.2.8 The site is located within Area 3 Western Claylands within the *Cambridgeshire Landscape Guidelines – A Manual For Management and Change In The Rural Landscape*, CCC, 1991. Relevant extracts include:[39]

- '*Larger farm units have created a need for* ***large storage buildings, which can be prominent in the landscape***
- ***Church spires and towers enliven the skyline****.*
- *The vision is one of a fairly large-scale landscape with large rolling fields enclosed by and sweeping around blocks and belts of woodland and broad hedgerows*'. (emphasis added)

6.2.9 The northern site boundary aligns with the boundary of Area 8 Fenlands in the Cambridgeshire Landscape Guidelines. Relevant extracts for this area include:[40]

- '*The open landscape provides distant views where the scattering of clumps and individual trees merge together to produce a feeling of a more densely tree-covered horizon.*
- *extensive* ***linear planting of poplars*** *and willow on field edges and road verges in the Isleham-Prickwillow area on the initiative of vegetable growers has produced features which* ***now dominate the local landscape***
- *In many areas* ***the essential character is the open view of land, sky and the field drains****. Any landscape proposal* ***must suit the massive scale of the landscape…****'.*

[39] Area 3 Description, *Cambridgeshire Landscape Guidelines – A Manual For Management and Change In The Rural Landscape*, CCC, 1991

[40] Area 8 Description, *Cambridgeshire Landscape Guidelines – A Manual For Management and Change In The Rural Landscape*, CCC, 1991

6.2.10 Within the District Design Guide, a supplementary planning document (SPD) adopted by South Cambridgeshire District Council in 2010, the site lies within LCA E Fen Edge. The key characteristics are largely a repetition of those outlined in the aforementioned studies.

6.2.11 Also adopted SPD is the Cottenham Village Design Statement, adopted 2007. Relevant extracts included:[41]

- '***All Saints Church is a prominent landmark which can be seen from almost every direction around the village****... **The pinnacled tower acts as a focus** around which the setting of the village revolves as one looks from Beach Road, Long Drove, Church Lane, Twentypence Road, Engine Drove, Cottenham Lode and Rampton Road.*
- *Because there are so few public rights of way in the vicinity, the **viewing places that are accessible are well frequented in their own right for enjoyment of what can be seen from them**. Most of the adjoining land is outside the village framework and covered by countryside protection policies. **Landmarks are often listed buildings** and are subject to other national regulatory and policy controls that seek to give effect to the desirability of preserving and enhancing them and their settings*'. (emphasis added)
- Guideline L/7 recommends '*Protect vistas that contribute to the character and attractiveness of Cottenham*'.

6.3 Landscape Baseline: Site Context

6.3.1 The site lies in a transitional area, close to a boundary between two different character areas. This boundary is reflected in published landscape character assessments at a National, Regional and County level. The low-lying (often below sea level) fenlands lie to the north of the site and the slightly more elevated Claylands are to the south. Whilst each area is distinctive overall in their own right, these two landscapes share a number of broadly similar characteristics. One of which is a relatively flat topography, albeit this is more pronounced in the fenlands. The result of this topography is that both areas share

[41] Landscape and Wildlife, Cottenham Village Design Statement SPD.

characteristically large skies, far reaching views from any local high points, and new buildings and structures tend to be visible across large areas.

6.3.2 A notable topographical (and landscape character) variation in the wider visible context of the site derives from the chalklands to the south-east of Cambridge. Looking south, the horizon is defined by noticeably elevated land, formed by a '*narrow continuation of the chalk ridge that runs south-west to north-east across southern England*' (NCA 87: East Anglian Chalk). The chalk ridge reaches elevations of over 100m above ordnance datum (AOD). One such location is at Wadlow Farm, where there is a 13-turbine wind farm development (120m height to blade tip). These turbines are visible over a considerable distance, including from the tower of Ely Cathedral.

6.3.3 Of lesser elevation, between the site and Ely is a ridge which extends from west of Haddenham to Stretham (Haddenham ridge). Although only rising to 30m AOD, the ridge forms a noticeable rise in the otherwise low-lying fenland landscape. It acts as a barrier, closing views between the landscape south of Haddenham to that beyond the ridge approaching Ely. This characteristic is particularly noticeable when travelling north along the A10, where Ely Cathedral 'suddenly' becomes visible on departing Stretham having crossed the ridge. The Cathedral is an outstanding historical landmark within the fens.

6.3.4 A lower ridge, similar in alignment to that of the Haddenham ridge is found to the north-east of the site around Wicken. This completes a ring of higher ground within 6-7km to the north-west to north-east of the site. In combination with the more elevated Claylands, and chalklands to the south, south-west and south-east, this enclosure means that the site lies in a slight 'basin'. This basin features two main river corridors: the River Cam and the River Great Ouse.

