



Proposed Digestate Storage Lagoons, Bressingham, Norfolk

Supplementary Landscape and Visual Assessment

May 2022

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1. INTRODUCTION

- 1.1 This Landscape and Visual Impact Assessment has been prepared to accompany proposals for two digestate storage lagoons at Bressingham, Norfolk, to serve a new anaerobic digester plant at Deal Farm, Bressingham.

Purposes of the Document

- 1.2 The purpose of this document is to assess the landscape, visual and cultural impacts of the potential development on the sites.
- 1.3 The document evaluates the contribution of the site to the landscape character, visual amenity and cultural and heritage features of the local area before assessing the potential impacts of the development on that character and amenity.

Structure of the Document

Landscape Baseline

- 1.4 This section assesses the character and quality of the local landscape before identifying the extent to which the proposal site contributes to or detracts from that character and therefore its sensitivity to change. Particular reference is made to the district-wide Landscape Character Assessment
- 1.5 The assessment of the character and of the proposal site identifies the wider landscape receptors that

may be affected by the proposals, as well as their sensitivity to change. These receptors may be features or elements of character that need to be preserved, restored or enhanced.

Development Proposals and Site description

- 1.6 This section reviews the historic development of the sites and their landscape setting, and describes the development proposals.

Landscape and Visual Assessment

- 1.7 This section assesses the potential landscape and visual impacts of development on the sites, based on a thorough field survey and panoramic site photographs. The precise locations of the photographs were plotted using GPS, and were prepared in accordance with Landscape Institute guidance on photography and photomontage in landscape and visual assessment. This is followed by a more detailed assessment of the potential impact of the development.

Conclusion

- 1.8 This section summarises the predicted overall landscape, cultural heritage and visual impacts of the development.
- 1.9 This landscape and visual assessment was undertaken only from public rights of way or from land under the control of the site owner. Direct views from private

property were not possible, although potential views from neighbouring properties were assessed as far as was possible from nearby public rights of way. The assessment was undertaken during August and December 2021.



2. Personal Statement

2.1 This report has been prepared by Luke Broom-Lynne CMLI MRTPI.

2.2 I am an independent Chartered Landscape Architect and Chartered Town Planner with over 30 years in professional practice. I was awarded a BA Degree in Landscape Architecture from Leeds Metropolitan University in 1983, followed by a Post-graduate Diploma (with commendation) in 1985. I have been a Chartered member of the Landscape Institute since 1989 and of the Royal Town Planning Institute since 2004.

2.3 I worked initially in the public sector, including senior posts in the planning teams of the Broads Authority and Norwich City Council. I have worked in the private sector for the past 18 years, including a period as Partner in a major regional planning and property consultancy. I now work as an independent landscape planning consultant, involved in Landscape and Visual Impact Assessment, Urban Design and Masterplanning for a wide range of commercial and residential projects throughout the UK.

2.4 Significant projects have included

- University of East Anglia – Landscape Strategy
- Bewilderwood, Tatton Park and Hoveton – LVIA's and Landscape Strategy
- North Weald AONB, Essex Coast, Pembroke - LVIA's

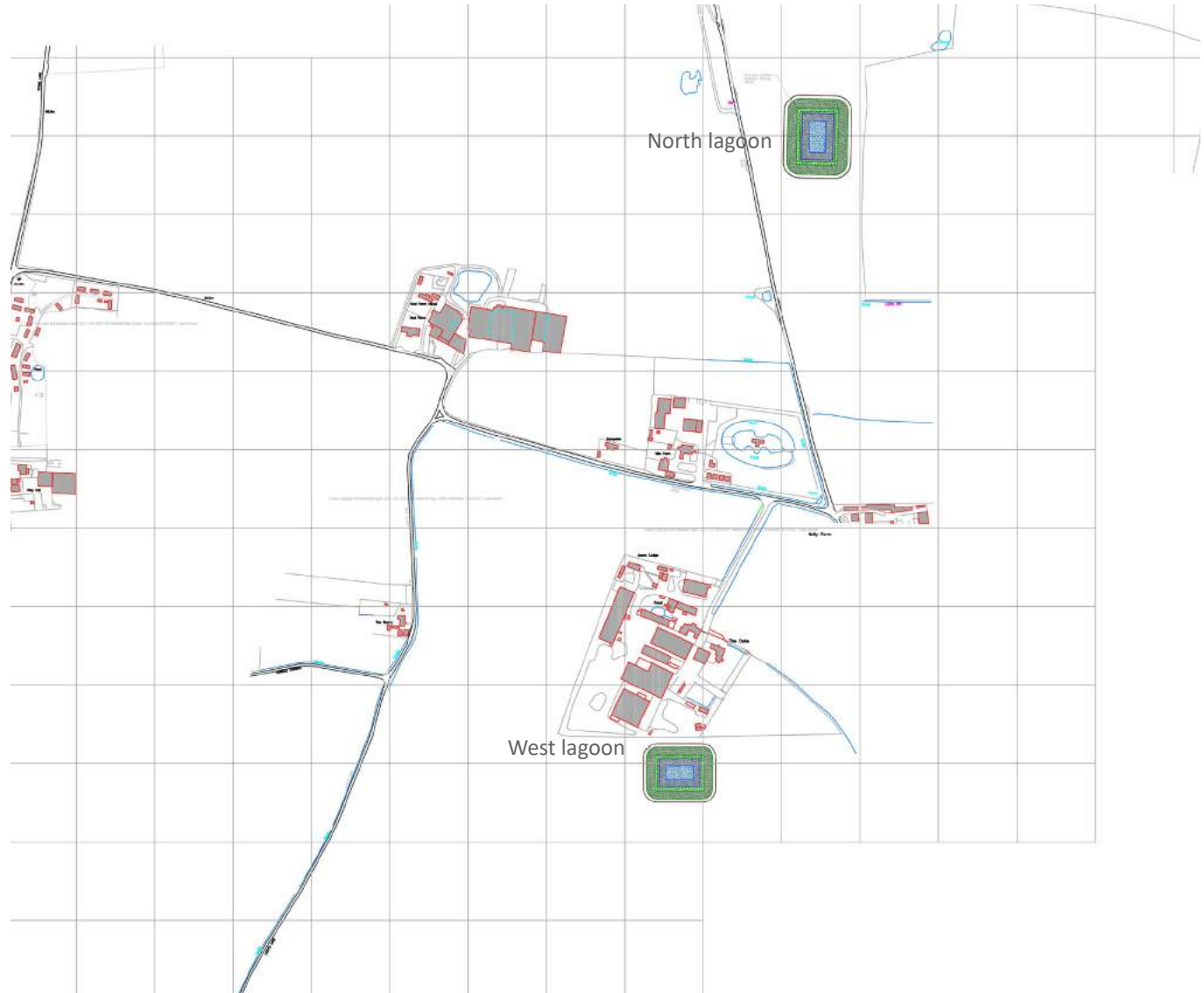
for new solar farms

- Future Biogas – LVIA's and landscape strategy for various power plants in Lincolnshire, Staffordshire, Norfolk and Cambridgeshire.
- Coltishall airfield – LVIA and landscape strategy.
- Grays, Essex - Masterplanning and urban design for new residential development
- Bridlington, Yorkshire - New holiday development
- Edinburgh - LVIA for new Park and Ride scheme

2.5 I believe that my submission complies with the requirements of the Codes of Professional Conduct of the Royal Town Planning Institute and the Landscape Institute.

3. Site Proposals and planning background

- 3.1 The proposed development comprises two digestate storage lagoons, each with a capacity of 5000m³ identified as the North and West lagoons.
- 3.2 The site boundary of each is approximately 0.9 hectares.
- 3.3 The lagoons will be lined with HDPE welded mebrane, with banks at a gradient of approximately 1:3. Outer banks will be established with grass.



Proposed lagoon locations

4. Planning Issues

National Planning Policy Framework

- 4.1 The National Planning Policy Framework requires that the policies in a Local Plan follow the approach of “a presumption in favour of sustainable development”, with clear local policies that will guide how the presumption will be applied locally.
- 4.2 The National Planning Policy Framework identifies three dimensions to sustainable development: economic, social and environmental. These dimensions give rise to the need for the planning system to perform a number of roles:
- an economic role – contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure;
 - a social role – supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services that reflect the community’s needs and support its health, social and cultural well-being; and
 - an environmental role – contributing to protecting and enhancing our natural, built and historic

environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy.

- 4.3 The implications on all three dimensions columns, must be considered in every decision – applying relevant policies from the sections in this document and other relevant material considerations. In accordance with the National Planning Policy Framework the decision makers must make development management decisions to achieve sustainable development by seeking economic, social and environmental gains from all development, “jointly and simultaneously”

- 4.4 Degrees of adverse impact in one or more dimension(s) may be balanced with a degree of positive impact in another dimension(s) – the green and amber areas in each column. The principles of sustainable development seek a net beneficial impact from any development in each dimension.

- 4.5 NPPF: Conserving and enhancing the natural environment

- 4.6 In relation to conserving and enhancing the natural environment the NPPF states that planning policies and decisions should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status

or identified quality in the development plan);

- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans;
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

South Norfolk Local Plan

Development Management Policies

- 4.7 The Development Management Policies will

determine how the Council carries out its development management responsibilities to promote sustainable development and how it will determine planning applications. The policies influence the type and quality of future homes and other new development that is approved by the Council, and will help us conserve heritage assets, biodiversity, geodiversity and the countryside.

Policy DM 1.4 Environmental quality and local distinctiveness

- 4.8 All development proposals should demonstrate that full regard has been given to local circumstances and the distinctive local characters and qualities of the places found in South Norfolk. The National Planning Policy Framework in particular promotes design and environmental quality, including the protection and mitigation of impacts.

Policy DM 3.8 Design Principles applying to all development

- 4.9 The Council will work with applicants to achieve high quality design and positive improvement from all development, protect and enhance the environment and existing locally distinctive character and encourage innovation; the Council will refuse development that fails to take the opportunities for improving the character and quality of an area and the way the area functions.
- 4.10 Planning permission will be granted for development that has been designed to, where relevant to the

proposed development:

- respect adjoining structures, spaces, routes and local landscape;
- provide an attractive, accessible and safe environment. Landscaping of the development is designed to retain important existing natural features, reflect the surrounding landscape characteristics of the area and contribute to relevant objectives of the local Biodiversity Action Plan.

Policy DM 3.13 Amenity, noise and quality of life

- 4.11 Development should ensure a reasonable standard of amenity reflecting the character of the local area.
- 4.12 For planning purposes ‘amenity’ is defined as ‘the desirable features of a place that ought to be protected or enhanced in the public interest’. Amenity and environmental quality can be impacted in other ways including by poorly designed and managed lighting. This is a particular issue in rural parts where the relatively ‘dark skies’ contribute greatly to character and amenity.

Policy DM 4.1 Renewable Energy

- 4.13 The effect of the proposal will be considered on:
- The effect on the character and appearance of the landscape;
 - Designated and undesignated heritage assets;
 - The amenities and living conditions of nearby residents by way of noise, outlook, and overbearing

effect or unacceptable risk to health or amenity by way of other pollutants such as dust and odour.

Policy DM 4.5 Landscape Character and River Valleys

- 4.14 All development should respect, conserve and where possible, enhance the landscape character of its immediate and wider environment. Development proposals that would cause significant adverse impact on the distinctive landscape characteristics of an area will be refused. All development proposals will be expected to demonstrate how they have taken the following elements (from the 2001 South Norfolk Landscape Assessment as updated by the 2012 review) into account:
- The key characteristics, assets, sensitivities and vulnerabilities;
 - The landscape strategy; and
 - Development considerations.

Policy DM 4.8 Protection of Trees and Hedgerows

- 4.15 The Council expects all development proposals to fully consider the existing trees both on and adjacent to the site. Development will be permitted where it can be demonstrated that there exists a harmonious and sustainable relationship between trees and structures.

Policy DM 4.9 Incorporating landscape into design

- 4.16 Where appropriate, detailed development proposals must demonstrate a high quality of landscape design, implementation and management as an integral part of the new development.

