CONTENTS

APPENDICES

LANDSCAPE

This ES Chapter is comprised of a comprehensive Landscape and Visual Assessment which is detailed within the following pages.

PROPOSED ANAEROBIC DIGESTION FACILITY AT SPRING GROVE FARM, WITHERSFIELD, NORTHWEST OF HARVEHILL, CB9 7SW

Landscape and Visual Impact Assessment

Prepared for: Acorn Bioenergy Limited

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CONTENTS

DOCUMENT REFERENCES

APPENDICES

1.0 Introduction

This Landscape and Visual Impact Assessment (LVIA) evaluates the effects of the Proposed Development at Spring Grove Green Power, Haverhill in West Suffolk District (hereafter referred to as 'the Proposed Development') on landscape and visual receptors. The assessment was undertaken by experienced Chartered Landscape Architects at Optimised Environments Limited ('OPEN'), a wholly owned part of the SLR Consulting Ltd (SLR) Group, on behalf of Acorn Bioenergy Limited (Acorn). It considers potential effects on the landscape and visual receptors of the Site and surrounding area.

Content of the Assessment

This assessment contains the following sections:

- Introduction: setting out the content of the LVIA, the approach taken, the description of the location and nature of the Proposed Development and extent of the Study Area;
- Assessment methodology: describing the guidance relevant to the assessment, the methods used and the level of effects;
- Planning context: outlining the key policies of relevance to the assessment;
- Development design and mitigation: summary of the design and measures taken to avoid or minimise the landscape and visual effects of the Proposed Development through the design;
- Assessment of effects on landscape character, designations and elements: describes the landscape character of the Proposed Development Site and Study Area based on desktop reviews, site visits and consultations and identifies the residual effects of the Proposed Development on landscape receptors and landscape designations;
- Assessment of effects on visual amenity: describes the visual amenity of the Proposed Development Site and Study Area based on desktop reviews, site visits and consultations and identifies the residual effects of the Proposed Development on representative viewpoints and principal visual receptors; and
- Summary of findings.

Approach

This assessment forms part of a formal Environmental Impact Assessment (EIA) in support of the application for the Proposed Development and it follows best practice guidance produced by the Landscape Institute's 'Guidance for Landscape and Visual Impact Assessment' (GLVIA) (3rd Edition 2013) and evaluates the likely significant effects of the Proposed Development on landscape character, designations and elements and visual amenity of the Site and its surroundings.

The Site, Context and Project Description

The Proposed Development is located north of Spring Grove Farm and the A1307, approximately 250m to the west of the edge of the settlement of Haverhill, in West Suffolk District, in the county of Suffolk (Figure 1 refers). The Proposed Development site lies immediately to the northeast of the administrative boundary with South Cambridgeshire District, which defines part of the application boundary to the Proposed Development.

In landscape and visual terms, it is considered that the Proposed Development comprises two distinct components, including an anaerobic digester plant (the 'AD facility Site) and, secondly, a buried pipeline

connecting to two offsite digestate lagoons (the 'pipeline and lagoons Site'). The landscape and visual effects of these two main components are likely to be distinct in terms of their potential impact. It is likely that each will affect different geographical areas. Accordingly, and to assist the reader, the LVIA separates the assessments for these two main components.

The AD facility Site comprises two adjoining fields on Spring Grove Farm – Bowsey field and Spring Grove field. It is proposed that Bowsey field will house most of the Site infrastructure, utilising a marginal area of Spring Grove field to the east. The pipeline site extends north from the AD facility to connect to two new offsite digestate lagoons, located approximately 2.5km due north of the AD facility Site beside Cadge's Wood.

The red line boundary for the Proposed Development that is shown in the accompanying figures accommodates both the AD facility and pipeline/ lagoons Sites.

Anaerobic Digester Facility Site

Bounded by established trees and hedgerow of varying density to the north and west, Bowsey field and Spring Grove field are bordered by an additional tree belt of substantial depth extending along southern boundary (approximate depths of between 75m-122m). Parts of this comprise tall poplar trees which create a more visually permeable edge to the Site. The eastern boundary of the site is currently open.

The Stour Brook runs west to east along the southern boundary of the AD facility Site and is flanked by the broadleaved woodland/riparian corridor describe above.

Acorn intends to apply to Suffolk County Council for planning permission to construct and operate an on-farm anaerobic digestion ('AD') facility, located on agricultural land 85-100m to the north of Spring Grove Farm, which would process agricultural feedstock to generate carbon negative biomethane. The carbon negative biomethane would be injected into the gas grid to create renewable heat as well as a small proportion being directly used as an alternative fuel to power vehicles. The resources used by the AD process include crops grown on the Applicant's land and other farms in the immediate surrounding area. It would use manures from local farms, as well as poultry litter and other agricultural by-products from the surrounding area. The anaerobic digestion plant would essentially recycle these inputs and produce a fertiliser which would be spread on local farmland and surrounding farmsteads, assisting the growth of other crops.

The Proposed Development (comprising AD facility, pipeline and offsite lagoons) would consist of approximately 14.0ha of developable land and would accept in the region of 92,000 tonnes per annum of feedstock from local farms. The Proposed Development would consist of a range of new buildings and structures (as outlined below), hardstanding, soft landscaping and an access road off the A1307, via the existing Spring Grove Farm entrance.

Key components of the AD facility Site are shown in GGP Consult Site Layout Drawing 29351-P-101-Revision I and include:

- 3 on site liquid digestate covered lagoons with total capacity of 30,000m³;
- 2 offsite liquid digestate covered lagoons with total capacity of 22,500m³;
- 1 onsite rainwater harvesting lagoon with a total capacity of 2,000m³;
- 5 large digester tanks/ fermenters with storage capacity of 41,000m³ each, with straight wall height of 9m with a gas dome on top of 7.6m (the tanks will be sunk into the hillside reducing the overall perceived height);
- 3 silage clamps area measuring 78.75m x 52.5m x 3.52 m high;
- Straw bunker building measuring 54.5m x 16.05m x 8m to ridge;
- Manure reception shed measuring 26m x 19.5m x 8m to ridge;
- 5 biomethane off take vehicle bays;

- Liquid digestate tanks: 3no. 8m x 8m; 3no. 6m x 8m;
- Separator building measuring 18m x 15m x 8m to ridge;
- 4 pasteurisation tanks measuring 3m diameter x 11m high;
- Gas flare measuring 2.4m diameter 9m tall;
- Biogas upgrade unit measuring 26m x 9m x 3m tall;
- 2 x combined heat and power (CHP) units measuring 13m x 3m x 3m tall, with 9m stacks;
- 2 x compressors measuring 13m x 3m x 3m tall;
- CO2 Capture Unit measuring 10m x 16m x 4.75m tall;
- ASS (evaporator) measuring 15.3m x 12m x 12 high;
- Weighbridge and site office (4no. 40ft containers stacked);
- Staff welfare unit (canteen, showers, toilets)
- Staff car park;
- HGV manoeuvring area;
- Fuel tank storage;
- Site boundary fence (likely to be palisade or similar with secure access gates).

Other proposed development equipment and components include:

- 3 feed hoppers 220m³ each;
- Liquid storage tanks: 2no. 6.5m x x3m x 3m tall;
- Pump room container measuring 13m x 3m x 3m;
- CO2 tanks 2no. 13.2m long x 3m diameter, 3.4m tall;
- Propane tanks: 2no. x 12.5 tonnes;

Lighting of the AD facility

A separate Lighting Assessment has been undertaken by Strenger which includes lighting proposals (and associated mitigation of effects) that are designed to be compliant with the residential receptor criteria as set out in the Institution of Lighting Professionals (ILP) Guidance Note 01/21: The Reduction of Obtrusive Light. Specifically, the assessed lighting associated with the Proposed Development is compliant with the obtrusive light criteria as set out for ILP Environmental Zone E2. The Strenger report should be read in conjunction with this LVIA as no separate night time assessment has been undertaken here.

Pipeline and digestate lagoons Site

The pipeline and digestate lagoons Site includes several relatively large-scale, arable fields located to the north-west of Haverhill, and west and north of Withersfield.

The pipeline would extend north of the main AD facility through arable fields located between ancient woodland blocks of Howe Wood, Lawn Wood and Littley Wood, with at least 150m standoffs to each. An 8 x 8m continuous temporary working area has been defined for the pipeline route, with a 3m wide trench to accommodate the pipeline, that would be fully restored to existing use following construction. A 3m x 3m trench would be dug and a pipe laid, with the trench filled with gravel and spoil, followed by reinstatement of topsoil. It is understood that the road and watercourse crossings would be installed using directional drilling techniques. The nature of effects on landscape and visual receptors likely to arise from the pipeline has been considered in combination with the AD facility, to which the separate application for the pipeline is linked.

Cadge's Wood (ancient woodland) is located adjacent to the west of the digestate lagoon site and north of the end of the pipeline Site. North Wood (ancient woodland) is approximately 300m to the east of the digestate

lagoon site. The digestate lagoons Site comprises two lagoons located next to each other and each measuring 208m x 178m, as shown in GGP drawing 29351-P-600 Revision E. The digestate lagoons are partially excavated into existing ground levels, with a perimeter bund measuring approximately 2m in height, resulting in a low level of physical change to the height of the Site.

The Study Area

GLVIA 3 clarifies how study areas should be determined on a project specific basis. Paragraph 5.2 states that the study area extent should be: *"… based on the extent of Landscape Character Areas likely to be significantly affected either directly or indirectly"* or *"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."*

An initial 5km Study Area was defined to inform a review of aerial photographs and desktop ZTV analysis and this was further refined following site visits for the AD facility and pipeline sites. The site visits indicated that the potential visibility of the proposed AD facility Site would be heavily curtailed by landform, hedgerow/ tree and woodland planting. To account for this, the assessment of the AD facility Site was based on a 2km detailed Study Area around the AD facility Site, with eight representative viewpoints identified within this range to inform the visual impact assessment (Viewpoints 1-7 and 12), as shown with the ZTV on Figure 8. Four additional viewpoints were identified for the pipeline and offsite digestate lagoons Site (Viewpoints 8-11). The Figures in Appendix 2 are mapped to the 5km radius to provide context to the assessment.

No representative viewpoints for the AD facility Site were identified beyond the 2km study area due to screening described above. The evaluation of the AD facility Site concluded that it was unlikely that the Proposed Development would have any material effects beyond approximately 1km radius, since the visual influence of the Proposed Development would reduce rapidly with distance influenced by the landform and intervening woodland and trees, such that Haverhill is substantially screened from visibility of the AD facility Site. The photomontage produced for Viewpoint 12 on the western edge of Haverhill illustrates the degree of enclosure the town would experience. Additional photography was taken (viewpoints 8, 9, 10 and 11) to capture the pipeline and offsite digestate lagoon, which is contained in the supporting Figures, and this extends slightly beyond the 2km study area for the AD facility Site.

Viewpoints

The results of the initial Study Area analysis were used to identify potential viewpoints from a range of distances and directions providing a representative sample of the likely visibility of the Proposed Development. The actual extent of visibility was verified during site visits in May and September 2022, with the pipeline and offsite digestate lagoon being assessed in November 2022. A further viewpoint (Viewpoint 12 was identified in January 2023 to illustrate the edge of Haverhill and has been included as Figure 9.14. These viewpoints have been used to create photowirelines showing the likely visibility of the proposed AD facility, which are contained in Figures 9.1-9.7. Figures 9.8-9.11 contain photographs of the pipeline route and offsite digestate location Site.

The photowirelines illustrate the outline of the three-dimensional elements of plant, together with areas of open space ground where relevant for the purposes of visual impact evaluation and are not intended to illustrate the final appearance of the buildings and plant that make up the facilities. Three photomontages have been produced to Landscape Institute Level 4 to illustrate the appearance of the AD facility, including the proposed mitigation planting at Years 5, 10 and 15 in Figures 9.12-9.14.

The reader's attention is drawn to Application Figures 29351-003 F101 D and 29351-003 F102 D which provide an accurate plan and cross sections showing the elements of plant. Due to the temporary nature of the likely effects from the pipeline excavation and reinstatement works, neither the pipeline (nor offsite digestate lagoon) is illustrated in the photowirelines or photomontages.

Consultation

It has not been possible to consult with the landscape officer at Suffolk County Council to discuss the Study Area limits, representative viewpoint locations and any requirements for visualisations ahead of submission. The scope of work included within this LVIA is based on the experience of the assessors who have applied reasoned professional judgement to produce a competent and appropriate assessment of the Proposed Development.

Assumptions and Limitations

No technical difficulties or practical problems were encountered in carrying out the LVIA presented in this document.

GLVIA3 suggests that consideration be given to seasonal variation in effects where appropriate but acknowledges that the timing of the assessment may mean that this is not practical. The photographic images captured for the LVA were taken in May and November 2022, and represent an intermediate time in the year when deciduous trees are not fully in leaf, but some screening is already apparent. A comparison of visibility or visual effects over multiple seasons or during a wide range of light and weather conditions was not possible. Professional judgement was used to consider the potential for screened views during periods where deciduous vegetation was in leaf.

The site visits were conducted when general climatic conditions were dry and relatively mild, and visibility was good.

No night-time assessment has been undertaken. It is understood that some limited external lighting is required at the facility to ensure safe working during the winter months when light is reduced in the early mornings and afternoon/early evenings. All external lights will be directed downwards into operational areas and be hooded to reduce potential light spillage outside of the site. Lighting shall only be used within permitted hours of operation or if necessary, during maintenance or emergency work.

2.0 Assessment Methodology

Introduction

The following sources have been used to inform the preparation of the methodology and as guidance in the preparation of the written assessment and in the production of figures:

- Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3), The Landscape Institute with the Institute of Environmental Management and Assessment (2012);
- Technical Guidance Note - TGN 06/19 Visual Representation of Development Proposals, The Landscape Institute (2019); and
- Technical Guidance Note - TGN 02-21 Assessing landscape value outside national designations. The Landscape Institute (2019).

Landscape is a definable set of characteristics resulting from the interaction of natural, physical and human factors: it is a resource in its own right. Its assessment is distinct from visual assessment, which considers effects on the views and visual amenity of different groups of people at particular locations. A clear separation of these two topics is recommended in GLVIA3.

As GLVIA3 (paragraph 2.23) states, professional judgement is an important part of the LVIA process: whilst there is scope for objective measurement of landscape and visual changes, much of the assessment must rely on

qualitative judgements. It is critical that these judgements are based upon a clear and transparent method so that the reasoning can be followed and examined by others.

Impacts can be defined as the action being taken, whereas effects are the changes which result from that action. This method of assessment assesses landscape and visual effects.

Landscape and Visual Effects

2.1.1 Landscape

Landscape, as defined in the European Landscape Convention, is "*an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors"*, (Council of Europe, 2000). Landscape does not apply only to special or designated places, nor is it limited to countryside.

GLVIA3 (paragraph 5.34) recommends that the effect of the development on landscape receptors is assessed. Landscape receptors are the components of the landscape that are likely to be affected by the proposed development and can include individual elements (such as hedges or buildings), aesthetic and perceptual characteristics (for example sense of naturalness, tranquillity or openness), or, at a larger scale, the character of a defined landscape character area or landscape type. Designated areas (such as National Parks or Areas of Outstanding Natural Beauty (AONBs) are also landscape receptors.

This assessment is being undertaken because the Proposed Development has the potential to remove or add elements to the landscape, to alter aesthetic or perceptual aspects, and to add or remove characteristics and thus potentially change overall character.

2.1.2 Visual Effects:

Visual effects are the effects of change and development on the views available to people and their visual amenity. Visual receptors are the people whose views may be affected by the Proposed Development.

Visual receptors are the people whose views may be affected by the Proposed Development. They generally include users of Public Rights of Way (PRoW) or other recreational facilities or attractions; travellers who may pass through the Study Area because they are visiting, living or working there; residents living in the Study Area, either as individuals or, more often, as a community; and people at their place of work.

Viewpoints are chosen for a variety of reasons but most commonly because they represent views experienced by relevant groups of people.

Categories of Effects

In the assessment, the potential effects on the landscape and visual resource are grouped into four categories: effects on landscape character, landscape designations, landscape elements, landscape designations and visual amenity.

Effects on landscape character arise either through the introduction of new elements that physically alter the pattern of elements that makes up landscape character, or through visibility of the Proposed Development, which may alter the way in which the pattern of elements is perceived. This category of effects is made up of landscape receptors, which fall into two groups; landscape character types / areas and national or local landscape designated areas.

Effects on landscape elements are restricted to the area within the Site's boundary and are the direct effects on the fabric of the Site, such as a change in landuse, landform or removal or addition of trees. This category of

effects is made up of landscape elements, which are the components of the landscape such as hedgerows or woodland that may be physically affected by the development of the Site.