6.3.5 The settlement pattern surrounding the site reflects local topographical variation. Small villages and hamlets are generally confined to areas above sea level. They encircle and overlook the 'basin' landscape in which the site is located. The Haddenham ridge for example features a string of three historic villages: Haddenham, Wilburton and Stretham. The sparsity of settlement overall (due in part to a lack of elevated land) means that the basin area, particularly to the north of the site, retains a deeply rural character. Much of the lower-lying landscape between the site and the Haddenham ridge is utilised for arable farming (as it has been historically). Historic field patterns remain. Fields are organised

with regularity and with straight, rectilinear boundaries: a response to the level topography and historic drainage patterns.

6.3.6 Views from the Haddenham ridge are far-reaching and look out across an extensively flat arable landscape. Modern structures are visible within this landscape, including solar energy developments, but any noticeably large (non-residential) buildings tend to be for agriculture. While some of these buildings have a large footprint, they tend to be no greater than 2-3 storeys high. They sit low in the landscape and respond well to the broad horizontal lines of the surrounding fieldscapes and distant level horizons. Such buildings do not breach the horizon when looking south towards the site from local high points, e.g. Haddenham.

6.3.7 Directly opposite to the site on the eastern side of the A10 is Denny Abbey. This is a Scheduled Ancient Monument (SAM) and contains three listed buildings (two of which, the abbey and refectory, are Grade I listed). South of Denny Abbey is the disused airfield and barracks at Waterbeach. Waterbeach Barracks are currently the subject of an outline planning application for up to 6,500 new dwellings (and other business, retail and leisure uses) (application ref: S/0559/17/OL).

6.3.8 The site specifically is a 6.23ha grass field. It is adjacent to the existing 162ha Waterbeach Waste Management Park (WWMP). The WWMP features the Waterbeach landfill to the north-west, and a Mechanical Biological Treatment (MBT) and Materials Recycling Facility (MRF) immediately north-east. To the south lies a modern business park (Cambridge Research Park). Together, the WWMP and Cambridge Research Park form a corridor of development along the northern side of the A10. Signalling the beginning of a more urbanised landscape on route south towards Cambridge.

6.4 Landscape Value

6.4.1 The LVIA (ES Chapter 5) does not specifically address the value of the landscape surrounding the site, other than in relation to the landscape fabric of the site, which it considers is low. At Appendix 5.4 of the ES, the LVIA finds that the value of both the Claylands and Fenlands LCAs is medium. The reasoning provided is as follows:

- Claylands – '*There are no landscape designations present. The public rights of way network within the character area is sparse, but several long routes are present running along watercourses, allowing access through the landscape*'.
- Fenlands – '*There are no landscape designations present. The recreational value of the rivers is evidenced by the presence of long-distance promoted walking routes along their banks, and by the presence of marinas. The rivers are narrow corridors within a functional landscape of limited value*'.

6.4.2 The LVIA appears to have taken a narrow view on what constitutes landscape value, focused on designations and primarily recreational value. All nationally designated landscapes are of course valued landscapes in the general meaning of the word and they are protected by legislation and paragraph 172 of NPPF2. However, GLVIA3 recognises that valued landscapes can exist outside of designations and provides a list of factors[42] (which go beyond recreational value) that can be useful in indicating value (GLVIA3, page 84 in Box 5.1).

6.4.3 Based upon the Box 5.1 factors, we agree with the LVIA that the site has medium value when considered in isolation. Its immediate setting, specifically the A10 and land to the west within the WWMP, has also been impacted by a number of detractors, including the A10 road and the other existing WWMP facilities. As a result of its context and allocation in the *Minerals and Waste Site Specific Proposals Development Plan Document*, the site forms part of the wider development corridor along the western side of the A10 heading south into Cambridge.

[42] The factors are: Landscape Quality (condition); Scenic Quality; Rarity and Representativeness; Conservation Interests; Recreation Value; Perceptual Aspects; and Associations.

6.4.4 However, beyond this immediate area to the east lies Denny Abbey and to the north, a landscape which features numerous historic settlements (with conservation areas) and a primarily arable land use. The arable characteristics of the area, its settlement pattern, and its inherently flat topography are highly representative of the Fenlands LCAs described at a national, regional, and country level. This wider landscape also has value in providing an attractive rural landscape setting to the nearby historic villages and allows for a sense of historic continuity. In our opinion, the value of the wider landscape that would be affected by the proposed development, particularly as it relates to the basin landscape, land north of the site up to and including the Haddenham ridge (i.e. within the 'Fenlands' LCA), is **medium-high**.

6.5 Assessment of Effects

Susceptibility

6.5.1 The susceptibility to change of a landscape is its ability '*to accommodate proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies*'.[43] This assessment can only be made once the consequences of the development are identified as recommended in GLVIA3.

6.5.2 The LVIA finds that the susceptibility of both the Claylands and Fenlands LCAs, to the development proposed, is Low to Medium. Regarding the specific criteria identified in the LVIA for determining susceptibility to a WRF development, the LVIA finds that the Fenlands LCA has a lower susceptibility with regards to its 'scale' and 'pattern/complexity' but a higher susceptibility than the Claylands with regard to its 'visual interruption'.

6.5.3 We considered that this is a significant underestimation of the susceptibility of the landscape surrounding the site. Our assessment of the basin landscape surrounding the site, the majority of which is within the Fenlands LCA grouping, to a WRF development is set out below. We have used the same criteria as the LVIA, with the additional criteria outlined in section 4.2 above.