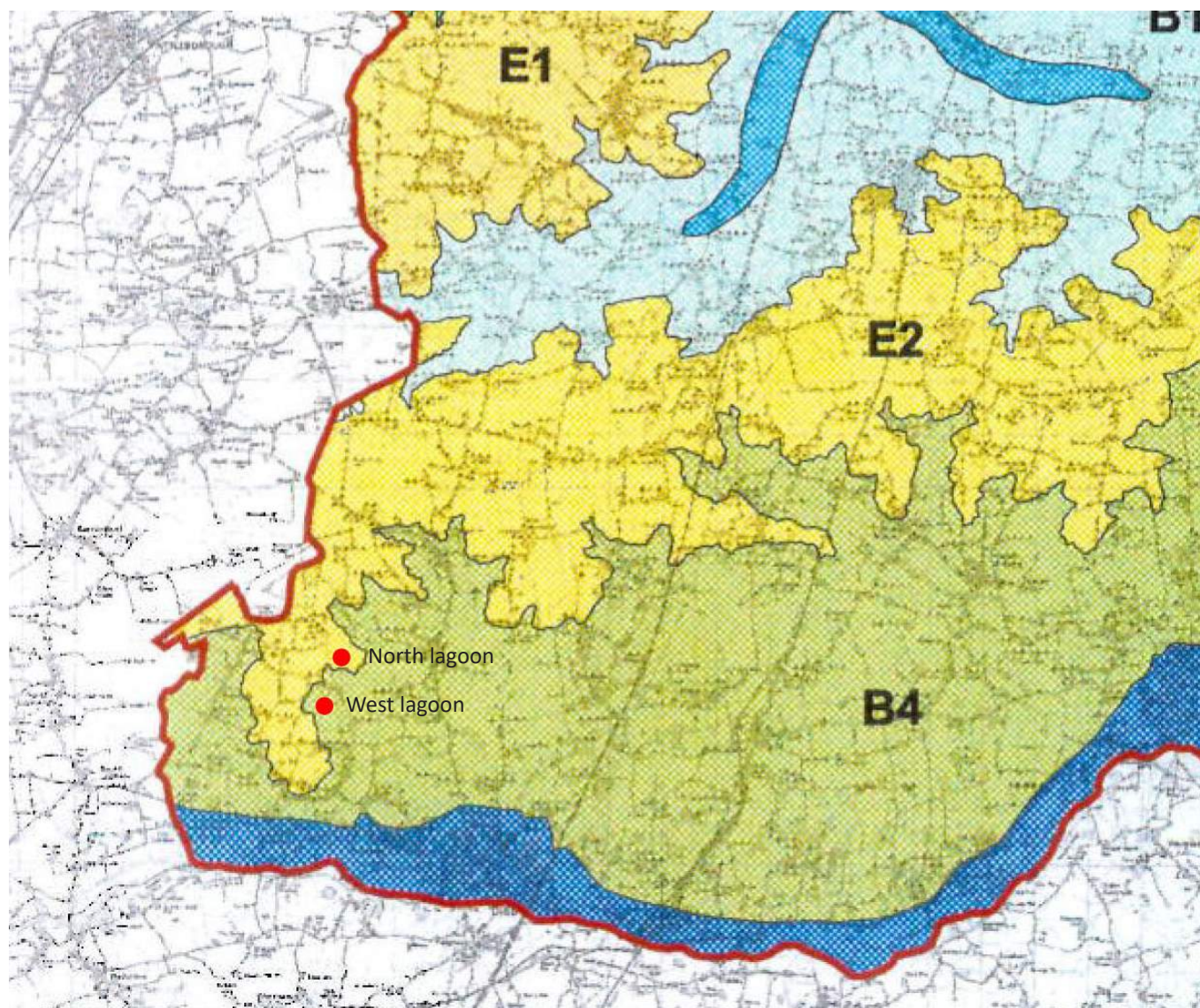
- 4.17 Landscape schemes will be required to respect the character and distinctiveness of the local landscape and should ensure that any land remodelling respects the local topographic character in terms of height, slope, angle and character. Landscape schemes should be clearly and properly specified.

South Norfolk Landscape Character Assessment

- 4.18 An understanding of the landscape context of the site is fundamental, and specific reference is made to the South Norfolk Landscape Character Assessment.
- 4.19 The proposed sites are on the transition between the Landscape Character Areas identified as being the 'Great Moulton Plateau Farmland' and the 'Waveney Tributary Farmland'.

E2: Great Moulton Plateau Farmland

- 4.20 The key characteristics of this character area include:
- Flat, elevated plateau landform above the 50m contour with little topographic variation.
 - Extensive arable farmland with large-scale fields and notable absence of boundaries.
 - A large-scale landscape of openness and exposure.
 - Isolated and infrequent blocks of mixed woodland, otherwise woodland is confined to tiny farm copses
 - A number of greens and commons, some with associated pond habitats.



Extract from South Norfolk Landscape Character Assessment

- Expansive skies are a defining feature with distant views and farm buildings visible in the open landscape.
- Hedgerows are sparse with fuller enclosure along roadsides.
- Hedgerow trees are an important feature, marking the lines of former boundaries.
- A140 cuts north-south through the centre of the character area.
- Otherwise straight rural roads cut through the area.
- Grass verges and occasionally ditches occur along road sides.
- Timber framed houses and moats.
- Large scale farm buildings, water towers, telegraph poles exposed in this open landscape and distinct absence of churches.
- Sparsely settled with scattered farmhouses, some linear settlement with absence of centre/ core.
- Disused airfields are a feature of the plateau at Shelton and Pristow Green.

Great Moulton Plateau Farmland Land Cover and Biodiversity

- 4.21 This is a simple and uniform landscape, dominated by arable farmland with large-scale, regular, geometric fields. There has been wide-scale removal of boundary vegetation to accommodate modern farm machinery and the scarcity of hedgerows accentuates the scale

and openness of the plateau. Where hedgerows do occur as field boundaries they tend to be fragmented however alongside roads hedgerows tend to be fuller and provide a sense of enclosure. Remnant hedgerow trees, primarily oak, are characteristic and an important indicator of former field boundaries. Grass verges and sometimes ditches occur alongside the rural roads which dissect this area. Water is not a significant feature with minor ditches/ tributaries and small field ponds occurring but not distinctly visible.

Great Moulton Plateau Farmland Sensitivities and Vulnerabilities

- 4.22 The principal sensitivities and vulnerabilities of the Great Moulton Plateau Farmland include:
- strong sense of openness, long views and expansive skies and open views, particularly from the edge of the plateau;
 - the blocks of ancient woodland where they remain;
 - the setting of historic halls and moats;
 - the network of quiet, straight rural lanes that cross the plateau;
 - mature hedgerow oaks and hedgerow boundaries where they remain;
 - the sparse and small scale settlement patterns and individual identity of the settlements;
 - the need to maintain the characteristic hedgerow trees and prevent further degradation of boundaries.

Great Moulton Plateau Farmland Landscape Strategy

- 4.23 The overall strategy is to conserve the Great Moulton Plateau Farmland with its expansive skies, created by its elevated landform, dominance of arable farming and lack of settlement. It would be beneficial to consider:

- conserve and maintain grass verges alongside roads;
- re-instate hedgerows alongside roads and as field boundaries. Also maintain and promoting hedgerow trees;
- conserve and manage the existing large blocks of woodland.

B4: Waveney Tributary Farmland

- 4.24 The Key Characteristics of this character area include:

- Transitional landscape occupying the mid ground between the upland plateau (Great Moulton Plateau Farmland) and the main river valley (Waveney Valley).
- Undulating landform to the south of the area where it is dissected by tributaries. Land is higher and flatter towards the north of the character area adjoining the Great Moulton Plateau Farmland.
- A large-scale open landscape on the higher ground with some distant views.
- Pockets of enclosure and intimacy associated with the tributaries.

- Narrow streams, drainage channels (within grass verges) ponds and moats are characteristic. Ditches occur along road sides and in places divide fields.
- Predominantly arable farmland with a varied field pattern. Fields are small to the south of the character area, larger on the higher plateau areas.
- Mature hedgerow trees are very distinctive especially large mature oaks.
- Hawthorn/ blackthorn hedges divide fields.
- Scattered blocks of woodland with some larger blocks having SSSI designations.
- Pockets of parkland and remnant parkland occur.
- Diversity of ecological assemblages including grassland, wet habitats, woodland, some of which are SSSI.
- Round tower and isolated churches are distinctive landmarks. Moats and earthworks are a feature.
- Settlement occurs throughout the character area. Villages are frequently linear along roads with some villages set around greens.
- Large farm units and processing units are present plus pylons which cut through this area.
- The A140 and the Norwich-Diss railway line cut across the character area north south. Otherwise winding rural roads, and sunken lanes dissect the rural area.
- A peaceful and rural landscape.

4.25 In common with much of South Norfolk, land cover is predominantly arable farmland. The field pattern

is varied with small/ medium fields becoming larger towards the higher plateau land. Fields are irregular in shape, divided by hawthorn/blackthorn hedges and occasionally ditches. Hedgerow trees are a feature, particularly large mature oaks. These sometimes occur alongside the grass verges, which flank rural roads forming distinctive 'avenues'. Small areas of grazed pasture are associated with the tributary valleys; these are infrequent, but nevertheless an important local landscape feature. Numerous streams, ditches and drainage channels occur and along with the moats and ponds these are a significant and defining characteristic.

Waveney Tributary Farmland Sensitivities and Vulnerabilities

4.26 The principal sensitivities and vulnerabilities of the Waveney Tributary Farmland include:

- the hedgerows and woodlands, which create pattern and variety in the landscape and contribute to a more intimate and enclosed character in some areas;
- the distinctive character and form of the individual small villages and settlements (linear and set around village greens) and the rural setting of villages;
- small-scale local vernacular features including the black and white fingerposts, black lane signs, and distinctive tributary crossing points;
- the rural road verges and lines of hedgerow trees

which are especially sensitive to upgrading;

- the diversity of habitats especially those sensitive to development, fragmentation and change in water level/quality;
- the characteristic water features in this landscape and the threat of loss through drainage/ infilling;
- the views to and setting of the distinctive and prominent churches;
- the historic field pattern around Dickleburgh;
- the overall peaceful, rural character and absence of visual and aural intrusion.

Waveney Tributary Farmland Landscape Strategy

4.27 The overall strategy is to conserve the rural, peaceful quality of the Waveney Tributary Farmland with its strong farmland character, threaded by small tributary watercourses, and mix of more intimate, wooded, enclosed valleys contrasting with more open landscapes.

4.28 There are opportunities to enhance the landscape to reinforce local character:

- maintain and manage moats, field ponds and drainage ditches;
- protect and manage rural grass verges;
- maintain areas of pasture within the tributary valleys and seek opportunities to extend pastures along watercourses;
- maintain the stock of hedgerow trees, particularly

along roadsides and encourage new generations of hedgerow trees to replace existing stock;

- consider opportunities to reinstate hedgerows where they have been lost, and particularly along roadsides;
- manage woodlands to conserve character and enhance biodiversity and consider opportunities to extend and link woodland, including the creation of new woodlands around villages;
- conserve and restore historic parkland landscapes;
- conserve the distinctive small-scale historic field pattern around villages as at Alburgh, Dickleburgh, Denton and Burston.

Waveney Tributary Farmland Development Considerations

4.29 The SNC Landscape Character Assessment states that any development in the area must respect the character of Waveney Tributary Farmland and in particular consider the following:

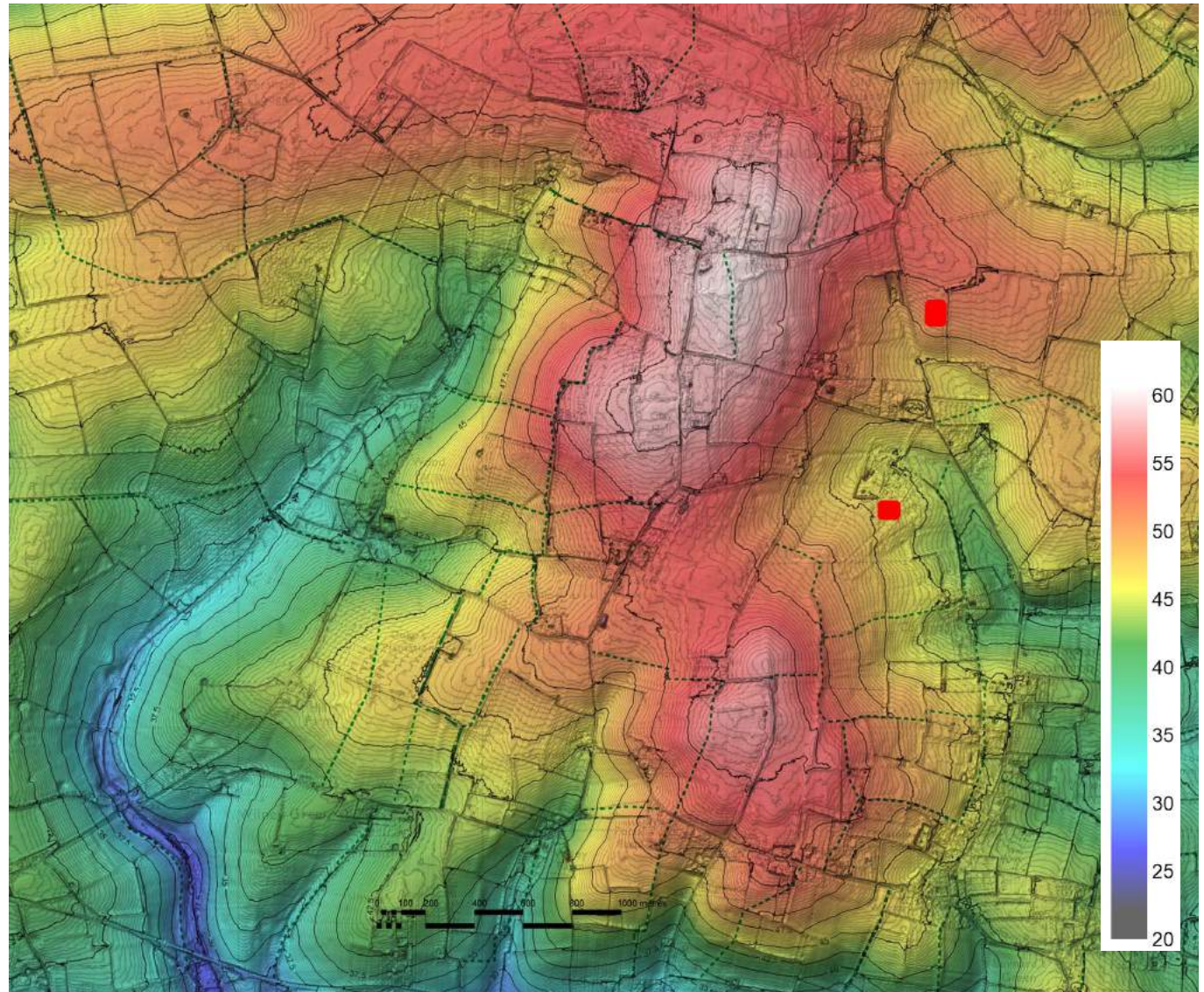
- conserve the rural peaceful character, with the pattern of small villages and settlements set within the agricultural landscape, but not dominating it;
- conserve the character and individual identity of the villages either set around greens or loosely following roads. Infilling or extension of settlements could result in a change to a more compact character and merging of settlement and loss of individual identity;