Effects on visual amenity is presented as an assessment of the effects that the Proposed Development will have on views from principal visual receptors, which are notable individual properties, farmsteads and settlements, routes, features and attractions found throughout the Study Area (as ascertained through the baseline study).

The assessment of effects on landscape character and visual amenity is informed by a series of viewpoints that have been selected to represent visibility of the Proposed Development from the principal visual receptors around the Study Area. Further information on these viewpoints and visual receptors is provided in Section 6 of this assessment.

Nature of effects

Landscape and visual effects can be positive, negative or neutral in nature. Positive effects are those which enhance and/or reinforce the characteristics which are valued. Adverse or Negative effects are those which remove and/or undermine the characteristics which may be valued. Neutral effects are changes which are consistent with the characteristics of the landscape or view.

Assessment of the level of effect

The methodology for the assessment of landscape and visual sensitivity and magnitude of change is presented in Appendix 1. The level of effects is ascertained through a combination of the sensitivity of the landscape or visual receptor and the magnitude of change that would arise as a result of the Proposed Development.

2.1.3 Sensitivity

The sensitivity of landscape receptors is assessed by combining an evaluation of the susceptibility of landscape receptors to the type of change which is proposed, with the value attached to the landscape. (GLVIA3, paragraph 5.39 - 5.47 and TGN 02-21).

Sensitivity of visual receptors is assessed by combining an assessment of the susceptibility of visual receptors to the type of change which is proposed, with the value attached to the views. (GLVIA3, paragraph 6.30 – 6.37).

The full methodology for assessing sensitivity is described in Appendix 01, Table 1 and 2.

2.1.4 Magnitude of Change

The magnitude of landscape change is established by assessing the size or scale of change, the geographical extent of the area influenced and the duration and potential reversibility of the change (GLVIA, paragraph 5.48 - 5.52).

The magnitude of visual change is established by assessing the size or scale of change, the geographical extent of the area influenced and the duration and potential reversibility of the change (GLVIA, paragraph 6.38 – 6.41).

The full methodology for assessing magnitude of change is detailed in Appendix 01 Table 1 and 2.

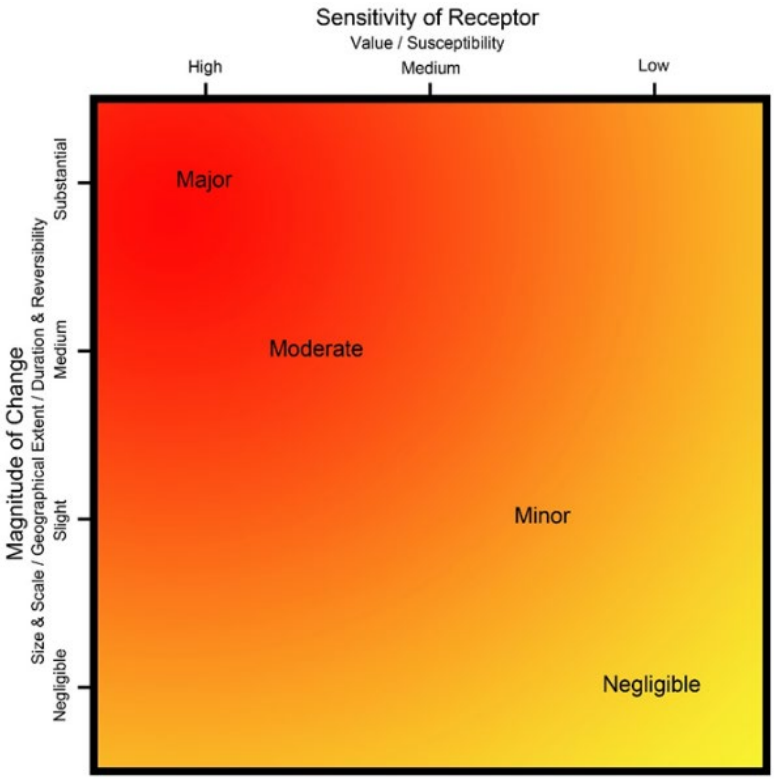
Assessment of Significance

The assessment of the overall landscape or visual effects is defined in terms of the relationship between the sensitivity of the landscape or visual receptors and the magnitude of the change. In this assessment, effects are assessed as ‘minor’, ‘moderate’, ‘major’, ‘negligible’ and ‘none’. It should be noted that for the assessment

intermediate levels may also be included such as medium-high or medium-low where the change falls between definitions. This is based on professional judgement.

This evaluation is carried out for each receptor described in the baseline section of this report. For the purposes of this assessment, moderate and major impacts are deemed 'significant'.

The diagram below summarises the nature of the relationship, but it is not formulaic. Judgements are made about each effect using this diagram as a guide.



Cumulative Effects

The assessment of cumulative effects is essentially the same as for the assessment of landscape and visual effects in that the level of landscape and visual effect is determined by assessing the combination of sensitivity of the landscape or visual receptor (ranging from high to negligible) and the magnitude of change (ranging from high to no change).

With regard to this LVIA, no other developments have been identified in close proximity to either the AD facility or Pipeline Sites that could give rise to cumulative landscape and visual effects. Cumulative effects are not therefore considered further in this assessment.

Method of baseline data collation

2.1.5 Desk study

A desk study has been carried out as part of the LVIA. The study identified aspects of landscape and visual resource that may need to be considered as receptors in the LVIA including National Character Areas, Landscape Character Types (LCTs) or Landscape Character Areas (LCAs), landscape planning designations and site-specific landscape elements. In terms of the visual resource the following receptors were considered – users of national/ regional trails, national cycle routes, PRoW, roads, rail, residential properties / settlements and places of work.

The following sources have been referred to in the desk study:

- National Character Area Profiles, 2014;
- Greater Cambridgeshire Landscape Character Assessment, 2021;
- Suffolk Landscape Character Assessment, 2009.

2.1.6 Site visits

Visits to the Site and the Study Area have been carried out in order to review the baseline conditions of the Site, identify potential landscape and visual receptors, take representative viewpoint photographs, carry out and review the assessment of effects. As mentioned previously site visits and viewpoint photography took place in May, September and November 2022, as well as January 2023.

2.1.7 Preparation of a Zone of Theoretical Visibility

To inform the viewpoint selection, a screened ZTV was prepared for the AD facility Site (Figure 2 refer). A ZTV is a tool to explore from where the Proposed Development may theoretically be seen. In producing the screened ZTV, the ZTV software used a combination of EA LiDAR at 1m resolution digital surface modelling (DSM) which considered the screening function of built form and vegetation and digital terrain data (DTM). The ZTV was generated at a height of 2 m and the earth's curvature was taken into consideration.

The highest points of the Proposed Development were based on 17m height and plotted using a 50 m grid points forming a mesh across the Site – the maximum developable area. The model and computer generated 'lines of sight' to show what could be seen from these points and thus the places from which the Proposed Development may be visible. This was then used to inform representative viewpoints and tested in the field considering the local topography (Figure 3 refers).

2.1.8 Photography and Visualisations

Photography taken to demonstrate the landscape and views visible from the representative viewpoints is illustrated in the visualisation sheets in Figures 9.1 to 9.8, and in the site photography for the pipeline in Figures 9.9-9.11. The existing views were recorded at the position of each viewpoint using a Canon EOS 6D full frame camera and a fixed 50mm (a Canon 6D Mark II Camera and 50mm F1.4 USM Lens was used for the pipeline photography). The cameras were set 1.5m above ground level. The photographs were stitched in PTGUI software and cylindrically projected to reflect natural vision and proportion.

Seven Type 3 Photowirelines were prepared to support the representative viewpoints related to the AD facility Site assessment, prepared with reference to the requirements of the Landscape Institute.

3.0 Planning Context

National Policy

Planning Policy is referred to in this LVIA to give some relevant context to the assessment. The Applicant's Planning Statement should be referred to for a comprehensive overview and interpretation of policy.

A revision of the National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2019) was published in July 2021.

Paragraph 7 of the NPPF[1] states that the purpose of the planning system is to "*contribute to the achievement of sustainable development*". Paragraph 8 states that in order to achieve sustainable development the planning system has economic, social and environmental objectives. At paragraph 8(c), under environmental objective, it is stated that the planning system should "*protect and enhance our natural, built and historic environment*".

NPPF paragraph 10 states that "*at the heart of the Framework is a **presumption in favour of sustainable development***" (bold text as per NPPF).

Paragraph 11 sets out the fundamental principle of this document: that there is a presumption in favour of sustainable development. All development that is in accordance with the development plan should be approved *"without delay"* and that *"where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date"* permission should be granted for development *"unless any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in the Framework taken as a whole."*

Paragraphs in Section 12 "Achieving well-designed places" (126, 132 and 134) relate to the need for good design in new developments. Paragraph 126 states *that "good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities".* Paragraph 132 states that applicants should work closely *"with those affected by their proposals to evolve designs which take account of the views of the community".* Paragraph 134 states that *"development that is not well designed should be refused, especially where it fails to reflect local design policies and government guidance on design".*

Paragraph 174 in Section 15 "Conserving and enhancing the natural environment" states that the planning system*, "should contribute to and enhance the natural and local environment by [inter alia] …protecting and enhancing valued landscapes"* and by *"recognising the intrinsic character and beauty of the countryside"*. Paragraph 175 states that the planning system should *"distinguish between the hierarchy of international, national and locally designated sites"*. Paragraph 176 states that *"great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty which have the highest status of protection"*. Paragraph 180 states that where development results in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees), the development should be refused unless there are wholly exceptional reasons and a suitable compensation strategy introduced.

[1] Ministry of Housing, Communities and Local Government (July 2021) National Planning Policy Framework

Development Plan Policy

The Site lies within Suffolk County Council (SCC). The authority's administrative area covers about 60% of the 2km Study Area, with the western parts of the Study Area lying in Cambridgeshire.

The planning application would be made to Suffolk County Council, as it will include an element of waste management, the relevant policies of the Suffolk Minerals and Waste Local Plan are understood to be applicable. Although Acorn is submitting to SCC, local policies from West Suffolk Local Plan are identified too, to provide some context to the Assessment.

Planning policy documents that are relevant to the Site and proposed development therefore comprise:

- Suffolk Minerals and Waste Local Plan (SMWLP) (July 2020);
- Core Strategy for former SEBC (2010);
- Vision 2031 (2014) Haverhill and Rural elements;
- WSDC Joint Development Management Policies Document (2015);
- Policies Maps;
- the relevant 'Made' neighbourhood plans in West Suffolk; and
- the West Suffolk Local Plan Review.

3.1.1 Suffolk Minerals and Waste Local Plan (July 2020)

The following policies are considered relevant to the proposed development:

- Policy GP1: Presumption in favour of sustainable development
- Policy GP2: Climate change mitigation and adaptation
- Policy GP4: General environmental criteria
- Policy WP1: Management of waste
- Policy WP3: Existing or designated land-uses potentially suitable for waste development
- Policy WP7: Anaerobic digestion
- Policy WP 17: Design of waste management facilities

3.1.2 West Suffolk Joint Development Management Policies (2015)

The Site lies within West Suffolk District Council and is not covered under Local Plan allocations. Land to the southeast of Spring Grove Farm and immediately east of the A1307 is identified for economic use as referred to in the West Suffolk Local Plan Issues and Options.

The Local Plan has allocated land to the south of the A1307 as employment land - Hanchet End Research Park - as referred to in Haverhill Vision 2031, September 2014.

The key West Suffolk Joint Development Management Policy is **DM5: Development in the Countryside** which outlines the relevant considerations as follows:

"*The area outside defined development boundaries is classified as the countryside. The countryside is a principal element of the rural character of West Suffolk and is enjoyed by both residents and visitors. The quality and*

character of the countryside should be protected and where possible enhanced and planning therefore has an important role in supporting and facilitating development and land use which enables those who earn a living from, and those who help maintain and manage the countryside, to continue to do so."

"The Government's NPPF advises in paragraph 109 that 'the planning system should contribute to and enhance the natural and local environment'. It is therefore important to manage development in the countryside but it is also recognised that some new development will help to support the rural economy, meet local housing needs and provide for particular uses such as renewable energy, community facilities, recreation and leisure.

Such development is covered in specific policies in this document including Policies DM24, DM25, DM28, DM32, DM33, DM34, DM41, DM43, DM44, and DM48."

"Areas designated as countryside will be protected from unsustainable development. A new or extended building will be permitted, in accordance with other policies within this Plan, where it is for:

a. purposes directly related to agriculture or forestry;

b. affordable housing for local needs in accordance with other policy;

c. development relating to equine related activities and the horse racing industry;

d. essential small scale facilities for outdoor sport or recreation or other uses of land which preserve the openness, appearance and character of the countryside, leisure activities, and new tourism facilities;

e. a dwelling for a key worker essential to the operation of agriculture, forestry or a commercial equine-related business in accordance with the requirements of Policy DM26;

f. small scale residential development of a small undeveloped plot, in accordance with policy DM27; or

g. the replacement of an existing dwelling on a one for one basis where it can be demonstrated that:

i. the proposed replacement dwelling respects the scale and floor area of the existing dwelling, and,

ii. the curtilage of the development is only greater than the curtilage of the existing dwelling where it can be justified with reference to Policy DM25.

Proposals for economic growth and expansion of all types of business and enterprise that recognises the intrinsic character and beauty of the countryside will be permitted where:

- *it will not result in the irreversible loss of best and most versatile agricultural land (grades 1, 2 and 3a);*
- *there will be no significant detrimental impact on the historic environment, character and visual amenity of the landscape or nature conservation and biodiversity interests; and*
- *there will be no significant adverse impact on the local highway network."*

Other policies that are relevant to the Proposed Development include the following:

- Policy DM6: Flooding and Sustainable Drainage
- Policy DM7: Sustainable Design and Construction
- Policy DM8: Low and Zero Carbon Energy Generation
- Policy DM10: Impact of Development on Sites of Biodiversity and Geodiversity Importance
- Policy DM11: Protected Species
- Policy DM12: Mitigation, Enhancement, Management and Monitoring of Biodiversity
- Policy DM13: Landscape Features Policy

- DM14: Protecting and Enhancing Natural Resources, Minimising Pollution and Safeguarding from Hazards
- Policy DM15: Listed Buildings
- Policy DM16: Local Heritage Assets and Buildings
- Policy DM20: Archaeology
- Policy DM31: Farm Diversification
- Policy DM32: Business and Domestic Equine Related Activities in the Countryside
- Policy DM45: Transport Assessments and Travel Plans

In keeping with the SEBC Core Strategy (2010),

"*development outside the settlements defined in Policy CS4 (Settlements and Hierarchy) will be strictly controlled, with a priority on protecting and enhancing the character, appearance, historic qualities and biodiversity of the countryside while promoting sustainable diversification of the rural economy. Policies in the Development Management DPD and Rural Site Allocations DPD will set out detailed uses which are appropriate in rural areas".*

Policy WP3 of the Suffolk Minerals and Waste Local Plan 2020 lists suitable locations for waste management development which includes: "*within or adjacent to agricultural and forestry buildings*".

Only open-air composting is listed as suitable on agricultural land and protection of the open countryside is listed as a key consideration. In this instance, the Site is located adjacent to an existing farm complex and sharing the farm access.

3.1.3 West Suffolk Local Plan Review

The West Suffolk Local Plan is currently being reviewed and Strategic Issue 1 is 'Climate Change'. Strategic Objective 4 states that the Council will "*Ensure West Suffolk is equipped to reduce its greenhouse gas emissions and impact on climate change through providing opportunities for sustainable travel, low-carbon buildings, and encouraging and utilising renewable and low carbon energy generation*".

Landscape Designations and Related Designations

Landscape designations and planning context of relevance to the LVIA, together with a few publicly accessible recreational areas and routes, are shown on Figure 4 Landscape Planning Context and Figure 5 Access and Recreation, and include:

3.1.4 Landscape / Planning Designations:

- International: There are no internationally protected landscape designations within a 2km radius of the AD facility Site.
- National: There are no nationally protected landscape designations within a 2km radius of the AD facility Site. There is a nationally important Scheduled Monument and a number of Listed Buildings, as shown in Figure 4. The Conservation Area of Withersfield lies around 1km to the north east of the AD facility Site.
- Registered Park and Garden: There are no Registered Parks and Gardens within a 2km radius of the AD facility Site.
- The pipeline and digestate lagoons Sites are not within, or immediately adjacent to, any

designations for nationally or regionally valued landscapes.