[43] Guidelines for Landscape and Visual Impact Assessment, Third Edition 2013 Page 88 Paragraph 5.40

- **Scale**: The landscape is of a large scale, as recognised in the descriptions of LCAs in both the Fenlands and Claylands. However, whilst this does reduce its susceptibility to the proposed development, another important factor is the predominate forms to which that scale relates, as identified in the TLP review:

  > '*a large-scale development relates to a large scale landscape in terms of expanse of landform and skyline, and therefore potentially could be less susceptible than a smaller scale landscape*. ***However, horizontal and vertical form also plays an important role***. *The landscape surrounding the site has a strong horizontal form in terms of landform and skyline. Consequently,* ***a strongly vertical form, particularly of a large built mass would contrast with the horizontal form***'. (emphasis added)

  This point made by TLP is also recognised in the description of the Planned Peat Fen LCT (East of England Landscape Framework): '*The flat horizontal nature of the landscape can give vertical features (eg church towers and more recently wind farms) unusual prominence*'.[44]

- **Pattern/Complexity**: This is a very regular landscape, with strong linear elements, which helps to reduce its susceptibility to rectilinear structures and elements such as tree belts.

- **Development/ Human Influence**: Settlements tend to be located away from the low-lying areas, on the enclosing higher land, however more modern development is present within the immediate vicinity of the site (at the WWMP/ Cambridge Research Park) and further development is likely at Waterbeach Barracks. Development includes several buildings of size, but none anywhere near the scale (height and massing) proposed.

- **Connections with adjacent areas**: There is inter-visibility between the basin area and the more elevated land surrounding it. There is also visibility towards the more elevated land in the distant chalklands, further to the south. This inter-

[44] Available online: http://landscape-east.org.uk/lct/planned-peat-fen

visibility increased the susceptibility of the landscape to harm, particularly given the scale of the building proposed.

- **Visual Interruption**: From the Haddenham ridge in particular, the Wind turbines at Wadlow Farm are just visible in the far-distance on the chalk ridge to the south-east of Cambridge. Other kinds of visible development include a number of recent solar farms. From low lying locations (e.g. Great Ouse walk) distant views of low-lying areas and development are easily screened by above ground features such as vegetation.

- **Skyline**: Within the lower land of the basin the horizons are often formed by above ground features such as vegetation. Few developments, other than the Wadlow wind turbines, which interrupt the distant skyline in the extensive views from the ridges around Haddenham.

6.5.4 Based upon the above, we consider that the susceptibility of the surrounding landscape to the development proposed is **medium-high**.

Sensitivity

6.5.5 The sensitivity of the surrounding landscape is a combination of its susceptibility to the development proposed and the value placed on the site and the surrounding landscape. The overall sensitivity of the surrounding landscape to the proposal is therefore considered to be **medium-high**.

Magnitude of Change

6.5.6 The magnitude of change concerns the scale, geographical extent and the duration and reversibility of the landscape effects. The LVIA finds that the magnitude of change for both the Fenlands and Claylands LCAs would be '*Medium to Large (localised) Small (generally)*'.

6.5.7 We agree that the development would have up to a large magnitude of change within the more immediate areas surrounding the site – including at the highly sensitive Denny Abbey. However, importantly we consider that this large magnitude of change would extend over a much greater area than indicated in the LVIA.

6.5.8 The LVIA methodology defines a 'large' magnitude of change as: '*A substantial change in landscape characteristics and/or* ***over extensive geographical area*** *and/or which may result in an irreversible landscape impact*'.[45] (emphasis added). The LVIA states that: '*The geographical extent of an effect is the area over which effects will be experienced. It is not the same as size/scale, as a small-scale change may be experienced over a wider area, or vice-versa*'.[46]

6.5.9 The geographical extent of an effect is dependent on the extent of visibility of the proposal, which in turn can be influenced by its height relative to its context. Unhelpfully the ES does not include a ZTV, which would have illustrated just how extensive its area of visible influence would be.

6.5.10 In ES Appendix 5.4 the LVIA states in relation to the 'Geographical Extent' of the Fenlands LCA being impacted upon that: "*Change confined to the southern edge of the character area, within approx. 1-1.5km of the Site*". This is simply inaccurate. Given the height of the main building and the chimney (up to 80m), relative to the surrounding low lying-topography, the development would evidently be visible over an extensive area. This would not only include land within the landscape 'basin' referred to above but would extend beyond the intervening ridgelines at Haddenham to viewpoints within Ely (e.g. the Cathedral's West Tower) and as far south as places such as the American War Cemetery at Madingley. The plume emitting from the chimney would draw attention to the development.

6.5.11 The proposal will be visible from within a very large geographical area and its character is industrial. Such a large scale industrial building will be entirely incongruous within the largely rural character experienced throughout much of the landscape surrounding the site and would be a major visible detractor. This detractor would be visible in views which are currently absent of any similarly sized buildings, at an extensive number of locations all around the Fenlands and Claylands. People driving through the landscape, particularly north of Cambridge and south of the Haddenham ridge, would be very aware of the development, seeing it on several different roads.