- seek to maintain the soft grass verges and open frontages that characterise the settlements along rural roads and avoid creation of hard boundaries or surfaces which would impart a more urban character;
- conserve village greens and commons;
- conserve the local vernacular features that contribute to the rural character including the distinctive road signs and road names.
- Conserve the quiet, rural character of the narrow lanes that cross the area;
- consider potential effects of potential large-scale developments (for example relating to airfield sites).

5. Local Landscape Baseline

Topography

- 5.1 The general openness of the landscape accentuates the powerful landform of the area. As noted in the District Landscape Character Assessment, this is an area with an undulating landform dissected by small tributaries. Land is higher and flatter towards the north of the character area adjoining the Great Moulton Plateau Farmland.
- 5.2 The two lagoons occupy the western side of the small valley of a tributary of the River Waveney.
- 5.3 The North lagoon is located on southward sloping land at an elevation of between 52 and 50 metres Above Ordnance Datum. The West lagoon is on slightly flatter ground closer to the tributary valley floor at an elevation of 47 metres AOD. The South lagoon is located on a northeastward-facing slope from around 51 to 49 metres AOD.
- 5.4 The land rises to a plateau area at around 60 metres AOD to the west of Hall Farm.

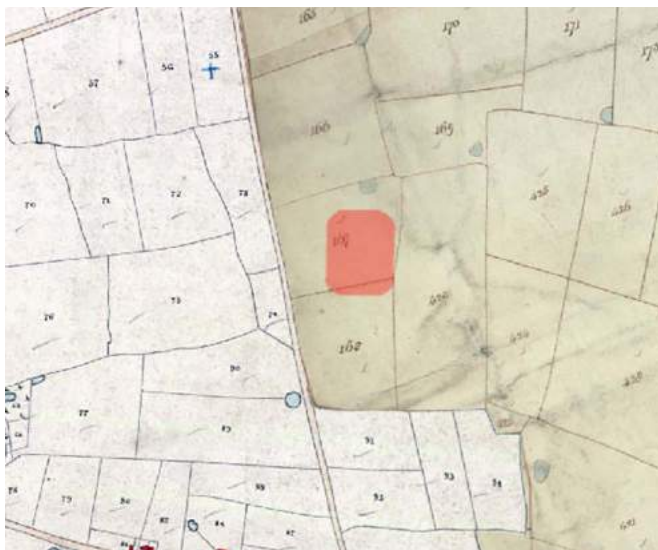


Site topography

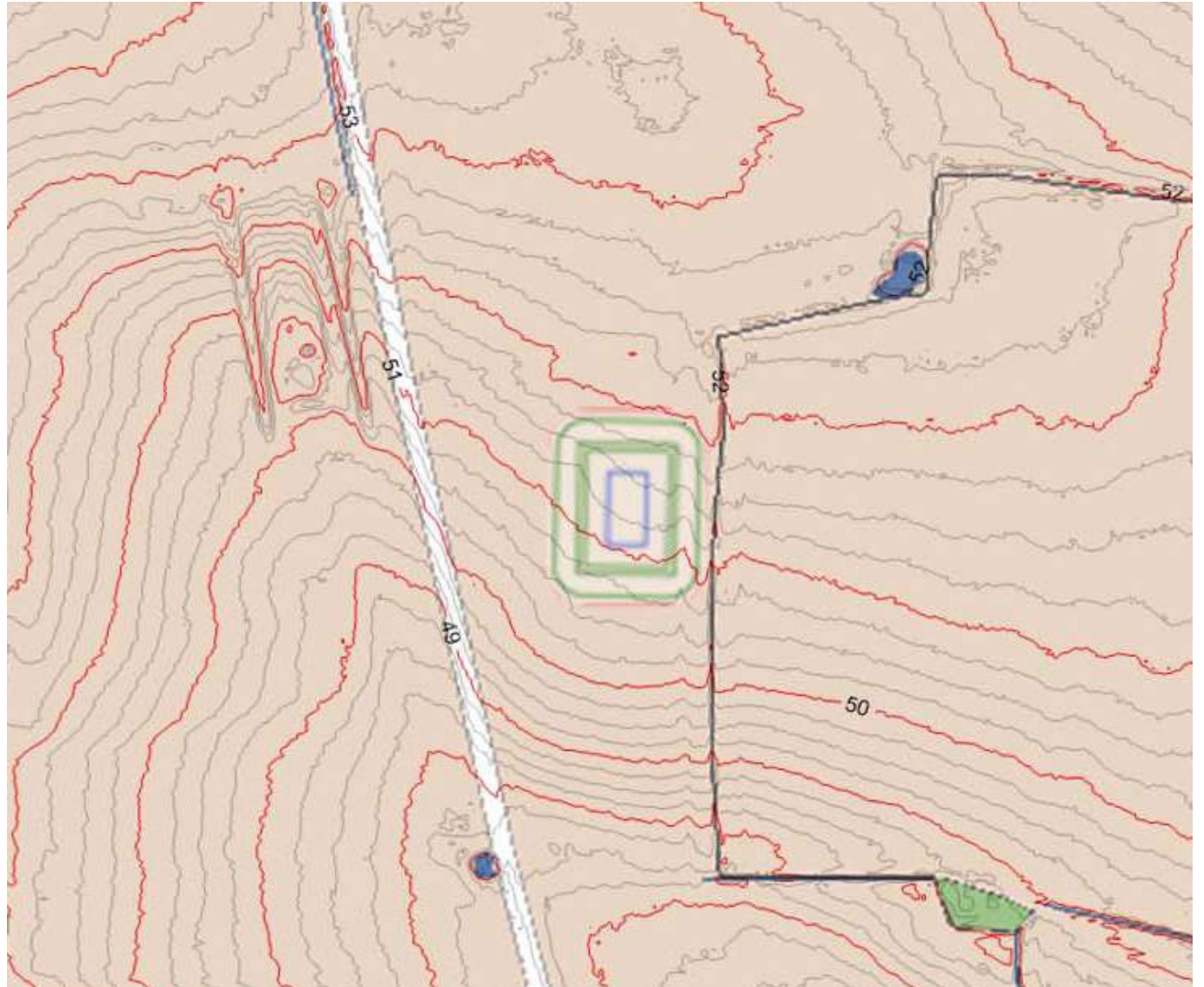
Landscape baseline

North Lagoon

- 5.5 Analysis of historic mapping shows how the landscape has evolved in the past two centuries.
- 5.6 The mapping from the 1840s shows that this was an area of relatively uniform medium-sized rectilinear fields. Occasional ponds are located on field corners. As now, this is sparsely populated area with a few scattered houses and farmsteads.
- 5.7 By the time of the First Edition Ordnance Survey mapping, the field pattern remained the same. This mapping shows the presence to boundary trees which were common along the hedgerows here.
- 5.8 By the time of the 1946 aerial view many of the hedgerows and trees have already been removed, with fields enlarged and the remaining hedgerows fragmented. A few scattered trees remain and the site of the lagoon still comprised two separate fields.
- 5.9 Currently, there is still a hedgerow and some trees along the eastern boundary of the lagoon site, but most of the fields have been amalgamated. A farm pond to the north-east of the site also still remains. Generally, the lack of trees and hedgerow has now created a very open and intensively farmed landscape.



Top left: 1840 Tithe map. Top right: 1890 Ordnance Survey map
Bottom left: 1946 Aerial view. Bottom right: 1988 Aerial view