- The pipeline and digestate lagoons Site are located close to an area of ancient woodland, known as Cadge's Wood.
- The pipeline routeing crosses a PRoW route in two places and follows field boundaries (hedgerows) and in places farm tracks, as well as across open arable fields.
- Ancient woodland: There are six areas of ancient woodland within a 2km radius of the Site. Howe Wood lies circa 0.3km to the north east of the AD facility Site, to the east of the PRoW linking Haverhill with Withersfield. Hare Wood, Over Wood, Lawn Wood and Littley Wood all are located to the north west of the Site, at in excess of 1km from the Site boundary. The pipeline routeing would pass between ancient woodland blocks of Howe Wood, Lawn Wood and Littley Wood, with at least 150 m standoffs to each.
- Cadge's Wood (ancient woodland) is located adjacent to the west of the digestate lagoon Site and north of the end of the pipeline Site. North Wood (ancient woodland) is approximately 300m to the east of the digestate lagoon site.
- Howe Wood, Littley Wood and North Wood are identified as a County Wildlife Site (CWS) in the Local Plan. A further CWS is identified adjacent to the A1307 on the northern edge of Haverhill. These are all over 150 m to the east of the pipeline and digestate lagoon sites.

To the south of the A1307, Markham's Wood is located at 0.6km from the AD facility Site and is also a CWS. These woods play an important role in curtailing the theoretical visibility of the Proposed Development, as shown in the screened ZTV in Figure 2.

There are no TPOs within or edging the Site.

3.1.5 Access and Recreation:

- National / regional routes: There are no nationally important Long Distances Routes within the 2km Study Area. Three such routes are identified in the outer 5km study area as shown on Figure 5, including the Stour Valley Path, The Icknield Way Trail and the Harcamlow Way, no part of which is subject to any visibility of the Proposed Development.
- Public Rights of Way: There are no PRoW within the AD facility Site, but a number are located within the wider Study Area, as shown in Figure 5. A PRoW connecting Haverhill to Withersfield passes close to the eastern boundary of the AD facility Site, as it cuts through an arable field and currently affords open views into the Site. The pipeline routeing would pass parallel to a PRoW route between A1307 and Horseheath Road at approximately 300 m away.

As the pipeline passes beneath Silver Street it would be within approximately 100m of a separate PRoW route which connects Silver Street with Skipper's Lane (via the access track to Woodhouse) to the north.

The pipeline would then cross the route of a PRoW to the east of Skipper's Lane and then run parallel to the route over a distance of circa 1.5km. The pipeline would then cross the PRoW route again as it turns west prior to Cadge's Wood. The digestate lagoon site would be approximately 50m north of the PRoW at this point.

These PRoWs are located in undulating farmland, characterised by large-scale open arable fields. In places the PRoWs follow hedgerow field boundaries, sections of farm track and in other places across open fields.

- Registered Common / CROW Open Access land: There are no areas of CROW land within the 2km Study Area, nor within the wider area shown in Figure 4.

3.1.6 Cultural Heritage/ Nature Conservation Assets:

- Scheduled Monuments: There is one Scheduled Monument within the 2km detailed Study Area. This is the 'Moated site 90m south of Barsey Farm', reference 1019878, as shown in Figure 4. It lies outside the ZTV for the Proposed Development so has no visibility.
- Heritage Environmental Assets: A 'Roman Road via Devana' lies to the west of the Site, as shown in Figure 4. It may be subjected to some theoretical visibility of the AD facility Site and Viewpoint 7 has been identified to illustrate the likely effect.
- Conservation Areas / Listed Buildings: The Withersfield Conservation Area is the only one within the 2km Study Area and sits approximately 1km to the north-east of the Site boundary. No part of the Conservation Area is subject to any theoretical visibility of the AD facility Site, due to it being located on the east facing slopes of a ridgeline that shields the village from views towards the Site. Visibility from Silver Street, to the west of the Conservation Area is shown in Viewpoint 5.
- The closest heritage assets are Grade II Listed Buildings approximately 350m west of the AD facility Site at Limberhurst Thatch and Silver Street Farmhouse, approximately 600m north. The remaining clusters of Grade II and Grade II* Listed Buildings are concentrated at Hollow Hill and Church Street in the Withersfield area, which lies outside the ZTV shading.
- The pipeline routeing would pass approximately 150 m to the east of Silver Street Farmhouse (Grade II) Listed Building and 400 m to the west of the White Horse Inn (Grade II) Listed Building and Four Cottages Immediately West of Little Thatch (Grade II) Listed Buildings and the edge of Withersfield Conservation Area.

It should be noted that the LVA only considers heritage and nature conservation assets where they are distinct local landscapes or tourist/visitor attractions and where views are an important contributory factor to the experience.

3.2 Strategic Housing and Employment Land Allocations

A small number of housing and mixed use allocations are shown on Figure 4, as identified in the Local Plan. None of these sites has the potential to give rise to cumulative landscape and visual effects with the Proposed Development Site and therefore such developments have not been considered as part of the cumulative assessment.

3.3 Planning Summary

The Application Site is not within, or immediately adjacent to, any designations for nationally or regionally valued landscapes.

Ancient Woodland, some of which is identified as County Wildlife Sites, lies near to the eastern end of the site and in other locations within the 5km Study Area where it provides a valuable screening effect in containing the potential visibility of the Proposed Development.

There are no PRoW passing through the Site, though there is a footpath close to the eastern boundary. There are a number of footpaths / bridleways within a 1 km radius of the Site.

A Conservation Area exists at the village of Withersfield, and a Scheduled Monument at Barsey Farm, but both lie outside the ZTV for the Proposed Development.

4.0 Development Design, Mitigation and Potential Impacts

Introduction

The likely landscape and visual effects from the AD facility and Pipeline/ offsite digestate lagoons will be very different. The pipeline route will be fully reinstated on completion of construction works and will not have the potential to lead to any long-term significant adverse effects. The offsite digestate lagoons comprise low level development that will not exceed approximately 2.0m-2.5m in height above existing ground levels, excluding the height of perimeter fencing and the establishment of native scrub planting.

In this section the characteristics of both the AD facility and Pipeline Sites are described, noting that the effects from the AD facility are the most likely to result in landscape and visual effects. The nature of proposal is described alongside the loss of landscape elements and proposed mitigation measures. Potential impacts resulting from the Proposed Development are also summarised below and are considered in relation to the assessment of effects.

Nature of Proposals

AD facility Site

Vehicular access to the proposed AD facility Site would be from the A1307, Haverhill Road, to the south of the site, utilising the existing access serving Spring Grove Farm. Some localised widening of the existing tracks would be needed to facilitate access into the field north of the farm, but an existing bridging point across the Stour Brook would be used to minimise tree removal in that area.

New native tree and hedgerow planting is proposed around the perimeter of the site to reinforce existing vegetation, and a new woodland will be created at the eastern end to form a robust edge to the Site. The landscape strategy is shown in Figure 6.

The key elements of the Proposed Development, in terms of their potential to affect landscape character and visual amenity are largely related to the following elements:

- *5no. Digester tanks at 16.6m tall;*
- *6no. dirty water tanks at 8m tall;*
- *2 storey welfare/offices at 5.4m tall;*
- *4 no. Pasteurisation tanks at 11m tall;*
- *3 no. Silage clamp areas with 3.5m retailing walls;*
- *1 no. Gas flare at 9.0m tall;*
- *1 no. Biogas Upgrade Unit vent at 7.5m tall;*

- *2 no. Combined heat and power unit stacks at 9m tall;*
- *2 no. Compressor stacks at 5m;*
- *CO_2 Capture Unit at 4.75m tall;*
- *CO2 tanks at 3.4m tall;*
- *Separator/straw processing/manure buildings at 8m tall.*
- *Propane tanks;*
- *ASS (evaporators) at 12m tall; and;*
- *New woodland and native scrub planting.*

The remaining structures are 3m tall or smaller. The pipeline will be buried underground and the embankments of the offsite digestate lagoon will not exceed 3m in height.

The digestor tankers would sit close to the centre of the Site, in Bowsey field, with the silage clamps to the west and three covered lagoons and ancillary structures to the east. The location of the digester tanks takes advantage of natural screening that is derived from a thick belt of woodland along the Stour Brook, and the southern edge of the Site, in this part of the site. Furthermore, they will be cut into the sloping landform of the site to integrate them into the topography and reduce their apparent perceived height. This will help to minimise visibility of that tallest elements of plant from the A1307.

A large bunded area composed of surplus subsoil and topsoil would be created at the eastern edge of the site, which would be planted with native woodland and scrub to provide some additional screening in views from Haverhill and the east. This mitigation would also deliver biodiversity net gain and connect with the habitat along the Stour Brook.

The finishes of the buildings and structures would be similar to those already found within numerous farms within the agricultural context of the Site with digester tanks likely to be painted green in colour, subject to agreement with the Council.

There would be some localised earthworks required with the creation of retaining walls to accommodate structures stepping down in a north south direction. The AD facility Site would be secured with a suitably coloured 2.5m high palisade fence.

Some limited external lighting is required at the AD facility Site to ensure safe working during the winter months when light is reduced in the early mornings and afternoon/early evenings. All external lights would be directed downwards into operational areas and be hooded (using light spill shields) to reduce potential light disturbance outside of the Site. Lighting will only be used within permitted hours of operation or if necessary, during maintenance or emergency work with dimming, timer and photocell controls. No permanent lighting would be required along the pipeline route or around the offsite digestate lagoon.

The digestate pipeline is to be 9 inches in diameter and buried below ground, either via a trench or with the use of directional drilling under Silver Street and Skippers Lane. The digestate lagoons are to be excavated into the sloping ground to form retaining earth embankments which would be grass seeded with a suitable nature conservation mixture. The two offsite lagoons would be covered.

Some limited external lighting is required to ensure safe working during the winter months when light is reduced in the early mornings and afternoon/early evenings. A lighting Strategy has been designed to be compliant with the residential receptor criteria as set out in the Institution of Lighting Professionals (ILP) Guidance Note 01/21: The Reduction of Obtrusive Light. Specifically, the assessed lighting associated with the Proposed Development is compliant with the obtrusive light criteria as set out for ILP Environmental Zone E2.

Pipeline and digestate lagoon Site

Access to the pipeline and digestate lagoon sites would be via existing farm access tracks and routes, which in some places are shared with PRoW.

Loss of Landscape Elements

The proposed AD facility Site would require the development of approximately 12.5ha of Grade 2 agricultural land, which is currently utilised as arable farmland. The digester tanks would have a relatively modest footprint within Bowsey field, with the majority of the site area accommodating lagoons, clamps and circulation areas.

A short section of hedgerow would require removal to accommodate the site access.

No other hedgerows or trees have been identified for removal as part of the Proposed Development.

The digestate pipeline would require the temporary disturbance of arable farmland soils for trenching, which would then be reinstated, as existing. The offsite digestate lagoons site would require the removal of arable farmland soils and re-profiling of gently sloping land.

Proposed Embedded Mitigation

The principal mitigation of landscape and visual effects is 'embedded' mitigation achieved through careful siting and design of the various elements of the Proposed Development, such as the layout of the buildings and how the layout responds to the landform and orientation of the site; the density and massing of the buildings, and the integration of existing and proposed planting, which can reduce effects, or in some cases, prevent effects from arising.

The potential for mitigation is described in the following two sections covering the assessment of landscape and visual effects. There is some considerable potential for additional mitigation of landscape and visual effects that would follow on from the construction of the Proposed Development, particularly to the east of the AD facility Site where a significant area of soil mounding will be placed to utilise surplus subsoil and topsoil material from the site excavations. This is shown in the Landscape Strategy drawing in Figure 6.

The Landscape Strategy is designed to assist the embedded mitigation by providing a long-term framework of new native planting around the edges of both the AD facility and offsite lagoons Sites. These will reinforce existing field boundaries and help to provide additional visual screening to contain the Proposed Development, while also contributing to the biodiversity of the site and its environs. The native mitigation planting will bring discernible levels of additional screening around the AD facility and offsite lagoons Sites within a period of 10 years from planting.

Internal parts of the site will be planted with a species rich grassland that will further contribute to biodiversity net gain. A particular opportunity exists at the eastern end of the site, where surplus subsoil and topsoil from site excavations will be graded to form a mounded area. This will be planted with native woodland to provide a substantial new area of woodland that is in keeping with the woodland blocks in the Study Area, that characterise the surrounding landscape. The woodland will also provide a connection to the existing riparian woodland along the Stour Brook, creating a beneficial wildlife corridor. It will also assist in establishing a new boundary to the Site that will in time screen views into the Proposed Development from the east, including from Haverhill, as shown in the photomontage from Viewpoints 4 (Figure 9.12) and 12 (Figure 9.14).

Additional woodland planting would be carried out around the proposed offsite digestate lagoon to enclose the new structure and extend the adjacent habitats in the established Cadge's Wood. The woodland planting would consist of a minimum 5m wide strip of mixed native trees and shrubs.

Potential Impacts (Landscape and Visual)

Despite the extent of embedded mitigation, the potential remains for some landscape and visual impacts to arise in relation to the development during construction and operation. Potential impacts may result from the following:

Potential impacts during construction (Temporary)

- Site preparation and earthworks including the presence of compounds / temporary spoil heaps;
- Excavation and backfilling of pipeline route and offsite digestate lagoons;
- Presence of moving construction vehicles and large machinery, including cranes;
- Presence of disturbed land;
- Active change in the landscape / land use as development progresses;
- Views of construction process and extensive areas of bare earth;
- Views of construction traffic;
- Light associated with floodlighting to allow a full working day in winter; and
- Extensive areas of bare earth from temporary stockpiles and new landforms before they have had a chance to 'green up' from the landscape works.

The construction period assessment considers the temporary effects of the construction activities. It is anticipated that construction of the proposed development would take approximately 70 weeks. The long-term effects of the introduction of the Proposed Development are considered as operational period permanent impacts, although it is acknowledged that they occur progressively during the construction period.

The construction phase environmental impacts of the Proposed Development would be managed through the implementation of a CEMP which would be part of a discharge of requirements and include mitigation measures under the 'Considerate Contractors' scheme.

Potential impacts during operation (Year 0 permanent)

- The introduction of new buildings and structures (lagoons) with a quasi-agricultural appearance in a rural landscape;
- Loss of existing landscape resource - land use and landcover;
- Evidence of disturbed ground along the pipeline route and around the offsite digestate lagoons;
- Creation of new landscape elements;
- Landform changes;
- Mitigation and enhancement planting;
- Indirect effects on existing adjacent landscape character areas;
- Views of vehicles and occasional site security lighting during periods of low light levels
- Visual intrusion; and
- Changes to views appreciated by key receptors.

It should be noted that during operation the Proposed Development would be predominantly unlit and there will be approximately 8,986 traffic movements annually (HGV / tractor trips), with the highest levels occurring during June and July, followed by September / October aligned with feedstock generation and harvest campaign seasons.

Potential impacts during operation (Year 15 permanent)

At Year 15 the following permanent impacts would be experienced:

- The maturing of mitigation planting; and
- Views of vehicles and occasional site security lighting during periods of low light levels.

5.0 Assessment of effects on landscape character, elements and designations

Introduction

This section describes the landscape character of the Proposed Development Site and Study Area based on desktop reviews, site visits and consultations and identifies the residual effects of the Proposed Development on landscape receptors following construction and during operation (Year 0 and Year 15).

The landscape assessment is based on both a desk top appraisal of existing landscape character assessments and plans as well as a site-based survey. In accordance with GLVIA3 the main landscape receptors, (landscape character, landscape designations and site landscape elements), which have the potential to be affected by the Proposed Development have been identified and their sensitivity to the Proposed Development has been assessed by considering their value and susceptibility. The magnitude of change which would be experienced by each of these receptors has then been assessed by determining the size and scale of change, the geographical extent of that change, and the duration and reversibility of that change. Finally, the significance of the landscape and visual effects is established, having regard to the sensitivity and magnitude of change experienced by each receptor.

Baseline

5.1.1 Landscape character – National

The AD facility Site and land within the wider 5km radius Study Area lies within National Character Area Profile (NCAP) 86, South Suffolk and North Essex Clayland (Figure 7 refers).

For the purposes of this assessment NCAP 86 has been scoped out. The NCAP is too generic and covers a considerable area. It is considered that for this scale of assessment, the county landscape character assessment is a more appropriate tool by which to determine and review effects on landscape character.

5.1.2 Landscape Character – County

Suffolk Landscape Character Assessment, 2009

At a county level the AD facility Site is located within the Rolling Estate Farmlands Landscape Character Type (LCT15), as defined in the Suffolk Landscape Character Assessment, 2009.