[45] Table 2.3, ES Appendix 5.1
[46] 2.12, ES Appendix 5.1

6.5.12 A number of other incinerator sites, at locations such as Sheffield, Ferrybridge and Leeds are located on brownfield sites, including former power stations where large cooling towers once stood. In these locations the large scale of the buildings, the heights of the chimneys and the emitting plumes are not incongruous. In contrast, the current proposal would be an isolated structure, with no other industrial buildings of a similar scale and height in the surrounding landscape. The only building in the landscape that has a similar scale and height is Ely Cathedral. The development would introduce a new industrial 'landmark' to the Fenlands. It would impact on several different landscape areas (e.g. the 'Claylands', 'Fenlands' and land within the chalklands to the south: one of the key factors identified in GLVIA3 as indicating a higher magnitude of change.[47]

6.5.13 The other WWMP facilities within the immediate vicinity would not help to provide an appropriate context for the development due to the scale, height of massing, of the proposed WRF. The LVIA does not provide any long sections through the site and the entire adjoining WWMP land. But a comparison in scale between the proposed development and the existing neighbouring buildings is possible when looking at the elevations in ES Figure 4.3 and 4.4, and 5.2 in the Design and Access Statement (Option B). These give a sense of just how much larger the proposed building will be than the existing MBT or MRF plants. These buildings, like other agricultural buildings in the wider context of the site, sit low within the landscape. The largest (MRF Facility) is less than a third of the height of the proposed WRF) and relates well to the evolving landform of the nearby landfill. The WRF will dwarf both the MRF and MBT facilities.

6.5.14 Table 1 below sets out the heights of the buildings around the site, together with that of the proposed development, and of the landmark Ely Cathedral.

[47] 5.50 GLVIA3

Table 1: Height Comparison

Building	Height	Source
Proposed WRF	41.7m (main building), 80m (chimney). The visible plume would be of a length that exceeds 100m for between approximately 1% and 2.7% of daylight hours.	2.4.3 in the accompanying Planning Statement and 5.4.44 in ES Volume 1, Chapter 5.
Waste reception building	12m	Planning Statement for application ref S/02438/06/CW
MBT facility	12m	4.46 in the Planning Statement supporting application ref: S/02438/06/CW
MRF Facility	12.5m (other buildings such as the office and gatehouse were proposed at 4m and 4.5m high respectively)	Figure 2 in the Planning Statement supporting application ref: S/01777/10/CW
Waterbeach Landfill	17m AOD at the ridge	Planning Statement supporting application ref: S/0013/15/CW refers to final height of landfill in Area D being governed by Drawing MC 142.9 (Rev A) and Drawing 722410/001. Height also shown in the consented, conditioned, Landscape Restoration Plan Rev A submitted with application S/0013/15/CW.
Ely Cathedral	66m (West Tower), 52m (Octagon Tower), 32m (Nave).	Facts and Figures, ElyCathdral.org

6.5.15 The WRF building would have a floor level at 3.6m AOD (as indicated on Drawing No. 17013_PL07, Planning Application Document and outlined in the Flood Risk Assessment (ES Appendix 9.1). Ely Cathedral in contrast has a floor level at around 20m AOD. Taking this into account the height of the main building will be 45.3m AOD with the height of the chimney 83.6m AOD. The top of the Nave of Ely Cathedral is 52m AOD, the Octagon Tower 72m AOD and the West Tower is 86m AOD.

6.5.16 Considering all the factors identified above, the overall magnitude of change that would result if the site were developed for a WRF use would be **large**.

6.6 Conclusion

6.6.1 The sensitivity of the surrounding landscape to the proposed development is medium-high. The magnitude of change is large and the nature of the change is **adverse**. The overall effect on the landscape would be **moderate/major adverse**. This effect would be significant and would be experienced across a wider geographical area (in particularly up to the Haddenham ridge) than identified in either the LVIA or the TLP review.

7 Review of the Visual Amenity Effects of the Proposal

7.1 Introduction

7.1.1 Visual changes that result in changes to the local landscape character have been described in the section above and are not repeated in detail in this section. Only a limited number of viewpoints and issues are considered where it is felt the LVIA most underestimated the impact.

7.1.2 Visual effects are a result of the sensitivity of visual receptors (people who will experience changes to existing views) to the proposed development and the magnitude of those changes.

7.1.3 GLVIA3 provides guidance on the relative sensitivity (based on their likely susceptibility) of different visual receptors (Page 113-114). In summary, the most sensitive receptors are:

- Residents at home;
- People engaged in outdoor activities whose attention is focused on the landscape and view; and
- Visitors to heritage assets or other attractions where views are an important part to the experience.

7.1.4 The least sensitive receptors are:

- People engaged in outdoor sports or activities which do not depend on an appreciation of views; and
- People at their place of work (although this can vary).

7.1.5 The sensitivity of road users varies. People on busy or main routes are considered to have medium or low sensitivity, whilst users of rural roads or scenic routes will have medium or even high sensitivity.