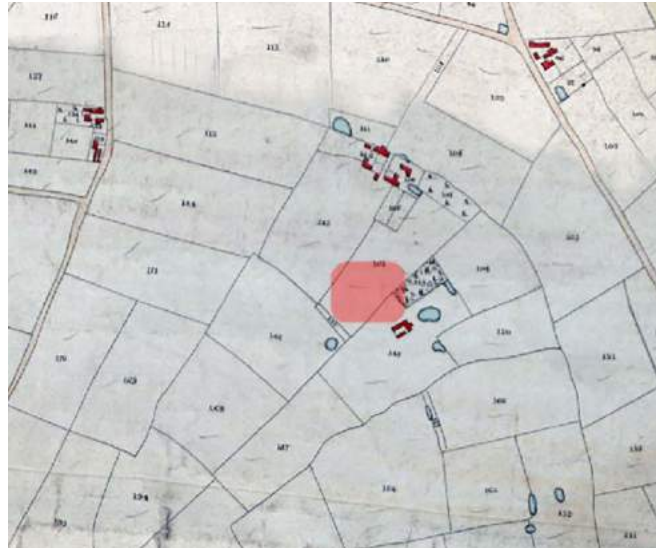


Site topography of the North lagoon

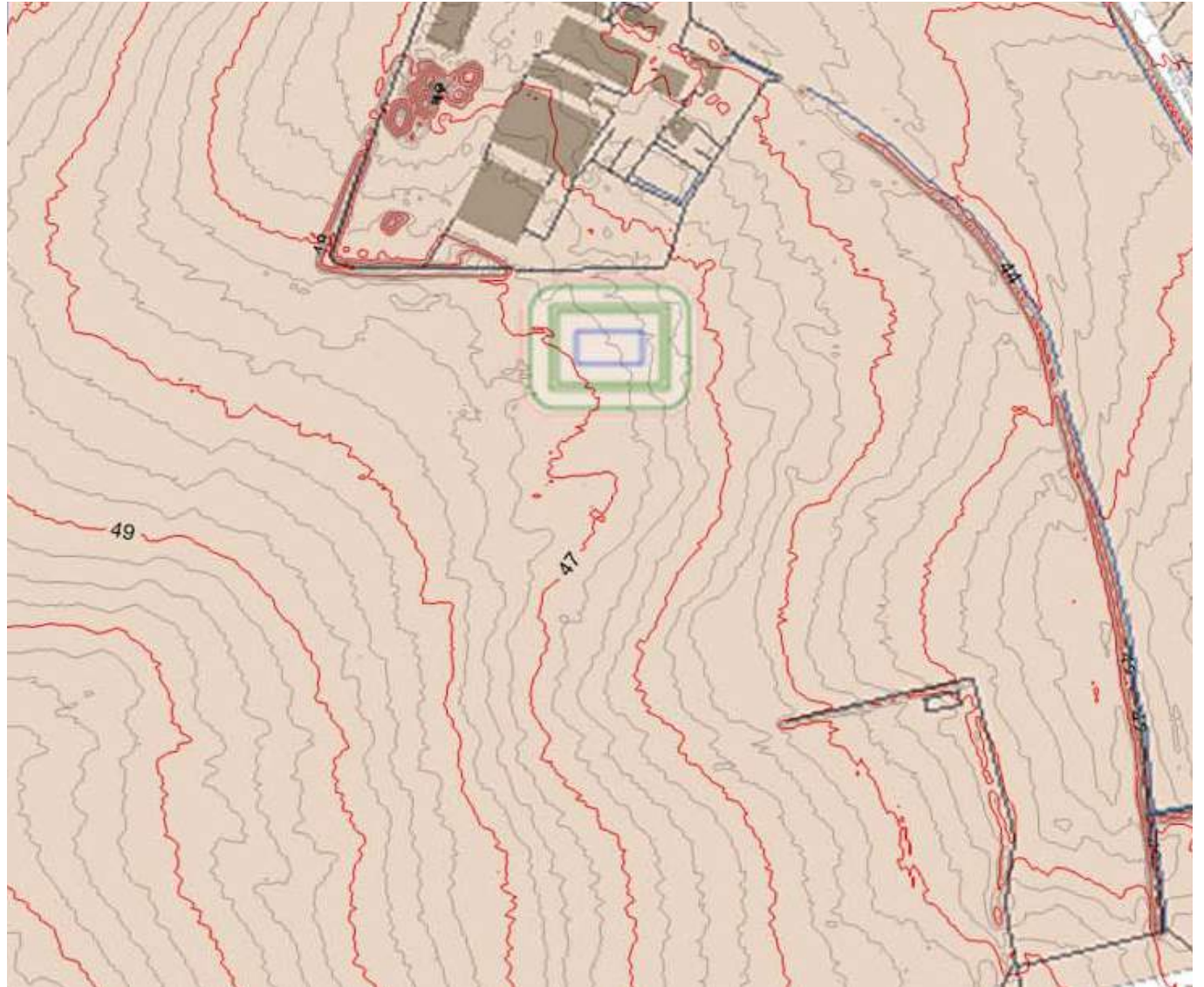
Landscape baseline

West Lagoon

- 5.10 The West lagoon is located in an area typical of this part of Norfolk, with the 1840 mapping showing medium-sized rectilinear fields. The proposed site appears to occupy a former orchard, with a building directly under the proposed lagoon and a farm pond just to the east. The buildings of The Oaks farmstead are present at this time to the north of the proposed lagoon.
- 5.11 By the time of the 1890s Ordnance Survey mapping, the field to the north of the proposed lagoon is an orchard, and all the hedgerows around the site a well-stocked with boundary trees. A few scattered houses are present to the north of the site.
- 5.12 The 1946 aerial show that many of the fields have now become amalgamated and trees removed. The immediate area of The Oaks, however, still appeared to have a good tree cover, and the building under the South-east corner of the proposed lagoon was still present.
- 5.13 At the present time, the area has become denuded of trees and hedgerow, and the fields amalgamated into very large units, although with some mature trees around The Oaks. The lagoon site is now a bare part of a much larger field. The Oaks has developed into a complex farm unit, with many barns, other buildings and machinery being prominent in the landscape.



Top left: 1840 Tithe map. Top right: 1890 Ordnance Survey map
Bottom left: 1946 Aerial view. Bottom right: 1988 Aerial view



Site topography of the West lagoon

Landscape sensitivity

- 5.14 The sensitivity of various aspects relating to proposed development is considered as follows:

Scale and complexity of landform

- 5.15 Development will generally be less easily perceived within a flatter landscape, where localised intervening obstruction such as woodland, hedgerows and subtle changes in landform create effective screening.

The application sites are located in a varied area with some subtle changes in topography area with a variety of views across the landscape, which indicates a higher sensitivity.

Scale and complexity of landuse

- 5.16 New development in the rural landscape can create forms which may contrast with more natural textures. The presence of a diversity of land uses in the landscape will act to reduce sensitivity in this respect, particularly if those uses include arable land, horticulture or brown-field sites, whereas there is more likelihood that new development will stand out as a significant change in a semi-natural landscape or one in which permanent pasture features heavily.

In this instance, the sites are within a generally open area of uniform intensive lowland agriculture, which suggests a higher sensitivity

Visual exposure

- 5.17 The relative visibility of a landscape or distinctive elements within it, both from within the character area and in relation to other character areas, will influence its sensitivity. A landscape with a strong sense of enclosure is likely to be less sensitive to development than a more open and exposed landscape in which the development can be more readily perceived.

In this instance, the sites are within a landscape with open views and vistas, which suggests a higher sensitivity.

Development and activity

- 5.18 Landscapes which show evidence of modern development, including settlement, industrial and commercial development and infrastructure, tend to be less sensitive to development. Landscapes which are relatively free from overt human activity and disturbance, and which have a perceived naturalness, a strong feel of traditional rurality or are dominated by historic rather than modern buildings, will therefore be more sensitive.

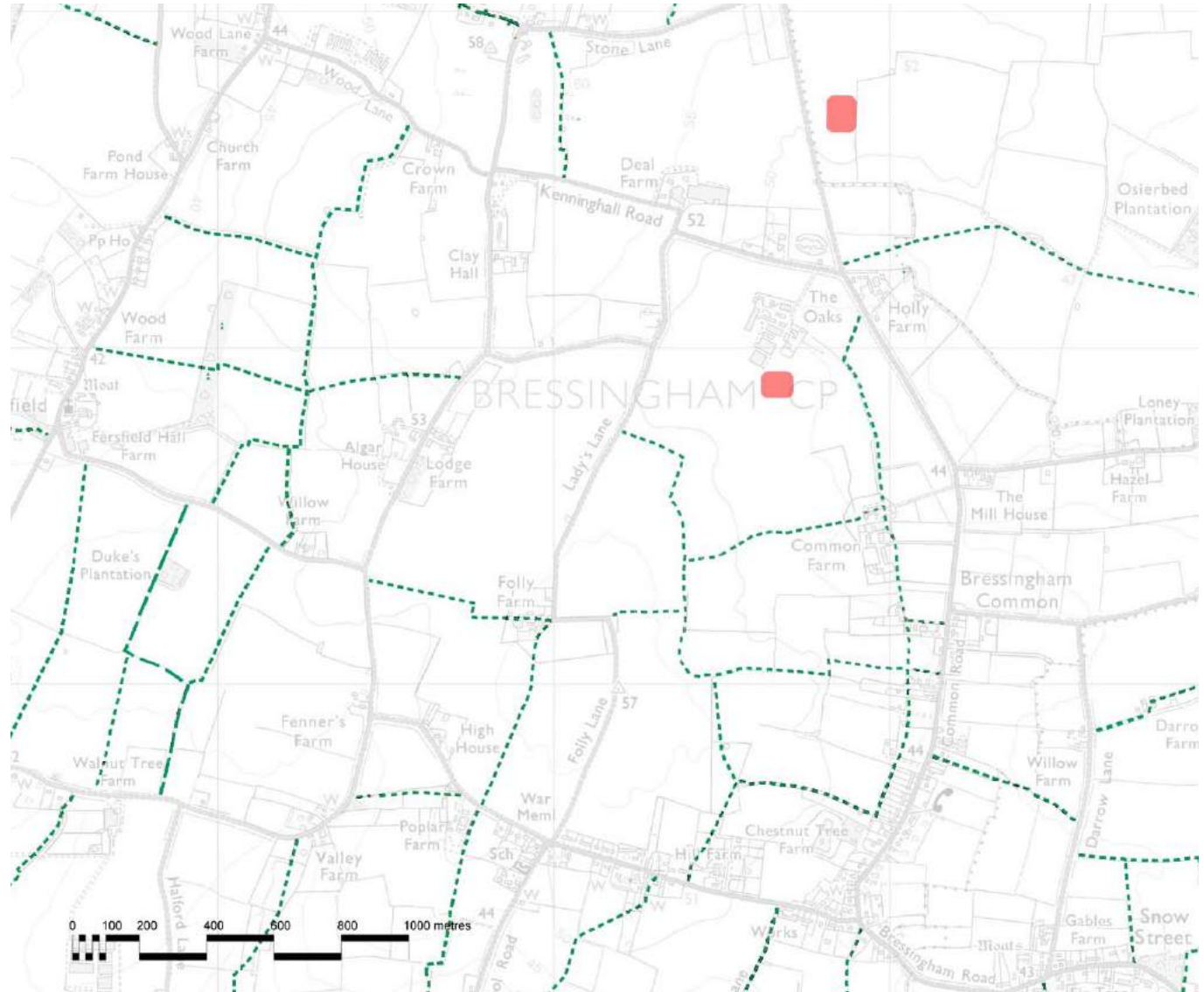
The application sites are within an area of moderate development activity and infrastructure indicating a moderate sensitivity.

- 5.19 Overall, therefore, it is considered that the sensitivity of the sites is considered to be **medium to high**. In

general this suggests that thresholds for change are relatively low and development can be accommodated only in limited situations, providing it has regard to the setting and form of existing settlement and the character and the sensitivity of adjacent landscape character areas.

Public Rights of Way

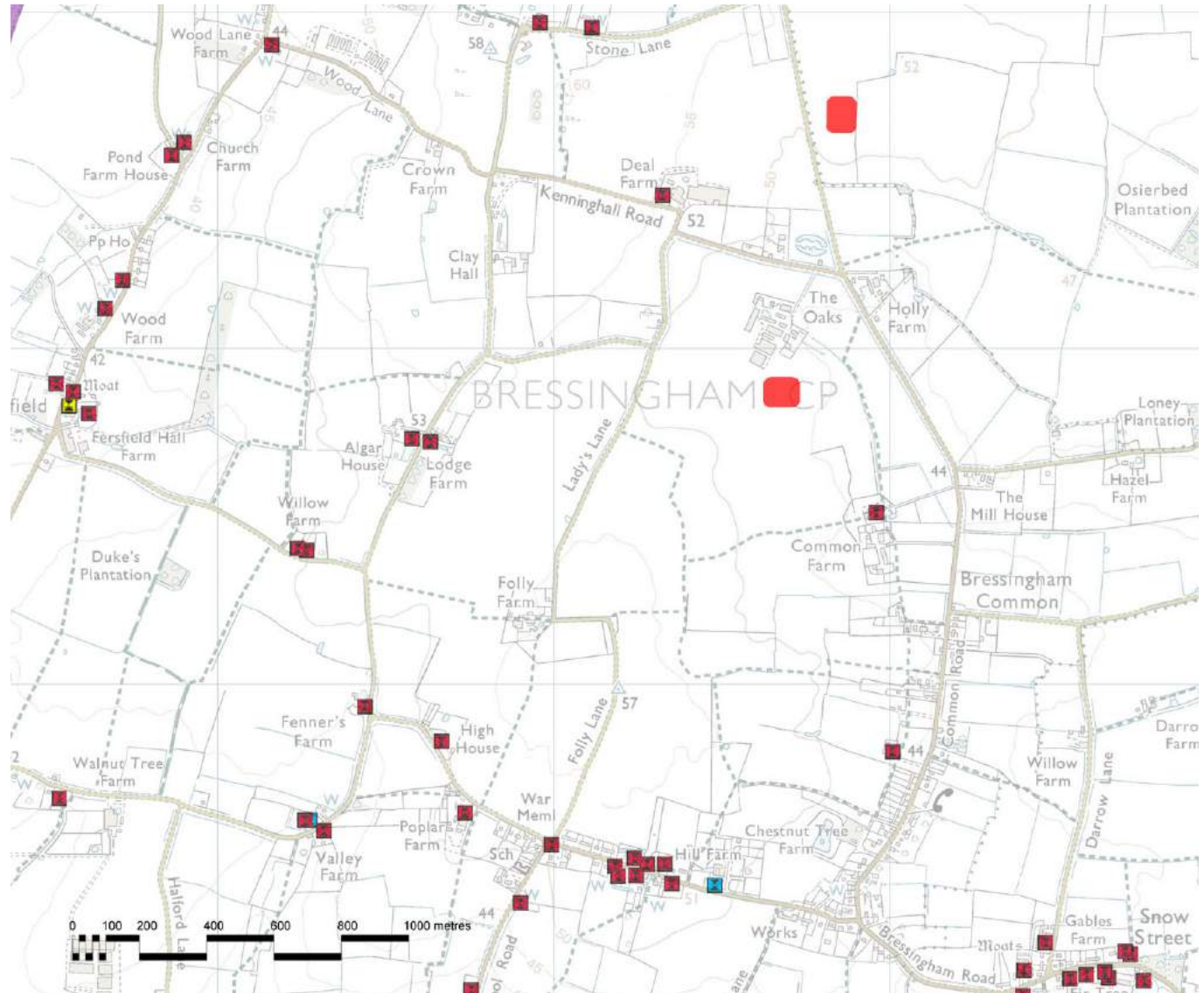
- 5.20 There is a network of minor public roads in the area, and a number of interconnected public footpaths
- 5.21 There are several lanes and country roads in the area, from where passing views toward the sites are possible. The North lagoon is not near any public rights of way, although there will be views toward it from Common Road 50 metres to the West.
- 5.22 The West lagoon is located close to The Oaks farm complex and will not directly affect any public rights of way. However, footpath Bressingham FP7 runs southwards to Bressingham Common, parallel with Common Road, and passes around 170 metres from the site.