The key characteristics of the Rolling Estate Farmlands LCT are:

- *"Gently sloping valley sides and plateau fringes*
- *Generally deep loamy soils*
- *An organic pattern of fields modified by later realignment*
- *Important foci for early settlement*
- *Coverts and plantations with some ancient woodlands*
- *Landscape parks with a core of wood pasture*
- *Location for mineral workings and related activity, especially in the Gipping valley."*

This is a narrow LCT which is partly bounded to the north and south by the Undulating Estate Farmlands (LCT24), in which the pipeline and digestate lagoons Site are located. The offsite digestate lagoons Site is located close to the boundary with West Wickham Wooded Claylands (LCA4E).

The key characteristics of the Undulating Estate Farmlands LCT are:

- *Undulating arable landscape*
- *Organic field pattern rationalised by estate ownership*
- *Oak, ash and field maple as hedgerow trees*
- *Complex arrangements of plantations especially in the north*
- *Ancient woodlands*
- *Landscape parks and ornamental tree species*
- *Substantial open areas created for airfields and by post WWII agricultural improvement*
- *Dispersed settlement pattern of loosely clustered villages, hamlets and isolated farmsteads especially in the north*
- *Settlements more clustered and less dispersed in the south*
- *Rich stock of mediaeval and Tudor timber-framed and brick buildings and moated sites*
- *A landscape of well wooded farmland in many places often with a well kept appearance"*

These LCTs are shown on Figure 7, along with the adjoining LCTs within Cambridgeshire. No other LCTs within Suffolk have the potential to be affected by the Proposed Development, but it is possible that the Proposed Development could affect the key characteristics of adjoining LCTs, across the County boundary, through visibility. The appearance of the Proposed Development in views from within nearby LCTs may affect the perception of their defining characteristics, hence it is relevant to also consider relevant Landscape Character Areas (LCAs) in Cambridgeshire.

The relevant LCAs within Cambridgeshire are those that adjoin the administrative boundary with Suffolk and which include:

- *West Wickham Wooded Claylands (LCA4E)*
- *The Camps Wooded Claylands (LCA4F)*

These are described below.

Greater Cambridgeshire Landscape Character Assessment April 2021

The key characteristics of the West Wickham Wooded Claylands LCA are as follows:

- *"Predominantly irregular field pattern indicative of medieval field layout*
- *Significant woodland cover generally comprising medium size blocks including ancient woodland*
- *Settlement includes small, linear villages and isolated farms, generally enclosed by strong woodland groups and mature hedgerows.*
- *Distinctive open, panoramic views towards wooded horizons."*

The key characteristics of the Camps Wooded Claylands LCA are as follows:

- *"Irregular medieval field pattern*
- *Raised banks, open ditches and fragmented hedgerow network provide enclosure*
- *Scattered small woodlands and shelterbelts, often at settlement edges*
- *Settlement comprises two small villages, linear road side settlements and isolated farms."*

This Assessment will evaluate to what degree the Proposed Development may affect the key characteristics of these LCTs/ LCAs.

5.1.3 The Site and Study Area

GLVIA3 recommends that a landscape character assessment should be carried out as part of the baseline study (paragraph 5.4). This should consider:

- the elements that make up the landscape (physical, land cover and the influence of human activity);
- aesthetic and perceptual aspects; and
- the overall character of the area.

An assessment of the landscape baseline is set out in the following paragraphs.

The Application Site for the AD facility consists of two broadly rectilinear arable fields which are located to the north of the A1307, approximately 200m northwest of Haverhill. The fields are owned by Spring Grove Farm and are referred to as Bowsey field (lying to the west) and Spring Grove field (to the east). It is proposed that Bowsey field will house most of the Site infrastructure (including the tallest elements proposed), with lower height elements utilising a marginal area of Spring Grove field to the east. Howe Wood, an ancient woodland and county wildlife site lies to the northeast of the site. The pipeline and digestate lagoon site include several relatively large-scale, arable fields located to the north-west of Haverhill and west and north of Withersfield.

The AD facility Site is accessed via the existing junction on the A1307 that serves Spring Grove Farm. While close to the road, the southern site boundary is separated from the road by the Stour Brook, which runs in a discreet ditch along the boundary. There is also a belt of mature woodland and scrub planting between the road and Stour Brook which provides a strong level of visual screening into the site from the A1307. This weakens towards the western end of the Site, where the woodland comprises a stand of mature poplar trees which are more permeable, in visual terms.

The AD facility Site has relatively strong boundaries on three sides, with only the eastern edge being open. It is proposed that the level of enclosure along the eastern edge of the Site will be addressed through new hedgerow and woodland planting, which will have a range of landscape, visual and biodiversity benefits. This planting is shown in the Landscape Strategy drawing in Figure 6.

Beyond the western boundary of the AD facility Site, the field is terminated by a narrow lane (Silver Street) providing access from the A1307 to the village of Withersfield. Views into the western end of the site are intermittent, due to a substantial hedgerow along the eastern verge. This continues for some 500-600m of Silver Street before terminating close to the more elevated part of the street, where longer range views open out, albeit the Site is tucked into the landscape below the crest of the hill. The hedgerows that exist around the site contain a range of native species including ash; oak, lime and field maple. The scrubby layers include extensive areas of blackthorn which provide a dense sense of enclosure in some areas, especially to the southern edge.

An Arboricultural Feasibility Report has been prepared for the Applicant to evaluate the boundaries of the site and this has informed a constraints exercise which ensured their retention in the Proposed Development layout design. The Arboricultural Report concludes that "*It would appear from the walk-through visit that there is scope for development of the site without being arboriculturally detrimental to the majority of the site. The proposed site access point utilises an existing field access point and will only require minor tree works to upgrade and improve access.*", and that "*It would appear that the site is developable without detriment to the majority of important and/or significant trees, subject to the extent, design and layout of the infrastructure for the AD development.*"

A PRoW lies just outside the eastern boundary of the Site and connects Haverhill to Withersfield. Open views into the eastern end of the Site are currently possible from part of this route and visibility of the Proposed Development will be mitigated though additional hedgerow and woodland planting as described above.

Land use within the wider Study Area is substantially agricultural (arable) in nature and is interspersed with woodland blocks, with the obvious exception of Haverhill settlement. The Site itself is essentially rural in character, and feels relatively enclosed by its existing field boundaries, and sloping ground, with some intervisibility across the Site to the settlement of Haverhill. From the highest parts of the Site some 3 storeys residential blocks are visible within Haverhill, meaning there is potential for elevated views back to the Proposed Development from upper storeys. In reality, the main change that these views from Haverhill would experience is the substantial earth bunding and woodland that is proposed at the eastern end of the site, as illustrated in the photomontages for Viewpoints 4 (Figure 9.12) and Viewpoint 12 (Figure 9.14). The majority of the north western edge of Haverhill is substantially concealed by planting along the inside edge of the A1307, with the commercial development at 'The Epicentre'/ Haverhill Research Park - adjacent to the roundabout with the A1017 being most prominent. This view is captured in the photomontage for Viewpoint 12 (Figure 9.14).

Landform within the site slopes from the north to south, from approximately 88m AOD along highest parts of the northern boundary, down to the Stour Brook at around 80m AOD. This offers the opportunity to cut the development into the gradient to help recess the taller elements of plant into the hillside, thereby increasing the sense of enclosure on Site and reducing the perceived height of new plant in views. The village of Withersfield lies about 1km to the north east of the site boundary, but is set on the opposite slope of the intervening hill, meaning that it is shielded from visibility of the Proposed Development by the landform.

The AD facility Site is enclosed, as evident in the baseline viewpoint photography and this is enhanced in summer months but its surrounding woodland and hedgerows, with filtered glimpsed views in from surrounding roads and the A1307 bypass around Haverhill. As mentioned above, a sense of connectivity with the wider landscape is severed due to the well vegetated nature of the Site's boundaries. Lighting and noise levels associated with

presence of vehicular movement along the A1307 reduces the sense of tranquillity and remoteness.

The southern part of the pipeline Site extends over rising land from 90m AOD north of the main Site to 110m AOD, where it passes beneath Silver Street, near to Silver Street Farm and Sparrow Hall Cottage. This section of the pipeline has some intervisibility with properties on the edge of Haverhill.

The central part of the pipeline Site extends across an arable field between Horseheath Road and Skipper's Lane at circa 110m AOD. This section of the pipeline is the nearest to Withersfield village which is located to the south-east on the lower-lying parts of the valley floor alongside Stour Brook.

The northern part of the pipeline Site slopes down from 110m AOD east of Skipper's Lane to the Stour Brook watercourse at 95m AOD and follows the valley as it rises gently up to the digestate lagoon Site at elevations of around 105-110m AOD. This section of the pipeline and offsite digestate lagoons Site is more rural, enclosed by the undulating landform and Stour Brook valley sides (119m AOD to the west and 124m AOD to the east). There are a few isolated farmsteads located along Skipper's Lane on the elevated ground to the west of the valley, such as, Lawn Farm, Exhibition Farm and Exhibition Cottages and Skippers Hall Farm.

The offsite digestate lagoons are located immediately to the east of Cadge's Wood and an established farm track. Mature woodland blocks are also located on the valley sides and further add to the partial sense of enclosure to the local landscape setting. The farmland is rectilinear and organised in appearance, with relatively large field sizes. Thick established hedgerows typically define the field boundaries, with mature hedgerow trees. There are also occasional mature trees within the arable fields. The farm routes from the highway typically include timber barriers to restrict access to the public.

5.1.4 Summary of receptors

The main landscape receptors with any potential to be affected by the Proposed Development are:

5.1.5 Landscape character:

- LCT 15 Rolling Estate Farmlands (the Site)
- LCT24 Undulating Estate Farmlands
- LCA4E West Wickham Wooded Claylands
- LCA4F The Camps Wooded Claylands

5.1.6 Landscape designations:

- None

5.1.7 Site elements:

- Sloping landform
- Change in landuse
- Partial sense of enclosure
- Rural in character, being open countryside
- Intact Vegetation (Hedgerows and Individual Trees), especially along the pipeline route

The following landscape receptors have been scoped out of the Assessment as being unlikely to experience any material landscape effects:

- Landscape Designations
- Barsey Farm Ancient Monument
- Ancient Woodlands
- Withersfield Conservation Area
- County Wildlife Sites

None of these five landscape receptors have potential to be directly or indirectly affected by intervisibility with the Proposed Development, as reflected on the ZTV and verified through field survey on Site.

Effect on Landscape Character

The potential landscape impacts of the different elements of the Proposed Development relate to their intervisibility with the landscape receptors as new landscape features, including how this affects their perceptual qualities and tranquillity. This includes the presence and activity of temporary construction plant during the construction period and vehicle movements during operation and include the presence of new light sources within the landscape.

In the absence of nationally or regionally designated landscapes, the value of the LCTs/ LCAs reflects their value at a community level. The individual susceptibility of LCTs/ LCAs to the Proposed Development is related to their ability to "*accommodate the proposed development without undue adverse consequences for the baseline situation and/or the achievement of landscape planning policies and strategies*" (Paragraph 5.40, GLVIA3). Aspects of the character of the landscape that may be affected by a particular type of development include landform, skylines, land cover, enclosure and aesthetic and perceptual aspects such as the scale of the landscape, its form, line, texture, pattern and grain, complexity, and its sense of movement, remoteness, wildness or tranquillity.

The Proposed Development is regarded as having a lifespan of 25 years and is theoretically reversible, however in terms of the LVA considered permanent.

5.1.8 Potential Construction Phase Effects- Landscape Character

LCT 15 Rolling Estate Farmlands (the Site)

AD Facility Site

The AD facility Site is located at the western extremity of this small area of LCT15, which is described as having *"An organic pattern of fields modified by later realignment",* and being an *"Important foci for early settlement*." It is characterised by "*Coverts and plantations with some ancient woodlands*" and is, in places, a "*Location for mineral workings and related activity.*"

These key characteristics of LCT15 are only partially typical of the AD facility Site itself. Viewpoints 1, 2, 3 and 4 reflect visibility of this LCT. The AD facility Site, whilst arable and gently sloping, is edged by woodland and trees on three sides and is largely enclosed. The size of the Bowsey and Spring Grove fields, and absence of intervening hedgerows, would suggest some rationalisation of boundaries has taken place over time. It is the case that eastern part of the LCT is a foci for the settlement of Haverhill, forming part of the immediate setting to the settlement on its north western edge.

The ZTV for the AD facility indicates there is a theoretically high potential for intervisibility between the Proposed Development and the LCT within approximately 1km of the Site, although this is likely to be limited to partial intervisibility associated with the upper elevations of the digester tanks (the domed membrane).

Construction activities associated with the AD facility would result in a loss of characteristic landscape elements (agricultural land use and fields) within the Site area, which represents a reasonably large part of the small LCT and the temporary introduction of a few new features, such as materials storages areas, construction compound, parking areas etc. The presence of high-level activities associated with cranes would be discernible across the LCT, including from the edge of Haverhill.

It is predicted that this LCT has a Medium sensitivity, a Medium magnitude of change on the landscape character of the LCT during construction activities resulting in a Moderate negative effect during construction, which would be locally Significant. This effect will be most apparent during construction when the LCT is experienced from the east.

Pipeline and digestate lagoons Site

The pipeline Site is located within the adjoining LCT24, Undulating Estate Farmlands, and would have no direct construction impacts upon LCT 15. The pipeline and digestate lagoon construction activities would not result in the loss of any characteristic landscape elements from within LCT24, but may temporarily introduce new features within its outward views, at a few locations near to the boundary. Any potential influence on the landscape character of the area by the pipeline development would be limited by intervening vegetation, including hedgerows.

This LCT has a Medium sensitivity. It is predicted that the proposals would result in a Negligible magnitude of change at construction, resulting in a Negligible and Not-Significant neutral effect from the pipeline construction on the landscape character of LCT15.

LCT24 Undulating Estate Farmlands

AD facility Site

The Undulating Estate Farmlands LCT broadly frames the AD facility Site along its northern southern edges. The presence of elevated landform (to the north), woodland, trees and hedgerows along these boundaries means that the construction of the Proposed Development on the Site will be heavily concealed in views from the LCT. In contrast, the pipeline routeing extends over the western side of the much larger extent of LCT24 Undulating Estate Farmlands, with the digestate lagoon Site close to its western boundary.

LCT24 is characterised by its "*Undulating arable landscape and organic field pattern rationalised by estate ownership*." along with its "*Ancient woodlands*" and "*Landscape Parks*". It has a "*Dispersed settlement pattern of loosely clustered villages, hamlets and isolated farmsteads*", with the village of Withersfield neatly reflecting this characteristic in the 2km Study Area. Overall, it is a "*landscape of well wooded farmland in many places often with a well kept appearance*". The key characteristics are strongly reflected in the landscape surrounding the Site and are qualities that instil a Medium sensitivity to change. Viewpoint 5 reflects visibility from the LCT.

Undulations in the landscape, such as the elevated position of Silver Street serve to provide a widely contrasting landscape of enclosed and exposed spaces, with some long range views.

Construction activities associated with the AD facility Site would result in some diminution of characteristic landscape elements (agricultural land use and rural character) on the edge of the LCT where it adjoins the Site, but this would be mitigated to some extent by screening elements described above. The temporary introduction of a number of new features, such as materials storage areas, construction compound, parking areas may be well concealed by the boundary hedgerows but the taller elements of digester tanks are likely to be seen above

these, especially in views from elevated positions along Silver Street (as illustrated in the photowire for Viewpoint 5). In terms of intervisibility the presence of high-level activities associated with cranes is likely to be localised to within a 2km range, as supported by the extent of ZTV.

It is predicted that LCT24 has a Medium sensitivity, a Medium to Slight magnitude of change on the landscape character of the LCT at construction, resulting in a Moderate to Minor negative effect during construction that would be Not-Significant.

Pipeline and digestate lagoons Site

The pipeline extends over the western side of the LCT24 Undulating Estate Farmlands with the digestate lagoon Site close to its western boundary.

The pipeline and digestate lagoon construction activities would include minor and localised changes in landcover and landform, as well as associated vehicle movements. These would be visible within a restricted part of the LCT close to the Proposed Development, particularly the valley alongside Stour Brook. However, although there would be impacts on the sense of openness and simplicity, this would not alter the overall balance or composition of the landscape.

This LCT has a Medium sensitivity. It is predicted that the proposals would result in a Slight to Negligible magnitude of change at construction, resulting in a Minor and Not-Significant negative effect on the landscape character of LCT24 Undulating Estate Farmlands.

LCA4E West Wickham Wooded Claylands

AD facility Site

This LCA lies to the west/ north-west of the AD facility Site, and is separated from it by some 250m at its closest point. The LCA is characterised by its "*irregular field pattern indicative of medieval field layout*" with "*Significant woodland cover, including ancient woodland."* The key characteristics refer to *"small, linear villages and isolated farms, generally enclosed by strong woodland groups and mature hedgerows*." And "*Distinctive open, panoramic views towards wooded horizons.*" Fieldwork suggests that the parts of the LCA within 5km of the Site display all of these characteristics. Viewpoints 6 and 7 reflect visibility from the LCA.