7.1.6 Some of the key visual receptors who would be affected by this development are:

- Residents with outlooks towards the site from nearby villages e.g. Chittering and those on the more elevated land of the Haddenham ridge.
- Users of the wider road network, and in particular the A10.

- People using the wider PRoW network;
- Visitors to Denny Abbey; and
- Potentially future residents at Waterbeach, if the Waterbeach barracks development is approved.

7.2 Assessment

7.2.1 We concur with the findings of the LVIA that there would be a significant adverse effect on receptors visiting Denny Abbey (LVIA Vp 17 and 20) and from the A10/ Denny cottages (LVIA Vp 1). However, like TLP, we consider that significant adverse effects would be experienced by a greater number of visual receptors than those identified in the LVIA. We agree with the conclusions of the TLP review that there would also be significant effects on receptors represented by Vps, 6, 7, 10 and 24.[48] Two further (key) receptors, which we consider would also experience significant adverse effects are discussed below.

Road users along the A10

7.2.2 In relation to the A10, we consider that this receptor has not been sufficiently represented in the LVIA. Vp 1 is the only view close to the road and it represents the view when leaving Denny Abbey/cottages, slightly off the A10. Most users of the A10 will be travelling in a north-south alignment and will view the proposal, as a landmark feature, for a considerable duration whilst driving in either direction along the road corridor. Although this is a busy A road, it nevertheless travels through an attractive area of open countryside, connecting through several historic settlements, where any existing buildings of scale (e.g. WRF facility) are well-enclosed by vegetation and are not dominant features in the view.

7.2.3 The proposed poplar trees, whilst characteristic of the wider landscape, will also dominate the road corridor being up to 30m high and within 40m of the road. These will form a substantial green barrier alongside the road. Three rows of a non-native hybrid poplar may assist in filtering views of the development from Denny Abbey in summer but will not

[48] Table 5.1, Landscape Review, The Landscape Partnership

screen the development from the majority of views along the A10. Where these trees will appear as a very rudimentary design response.

7.2.4 As a general point, a more sympathetic approach would have been not to attempt to block all views of the lower parts of the building (as the more elevated parts will be visible anyway), but to filter views via a staggered, multi-species, multi layered and multi-tiered woodland belt. We also share the concerns raised by TLP[49] relating to the proposed planting of the poplars at a semi-mature height. Planted at 5.5/6m high, the trees are less likely to establish a successful root system which may impact both upon the stability of the trees and their ability to reach their maximum growth potential.

7.2.5 We also note that there appears to be no separate effects identified for year 15 (a timeframe / view which is represented in the photomontages). It is understood, from the TLP review, that Axis considers the benefits of the tree planting are not sufficient to downgrade their assessment of the residual effects reported for Year 0.[50]

7.2.6 In our opinion the proposal would have a **large** magnitude of change upon the views of road users along the A10, particularly between the Cambridge Research Park (driving north) and Chittering (driving south). This audience is considered to have a **low/medium sensitivity**. The effect would be at the lower end of **moderate/major adverse** and would be significant. This judgement includes a consideration of the mitigation planting proposed.

Residents and road users along Haddenham Ridge

7.2.7 We disagree with the conclusions of the LVIA regarding Vps 15 and 16 from the Haddenham ridge. The LVIA finds that the effect on the receptors represented by these viewpoints (e.g. local residents and road users) would be moderate adverse, and not significant because: *At longer range, the Proposed Development would be a minor addition to the view and would have no appreciable influence upon the nature of the inherently expansive panoramic views available (refer to Viewpoints 14, 15 and 16')*.[51]

[49] Page 9, Landscape Review, The Landscape Partnership
[50] 2.4 Landscape Review, The Landscape Partnership
[51] 5.4.30 Chapter 5, Volume 1 ES

7.2.8 While the proposal would not prevent view of the extensive panorama, the development would create a new industrial landmark within the panorama. A new feature would be added to the view unlike any currently visible. While the feature would not occupy a substantial horizontal proportion of the view, it would have a vertical prominence above its surroundings. It would break the skyline from both locations; as is acknowledged in the LVIA.[52] There would be a noticeable contrast both in form (e.g. the vertical forms of the WRF facility vs the predominately horizontal forms presently seen within the landscape) and scale with other features in the view. This contrast would draw the eye. The smoke plumes (when visible), would also mean that the new landmark would unmistakable 'read' as an industrial addition to the view.

7.2.9 The LVIA accurately recognises that these viewpoints represent audiences with a **high sensitivity** to change. The magnitude of change, albeit experienced at over 6km away, would be **medium** as suggested in the LVIA) but the effect would be **moderate/major adverse** and would be significant, not 'moderate adverse' due to the degree of contrast described above. Despite proposed mitigation it is not possible to mitigate the contrast in the scale of this building with its flat surroundings in the absence of any similar features.