Extract from the Norfolk Definitive Map of Public Rights of Way

Landscape and Townscape Designations

- 5.23 The site is not located in any landscape designations that are recognised at national, regional or local level. Relevant statutory designations in the vicinity of the site are illustrated here.
- 5.24 A number of listed buildings are scattered in the area, but none in close proximity which might be affected by any of the proposals.

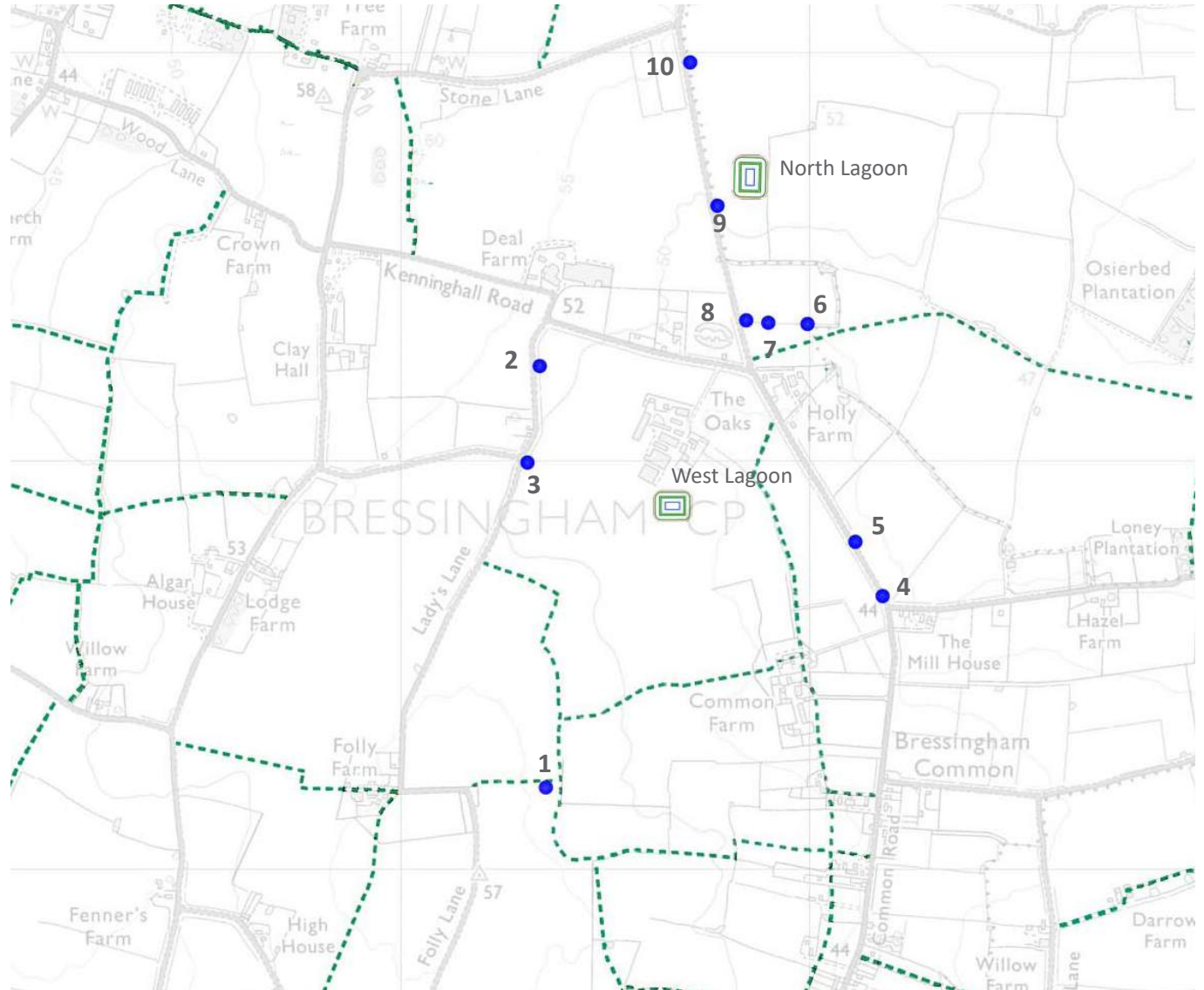


Listed buildings

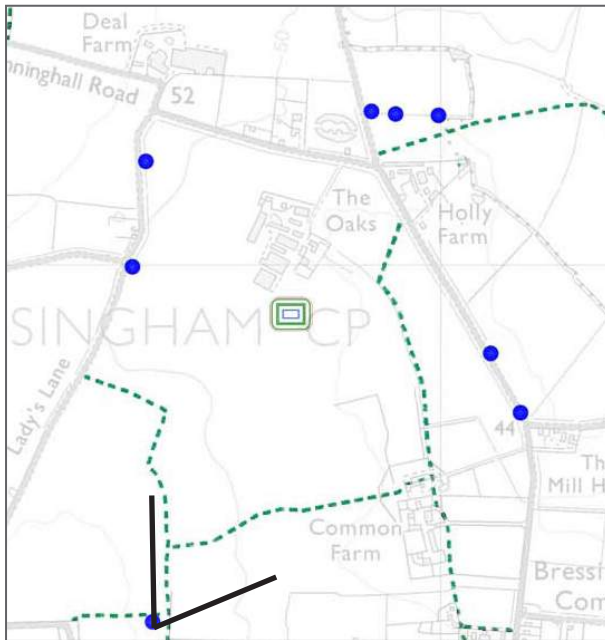
Landscape Designations

6. Visual Assessment

- 6.1 In order to undertake the assessment, the application site and its environs were walked and driven over one day to determine potential views, and identify representative locations (receptors) to demonstrate the visual impact.
- 6.2 Photographs have been used to demonstrate the key views and vistas, and to indicate potential visibility to and from the proposed development site. The location of the viewpoints was logged using GPS and this data was used to prepare the panoramic visualisations which were used in the preparation of the proposals. The following section summarises the potential visual impacts.



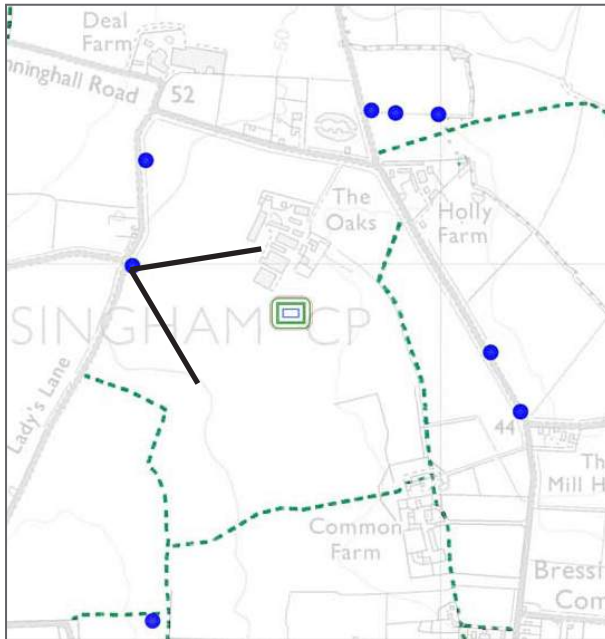
Viewpoints used in the visual assessment



| Viewpoint 1 (West lagoon) | Sensitivity | Description of effects | Magnitude of visual effect | Significance |
|--|--|---|----------------------------|------------------|
| <p>Location: 52.398235°N, 1.060952°E, 61.1m, TM0834482210, 608344, 282210</p> <p>View North-eastwards from public footpath, approximately 800 metres from the site</p> | <p>Medium</p> <p>This is the view from a public footpath in a rural area of moderate landscape quality</p> | <p>CONSTRUCTION</p> <p>The existing complex of Oaks Farm is a conspicuous feature from here, with its variety of activity and buildings. Construction activity will be visible due to the openness of the landscape, but a relatively recessive element against the backdrop of existing activity on The Oaks complex.</p> | Minor | Minor adverse |
| | | <p>COMPLETION</p> <p>The development will be seen as a low and minor element adjacent to the existing farm complex.</p> | Minor | Minor adverse |
| | | <p>COMPLETION PLUS MITIGATION</p> <p>Enhanced hedgerow planting around the site boundary will help screen the lagoon and will contribute to restoring some of the landscape structure to the area</p> | Minor | Minor beneficial |



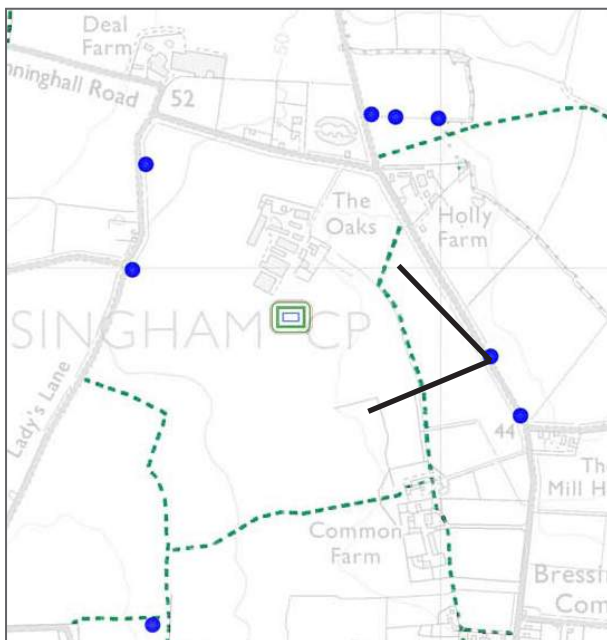
| Viewpoint 2 (West lagoon) | Sensitivity | Description of effects | Magnitude of visual effect | Significance |
|---|---|---|----------------------------|------------------|
| <p>Location: 52.407501°N, 1.06137°E, 54.6m, TM0832983242, 608329, 283242</p> <p>View south-eastwards from Lady's Lane, approximately 425 metres from the application site</p> | <p>Medium</p> <p>This is the view from a public road, in an area of average landscape quality</p> | <p>CONSTRUCTION</p> <p>The existing complex of The Oaks is prominent in the foreground. Some construction activity may be visible due to the openness of the landscape, but a recessive element due to the effects of distance</p> | Minor | Minor adverse |
| | | <p>COMPLETION</p> <p>The development will be seen as a relatively minor element adjacent to the existing farm complex.</p> | Minor | Minor adverse |
| | | <p>COMPLETION PLUS MITIGATION</p> <p>Enhanced hedgerow planting around the site boundary will help screen the lagoon and will contribute to restoring some of the landscape structure to the area</p> | Minor | Minor beneficial |



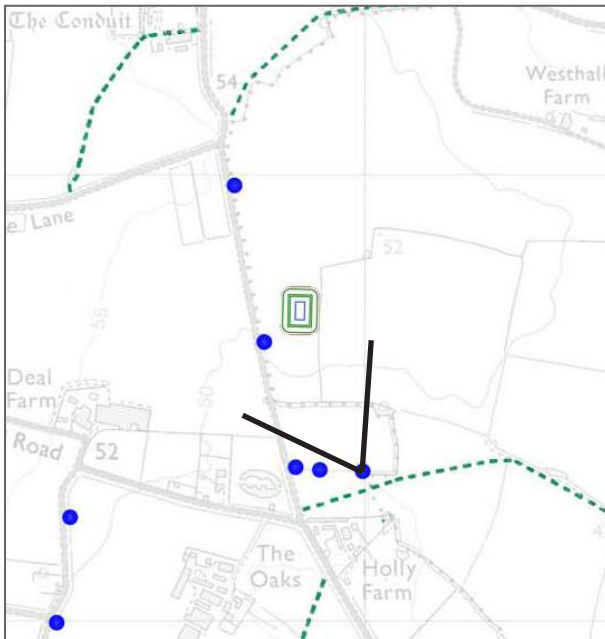
| Viewpoint 3 (West lagoon) | Sensitivity | Description of effects | Magnitude of visual effect | Significance |
|---|--|--|----------------------------|------------------|
| <p>Location: 52.405392°N, 1.060787°E, 63.7m, TM0829983006, 608299, 283006</p> <p>View Eastwards from Lady's Lane, approximately 335 metres from the application site.</p> | <p>Medium</p> <p>This is the view from a public road, in an area of moderate landscape quality</p> | <p>CONSTRUCTION</p> <p>Construction activity will be visible due to the openness of the landscape, but a recessive element due to the effects of distance association with existing activity on The Oaks complex.</p> | Moderate | Moderate adverse |
| | | <p>COMPLETION</p> <p>The development will be seen as a relatively minor element adjacent to the existing farm complex.</p> | Minor | Minor adverse |
| | | <p>COMPLETION PLUS MITIGATION</p> <p>Enhanced hedgerow planting around the site boundary will help screen the lagoon and will contribute to restoring some of the landscape structure to the area</p> | Minor | Minor beneficial |