The ZTV indicated there is a theoretically high potential for intervisibility between the Proposed Development and the LCA within approximately 2km of the Site and particularly from higher ground to the west in the vicinity of Viewpoint 7, although this is likely to be partial intervisibility associated with the upper portion of the digester tanks (the domed membrane), due to the well vegetated nature of the intervening landscape, especially in summer months.

The construction of the Proposed Development would result in a low level of change to the defining characteristics of LCA 4E, restricted to the south eastern tip of the LCA where views into the site are possible (close to Viewpoint 3). High level activities would be visible across over a small area of the LCA and may include temporary cranes.

It is predicted that the LCA has a Medium sensitivity and would experience a Slight to Negligible magnitude of change to a limited part of the landscape character of the LCA at construction, resulting in a Minor to Negligible negative effect during construction that would be Not-Significant.

Pipeline and digestate lagoons Site

The pipeline and digestate lagoons Site are located beyond the eastern boundary of the LCA4E West Wickham Wooded Claylands.

The pipeline and digestate lagoon construction activities would not result in the loss of any characteristic landscape elements from within the LCA, but may temporarily introduce new features within its outward views,

at a few locations near to the boundary. Any potential influence on the landscape character of the area by the Proposed Development would be limited by intervening vegetation, including hedgerows and mature woodland blocks (including Cadge's Wood).

This LCT has a Medium sensitivity. It is predicted that the proposals would result in a Negligible magnitude of change at construction, resulting in a Negligible and Not-Significant neutral effect on the landscape character of LCA4E West Wickham Wooded Claylands.

LCA4F The Camps Wooded Claylands

AD facility Site

LCA4F lies to the south west of the AD facility Site, across the A1307, which also separates it from LCA4E, described above. It abuts the Site boundary along an edge where there is a substantial amount of existing woodland screening at present. This limits the potential for intervisibility between the LCA and Proposed Development construction activities.

The LCA is described as having an "*Irregular medieval field pattern*", with "*raised banks, open ditches and fragmented hedgerow network provide enclosure"*. Enclosure is further enhanced by the "Scattered small woodlands and shelterbelts, often at settlement edges". The LCA comprises "*two small villages, linear road side settlements and isolated farms.*" This accurately reflects the characteristics of the LCA within the 2km Study Area, where relatively high levels of theoretical visibility are predicted in the ZTV. In reality there is likely to be limited potential for intervisibility, as confirmed in the visualisation for Viewpoint 6, which captures the interface between LCAs 4E and 4F.

During construction only high-level construction activities associated with the temporary presence and movement of cranes may be discernible against the skyline from some areas of the LCA and this would only affect a very small proportion of the LCA.

It is predicted that the LCA would have a Medium to Low sensitivity to the Proposed Development, a Slight to Negligible magnitude of change to the landscape character of the LCA, resulting in a Minor to Negligible negative effect during construction that would be Not-Significant.

Pipeline and digestate lagoons Site

The pipeline and digestate lagoon would be separated from LCA4F by the AD facility Site and would not have any perceptual effect on its character.

5.1.9 Potential Construction Phase Effects - Site Elements/Aesthetic and Perceptual Aspects

The following effects on site elements are predicted during construction, considering both physical and aesthetic/ perceptual aspects:

- Sloping landform:

  AD facility Site

  The sloping landform of the AD facility Site would be materially changed as a result of the regrading of existing ground levels that is necessary to form a level platform for the Proposed Development. The sloping landform has a Medium sensitivity and would undergo a Moderate to Substantial magnitude of change, resulting in a Moderate to Major negative effect on landform within the Site boundary, which would be Significant, although localised to the site itself.

Pipeline and digestate lagoons Site

The offsite pipeline and digestate lagoons construction activities would introduce minor and localised changes in landform. This would include trenching and formation of spoil heaps as well as cut and fill and formation of embankments and slopes. These elements have a Medium sensitivity. The proposals would cause a Slight to Negligible magnitude of change and result in Minor and Not-Significant negative effect on these site elements.

- Intact vegetation forming the Site boundaries:

  AD facility Site

  Vegetation is of Medium to High sensitivity with a Negligible to Slight magnitude of change, resulting in a Negligible to Minor negative effect on vegetation that would be Not-Significant. This is because the vegetation lies outside the construction boundary, with the exception of the access across the Stour Brook.

  Pipeline and digestate lagoons Site

  The pipeline and digestate lagoon construction activities would have no effect on hedgerows or individual trees, with directional drilling to be deployed where boundary features are to be crossed.

  These elements have a Medium to High sensitivity. The proposals would cause No magnitude of change and result in No effect, that would be neutral on these site elements.

- Change in landuse:

  AD facility Site

  Construction of the Proposed Development would result in the removal of large areas of the existing arable landcover on the AD facility Site in order to accommodate the change in landuse. The landcover is of Medium sensitivity with a Substantial magnitude of change, that would result in a Major negative and Significant effect on landform within the AD facility Site boundary. This effect would be mitigated by the planting of extensive new areas of woodland and scrub across significant parts of the Site.

  Pipeline and digestate lagoons Site

  The pipeline and digestate lagoon construction activities would introduce minor and localised changes in landcover. This would include disturbance to the existing arable fields associated with trenching and earthworks.

  These elements have a Medium sensitivity. The proposals would cause a Slight to Negligible magnitude of change and result in a Minor and Not-Significant negative effect on these site elements.

- Partial sense of enclosure:

  AD facility Site

  The partial sense of enclosure that is derived from hedgerows around three sides of the Site is of Medium sensitivity and would undergo a Medium magnitude of change as a result of the additional planting that is proposed although this would not be effective at Year 0. This would result in a Moderate negative effect during Construction, which would be Significant, (with the sense enclosure being enhanced by a substantial new woodland at the eastern end during Operation).

  Pipeline and digestate lagoons Site

  The pipeline and digestate lagoon construction activities would not alter the partial sense of enclosure.

These elements have a Medium sensitivity. It is considered that the pipeline and lagoon proposals would cause a Negligible magnitude of change and result in a Negligible and Not-Significant neutral effect on these aspects of the site.

- Rural in character and important in terms of its physical and perceptual connectivity to surrounding countryside:

  AD facility Site

  The containment of the AD facility Site limits its physical and perceptual connectivity to surrounding countryside. It does however appear rural in character, reflecting the typical arable landscape evident in the surrounding area. The rural character has a Medium sensitivity and would undergo a Medium to Substantial magnitude of change, resulting in a Moderate to Major negative effect within the Site boundary that would be Significant.

  Pipeline and digestate lagoons Site

  The pipeline and digestate lagoon construction activities would reduce simplicity and rural character across localised parts of rural area along the pipeline route, from temporary vehicle and plant movements and associated earthworks, but with buffer areas retained as part of the landscape strategy.

  These elements have a Medium sensitivity. It is considered that the proposals would cause a Slight to Negligible magnitude of change and result in a Minor and Not-Significant negative effect on these aspects of the site.

5.1.10 Potential Operational Phase Effects (Year 0 and Year 15) – Landscape Character

The sensitivity of the four landscape character receptors remains consistent with that identified for the construction stage. For each receptor, the landscape effects arising from the AD facility Site and Pipeline Site are assessed at Year 0 and Year 15 following completion of construction works.

LCT 15 Rolling Estate Farmlands (the AD facility Site)

AD facility Site

Year 0: Once constructed the Proposed Development would introduce a new features into the landscape of the LCT. This would include the digestor tankers and, particularly, the domed membrane visible at a higher elevation. Due to the relatively enclosed nature of the AD facility Site and the nature of remaining structures at a lower elevation, together with new mounding and juvenile woodland planting, intervisibility with the rest of the LCT to the east is likely to be limited.

It is predicted that the Proposed Development would result in a Medium magnitude of change to the landscape character of the LCT during operation, resulting in a Moderate negative effect to the landscape character in Year 0, that would be Significant.

Year 15: Following the establishment and growth of new woodland mitigation planting, and reinforcement of existing perimeter vegetation, it is anticipated that there would a slight reduction in effects. Intervisibility of the lower elements of the Proposed Development and the wider LCT would be limited as planting is strengthened along the Site's eastern boundary. Partial intervisibility associated with the digestor tanks (domed membranes) at a higher level would reduce notably as the woodland grows. It is predicted that the magnitude of change would reduce to Slight resulting in a Minor neutral, and Not-Significant effect on landscape character in Year 15, in LCT 15, because of existing and mitigation planting maturing providing further vegetative screening.

Pipeline and digestate lagoons Site

The pipeline Site is located within the adjoining LCT24, Undulating Estate Farmlands, and would have no residual impacts upon LCT 15.

LCT 24 Undulating Estate Farmlands

AD facility Site

Year 0: New features would be introduced into views from the adjacent LCT, once the Proposed Development is constructed and this would include the digestor tankers with associated domed membranes at a higher elevation. Due to the relatively enclosed nature of the Site, remaining structures would be absorbed into the surrounding vegetation with mitigation measures associated with lighting minimising night glow. Intervisibility within the adjoining LCT is likely therefore to be limited to the edge of the A1307 along the edge of Haverhill and in glimpsed views from Silver Street to the north, where the tallest elements of the digestors may be seen (as illustrated in the photomontage for Viewpoint 5 (Figure 9.13). It is predicted that the Proposed Development would result in a Slight magnitude of change to the landscape character of the LCT, resulting in a Minor negative effect on the landscape character at Year 0, that would be Not-Significant.

Year 15: The maturing of the proposed landscape scheme, alongside existing vegetation would result in little or no discernible change to the intervisibility of the Proposed Development from within the LCT and of higher structures. Partial intervisibility associated with the upper parts of the digestor tanks, at a higher elevation, would remain from Silver Street, as illustrated in the photomontage for Viewpoint 5 (Figure 9.13). It is predicted that the magnitude of change would reduce to Slight to Negligible resulting in a Minor to Negligible neutral and Not Significant effect on landscape character at Year 15 in LCT 24.

Pipeline and digestate lagoons Site

Year 0: Upon Operation, the pipeline would be reinstated as arable farmland and there would be no perceptible changes to the affected parts of the landscape following revegetation of excavated ground. The digestate lagoon would be set down and well contained by the valley topography, the mature Cadge's Wood and existing hedgerow to the south. The sense of openness and simplicity would be barely altered and the overall balance or composition of the landscape would be unchanged.

The LCT has a Medium sensitivity. It is predicted that the proposals would result in a Slight magnitude of change at Operations (Year 0), resulting in a Minor and Not-Significant negative effect on the landscape character of LCT24 Undulating Estate Farmlands.

Year 15: The maturing of the landscape planting to the north of the digestate lagoon would further reduce its intervisibility with the local landscape and extend the habitats in the adjacent Cadge's Wood. The residual localised changes to landform and loss of arable farmland would continue and remain unchanged.

It is predicted that the proposals would result in a Slight magnitude of change at Operation (Year 15), resulting in a Minor and Not-Significant neutral effect on the landscape character of LCT24 Undulating Estate Farmlands.

LCA 4E West Wickham Wooded Claylands

AD facility Site

Year 0: The Proposed Development would result in no loss of characteristic landscape elements within the LCA and the perceptive influence of new features in its outward views would be highly constrained by intervening

planting in the LCA. There would be no material effect on the aesthetic and perceptual qualities of the LCA. Mitigation measures associated with lighting would minimise night glow.

It is predicted that the Proposed Development would result in a Slight to Negligible magnitude of change to the landscape character of the LCA at Year 0, resulting in a Minor to Negligible negative effect on the landscape character at Year 0 operation that would be Not-Significant.

Year 15: Following the establishment and growth of new mitigation hedgerow planting as well as existing vegetation it is anticipated that there would a further reduction in effects. Intervisibility of the lower elements of the Proposed Development and the LCA would be extremely limited as planting matures along the Site's western boundary and there would be a reduction in partial intervisibility associated with the digestor tanks (domed membranes) at a higher level. It is predicted that the magnitude of change would reduce to Negligible resulting in a Negligible neutral and Not-Significant effect on landscape character in LCA4F at Year 15 in operation.

Pipeline and digestate lagoons Site

Year 0: Upon Operation, the pipeline would be reinstated as arable farmland and the digestate lagoon would be set down and well contained by the valley topography and the mature Cadge's Wood. There would be limited perceptible changes to outwards views from the edge of this adjacent LCA.

The LCA has a Medium sensitivity. It is predicted that the proposals would result in a Negligible magnitude of change at Operation, resulting in a Negligible and Not-Significant neutral effect on the landscape character of LCA4E West Wickham Wooded Claylands.

Year 15: The maturing of the landscape planting to the north of the digestate lagoon would further reduce its intervisibility with the local landscape and extend the habitats in the adjacent Cadge's Wood.

It is predicted that the proposals would result in a Negligible magnitude of change at Operation (Year 15), resulting in a Negligible and Not-Significant neutral effect on the landscape character of LCA4E West Wickham Wooded Claylands.

LCA 4F The Camps Wooded Claylands

AD facility Site

Year 0: The Proposed Development would result in no loss of characteristic landscape elements within the LCA and the introduction of new features in its outward views, affecting the aesthetic and perceptual qualities of the LCA, would be highly constrained by intervening existing planting. Due to the relatively enclosed nature of the Site, intervisibility with the Proposed Development across the LCA would be negligible, with the digestor tankers with associated domed membranes only being visible from the north eastern extremity of the LCA at Viewpoint 3. Mitigation measures associated with lighting would minimise night glow.

It is predicted that the Proposed Development would result in a Slight to Negligible magnitude of change to the landscape character of the LCA at Year 0, resulting in a Minor to Negligible negative effect on the landscape character at Year 0 operation, that would be Not-Significant.

Year 15: Following the establishment and growth of new mitigation planting, reinforcing the existing vegetation screen, it is anticipated that there would a further reduction in effects. Additional hedgerow planting would be introduced along the southern margins of the Site, which would increase the screening effects that exist at present. The limited intervisibility associated with the domed membranes of the digestor tankers would reduce further and the impact on the aesthetic and perceptual qualities of the LCA would reduce. It is predicted that

the magnitude of change would alter to Negligible resulting in a Negligible neutral effect on landscape character in LCA4F at Year 15 in operation that would be Not-Significant.

Pipeline and digestate lagoon Site

The pipeline and digestate lagoon would be separated from LCA4F by the AD facility Site and would not have any perceptual effect on its character during operation.

5.1.11 Potential Operational Phase Effects - Site Elements/Aesthetic and Perceptual Aspects

Year 0: The following effects on site elements are predicted during operation at Year 0, considering both physical and aesthetic / perceptual aspects:

- Sloping landform:

  AD facility Site

  The sloping landform of the AD facility Site would be materially altered by the regrading of existing landform to create a level platform for the Proposed Development. The extent and impact from this change would be confined to a part of the Site that is well enclosed with existing vegetation and the effect would not be widely experienced. The sloping landform is of Medium sensitivity with a Medium to Substantial magnitude of change at operation in Year 0, resulting in a Moderate to Major negative effect on landform within the Site boundary that would be Significant, albeit confined to a localised and contained part of the Site.

  Pipeline and digestate lagoons Site

  Upon Operation, the sloping landform along the pipeline route would be reinstated and there would be no perceptible changes to the affected parts of the landscape. The digestate lagoon would include permanent changes to landform, with the introduction of steeper embankments and slopes. This would be limited to a relatively small footprint and part of a wider area of sloping arable field.

  These elements have a Medium sensitivity. The proposals would cause a Slight magnitude of change and result in a Moderate to Minor and Not-Significant negative effect on these site elements.

- Intact vegetation forming the Site boundaries:

  AD facility Site

  The mitigation proposals associated with the AD facility Site would be installed but not established at Year 0. Existing vegetation is of Medium to High sensitivity with a Negligible to Slight magnitude of change, resulting in a Negligible to Minor neutral effect on vegetation that would be Not-Significant. This is because the vegetation predominantly lies outside the construction boundary, with the exception of the access across the Stour Brook.

  Pipeline and digestate lagoon Site

  Upon Operation, the digestate lagoon Site would include new areas of tree and shrub planting on its north side. However, at this initial stage whilst the plants are still juvenile, the effect would be limited. These elements have a Medium sensitivity. The proposals would cause a Negligible magnitude of change and result in a Minor and Not-Significant beneficial effect on these site elements.

- Change in landuse:

  AD facility Site

The existing arable landuse on the AD facility Site has a Medium sensitivity to change and would undergo a Substantial magnitude of change, resulting in a Major negative effect on arable landuse within the Site boundary at Year 0, that would be Significant.