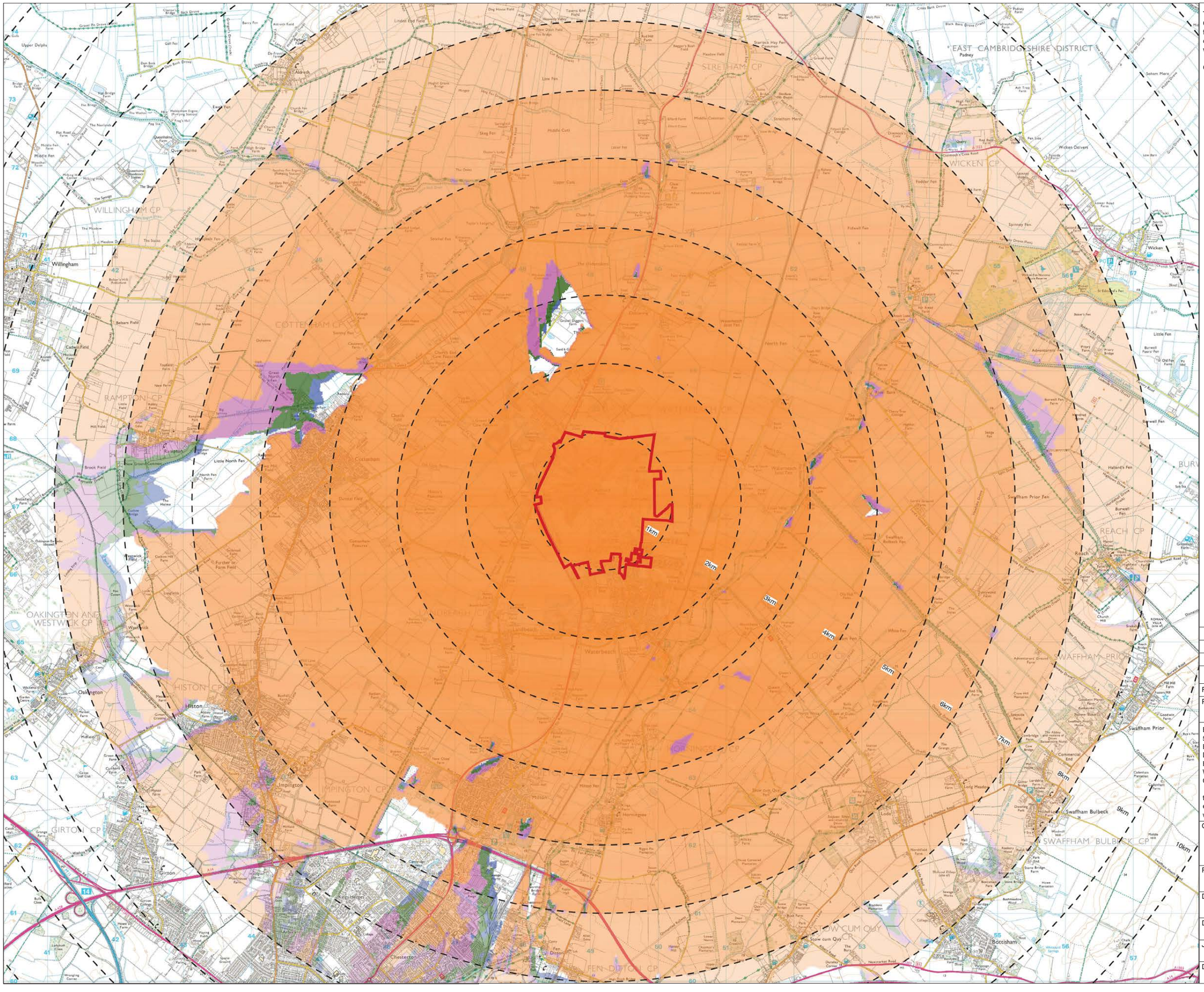
7.3 Conclusion

7.3.1 The proposed development would have a significant impact on a number of visual receptors both within the immediate context of the site, such as at Denny Abbey (an important historical site / visitor attraction) and on more distant, elevated locations (e.g. Haddenham ridge). Significant visual effects will not be localised as is suggested by the LVIA. They will occur across a much wider area, including up to and over 6km from the site. This is due to the degree of contrast that the proposal will introduce in relation to its form and scale, relative to its visible context, and the sensitivity of the audiences affected.

[52] Pages 22 and 24 ES Appendix 5.5

Appendix 1

ZTVs included as part of the Waterbeach Barracks application



- SITE BOUNDARY
- DISTANCE FROM CENTRE OF THE SITE
- 2 STOREY PROPOSED BUILT FORM (11 M)
- 4 STOREY PROPOSED BUILT FORM (17.5 M)
- 6 STOREY PROPOSED BUILT FORM (24 M)
- 8 STOREY PROPOSED BUILT FORM & AREA OF EXCEPTIONAL HEIGHT (24 M)
- SETTLEMENTS (ASSUMED HEIGHT: 9m ABOVE LANDFORM)
- ESTABLISHED WOODLAND BLOCKS & BELTS (ASSUMED HEIGHT: 12m ABOVE LANDFORM)

Rev	Description	Date
D	Site Boundary Updated	31.01.17
C	Site Parameters Updated	18.11.16
B	Site Boundary Updated	22.09.16
A	Site Boundary Updated / ZTV Updated to New Parameters	12.08.16