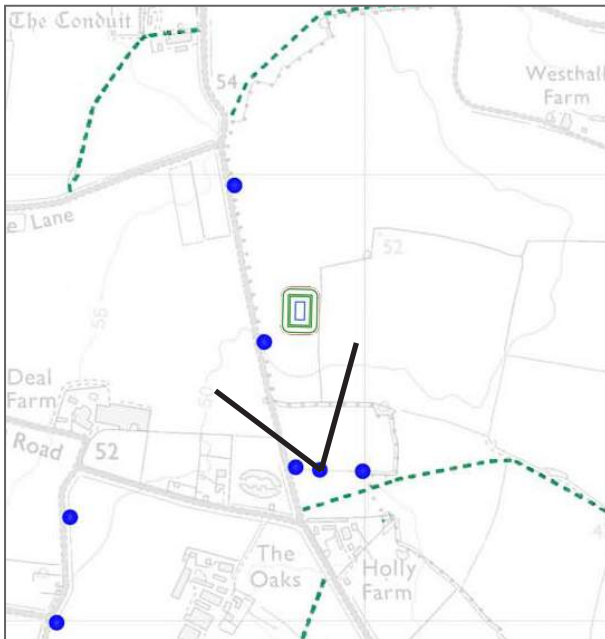
| Viewpoint 4 (West lagoon) | Sensitivity | Description of effects | Magnitude of visual effect | Significance |
|--|--|---|----------------------------|------------------|
| <p>Location: 52.402161°N, 1.073328°E, 61.3m, TM0916782683, 609167, 282683</p> <p>View North-westwards from Common Road, approximately 480 metres from the application site</p> | <p>Medium</p> <p>This is the view from a public road, in an area of moderate landscape quality</p> | <p>CONSTRUCTION</p> <p>Construction activity will be visible against the backdrop of the existing farm complex of The Oaks.</p> | Minor | Minor adverse |
| | | <p>COMPLETION</p> <p>The new lagoon and fencing will be visible as a new low feature in the landscape, seen amongst the existing complex of buildings associated with The Oaks</p> | Minor | Minor adverse |
| | | <p>COMPLETION PLUS MITIGATION</p> <p>New tree and hedgerow planting around the site will screen the development and provide long-term landscape structure</p> | Minor | Minor beneficial |



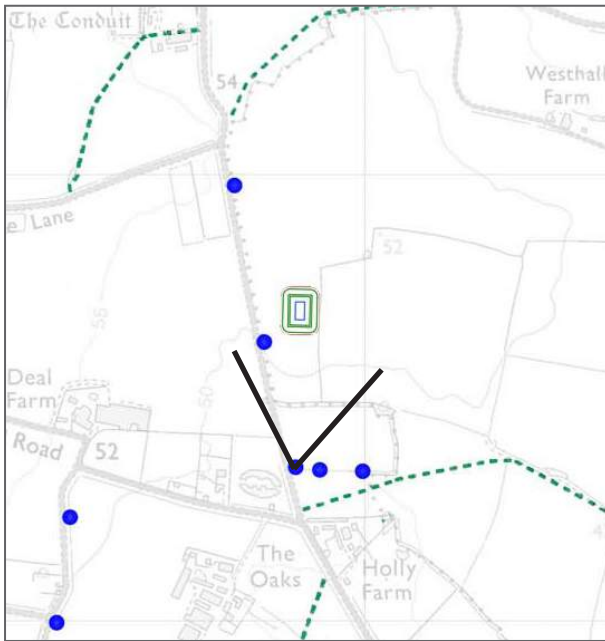
| Viewpoint 5 (West lagoon) | Sensitivity | Description of effects | Magnitude of visual effect | Significance |
|--|--|---|----------------------------|------------------|
| <p>Location: 52.403347°N, 1.072435°E, 46.9m, TM0910182812, 609101, 282812</p> <p>View Westwards from Common Road, approximately 375 metres from the application site</p> | <p>Medium</p> <p>This is the view from a public road, in an area of moderate landscape quality</p> | <p>CONSTRUCTION</p> <p>Construction activity will be visible against the backdrop of the existing farm complex of The Oaks.</p> | Moderate | Moderate adverse |
| | | <p>COMPLETION</p> <p>The new lagoon and fencing will be visible as a new low feature in the landscape, seen amongst the existing complex of buildings associated with The Oaks</p> | Minor | Minor adverse |
| | | <p>COMPLETION PLUS MITIGATION</p> <p>New tree and hedgerow planting around the site will screen the development and provide long-term landscape structure</p> | Minor | Minor beneficial |



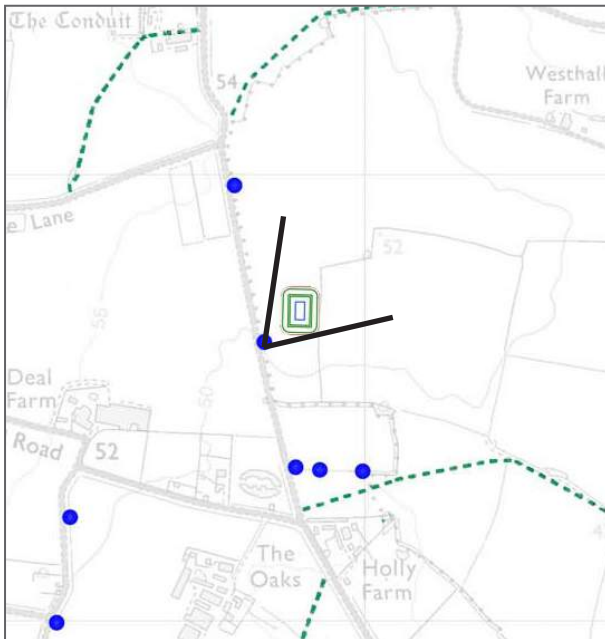
| Viewpoint 6 (North lagoon) | Sensitivity | Description of effects | Magnitude of visual effect | Significance |
|--|--|--|----------------------------|------------------|
| <p>Location: 52.408176°N, 1.071057°E, 48.7m, TM0898483345, 608984, 283345</p> <p>View Northwards from the edge of the large field containing the proposed lagoon</p> | <p>Medium/Low</p> <p>This is the view from land not open to the public, in an area of moderate landscape quality, approximately 330 metres from the application site</p> | <p>CONSTRUCTION</p> <p>Construction activity will be visible due to the openness of the landscape, but a somewhat recessive element due to the effects of distance and partial screening by hedgerow and topography</p> | Moderate | Minor adverse |
| | | <p>COMPLETION</p> <p>The lagoon and fencing will be partially visible, partly screened by the existing hedgerow</p> | Minor | Minor adverse |
| | | <p>COMPLETION PLUS MITIGATION</p> <p>Enhanced hedgerow planting along existing field boundaries, and allowing them to grow to a greater height will contribute to biodiversity and landscape structure and help to screen the proposals</p> | Minor | Minor beneficial |



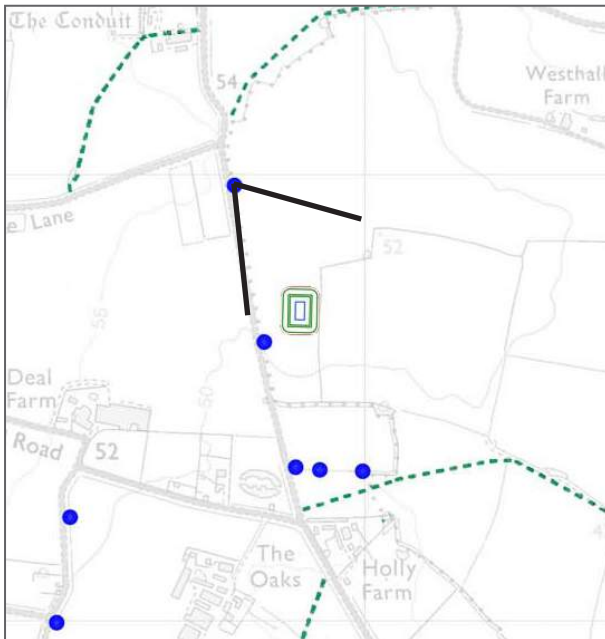
| Viewpoint 7 (north lagoon) | Sensitivity | Description of effects | Magnitude of visual effect | Significance |
|--|---|---|----------------------------|------------------|
| <p>Location: 52.408245°N, 1.069643°E, 56.7m, TM0888883348, 608888, 283348</p> <p>View northwards from the edge of the large field containing the proposed lagoon, approximately 300 metres from the site</p> | <p>Medium/Low</p> <p>This is the view from land not open to the public, in an area of moderate landscape quality.</p> | <p>CONSTRUCTION</p> <p>Construction activity will be visible and noticeable due to the openness of the landscape, and the elevated location against the skyline.</p> | Moderate | Moderate adverse |
| | | <p>COMPLETION</p> <p>The lagoon and fencing will be visible as a low feature against the skyline</p> | Moderate | Minor adverse |
| | | <p>COMPLETION PLUS MITIGATION</p> <p>The banks will green over rapidly with grass and wildflowers. New tree and hedgerow planting around the perimeter will screen the site and reinforce the fragmented landscape structure of the area</p> | Minor | Minor beneficial |



| Viewpoint 8 (North lagoon) | Sensitivity | Description of effects | Magnitude of visual effect | Significance |
|---|---|---|----------------------------|------------------|
| <p>Location: 52.408314°N, 1.068855°E, 46.9m, TM0883483354, 608834, 283354</p> <p>View northwards from the edge of Common Road, approximately 295 metres from the site</p> | <p>Medium/Low</p> <p>This is the view from a public road, in an area of moderate landscape quality.</p> | <p>CONSTRUCTION</p> <p>Construction activity will be visible and noticeable due to the openness of the landscape, and the elevated location against the skyline.</p> | Moderate | Moderate adverse |
| | | <p>COMPLETION</p> <p>The lagoon and fencing will be visible as a low feature against the skyline</p> | Moderate | Moderate adverse |
| | | <p>COMPLETION PLUS MITIGATION</p> <p>The banks will green over rapidly with grass and wildflowers. New tree and hedgerow planting around the perimeter will screen the site and reinforce the fragmented landscape structure of the area</p> | Minor | Minor beneficial |



| Viewpoint 9 (North lagoon) | Sensitivity | Description of effects | Magnitude of visual effect | Significance |
|---|---|---|----------------------------|------------------|
| <p>Location: 52.410896°N, 1.067988°E, 46m, TM0876383638, 608763, 283638</p> <p>View north-eastwards from the edge of Common Road, approximately 50 metres from the site</p> | <p>Medium/Low</p> <p>This is the view from a public road, in an area of moderate landscape quality.</p> | <p>CONSTRUCTION</p> <p>Construction activity will be visible and noticeable due to the openness of the landscape, and the elevated location against the skyline.</p> | Major | Moderate adverse |
| | | <p>COMPLETION</p> <p>The lagoon and fencing will be visible as a low feature against the skyline</p> | Major | Moderate adverse |
| | | <p>COMPLETION PLUS MITIGATION</p> <p>The banks will green over rapidly with grass and wildflowers. New tree and hedgerow planting around the perimeter will screen the site and reinforce the fragmented landscape structure of the area</p> | Minor | Minor beneficial |



| Viewpoint 10 (North lagoon) | Sensitivity | Description of effects | Magnitude of visual effect | Significance |
|--|---|---|----------------------------|------------------|
| <p>Location: 52.414017°N, 1.067258°E, 66m, TM0869983983, 608699, 283983</p> <p>View south-eastwards from the edge of Common Road, approximately 250 metres from the site</p> | <p>Medium</p> <p>This is the view from a public road, in an area of moderate landscape quality.</p> | <p>CONSTRUCTION</p> <p>Construction activity will be visible and noticeable due to the openness of the landscape, and the elevated location against the skyline.</p> | Major | Moderate adverse |
| | | <p>COMPLETION</p> <p>The lagoon and fencing will be visible as a low feature against the skyline</p> | Moderate | Minor adverse |
| | | <p>COMPLETION PLUS MITIGATION</p> <p>The banks will green over rapidly with grass and wildflowers. New tree and hedgerow planting around the perimeter will screen the site and reinforce the fragmented landscape structure of the area</p> | Minor | Minor beneficial |

7. Summary

Effect on Landscape Character

- 7.1 The landscape assessment has determined that this area is fairly typical of the Great Moulton Plateau Farmland Character Area described in the District Council Landscape Assessment. This is a flat, elevated plateau landform with little topographic variation. Expansive skies are a defining feature with distant views and farm buildings visible in the open landscape.
- 7.2 It is noted that it is an intensively farmed arable landscape with a heavily degraded landscape structure. Relatively few of the original hedgerows and boundary trees remain, resulting in open views where any new development is likely to be highly visible.
- 7.3 As discussed earlier, an assessment of the landscape sensitivity of the two sites was based on four main criteria:
- Scale and complexity of landform
 - Scale and complexity of landuse
 - Visual exposure
 - Development and activity
- 7.4 This assessment concluded that the sensitivity of the lagoon sites is considered to be **medium to high**. In general this suggests that thresholds for change are relatively low and development can be accommodated

only in limited situations, providing it has regard to the setting and form of existing settlement and the character and the sensitivity of adjacent landscape character areas.