Pipeline and digestate lagoons Site

The arable landcover along the pipeline route would be reinstated at Operation and there would be no perceptible changes to the affected parts of the landscape. The digestate lagoon would include permanent changes to landcover, with the inclusion of new areas of species-rich grassland and new planting around the margins. This would be limited to a relatively small footprint and part of a wider area of sloping arable field.

These elements have a Medium sensitivity. The proposals would cause a Slight magnitude of change and result in a Moderate to Minor and Not-Significant negative effect on these site elements.

- Partial sense of enclosure:

AD facility Site

The partial sense of enclosure to the AD facility Site would have a Medium sensitivity to the Proposed Development and would undergo a Medium magnitude of change at Year 0, resulting in a Moderate positive effect that would be Significant, with the sense enclosure being enhanced by the installation of new bunding and a substantial new woodland at the eastern end.

Pipeline and digestate lagoons Site

Upon Operation, the partial sense of enclosure of the pipeline route would be unchanged. Although the digestate lagoon would include new landform and landcover, this would affect a relatively small footprint and have limited change to the partial sense of enclosure experienced in the wider landscape.

These elements have a Medium sensitivity. It is considered that the proposals would cause a Negligible magnitude of change and result in a Negligible and Not-Significant neutral effect on these aspects of the site.

- Rural in character and important in terms of its physical and perceptual connectivity to surrounding countryside:

AD facility Site

The containment of the AD facility Site limits its physical and perceptual connectivity to surrounding countryside. It does however appear rural in character, reflecting the typical arable landscape evident in the surrounding area. It is predicted that there would be a Medium sensitivity and a Medium to Substantial magnitude of change at Year 0, resulting in a Moderate to Major negative effect within the Site boundary following completion that would be Significant.

Pipeline and digestate lagoons Site

- The rural character of the pipeline route would be fully reinstated. The digestate lagoon would also have a relatively simple appearance and rural character, albeit with new landform (with steeper embankments and slopes) and landcover (with grassland and new planting). This would be limited to a relatively small footprint and part of a wider area of sloping arable field.

These elements have a Medium sensitivity. It is considered that the proposals would cause a Slight magnitude of change and result in a Moderate to Minor and Not-Significant negative effect on these aspects of the site.

Year 15: The following effects on site elements are predicted during operation at Year 15, considering both physical and aesthetic / perceptual aspects:

- Sloping landform:

  AD facility Site

  The sloping landform of the AD facility Site would be fundamentally altered by the regrading required to form a platform for the Proposed Development, although the establishment of the perimeter planting and woodland at the eastern end of the site would achieve a high degree of integration for the Proposed Development. It is predicted that there would be a Medium sensitivity associated with landform and a Medium magnitude of change, resulting in a Moderate negative effect that would remain Significant.

  Pipeline and digestate lagoons Site

  The localised changes to landform associated with the digestate lagoon would continue at Year 15.

  These elements have a Medium sensitivity. The proposals would cause a Slight magnitude of change and result in a Moderate to Minor and Not-Significant negative effect on these site elements.

- Intact vegetation forming the Site boundaries:

  AD facility Site

  The mitigation proposals associated with the AD facility Site would be established at Year 15 with a substantial area of new woodland having a presence at the eastern end of the Site. Existing vegetation would be of Medium to High sensitivity with a Medium to High magnitude of change from the new planting, resulting in a Moderate to Substantial positive effect on the vegetation, that would be Significant.

  Pipeline and digestate lagoons Site

  The maturing of the landscape planting to the north of the digestate lagoon by Year 15 would extend the habitats in the adjacent Cadge's Wood. These elements have a Medium sensitivity. The proposals would cause a Slight magnitude of change and result in a Moderate and Not-Significant beneficial effect on these site elements.

- Change in landuse:

  AD facility Site

  The existing arable landuse on the AD facility Site has a Medium sensitivity to change and would continue to experience a Substantial magnitude of change at Year 15. The Site has a Medium sensitivity associated with landuse, a Medium magnitude of change, resulting in a Moderate negative effect that would remain Significant.

  Pipeline and digestate lagoons Site

  The localised changes to landcover associated with the digestate lagoon would continue at Year 15. These elements have a Medium sensitivity. The digestate lagoon proposals would cause a Slight magnitude of change to landuse and result in a Moderate to Minor and Not-Significant negative effect on this element.

- Partial sense of enclosure:

  AD facility Site

The partial sense of enclosure to the AD facility Site would have a Medium sensitivity to the Proposed Development and would undergo a Medium to High magnitude of change by Year 15, resulting in a Moderate positive effect as woodland and hedgerow planting matures around the perimeter of the Site, that would be Significant.

Pipeline and digestate lagoons Site

The maturing of the landscape planting to the north of the digestate lagoon by Year 15 would extend the sense of enclosure from the adjacent Cadge's Wood, which would be in keeping with the wider characteristics of the rural landscape. This landscape element has a Medium sensitivity. It is considered that the proposals would cause a Slight magnitude of change and result in a Moderate to Minor and Not-Significant neutral effect on these aspects of the site.

- Rural in character and important in terms of its physical and perceptual connectivity to surrounding countryside:

  AD facility Site

  The containment of the AD facility Site will be augmented by additional planting by Year 15 that will further limit its physical and perceptual connectivity to surrounding countryside. The rural character will continue to be changed by the Proposed Development, but its influence will be lessened by the establishing mitigation. It is predicted that there would be a Medium sensitivity and a Medium to Slight magnitude of change, resulting in a Moderate to Minor negative effect that would be Not Significant.

  Pipeline and digestate lagoons Site

  The maturing of the landscape planting to the north of the digestate lagoon would extend the sense of enclosure from the adjacent Cadge's Wood, which would be in keeping with the wider characteristics of the rural landscape. These elements have a Medium sensitivity. It is considered that the proposals would cause a Slight magnitude of change and result in a Moderate to Minor and Not-Significant neutral effect on these aspects of the lagoon site at Year 15.

It should be noted that effects on Site elements in Year 0 and Year 15 are localised to the Site itself.

5.1.12 Summary of effects on landscape character

Summary of findings of the landscape assessment for the AD facility Site.

Receptor	Sensitivity	Magnitude of Change	Level and nature of Effect
Landscape Character			
LCT15 Rolling Estate Farmlands	Medium	Medium during Construction and Medium at Year 0. Slight during Operation Year 15.	Moderate negative **Significant** during Construction and Moderate negative **Significant** at Year 0. Minor neutral Not Significant by Operation Year 15.
LCT24 Undulating Estate Farmlands	Medium	Medium to Slight during Construction and Slight to Negligible at Year 0. Slight to Negligible at Year 15.	Minor to Moderate negative Not Significant during Construction and Minor negative Not Significant at Year 0. Minor to Negligible neutral Not Significant at Year 15.
LCA4E West Wickham Wooded Claylands	Medium	Slight to Negligible during Construction and Operation Year 0. Negligible during Operation Year 15.	Minor to Negligible negative Not Significant during Construction and Operation Year 0. Negligible neutral Not Significant by Operation Year 15.
LCA4F The Camps Wooded Claylands	Medium to Low	Slight to Negligible during Construction and Operation Year 0. Negligible during Operation Year 15.	Minor to Negligible negative Not Significant during Construction and Operation Year 0. Negligible neutral Not Significant by Operation Year 15.
Landscape Designations			
The Proposed Development will not give rise to effects on any landscape designations.			
Site Elements / Aesthetic and Perceptual Aspects			

Receptor	Sensitivity	Magnitude of Change	Level and nature of Effect
Sloping landform	Medium	Medium to Substantial during Construction and Operation Year 0. Medium during Operation at Year 15.	Moderate to Major negative **Significant** within Site boundary during Construction and at Year 0. Moderate negative **Significant** during Operation Year 15.
Intact vegetation forming the Site boundaries	Medium to High	Negligible to Slight during Construction and Operation Year 0. Medium to High during Operation at Year 15.	Negligible to Minor negative Not Significant during Construction and Operation Year 0. Moderate to Substantial positive **Significant** during operation at Operation Year 15.
Change in land use	Medium	Substantial during Construction and Operation Year 0. Medium during Operation at Year 15.	Major negative **Significant** during Construction and Operation Year 0. Moderate negative **Significant** at Operation Year 15.
Partial sense of enclosure	Medium	Medium during Construction and Operation Year 0. Medium to High during Operation at Year 15.	Moderate negative **Significant** during Construction. Moderate positive **Significant** at Operation Year 0 and Operation Year 15.
Rural Character	Medium	Medium to Substantial during Construction and Operation Year 0. Medium to Slight during Operation at Year 15.	Moderate to Major negative **Significant** during Construction and at Operation Year 0. Moderate to Minor negative Not Significant at Operation Year 15.

Summary of findings of the landscape assessment for the Pipeline and offsite lagoons Site.

Receptor	Sensitivity	Magnitude of Change	Level and nature of Effect
Landscape Character			

LCT24 Undulating Estate Farmlands	Medium	Slight to Negligible during Construction, reducing to Slight at Operation (Year 0 and 15)	Minor and negative Not Significant at Construction and Operation Year 0, becoming neutral at Year 15
LCA4E West Wickham Wooded Claylands	Medium	Negligible during all assessment stages	Negligible and neutral Not Significant during all assessment stages
Landscape Elements			
Sloping landform	Medium	Slight to Negligible at Construction, Slight at Operation (Year 0 and 15)	Minor and negative Not Significant at Construction and Moderate to Minor and negative Not Significant at Operation (Year 0 and 15)
Intact vegetation (Hedgerows and Individual Trees)	High to Medium	No change at Construction, increasing to Negligible at Operation (Year 0) and Slight at Year 15	No change at Construction, increasing to Minor and beneficial Not Significant at Operation (Year 0) and Moderate and beneficial Not Significant at Year 15
Change in Landuse	Medium	Slight to Negligible at Construction, increasing to Slight at Operation (Year 0 and 15)	Minor at Construction, increasing to Moderate to Minor and negative Not Significant at Operation (Year 0 and 15)
Partial Sense of Enclosure	Medium	Negligible at Construction and at Operation (Year 0), increasing to Slight at Year 15	Negligible at Construction and at Operation (Year 0), increasing to Moderate to Minor and neutral Not Significant at Year 15
Rural Character	Medium	Slight to Negligible at Construction, increasing to Slight at Operation (Year 0 and 15)	Minor at Construction, increasing to Moderate to Minor and negative Not Significant at Operation (Year 0) becoming neutral at Year 15

6.0 Assessment of effects on visual amenity and visual receptors

Introduction

This section describes the visual amenity of the Proposed Development Sites and Study Area based on desktop review and site visits. It identifies the residual effects of the Proposed Development on representative viewpoints and principal visual receptors following construction and during operation (Year 0 and Year 15).

In accordance with the recommendations of GLVIA3, the significance and nature of the potential visual effects has been determined by assessing both the sensitivity of visual receptors and the potential magnitude of visual effect.

Overview of Visibility

The screened ZTV in Figure 2 demonstrates that the extent of visibility of the AD facility Site is largely concentrated within a 2km radius of the Site. Beyond a 2km radius, the ZTV indicates that visibility would be extremely limited, being curtailed by landform and woodland blocks. Likely views of the AD facility are therefore concentrated to within 2km of the Site and fieldwork has shown that, in reality, open views only occur at a closer range than this. With the exception of the eastern boundary of the AD facility Site, which is open, the remaining three boundaries offer notable levels of screening from existing vegetation that is located outside, or on the boundary of the Site. The only elevated views across the Site occur along the more open parts of Silver Street, to the north, which crosses a localised hill to the west of Withersfield.

The theoretical visibility of the proposed Pipeline and digestate lagoons development within the local landscape is particularly localised, being concentrated within 2km of the Pipeline and digestate lagoons Site, with occasional partial visibility from areas of higher elevation within the remainder of the Study Area.

As a result of the high levels of screening, visual effects of the Proposed Development would be largely localised, with potential areas of visibility from the following locations:

- Upper floors of residential and commercial properties in the closest parts of Haverhill and along limited parts of the A1307 at the northern extremity of the settlement (as illustrated in the photomontage for Viewpoint 12 (Figure 9.14)). Other residential areas, in particular the open aspects around nearby settlements, as well as individual dwellings and farmsteads;
- From the Public Rights of Way ('PRoW') that connects Haverhill to Withersfield, where it runs along the eastern boundary of the AD facility Site. PRoW in close proximity to the Pipeline and digestate lagoons Site, particularly on elevated slopes and ridges, or where routes are more open;
- From the edge of the County Wildlife Site, close to the edge of Haverhill (as illustrated in the photomontage for Viewpoint 4 (Figure 9.12));
- From open stretches of Silver Street, to the north, where views across (but not into) the Site are gained and from the local road network (as illustrated in the photomontage for Viewpoint 5 (Figure 9.13)), particularly on elevated slopes and ridges or where routes are more open and pass by the Pipeline and digestate lagoons Site;
- From limited stretches of the local road network including the A1307; A1017 roundabout and Silver Street.

Summary of potential visual receptors

For the purpose of the assessment, whilst it is the people living, working, passing through or enjoying recreational activities in the area who see the view and enjoy the visual amenity, it is the places they may occupy that are mapped and described as the 'receptors' of the views.

The following visual receptors have the potential to experience changes in their views:

6.1.1 Residential receptors:

Likely residential receptors who may experience a view of the Proposed Development include:

- Residents of two and three storey properties in Haverhill within 2km of the Proposed AD facility Site;
- For the Pipeline and digestate lagoons Site, residential receptors include those at the edge of the settlements of Haverhill and Withersfield where there are open views to the north and individual properties within open countryside, such as Silver Street Farm and Sparrow Hall Cottage, Woodhouse, Lawn Farm, Exhibition Farm and Exhibition Cottages and Skippers Hall Farm;
- Residents along Silver Street with views south over AD facility Site.

6.1.2 Recreational and Visitor receptors:

Recreational and visitor receptors with views of the AD facility Site would be limited to:

- People using the PRoW (footpaths and bridleways) to the east of the Site, and to a lesser degree the Roman Road to the west of the Site;
- People undertaking recreation in the CWS near Haverhill.

Whilst the ZTV illustrates theoretical visibility from much of the local road network within 2km, it was evident from the site visits that the linear belts of woodland and hedgerows which are prevalent along these roadsides screen most views outwards from the road corridor. As such, it is anticipated that there would only be intermittent and transient views from the local road network immediately edging the AD facility Site, and most noticeably close to the roundabout where the A1307 and A1017 meet.

Recreational and visitor receptors with views to the Pipeline and digestate lagoons Site would be limited to PRoW, in particular those within close proximity to the Site and/or where the pipeline crosses routes. This would include a PRoW which connects Silver Street with Skipper's Lane (via the access track to Woodhouse) and the PRoW route to the east of Skipper's Lane and follows the route of Stour Brook (with connections between Withersfield and Skippers Lane, via Cadge's Wood). There is also a route which connects Horseheath Road and A1307.

6.1.3 Representative viewpoints

Due to the separate nature of the sites for the AD facility and Pipeline/ offsite lagoons, a set of distinct representative viewpoints for each component of the Proposed Development was selected on the basis of fieldwork. Viewpoints 1-7, and 12, illustrate the proposed AD facility Site, while Viewpoints 8-11 illustrate the Pipeline and digestate lagoons Site. Viewpoint 12 was added - as an additional location - following further fieldwork carried out in January 2023 in order to represent visibility from the northern extremity of Haverhill.

The representative viewpoints were selected to demonstrate the range of views experienced by visual receptors around the Sites. The location of these views is indicated on Figure 8. See Figures 9.1 to 9.9 for the viewpoint photos. Photowirelines have been prepared for Viewpoints 1-7 inclusive, but not for the pipeline and lagoon due to their more limited presence in views.