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BMD LANDSCAPE DESIGN PLANNING

Client

Urban & Civic

Project

Waterbeach

Drawing Title

Figure 2: ZTV - Bare Earth

Drawn	Checked	Approved	Date
LC	JP	RM	18/11/2016
Job No.	Scale	Sheet Size	Revision
15.001	As Shown	A3	D

Drawing Number

BMD.15.001.LVIA.FIG.002

- SITE BOUNDARY
- DISTANCE FROM CENTRE OF THE SITE
- 2 STOREY PROPOSED BUILT FORM (11 M)
- 4 STOREY PROPOSED BUILT FORM (17.5 M)
- 6 STOREY PROPOSED BUILT FORM (24 M)
- 8 STOREY PROPOSED BUILT FORM & AREA OF EXCEPTIONAL HEIGHT (24 M)
- SETTLEMENTS (ASSUMED HEIGHT: 9m ABOVE LANDFORM)
- ESTABLISHED WOODLAND BLOCKS & BELTS (ASSUMED HEIGHT: 12m ABOVE LANDFORM)
- VIEWS WHERE 8 STOREY PROPOSED BUILT FORM AND AREA OF EXCEPTIONAL HEIGHT OBSCURED BY PROPOSED 2, 4 AND 6 STOREY BUILT FORM

Rev	Description	Date
D	Site Boundary Updated	31.01.17
C	Site Parameters Updated	18.11.16
B	Site Boundary Updated	22.09.16
A	Site Boundary Updated / ZTV Updated to New Parameters	12.08.16

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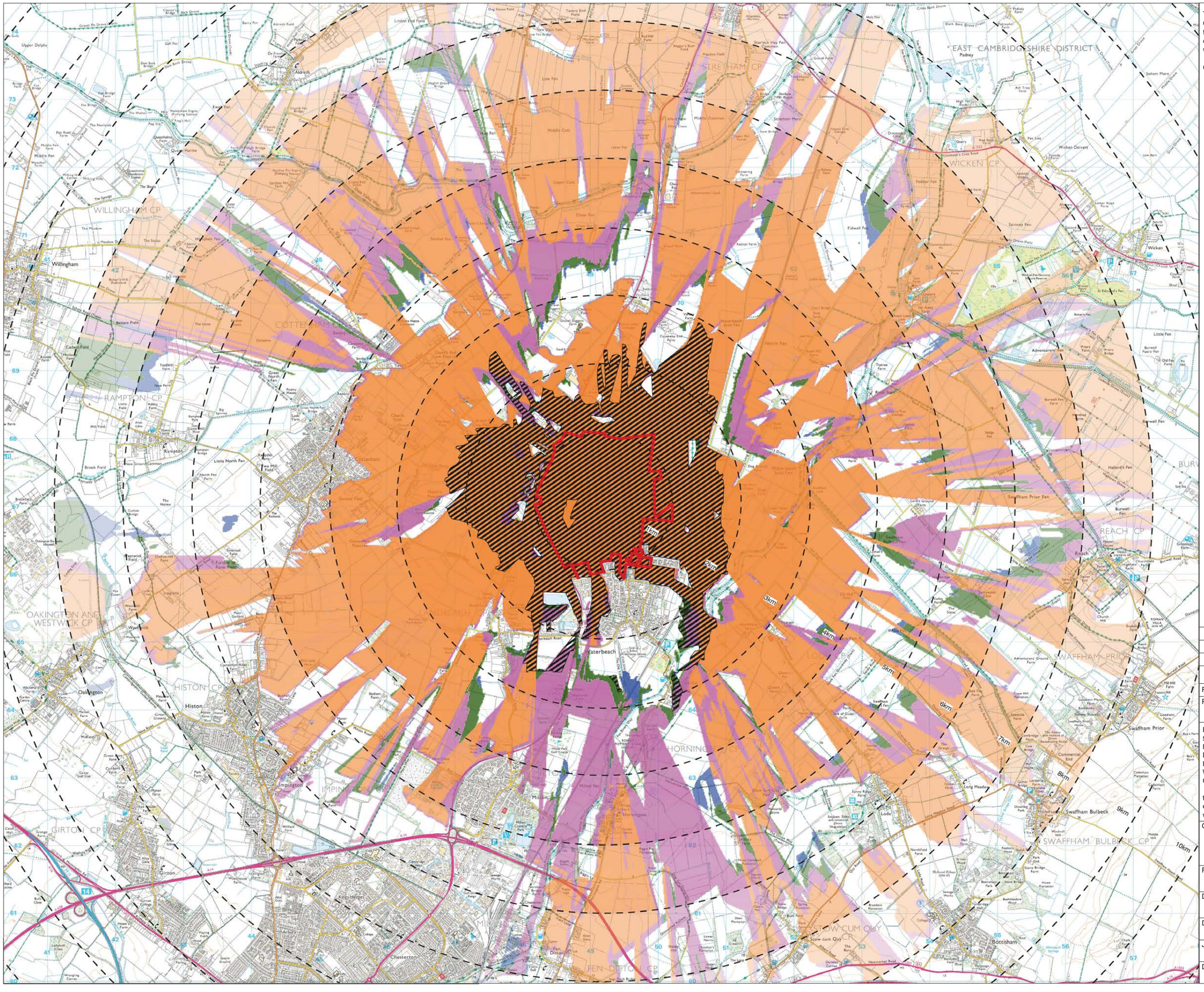
Drawing Title