- 7.5 Thus, despite, or perhaps because of, the degraded nature of the landscape the proposed lagoons are likely to initially have a noticeable impact and appear as noticeably man-made features in the landscape.
- 7.6 However, landscape mitigation, comprising boundary hedgerow and tree planting to link up with existing hedgerows will rapidly provide positive enhancement to the landscape character and structure.

Effect on Visual Amenity

- 7.7 The desktop studies, modelling and field survey helped to identify viewpoints that are regarded to be representative of the range of views and receptors around the site. The selected viewpoints were not intended to cover every single possible view but are intended to be representative of a range of receptor types e.g. residents, walkers on public footpaths and road users, from different directions and distances from the site.
- 7.8 The field assessment and digital modelling have demonstrated that, despite the elevated and exposed position, there is likely to be a relatively low long-term impact on visual amenity due to the following factors:

- the small vertical scale of the proposed development in relation to its surroundings.
- viewing the new development against the backdrop of existing trees and hedgerow.
- Scope of effective landscape mitigation which will positively enhance the local landscape structure

Residential Properties

- 7.9 Residential receptors are considered to be highly sensitive receptors.
- 7.10 Both sites are located well way from residential properties which might have direct views of the proposed lagoons.
- 7.11 The impact in residential properties is therefore considered to be negligible.

Public Highways

- 7.12 Users of minor roads are considered to be low to medium sensitivity receptors.
- 7.13 The Northern lagoon is located to the east of Common Road near Deal Farm, and there will be passing views of the proposed development, particularly as one travels downhill from the north, with the lagoon on the left. Construction activity will be prominent and noticeable this close to the road, although once constructed, the lagoon will have grass banks to soften the visual impact and there will be no visible moving machinery.

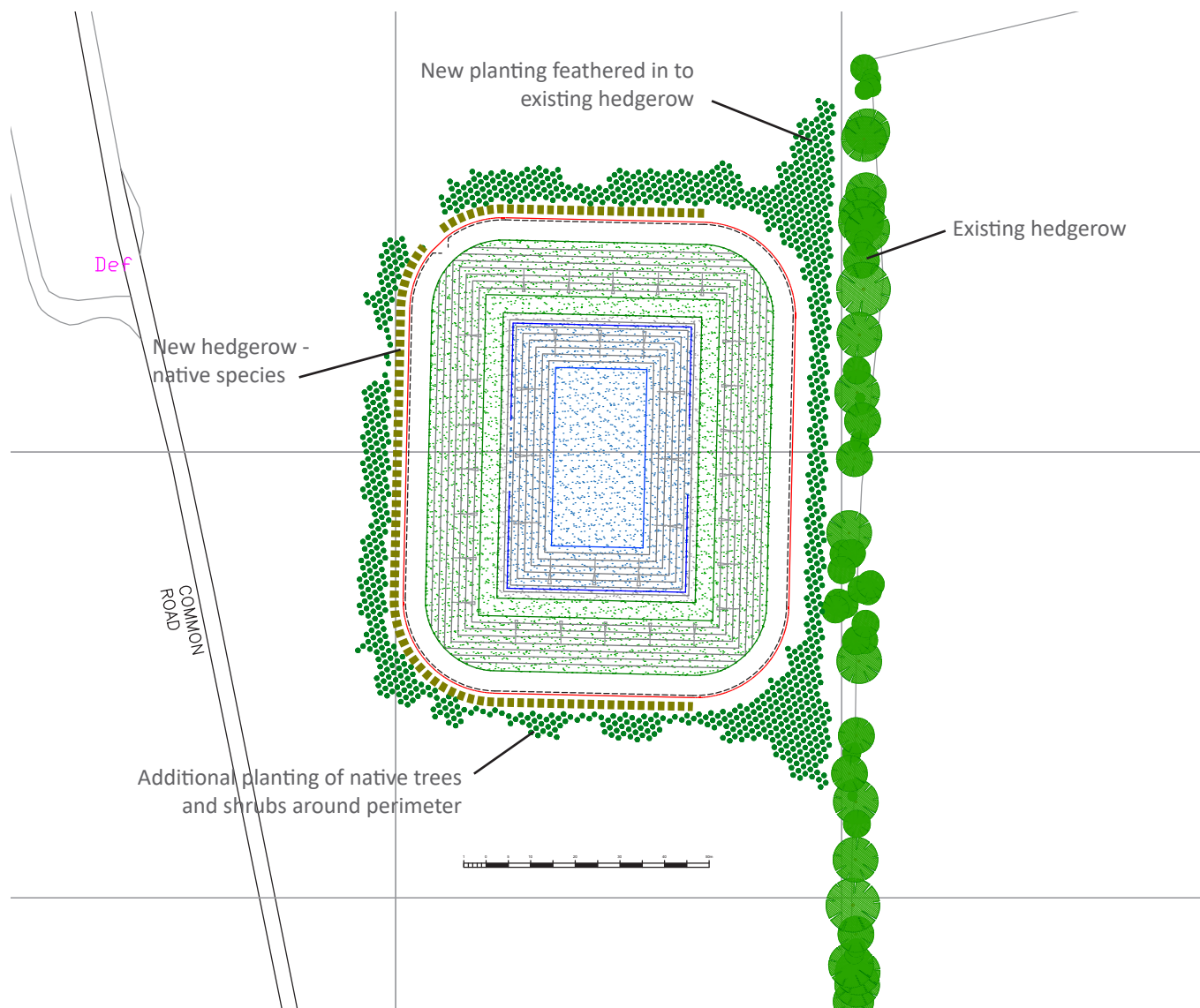
- 7.14 There will be views toward the West lagoon from Common Road and Lady's Lane, where the lagoon is located mid-way between the two roads. It will be seen close to the existing mix of farm buildings associated with The Oak. Activity will be less noticeable than with the northern lagoon due to the effects of distance and the proximity to existing activity on the adjacent farm.
- 7.15 In the medium to long term, landscape mitigation will screen the lagoons and provide positive landscape enhancement the area. Relatively simple landscape mitigation comprising native hedgerow and tree planting will not only screen the lagoon, but significantly reinforce the local landscape structure.

Public Rights of Way

- 7.16 Users of public rights of way are considered to be high sensitivity receptors.
- 7.17 The North and West lagoons will not directly affect any public rights of way.

8. Landscape Mitigation

- 8.1 It is considered that landscape mitigation would be very effective in assimilating the lagoon features into the landscape.
- 8.2 Suitable mitigation, as outlined here, will also provide long-term benefits in reinforcing the landscape structure of this landscape character area which has been heavily degraded in past decades by intensive agricultural practices and the consequent loss of hedgerows, trees and biodiversity.
- 8.3 It is recommended that a hedge, comprising the following species, is planted around the perimeter of the site:
- 55% Hawthorn, *Crataegus monogyna*
 - 20% Blackthorn, *Prunus spinosa*
 - 10% Field Maple, *Acer campestre*
 - 10% Guelder Rose, *Viburnum opulus*
 - 2.5% Alder Buckthorn, *Frangula alnus*
 - 2.5% Holly, *Ilex aquifolium*
- 8.4 Additional planting around the perimeter as shown should include the above species, with 40% of the planting to include English Oak (*Quercus robur*), Wild Service Tree (*Sorbus torminalis*), Hazel, (*Corylus avellana*), Rowan (*Corbus aucuparia*) and Crab Apple (*Malus sylvestris*).



Typical landscape mitigation proposals

9. Conclusion

- 9.1 A landscape and visual impact assessment was undertaken to determine the effects of two digestate storage lagoons at Bressingham, Norfolk.
- 9.2 The assessment has determined that the sites are within an intensively farmed landscape which has become degraded in recent decades due to the amalgamation of fields and consequent loss of a significant extent of hedgerows and trees. The undulating landscape thus means that there are expansive views over the open arable landscape, and the two lagoon sites are relatively highly visible.
- 9.3 However, it is considered that they are relatively low-key features, and of a type where landscape mitigation would be highly effective and beneficial to the overall landscape strategy for the area.
- 9.4 General planning policies relate primarily to the need for good sustainable design, the provision of renewable energy and the need to protect and ideally enhance the landscape character and biodiversity of the area.
- 9.5 The proposed developments would retain and enhance key landscape characteristics such as topography, boundary hedgerows and trees. There would be neutral effect on the landscape character of the site itself.
- 9.6 The proposed developments would not materially affect any of the existing landscape elements associated with the sites.
- 9.7 Furthermore the mitigation proposals proposed would have a beneficial effect on the landscape and visual resources of the area, which is considered to be significant benefit.
- 9.8 This assessment demonstrates that the proposed lagoons could be successfully accommodated and assimilated into the surrounding landscape without causing harm to the landscape character or visual amenity of the area, subject to satisfactory mitigation.

APPENDIX

10. APPENDIX

METHODOLOGY

10.1 This report has been prepared in accordance with the guidelines as set out in “*Guidelines for Landscape and Visual Impact Assessment: Third Edition*”, (GLVIA) published by the Landscape Institute and the Institute of Environmental Management and Assessment. This is widely regarded by professionals as the industry standard on the subject.

10.2 The assessment distinguishes between landscape impacts and visual impacts which, although related, are different. Landscape impacts are changes in the fabric, character and quality of the landscape. Visual impacts relate solely to changes in available views of the landscape and the effects of those changes on people. Impacts can also be beneficial as well as adverse.

10.3 A desktop study of the site was undertaken, including an assessment of character, landform, landscape features, historic evolution, policy and designations. This information was both used for, and assessed against, the site visit.

Definition of the study area

10.4 With regard to the landscape assessment, the views used were chosen based upon their location in relation to the site and other landscape elements. Beyond the

area chosen, the visual effects of the development are not considered likely to be significant. This is due in part to scale and height of the built components of development, the effect of reduced contrast between different landscape textures and colours at increasing distance and the increasing importance of atmospheric conditions in determining the availability of long distance views. At these distances, the development is likely to be screened by local features, such as landform, buildings and vegetation.

Baseline Information

10.5 A thorough inspection of the site was undertaken to determine the Zone of Visual Influence, which involved walking public rights of way and visiting significant public viewpoints to determine the likely visibility of the development. Photographs from selected viewpoints were taken using a Canon EOS 6D full-frame DSLR camera. Viewpoints were selected as being most representative of all potential views into the site, and the precise location was logged using GPS.

10.6 Photographs were taken at a focal length of 50mm (equivalent to 50mm on a conventional 35mm camera), to create the view which is generally accepted as being closest to that seen by the human eye. The photographs used are intended only to give an indication of the view discussed and are not a substitute for visiting the site in person. Panoramic views consisted of photographs taken by the criteria outlined above merged together with ICE® software.

No other photographic manipulation was undertaken.

10.7 A brief description of the existing land use of the area is provided and includes reference to existing settlements, transport routes and vegetation cover, as well as local landscape designations, elements of cultural and heritage value and local landmarks or tourist destinations. These factors combine to provide an understanding of landscape value and sensitivity, and an indication of particular key views and viewpoints that are available to visual receptors and therefore are to be included in the visual assessment.