The viewpoints selected and reasons for their inclusion are as follows:

Viewpoint name and number	Reason for Inclusion
AD facility Site Representative Viewpoints:	
1. View from PRoW south west of Howe Wood	Representative view from PRoW looking towards the Site in a westerly direction at close range. Potential for high sensitivity receptors using the PRoW.
2. View from roundabout at junction of A1307 and A1017	Representative view looking towards the Site in a north westerly direction from the outer edge of Haverhill. Potential for medium sensitivity receptors: • Users of road network; • People employed in adjacent Haverhill Research Park.
3. View from junction of A1307 and Silver Street	Representative viewpoint looking towards the Site in an easterly direction. Potential for medium sensitivity receptors: • Users of road network; • Views towards site from South Cambridgeshire.
4. View from County Wildlife Site: West Town Park	Representative viewpoint looking towards the Site in a westerly direction from local Park. Potential for high to medium sensitivity receptors: • Users of recreational facilities; • Residents moving about along Haverhill 'bypass'; • Users of road network.
5. View from Silver Street (west of Silver Street Farm)	Representative viewpoint looking towards the Site in southerly direction. Potential for high / medium to low sensitivity receptors: • Residents along Silver Street; • Users of road network; • Elevated views across Site.
6. View from A1307 near Park Hill	Representative viewpoint looking towards the Site in easterly direction. Potential for medium sensitivity receptors • Users of road network

Viewpoint name and number	Reason for Inclusion
7. View from PRoW near Hare Wood (route of Roman Road)	Representative viewpoint looking towards the Site in south easterly direction. Potential for high sensitivity receptors. • Users of PRoW; • Visitors to local heritage feature.
Type 3 Photowirelines were prepared for all of the above viewpoints (refer Figures 9.1-9.7).	
12. View from The Flying Shuttle carpark	Representative viewpoint looking towards the Site from a public house car park in north westerly direction from the edge of Haverhill. Potential for medium to low sensitivity receptors.
Type 4 Photomontages were prepared for Viewpoints 4, 5 and 12 (refer Figures 9.12-9.14).	
Pipeline and Lagoons Site Representative Viewpoints:	
8: Skipper's Lane, by farm access looking north-east	Representative view from a minor road, positioned by farm access (and PRoW) looking across the Stour Brook valley to the central and northern part of the pipeline route in an easterly direction. Potential for high and medium sensitivity receptors: • Users of PRoW (high) Road users (medium)
9: Skipper's Lane, by Skippers Hall Farm access looking east	Representative view from a minor road, at the entrance to a farm / residential property looking south-east in the direction of the digestate lagoons. Potential for high and medium sensitivity receptors: • Residents (high) Road users (medium)
10: PRoW by eastern edge of Cadge's Wood looking north-east	Representative view from PRoW close to the pipeline route and digestate lagoons a north-easterly to south-easterly direction. Potential for medium sensitivity receptors: • Users of PRoW (high)
11: Horseheath Road, by PRoW looking north-west	Representative view from minor road, at junction with PRoW, next to residential properties looking towards the central part of the pipeline route in a northerly direction: Potential for high and medium sensitivity receptors: • Residents (high) • Users of PROW (high) Road users (medium)

Effect on Visual Amenity / Visual Receptors

The potential visual impacts of the different elements of the Proposed Development relate to their intervisibility with the receptors as new human interventions in the landscape, including how this affects the perceptual quality and tranquillity evident in views. This would include the presence and activity of temporary construction plant during the construction period and vehicle movements during operation and include the presence of new light sources within the view.

All changes to the view at Year 0 are regarded as short term and temporary whilst embedded mitigation measures have an opportunity to mature. At Year 15 the changes to the view are regarded to be long term and permanent.

Potential Construction Phase Visual Effects

Potential construction stage visual effects are discussed separately for the AD facility Site and the Pipeline and digestate lagoons Site.

AD facility Site

Construction activities associated with the AD facility Site would result in the temporary introduction of a number of new features, such as materials storages areas, construction compound, parking areas, signage and road management measures. The presence and movement of construction vehicles including cranes would also be discernible. It is assumed that during construction, works would only take place during daylight hours with greater restrictions imposed during winter to reduce the impact of night glow.

Representative Viewpoint Assessment

The assessment of visual effects is undertaken with reference to the representative viewpoints, which provide an indication of the likely visual effects that may affect people undertaking different activities at various locations around the Site. The Table below summarises the findings of the desk and fieldwork-based assessment at each viewpoint location. Significant visual effects are highlighted in bold.

Viewpoint name and number	Receptor Sensitivity	Magnitude: Construction	Magnitude: Operation	Effect: Construction	Effect: Operation
AD facility Site: Representative Viewpoints					
1. View from PRoW south west of Howe Wood	High	Substantial	Substantial	Major, negative **Significant**	Year 0: Major negative, **Significant** Year 15: Major positive, **Significant**
2. View from roundabout at junction of	Medium	Medium to Substantial	Medium to Slight	Moderate to Major, negative	Year 0: Moderate negative, **Significant**

Viewpoint name and number	Receptor Sensitivity	Magnitude: Construction	Magnitude: Operation	Effect: Construction	Effect: Operation
A1307 and A1017				**Significant**	Year 15: Minor neutral, Not Significant
3. View from junction of A1307 and Silver Street	Medium	Medium	Slight	Moderate, negative **Significant**	Year 0: Minor negative, Not Significant Year 15: Minor neutral, Not Significant
4. View from County Wildlife Site: West Town Park	Medium to High	Medium	Slight	Moderate, negative Not Significant	Year 0: Moderate, negative Not Significant Year 15: Minor to Moderate, positive Not Significant
5. View from Silver Street (west of Silver Street Farm)	High: Residents Medium to low: Road users	Medium to Substantial	Medium to Slight	Major, negative (residents); Moderate, negative (road users) **Significant**	Year 0: Major to Moderate, negative **Significant** Year 15: Minor, neutral (by Year 10) Not Significant
6. View from A1307 near Park Hill	Medium	Slight	Negligible	Minor, negative Not Significant	Year 0: Minor, negative Not Significant Year 15: Negligible, neutral Not Significant

Viewpoint name and number	Receptor Sensitivity	Magnitude: Construction	Magnitude: Operation	Effect: Construction	Effect: Operation
7. View from PRoW near Hare Wood (route of Roman Road)	High	Slight	Negligible	Minor, negative Not Significant	Year 0: Minor, negative Not Significant Year 15: Negligible, neutral Not Significant
12. View from The Flying Shuttle Car Park	Medium to Low	Slight to Medium	Slight	Minor, negative Not Significant	Year 0: Minor, negative Not Significant Year 15: Minor, positive Not Significant

The principal reason why some long term effects are considered to be neutral, or positive, is due to the visibility of landscape mitigation planting, including the new woodland at the eastern end of the AD facility Site.

Recreational and Visitor receptors

The assessment considers that other than the views of construction activities experienced by users of PRoW immediately to the east of the Site, which would be Significant, views from the recreational path network would be substantially screened by intervening vegetation and landform. People visiting the County Wildlife Site in Haverhill would also experience some Not Significant visual effects, albeit at over 360m distance.

The assessment concludes that most of the visual receptors in the area would have either a High or Medium sensitivity to the Proposed Development and would experience a Minor to Negligible and Not Significant long term effect as mitigation planting establishes. The greatest degree of discernible change would occur along the eastern boundary to the Site, where Significant visual effects would arise and where a substantial new woodland would be established, resulting in positive landscape enhancement as the woodland develops.

Views during construction activities would be associated with the temporary presence of cranes which would form a small part of the view. Where the presence of the cranes is more apparent or encroach slightly above the skyline the magnitude of change and consequential nature of effect is slightly higher, resulting in some Significant visual effects locally during construction.

Residential receptors

The closest residential properties with potential views towards the Site (excluding the landowner's house at Spring Grove Farm), are located along Silver Street approximately 600m to the north of the Site. A group of four or five houses clustered around Silver Street Farm have relatively open views south across the Site and may experience Significant visibility of the upper parts of the Proposed Development, as illustrated in the Photomontage for Viewpoint 5 (Figure 9.13), which would progressively reduce in magnitude and significance as

the proposed native planting along the northern boundary of the Site establishes and reinforces the partial screening from the existing boundary hedgerow. By Year 10 the visual effect would be Not Significant.

Other nearby properties benefit from substantial garden vegetation, including the four properties just west of the junction between the A1307 and Silver Street and do not have open views.

As indicated in the ZTV in Figure 2, very few parts of Haverhill gain any visibility of the Proposed Development. It is evident from fieldwork at Viewpoint 1 that a small number of 3 storey residential buildings close to the A1307 bypass have some long range elevated views to the west, which may perceive Not Significant views of the Proposed Development through the gap in boundary cover along the Site's eastern edge. A Photomontage has been produced from Viewpoint 12 (Figure 9.14) to illustrate the likely degree of change from the northern edge of Haverhill, which is assessed to be Not Significant.

Whilst there is extensive screening along the A1307, as well as within the curtilage of such properties which would screen low level construction activities, there may be views of cranes at a higher level. Partial direct or oblique views may be experienced from the upper storey windows, particularly during winter when deciduous trees are not in leaf. Residents of the properties on Silver Street would be of High sensitivity, experience a Medium to Substantial magnitude of change during construction activities which would lead to a maximum Moderate to Major and Significant negative effect.

Remaining residents of properties within the 2km Study Area would have no, or very limited visibility of the construction activities, including in Haverhill. Such views would be of the temporary presence of cranes which would form a small and peripheral part of the view. Where the presence of the cranes is more apparent or encroach slightly above the skyline the magnitude of change and consequential nature of effect is slightly higher, but would nonetheless be on a Minor and Not Significant nature.

Transport receptors

Views of the construction activities from the local road network/ road junctions would be particularly limited, with the exception of a short stretch of the A1307 near the roundabout at the northern end of the Haverhill settlement, from where Significant visual effects would arise during construction and from the elevated stretch of the minor road near Silver Street Farm.

Road users would experience sequential partial, filtered, glimpsed views of construction activities, albeit for a limited length along such routes and at the junction with the A1017. It is assessed that from such locations receptors who would be of Medium to Low sensitivity would experience a Medium to Substantial, to Slight magnitude of change, resulting in a Minor to Moderate, and Not Significant negative effect.

Elsewhere road users within the 2km Study Area would have no or very limited visibility in sequential views of construction works associated with the development due to extent of intervening vegetation and built form resulting in a Negligible magnitude of change that would be Not Significant.

Potential Operational Phase Visual Effects (Year 0 and Year 15)

AD facility Site

On Operation of the Proposed Development in Year 0, all temporary construction related infrastructure would have been removed and the landscape scheme associated with the Site implemented, however, the landscaping would be immature and thus not of a size to substantially mitigate any visual effects.

Recreational and Visitor receptors

Year 0: On operation, users of the PRoW to the east of the Site (representative Viewpoint 1) would experience open views of the eastern edge of the Proposed Development which would be characterised by a substantial mounded area planted with young woodland. From the southern end of this path, more open views towards the taller elements of plant are likely, with some views experienced of various structures including the liquid digester tankers, and presence of lighting in case of an emergency. Receptors (of High sensitivity) would experience a Substantial magnitude of change and a Major negative and Significant effect on their visual amenity, at Year 0.

The Proposed Development would also have more limited visibility to recreational users within the County Wildlife Site: West Town Park (Viewpoint 4). Users who would be of Medium to High sensitivity and would experience a Medium magnitude of change resulting in a Moderate negative and Not Significant effect.

Year 15: At Year 15, users of the PRoW (representative Viewpoint 1) would continue to experience views of the Proposed Development, insofar as the wooded edge to the Site would have developed to form a robust new boundary plantation. This would serve a screening function along the eastern boundary of the Site (a combination of woodland, hedgerow and hedgerow trees) which remain a Significant effect but with the establishment of vegetation sufficient to change the overall nature of the effect to a positive one, with large scale woodland being a feature of the landscape character type, as illustrated in the Photomontage for Viewpoint 4 (Figure 9.12).

For remaining receptors within the wider Study Area, visual effects would reduce over a period of ten years as a consequence of the establishment of the perimeter hedgerow planting and would generally be maintained at a Minor to Negligible and Not Significant level.

Residential receptors

Year 0 and Year 15: On operation there may be partial views of the more elevated parts of the Proposed Development from upper storey windows and the curtilage of properties along Silver Street, particularly during winter when deciduous trees are not in leaf with occasional night glow in the case of an emergency. There would be a reduction to the magnitude of change once cranes and construction equipment has been removed from Site, and following mitigation planting.

Such receptors are of High sensitivity, and would experience a Medium to Substantial magnitude of change and Significant effects at completion of construction works that would steadily reduce as mitigation establishes. During operation of the Site, this would drop to a Medium to Slight magnitude of change at Year 15 which would be Moderate to Minor and Not Significant, and neutral in nature as boundary planting establishes.

Year 0 and Year 15: For remaining residents within the 2km Study Area there would be limited visibility of the Proposed Development and only occasionally would a night glow be apparent if there is an emergency on Site. The Site is relatively isolated with intervening vegetation and built form screening views of the development. The digestor tankers which would be the most noticeable structures would be green in colour and seen against a backdrop of surrounding vegetation. Consequently, there would be a Negligible or No Change magnitude of change on such residential receptors resulting in a Negligible / No Change negative and Not Significant effect.

Transport receptors

Year 0 and Year 15: Users of the A1307 would experience partial, filtered and glimpsed views of the Proposed Development along limited sections of the road close to Haverhill and potentially through the mature poplar

stand at its junction with Silver Street. Night glow from emergency lighting is likely to only occur on an infrequent basis. It is assessed that from these locations receptors who would be of Medium sensitivity, experience a Medium magnitude of change resulting in a Moderate Not Significant negative effect at Year 0 that would reduce to Slight and Minor, neutral, and Not Significant, as the perimeter hedgerows establish.

Year 0 and Year 15: All other users of the local road network within 2km are likely to experience Negligible negative effects on their visual amenity that would be Not Significant and which would remain unchanged at Year 15.

Potential Construction Phase Visual Effects

Pipeline and digestate lagoons Site

Recreational and Visitor receptors

There are several PRoW routes extending from Withersfield and connecting to Silver Street and Skipper's Lane and A1307, which pass relatively close, or are alongside or are crossed by the pipeline route and where the trenching works would be visible. Part of a PRoW passes close to the digestate lagoons and would also obtain glimpsed views of the construction earthworks between intervening hedgerows and the edge of Cadge's Wood. The access route to the lagoon also travels along this PRoW (on an existing farm access). In each case this part of the Proposed Development would be perceived as agricultural works and not wholly out of place in the broader managed farmland. Refer to Viewpoints 8, 10 and 11 (Figures 9.8 to 9.11).

It has been assessed that these recreational receptors would be High sensitivity. The proposals would cause a Negligible magnitude of change resulting in a temporary Minor and Not-Significant negative effect from these specific views and associated receptors. The exception of the section of the PRoW nearest the digestate lagoons which receive a Slight magnitude of change and a Moderate to Minor and negative Not-Significant visual effect.

Residential receptors

There are several residential properties along Silver Street, Horseheath Road and Skipper's Lane as well as on the edge of Haverhill and Withersfield which may have views of the pipeline route and where the trenching works would be visible, although the digestate lagoons are typically obscured by intervening landform or vegetation. This includes Silver Street Farm and Sparrow Hall Cottage, Woodhouse, Lawn Farm, Exhibition Farm and Exhibition Cottages, to varying degrees. In each case this part of the Proposed Development would be perceived as temporary agricultural works and not wholly out of place in the broader managed farmland. Refer to Viewpoint 11.

Skippers Hall Farm, which is located further north on Skipper's Lane, would have elevated views towards the digestate lagoons, although the pipeline would be obscured by Cadge's Wood. For these receptors, the Proposed Development would also be perceived as agricultural works and not wholly out of place in the broader managed farmland. Refer to Viewpoint 9.

It has been assessed that these residential receptors would be High sensitivity. The proposals would cause a Negligible magnitude of change, resulting in a temporary Minor and Not-Significant negative effect from these specific views and associated receptors.

Transport receptors

Travellers along Silver Street and Skipper's Lane would pass over the proposed crossing points for the pipeline route. However, as the works would consist of directional drilling beneath the road, the disruption from the construction activity is anticipated to be minimal and limited to trenching in the adjacent fields. As travellers pass by Skippers Hall Farm, there may be elevated glimpsed views of construction activity associated with the

digestate lagoons, which would be set down and partly obscured by intervening landform, at some distance from the route. Refer to Viewpoints 8 and 9.

Travellers along Horseheath Road (which leads from Witherfield village) would also pass relatively close to the pipeline route and where the trenching works would be visible. Refer to Viewpoint 11.

Also to a much lesser degree, there may be potential passing glimpsed views of the southern section of the pipeline construction works for travellers on A1307 on the edge of Haverhill.

It has been assessed that these transport receptors would be Medium to Low sensitivity. The proposals would cause a Negligible magnitude of change and there would be a temporary Minor and Not-Significant negative effect from these specific views and associated receptors.

Potential Operational Phase Visual Effects (Year 0)

Pipeline and digestate lagoons Site

At Operation (Year 0) of the Proposed Development, all temporary construction related infrastructure would have been removed and the landscaping scheme associated with the Site implemented, however, the landscaping would be immature and thus not of a size to substantially mitigate any visual effects.