Figure 3: ZTV - Visual Barriers Winter

Drawn	Checked	Approved	Date
LC	JP	RM	18/11/2016
Job No.	Scale	Sheet Size	Revision
15.001	As Shown	A3	D

Drawing Number

BMD.15.001.LVIA.FIG.003



- SITE BOUNDARY
- DISTANCE FROM CENTRE OF THE SITE
- 2 STOREY PROPOSED BUILT FORM (11 M)
- 4 STOREY PROPOSED BUILT FORM (17.5 M)
- 6 STOREY PROPOSED BUILT FORM (24 M)
- 8 STOREY PROPOSED BUILT FORM & AREA OF EXCEPTIONAL HEIGHT (24 M)
- SETTLEMENTS (ASSUMED HEIGHT: 9m ABOVE LANDFORM)
- ESTABLISHED WOODLAND BLOCKS & BELTS (ASSUMED HEIGHT: 12m ABOVE LANDFORM)
- VIEWS WHERE 8 STOREY PROPOSED BUILT FORM AND AREA OF EXCEPTIONAL HEIGHT OBSCURED BY PROPOSED 2, 4 AND 6 STOREY BUILT FORM

Rev	Description	Date
D	Site Boundary Updated	31.01.17
C	Site Parameters Updated	18.11.16
B	Site Boundary Updated	22.09.16
A	Site Boundary Updated / ZTV Updated to New Parameters	12.08.16

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Drawing Title

Figure 4: ZTV - Visual Barriers Summer

Drawn	Checked	Approved	Date
LC	JP	RM	18/11/2016
Job No.	**Scale**	**Sheet Size**	**Revision**
15.001	As Shown	A3	D

Drawing Number

BMD.15.001.LVIA.FIG.004

Appendix 2

Extracts from Scottish Natural Heritage *Visual Representation of Wind Farms: Version 2.2*

Scottish Natural Heritage

Visual Representation of Wind Farms

Guidance

Version 2.2

February 2017

Scottish Natural Heritage
Dualchas Nàdair na h-Alba
All of nature for all of Scotland
Nàdar air fad airson Alba air fad

CONTENTS

Optional visualisation techniques

Viewpoint pack

189 In some cases the planning authority may find the provision of a viewpoint pack helpful. These should be provided on thicker A3 paper for durability and ease of use in the field. Images contained within the pack should be loose leaf and should have a detailed location map printed on the reverse side to make it easier for users to find the exact viewpoint location. A brief description of how to find the viewpoint should also be included.

190 The pack should contain images from a set of key viewpoints, to be agreed with the determining authority. It may not be necessary to provide them for every ES viewpoint. SNH do not require viewpoint pack images.

191 Each image should be clearly labelled: "**This image is intended only for use at the viewpoint. Further information in the ES should also be referred to**."

Construction of A3 single frame photomontages in the viewpoint pack

192 The images should be prepared from the same baseline photography and using the same process for rendering turbines[11]. The image height should be 260mm by 390mm wide. The horizontal field of view should be 27° and the vertical field of view should be 18.2°. The image will have a Principal Distance of 812.5mm.

Figure 4: A3 single frame for use in viewpoint pack

Using the viewpoint pack

193 The pack holder or title page should be clearly labelled "Images for assessment only at the identified viewpoints" along with the name of the wind farm and supplementary information. It should include a map showing the location of each viewpoint and detailed grid references to help users find the viewpoint location in the field.

194 It is important to get as close to the precise viewpoint location as possible. The viewpoint map, grid reference and photograph of the tripod location can all be used to achieve this. The

Annex B Standard requirements which all visualisations should comply with

Checklist

Photography	**Camera**	Full Frame Sensor Size	
	Lens	50mm fixed focal length	
	Camera height	1.5m (unless alternative height can be justified, in agreement with planning authority)	
	Location	Grid reference, relevant location map, and photograph of tripod location provided	
Photomontage	**Image**	Clear of foreground objects	
	Conditions	Visibility sufficiently good	
	Baseline panorama and wireline	Cylindrical projection 90, 180, 270 or 360 degrees printed on A1 length sheet(s). Image size for both the baseline panorama and wireline should be 820mm by 130mm	
	Wireline	Planar projection, image size 260 by 820mm on A1 sheet. HFOV 53.5° and VFOV 18.2°	
	Panorama	Planar projection, image size 260 by 820mm on A1 sheet. HFOV 53.5° and VFOV 18.2°	
	Principal Distance	Printed on visualisations	
Maps	**Viewpoint map**	To include overall viewpoint location map (combined with ZTV). Thumbnail location map provided on each panorama	
Methodology		Statement of methodologies used to produce visualisations including ZTVs and software used	

HFOV = Horizontal field of view
VFOV = Vertical field of view

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