Recreational and Visitor receptors

For the users of the PRoW routes extending from Withersfield and connecting to Silver Street and Skipper's Lane and A1307, the pipeline route would be reinstated as arable fields and at this stage there would be no change to views relating to this aspect of the Proposed Development. Refer to Viewpoints 8 and 11.

The exception would be part of the PRoW which passes close to the digestate lagoons and would obtain glimpsed views between intervening hedgerows and the edge of Cadge's Wood. Nevertheless, the covered lagoons would be set down and perceived as an agricultural structure and not wholly out of place in the broader managed farmland. Vehicle movements accessing the lagoons would also use the existing farm access along part of this PRoW. Refer to Viewpoint 10. It has been assessed that these recreational receptors would be High sensitivity. The proposals would cause a Slight magnitude of change which would be Moderate to Minor and Not-Significant negative effect.

Residential receptors

For the residential properties along Silver Street, Horseheath Road and Skipper's Lane, as well as on the edge of Haverhill and Withersfield, once the pipeline route is reinstated as arable fields there would be no change to views relating to this aspect of the Proposed Development.

For residents at Skippers Hall Farm which would have elevated views of the digestate lagoons the Proposed Development would still be perceived as an agricultural structure and not wholly out of place in the broader managed farmland. Refer to Viewpoint 9. It has been assessed that these residential receptors would be High sensitivity. The proposals would cause a Slight magnitude of change, resulting in a temporary Minor to Negligible and Not-Significant negative effect.

Transport receptors

For travellers along Silver Street, Skipper's Lane, Horseheath Road and A1307 on the edge of Haverhill, once the pipeline route is reinstated to arable fields, there would be no change to views relating to this aspect of the Proposed Development.

As travellers pass by Skippers Hall Farm, there may be elevated glimpsed views of the operational digestate lagoons, which would be set down and partly obscured by intervening landform, at some distance from the route. Refer to Viewpoint 9. It has been assessed that these transport receptors would be Medium to Low sensitivity.

The proposals would cause a Slight magnitude of change and there would be a temporary Minor to Negligible and Not-Significant negative effect from these specific views and associated receptors.

Potential Operational Phase Visual Effects (Year 15)

Pipeline and digestate lagoon Site

At Operation (Year 15) of the Proposed Development, the landscaping scheme associated with the Site would have grown to a sufficient size to contribute to visual screening.

Recreational and Visitor receptors

By Year 15, the part of the PRoW which passes close to the digestate lagoons would still obtain glimpsed views between intervening hedgerows and the edge of Cadge's Wood. Nevertheless, the covered lagoons would be set down and perceived as an agricultural structure and not wholly out of place in the broader managed farmland. Refer to Viewpoint 10. It has been assessed that these recreational receptors would be High sensitivity. The proposals would cause a Slight magnitude of change which would be Moderate to Minor and Not-Significant negative effect.

Residential receptors

By Year 15, it is expected that the proposed landscape planting along the northern boundary would have established and will further conceal the glimpsed views of the covered digestate lagoons for the residents at Skippers Hall Farm. Refer to Viewpoint 9. It has been assessed that these residential receptors would be High sensitivity. The proposals would cause a Slight to Negligible magnitude of change, resulting in a temporary Minor and Not-Significant negative effect.

Transport receptors

By Year 15, it is expected that the proposed landscape planting along the northern boundary would have established and will further conceal the glimpsed views of the covered digestate lagoons for the travellers along Skipper's Lane by Skippers Hall Farm. Refer to Viewpoint 9. It has been assessed that these transport receptors would be Medium to Low sensitivity. The proposals would cause a Slight to Negligible magnitude of change, resulting in a temporary Minor to Negligible and Not-Significant negative effect.

Residual Visual Effects

There are no feasible additional landscape mitigation measures within the Application Site which could further reduce the landscape and visual effects described above, as such the residual visual effect would be as those reported within the assessment section described above.

7.0 Summary of Findings

The LVIA has been prepared in support of the application and this follows Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3), The Landscape Institute with the Institute of Environmental Management and Assessment (2012). It evaluates the significance of effects on landscape character, landscape designations, landscape elements and the visual amenity of the AD facility and Pipeline/ offsite digestate lagoons Sites and their surroundings.

The following tables set out the full findings of the LVIA in terms of the sensitivity of each receptor, the long-term magnitude of change as a result of the Proposed Development; the level, nature and significance of effects.

The tables summarise, firstly, the effects from the AD facility Site followed by the effects assessed for the Pipeline and digestate lagoons Site. Effects which are significant are highlighted in bold text.

Summary of Potential Landscape Effects: AD facility Site

Receptor	Sensitivity	Magnitude of Change	Level and nature of Effect
Landscape Character			
LCT15 Rolling Estate Farmlands	Medium	Medium during Construction and Medium at Year 0. Slight during Operation Year 15.	Moderate negative **Significant** during Construction and Moderate negative **Significant** at Year 0. Minor neutral Not Significant by Operation Year 15.
LCT24 Undulating Estate Farmlands	Medium	Medium to Slight during Construction and Slight to Negligible at Year 0. Slight to Negligible at Year 15.	Minor to Moderate negative Not Significant during Construction and Minor negative Not Significant at Year 0. Minor to Negligible neutral Not Significant at Year 15.
LCA4E West Wickham Wooded Claylands	Medium	Slight to Negligible during Construction and Operation Year 0. Negligible during Operation Year 15.	Minor to Negligible negative Not Significant during Construction and Operation Year 0. Negligible neutral Not Significant by Operation Year 15.
LCA4F The Camps Wooded Claylands	Medium to Low	Slight to Negligible during Construction and Operation Year 0. Negligible during Operation Year 15.	Minor to Negligible negative Not Significant during Construction and Operation Year 0. Negligible neutral Not Significant by Operation Year 15.
Landscape Designations			
The Proposed Development will not give rise to effects on any landscape designations.			
Site Elements / Aesthetic and Perceptual Aspects			

Receptor	Sensitivity	Magnitude of Change	Level and nature of Effect
Sloping landform	Medium	Medium to Substantial during Construction and Operation Year 0. Medium during Operation at Year 15.	Moderate to Major negative **Significant** within Site boundary during Construction and at Year 0. Moderate negative **Significant** during Operation Year 15.
Intact vegetation forming the Site boundaries	Medium to High	Negligible to Slight during Construction and Operation Year 0. Medium to High during Operation at Year 15.	Negligible to Minor negative Not Significant during Construction and Operation Year 0. Moderate to Major positive **Significant** during operation at Operation Year 15.
Change in land use	Medium	Substantial during Construction and Operation Year 0. Medium during Operation at Year 15.	Major negative **Significant** during Construction and Operation Year 0. Moderate negative **Significant** at Operation Year 15.
Partial sense of enclosure	Medium	Medium during Construction and Operation Year 0. Medium to High during Operation at Year 15.	Moderate negative **Significant** during Construction. Moderate positive **Significant** at Operation Year 0 and Operation Year 15.
Rural Character	Medium	Medium to Substantial during Construction and Operation Year 0. Medium to Slight during Operation at Year 15.	Moderate to Major negative **Significant** during Construction and at Operation Year 0. Moderate to Minor negative Not Significant at Operation Year 15.

Summary of Potential Visual Effects: AD facility Site

Viewpoint name and number	Receptor Sensitivity	Magnitude: Construction	Magnitude: Operation	Effect: Construction	Effect: Operation
AD facility Site: Representative Viewpoints					
1. View from PRoW south west of Howe Wood	High	Substantial	Substantial	Major, negative **Significant**	Year 0: Major negative, **Significant** Year 15: Major positive, **Significant**
2. View from roundabout at junction of A1307 and A1017	Medium	Medium to Substantial	Medium to Slight	Moderate to Major, negative **Significant**	Year 0: Moderate negative, **Significant** Year 15: Minor neutral, Not Significant
3. View from junction of A1307 and Silver Street	Medium	Medium	Slight	Moderate, negative **Significant**	Year 0: Minor negative, Not Significant Year 15: Minor neutral, Not Significant
4. View from County Wildlife Site: West Town Park	Medium to High	Medium	Slight	Moderate, negative Not Significant	Year 0: Moderate, negative Not Significant Year 15: Minor to Moderate, positive Not Significant
5. View from Silver Street (west of Silver Street Farm)	High: Residents	Medium to Substantial	Medium to Slight	Major, negative (residents); Moderate,	Year 0: Major to Moderate, negative **Significant**

Viewpoint name and number	Receptor Sensitivity	Magnitude: Construction	Magnitude: Operation	Effect: Construction	Effect: Operation
	Medium to low: Road users			negative (road users) **Significant**	Year 15: Minor, neutral (by Year 10) Not Significant
6. View from A1307 near Park Hill	Medium	Slight	Negligible	Minor, negative Not Significant	Year 0: Minor, negative Not Significant
					Year 15: Negligible, neutral Not Significant
7. View from PRoW near Hare Wood (route of Roman Road)	High	Slight	Negligible	Minor, negative Not Significant	Year 0: Minor, negative Not Significant
					Year 15: Negligible, neutral Not Significant
12. View from The Flying Shuttle Car Park	Medium to Low	Slight to Medium	Slight	Minor, negative Not Significant	Year 0: Minor, negative Not Significant
					Year 15: Minor, positive Not Significant

Summary of Potential Landscape and Visual Effects: Pipeline and digestate lagoons Site

Receptor	Sensitivity	Magnitude of Change	Level and nature of Effect
Landscape Character			
LCT24 Undulating Estate Farmlands	Medium	Slight to Negligible during Construction, reducing to Slight at Operation (Year 0 and 15)	Minor and negative Not Significant at Construction and Operation Year 0, becoming neutral at Year 15
LCA4E West Wickham Wooded Claylands	Medium	Negligible during all assessment stages	Negligible and neutral Not Significant during all assessment stages

Landscape Elements			
Sloping landform	Medium	Slight to Negligible at Construction, Slight at Operation (Year 0 and 15)	Minor and negative Not Significant at Construction and Moderate to Minor and negative Not Significant at Operation (Year 0 and 15)
Intact vegetation (Hedgerows and Individual Trees)	High to Medium	No change at Construction, increasing to Negligible at Operation (Year 0) and Slight at Year 15	No change at Construction, increasing to Minor and beneficial Not Significant at Operation (Year 0) and Moderate and beneficial Not Significant at Year 15
Change in Landuse	Medium	Slight to Negligible at Construction, increasing to Slight at Operation (Year 0 and 15)	Minor at Construction, increasing to Moderate to Minor and negative Not Significant at Operation (Year 0 and 15)
Partial Sense of Enclosure	Medium	Negligible at Construction and at Operation (Year 0), increasing to Slight at Year 15	Negligible at Construction and at Operation (Year 0), increasing to Moderate to Minor and neutral Not Significant at Year 15
Rural Character	Medium	Slight to Negligible at Construction, increasing to Slight at Operation (Year 0 and 15)	Minor at Construction, increasing to Moderate to Minor and negative Not Significant at Operation (Year 0) becoming neutral at Year 15
Visual receptors			
8: View from Skipper's Lane, by farm access looking north-east towards the pipeline and digestate lagoon Site	High (PRoW)	Negligible during Construction, reducing to No Change at Operation (Year 0 and 15)	Minor and negative Not Significant during Construction, reducing to No Change Not Significant at Operation (Year 0 and 15)
	Medium to Low (road users)		Negligible and negative Not Significant during Construction, reducing to No Change Not Significant at Operation (Year 0 and 15)
	High (residents)		Minor and negative Not Significant during all assessment stages

9: View from Skipper's Lane, by Skippers Hall Farm access looking towards the northern part of the Site in an easterly direction	Medium to Low (PRoW)	Negligible during Construction, Slight at Operation (Year 0) and Slight to Negligible (Year 15)	Minor to Negligible Not Significant and negative during all assessment stages
10: View from a PRoW by the eastern edge of Cadge's Wood looking towards the digestate lagoon to the north-east and pipeline to the south-east.	High	Slight during all assessment stages	Moderate to Minor Not Significant and negative during Construction, becoming Moderate to Minor and negative Not Significant at Operation (Years 0 and 15)
11: View from Horseheath Road, by junction with PRoW looking towards the pipeline in a north-westerly direction.	High (Local Residents and Users of PRoW)	Negligible during Construction, reducing to No Change at Operation (Year 0 and 15)	Minor and negative Not Significant during Construction, reducing to No Change Not Significant at Operation (Year 0 and 15)
	Medium to Low (Road users)		Minor to Negligible and negative Not Significant during Construction, reducing to No Change Not Significant at Operation (Year 0 and 15)

8.0 Conclusions

This Assessment has found that the effect of the Proposed Development on the surrounding landscape and visual receptors would be localised and concentrated substantially within a radius of 0.5km of the Site, although the presence of the digestor tanks above the existing tree canopy would be noticeable across limited other parts of the 2km Study Area, including from some 3 storey residential development within Haverhill, where unobstructed views (mainly from elevated ground) are possible. The choice of site for the Proposed Development avoids landscape designations and consequently there are no effects on any areas that are designated for their scenic qualities. The Assessment considers the landscape character sensitivity to be a medium level, or lower, as a result.

The Proposed Development requires a countryside location as it serves an agricultural purpose, and the Site offers a good degree of natural screening as a result of the ability to utilise landform screening to integrate the new facilities in a satisfactory way. The existence of mature tree and hedgerow planting around three boundaries of the Site is particularly beneficial in containing visibility of the facilities, which will tend to be prominent only in views from the east where the boundary is currently open. To address this visibility, a major new woodland block is proposed that will in time reinforce the eastern boundary and make a discernible contribution to biodiversity. The woodland will be planted on top of an area of bunded soil, providing a degree of enclosure and visual mitigation from completion of construction works.

The assessment found that the effect of the pipeline and digestate lagoon on the surrounding landscape and visual receptors would be concentrated within the immediate vicinity of the pipeline route with intervisibility within this area being reduced due to undulating landform, hedgerows and mature woodland.

Longer range views - from around 500 metres distance - are achieved from an elevated stretch of Silver Street to the north, where a small number of residential properties are located. In these views, the Proposed Development will be set down below the landform of the foreground hillside, with only the tallest elements of the digestors on the AD facility Site seen above the intervening hedgerow. The digestor tanks will be painted a muted colour in order that they recede and blend into the background colours. The northern boundary of the AD facility Site will be subject to further hedgerow planting to reinforce it and to secure the long-term resilience of the boundary as a screening element for the Site, which will help to reduce the magnitude of change perceived along Silver Street by Year 10. Other than these properties, the Proposed Development would be well concealed in views from the closest residential receptors around the AD facility Site. There will be some oblique views from upper storeys of a small number of residential blocks in Haverhill, from about 1km distance. The visual effects arising in Haverhill will be of a minor nature.

The most noticeable landscape and visual effects will take place on the AD facility Site itself, where the landscape character and physical landscape elements will undergo a high magnitude of change as a result of the Proposed Development. It would introduce some new elements into the local landscape, and typically, visibility would be limited to the taller digester tanks which have the potential to also influence the immediate character of the surrounding area, as detailed in the Assessment. Beyond around 500m the effects on landscape character would diminish rapidly due to the level of screening in the intervening landscape. The effects would also reduce over time as a consequence of the further mitigation envisaged in the Landscape Strategy (Figure 6).

There would be a high level of visual impact from the PRoW that runs to the east of the Site boundary. This would experience a high magnitude of change during construction that would be Significant, and which would inevitably be negative in nature. However, as the large area of new woodland establishes this effect would be ameliorated and the long term impression would be positive, as the woodland contributes to the fabric of the local landscape character. There would be limited visibility of the Proposed Development from the local road network with the main visibility arising from the A1307 along the northern edge of Haverhill, and further west where it has a junction with Silver Street. A large stand of mature poplars provides some good screening from this location but during winter views are likely to be more apparent. In the context of the route as a whole, the effects would be of an extremely limited duration.

This Assessment concludes that although the Proposed Development would be visible to a relatively limited extent, through the appropriate use of colour and materials and the introduction of new landscape elements within the scheme, there would be a limited effect on the landscape character and visual amenity within the surrounding area. The landscape and visual effects would also be highly localised, only affecting parts of the local area within 500m-600m radius from the Proposed Development Site.

The construction of the pipeline is likely to be locally intrusive, but this will be a short term activity and once reinstated, and vegetated, the route will be indiscernible in the landscape and views. The offsite digestate lagoons have been carefully sited to achieve a good level of integration into the local landscape and to benefit from localised screening available from Cadge's wood and nearby hedgerows. Further hedgerow planting will help to integrate this low-lying element into the landscape with only localised long term landscape and visual effects.

Some lighting will be required to allow the safe operation of the AD facility Site. This is subject to a separate Lighting Assessment, which has identified a scheme of lighting that will be carefully mitigated to ensure negative effects are minimised in the wider landscape.

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