Landscape and Townscape Character

Table M1 Townscape Assessment Criteria

- 10.8 The baseline landscape and townscape quality was evaluated using the GLVIA guidelines and its classification follows a five point scale interpreted in tables M1 and M2, based on best practice from previous assessments.

| Category | Definition |
|---------------------------|---|
| Highest value townscape | Nationally or regionally important townscape with high quality, highly valued rare or unusual features. Diverse, stimulating and thriving street level uses with a high level of human comfort, interactive pedestrian environment and strong hierarchy of public amenity and civic spaces. National area/feature designation and assemblage of important listed historical and rich cultural features including Conservation Areas and Listed Buildings or valued modern buildings. Well maintained unified townscape with attractive visual detail and no detractors. Negligible pedestrian and traffic conflict. |
| Very attractive Townscape | Locally distinctive development form with rich cultural associations using good quality locally characteristic materials. Harmonious relationship between buildings and hierarchy of publicly accessible spaces. Several Listed Buildings or local area/feature designations may apply including features of regional interest. Highly permeable, well maintained and no significant townscape detractors. Townscape promotes social interaction and pedestrian movement dominates traffic circulation with few conflicts. |
| Good Townscape | Features with historical/cultural local value, possibly designated. Locally distinctive townscape, vernacular or planned layout often with ornamentation in good condition and well maintained. Possibly degraded by unsympathetic modern development but retaining essential characteristics with potential for enhancement. Townscape supports social interaction and pedestrian movement co-exists with traffic movement with few conflicts. |
| Ordinary Townscape | Development is primarily functional, incoherent development form or minimum design criteria being used in contemporary situations. Little indication of local distinctiveness, design expression or ornamentation. Remnant distinctive townscape features may persist but are no longer in context. Few opportunities for social interaction, limited to specific 'community' locations. Traffic circulation usually controls pedestrian movement. |
| Poor Townscape | Poorly designed development form using inappropriate materials and/or materials of limited life span. Unsympathetic scale, lacking structure, variety, coherence or clear communication links. Poor boundary definition and arbitrary 'unowned' space, often vandalised, rarely used by community. Townscape in poor condition or decline, unwelcoming or even threatening, with a lack of opportunity for social interaction. Pedestrian movement may be inhibited/severely constrained by major transport barrier. |

Table M2 Landscape Quality Assessment Criteria

| Category | Definition |
|----------------------------|---|
| Highest Quality Landscape | Includes the most aesthetically attractive landscape. Areas of particular Natural Beauty perceived as special in a regional or national context. Nationally designated land such as National Parks, AONBs etc. |
| Very Attractive Landscape | Areas include historic and designated landscape. Diverse, semi-natural or farmed landscape with natural features. Normally abundant woodland cover together with a high distribution of trees, hedgerows and shrubs, streams, brooks and other naturalized unpolluted water corridors may be present. Several local landscape designations may apply, including Conservation Areas, and some historical or cultural sites may be present. |
| Good Quality Landscape | Countryside with some variety in farmland cover. Settlements and villages with pockets of open space and public recreation areas. There is a reasonable distribution of semi-natural vegetation, trees and shrub cover and the overall view of the area is pleasant. Local landscape designations of cultural and historic value may be present. |
| Ordinary Quality Landscape | Typical open agricultural land where attractive features are offset by detractors. Some strategic planning is evident but development is primarily functional including housing estates, business parks or urban fringe land uses. Not particularly aesthetically attractive, but with more value than a poor quality landscape. Land may be within a Green Belt or have a local landscape designation. |
| Poor Quality Landscape | Includes detractors such as power lines, industrial derelict or inappropriate built forms with no aesthetic value or evidence of strategic planning. There is lack of mature vegetation cover and no landscape designations apply. Intensively farmed landscape, which has lost most of its features. |

Contribution to the Landscape Character

Table M3 Contribution of the Site to Local Landscape Character

10.9 Once the quality of the wider landscape is established, it is useful to consider the contribution that the site makes towards the landscape character. This allows an evaluation of sites that are not of a consistent quality with the wider landscape, for example, a degraded site within a high quality and generally intact landscape.

10.10 This evaluation provides a baseline against which proposals can be assessed.

| Category | Definition |
|----------------------------|--|
| Outstanding Contribution | Where the existing character of the Site is representative of the local landscape character and the structure of the landscape is intact |
| Very Positive Contribution | Where the existing character of the Site contains many attributes representative of the local landscape character and the structure of the landscape is apparent |
| Positive Contribution | Where the existing character of the Site contains some attributes representative of the local landscape character and some incongruous elements but the Site does not detract from the local landscape character |
| Limited Contribution | Where the existing character of the Site contains some attributes representative of the local landscape character but also incongruous elements that detract from the local landscape character |
| Negative Contribution | Where the existing character of the Site contains no attributes representative of the local landscape character and the incongruous elements detract from the local landscape character. |

Existing Visual Amenity

Table M4 Existing Visual Amenity

- 10.11 This creates a baseline of the current quality of the view and how it is valued, or likely to be valued, by people. Potential impacts on views are assessed against this baseline to give a more accurate picture of the extent of those impacts.

| Category | Definition |
|----------------------------|--|
| Exceptional Visual Amenity | Where the quality of existing views is such that people would travel some distance to experience them |
| High Visual Amenity | Where the quality of existing views is such that local people would go out of their way to experience them |
| Good Visual Amenity | Where the quality of existing views is such that there are few incongruous elements |
| Fair Visual Amenity | Where the quality of existing views is such that there are a number of incongruous elements |
| Poor Visual Amenity | Where the quality of existing views is such that the incongruous elements dominate. |

Landscape Effects and Receptors

10.12 Landscape effects are defined by the Landscape Institute as ‘changes to landscape elements, characteristics, character, and qualities of the landscape as a result of development’ and these may be adverse, neutral or beneficial, Landscape receptors are things that are affected by landscape impacts and may include the following:

- **Landscape elements:** introduction or removal of trees, vegetation and built features and other elements which together form landscape patterns;
- **Landscape patterns:** degradation or erosion of groups and arrangements of landscape elements, which form patterns that are characteristic of landscape character types;
- **Landscape character:** the landscape character is a product of a combination of factors that contribute to the creation of a unique setting. Landscape character is a product of the combination of geological features, geomorphic processes, floral and wildlife associations, with social, economic and cultural forces; and
- **Cumulative landscape effects:** these are defined by the Landscape Institute as resulting from additional changes to landscape amenity caused by the proposed development in conjunction with other development (associated or separate from it), or actions that occurred in the past, present or are likely to occur in the foreseeable future.

10.13 The landscape effects have been assessed by

consideration of three criteria:

- The **sensitivity** of the landscape resource or receptor (very high, high, medium, low or very low);
- The **magnitude** of the affected landscape resource (no change, low, medium, high and very high); and
- The **significance** of the impact (major, moderate, minor or negligible).

10.14 Consideration of the sensitivity of the landscape receptor against the magnitude of change posed by the development to give the significance of the impact is fundamental to landscape assessment and each of these criteria has been defined in more detail with relevance to this assessment.

Sensitivity of Landscape Receptors

10.15 The sensitivity of landscape receptors have been determined by reference to the baseline assessment of the existing landscape. The classification of sensitivity with regard to landscape receptors is defined further in Table M5 and is derived from consideration of the existing (baseline) landscape receptors as follows:

- **Landscape condition:** the state of repair of the elements of a particular landscape, the integrity and intactness and the extent to which its distinctive character is apparent;
- **Landscape value:** the importance attached to a landscape or its elements. This is most readily

recognised by the existence of any planning policy designations. These may express national or local consensus, and generally reflect aspects of its quality, cultural associations, scenic or aesthetic characteristics or ecological state. The rarity of the landscape or its particular representation of a certain landscape character may also be considered; and

- **Landscape capacity:** the ability of a particular landscape or element to absorb change without unacceptable adverse effects on its character. This may be considered with reference to existing landscape characteristics such as scale, topography and existing screening elements as well as landscape change, including the presence of existing development. Generally, landscapes that are already influenced by the type of development proposed have a greater capacity to accommodate the proposed changes, whilst those lacking any influence from similar development will have less capacity.

10.16 It is important to use sensitivity criteria of an appropriate scale for the development. In some cases where criteria are chosen to reflect nationally sensitive sites, such as designated National Parks or Areas of Outstanding National Beauty, it is possible that issues of local importance are under emphasised. The opposite is also true. If the highest significance is assigned to nationally designated landscapes and the study area falls within one, there is the assumption

that all of the land within that study area is of the highest sensitivity to change. This is not the case as many designations, such as AONBs, are broad-brush and the sensitivity criteria should be altered accordingly. Sensitivity criteria should be reviewed on a case by case basis.

Table M5 Sensitivity of Landscape Receptors

| Landscape Receptor Categories | Scale | Sensitivity | Typical Examples |
|--|------------------|-------------|---|
| High importance and rarity. No, or limited, potential for substitution. | National | Very High | Resources and receptors of National Importance e.g. Sites of Special Scientific Interest, National Parks, Grade I and Grade II* Listed Buildings and Scheduled Ancient Monuments. |
| High importance and rarity. Limited potential for substitution. | National | High | Resources and receptors of Regional or County Importance e.g. Regional and Country Wildlife Sites, Grade II Listed Buildings. |
| Medium importance and rarity. Limited potential for substitution. | Regional / Local | Medium | Un-designated but value perhaps through non-official publication or demonstrable use. Also includes elements such as hedgerows and trees. |
| Low importance or rarity. | Local | Low | Resources and receptors which are of very low potential or minor importance and/or which have been partially destroyed. |
| Low importance or rarity. | Local | Negligible | Areas in which investigative techniques have produced negative or minimal evidence of any resource or receptor. |

Visual Effects and Receptors

10.17 Visual effects are concerned wholly with the effect of the development on views, and general visual amenity of people who have (or will have) views of the development. Visual effects may include the following:

- **Visual obstruction:** physical blocking of view;
- **Visual intrusion:** the visual intrusion of the proposed development into an existing view or loss of particular landscape element or features already present in the view; and
- **Cumulative visual effects:** the cumulative or incremental visibility of similar types of development may combine to have cumulative visual effect, this may concern intervisibility where more than one development may be viewed simultaneously from a viewpoint, or occur sequentially where developments may be viewed from a number of differing location, most commonly from a road, rail route or long distance path.

Sensitivity of Visual Receptors

10.18 Based on the Guidelines for Landscape and Visual Impact Assessment (GLVIA), the different receptor categories are ranked in order of their sensitivity to visual effects as set out in Table M6. It should be stressed that this table is indicative only as it would be impossible to rigidly tabulate sensitivity to change.

Nature

10.19 An impact may be adverse, neutral or beneficial in nature. However, as planting proposed as part of mitigation measures matures, the degree to which the nature of the impact is adverse may reduce, or the degree to which it is beneficial may increase. This is termed as reducing adverse or increasing beneficial.

Table M6 Sensitivity of Visual Receptors

| Category | Sensitivity |
|--|-------------|
| Including viewer within nationally designated townscape features (such as the setting of an Area of Outstanding Natural Beauty). Users of such areas are often very aware of the value of views. | Very High |
| Including viewers looking from windows of their own residential properties or recreational viewers using public rights of way or the setting of a Grade II* listed building. | High |
| Including views from people engaged in outdoor sports or recreation. Such users are not wholly focused on the landscape around them. | Medium |
| Including people with cars and on other transport routes. | Low |
| Including people working inside who are not focused on views outside. | Negligible |

Magnitude of Landscape Effects

Table M7 Magnitude of Landscape Effects

10.20 Magnitude of landscape impact is a function of the following factors:

- The nature of the effect; and
- The degree of change to the landscape element, taking into account the proposed mitigation measure
- The overall effect on the landscape receptor can range from degradation to enhancement.

Magnitude of Visual Effects

10.21 Magnitude of visual impact is a function of the following factors:

- The distance from receptor to the source;
- The nature of the effect (obstruction, intrusion, cumulative); and
- The degree of change to the existing view caused by the construction of an intrusive feature or the obstruction or modification of an existing view, taking into account the agreed mitigation measures. The overall effect upon visual amenity can range from degradation to enhancement.

10.22 It is important to note that magnitude is not a judgement on whether the impact is positive or negative.

| Predicted Landscape Effects | Magnitude |
|--|-----------|
| Significant loss of, or major alteration to, key elements/features/characteristics of the landscape or introduction of elements considered to make significant changes within the receiving landscape. | Very High |
| Noticeable loss of, or alteration to, key elements/features/characteristics of the landscape or introduction of elements that may be prominent within the receiving landscape. | High |
| Partial loss of, or some alteration to, key elements/features/characteristics of the landscape or introduction of elements that may be noticeable within the receiving landscape. | Medium |
| Minor loss of, or minor alteration to, key elements/features/characteristics of the landscape or introduction of elements that are barely noticeable within the receiving landscape. | Low |
| No loss of, or alteration to, key elements/features/characteristics of the landscape and no introduction of features. | No Change |

Table M8 Magnitude of Visual Effects

| Predicted Visual Effects | Magnitude |
|--|-----------|
| The proposals become the dominant feature of the scene to which other elements become subordinate and they significantly affect and change its character. A complete change in view. | Very High |
| The proposals may form a visible and recognisable new element within the overall scene and may be readily noticed by the observer or receptor. A significant change in view. | High |
| The proposals are visible within the view and have an effect on the quality of the scene. A noticeable change in view. | Medium |
| The proposals constitute only a minor component of the wider view, which might be missed by the casual observer or receptor. Awareness of the proposals would not have a marked effect on the overall quality of the scene. A barely perceptible change in view. | Low |
| No part of the development is discernible. | No Change |

Landscape Capacity

10.23 The process for undertaking this study involves two stages;-

- Definition of local level landscape character areas.
- Assessment of landscape capacity.

Definition of local level landscape character areas

10.24 Prior to assessment of landscape capacity a review of the areas within the study area was required in order to define boundaries for assessment. These boundaries are called 'Character Areas' and the establishment of these is based on guidance within "Landscape Character Assessment - Guidance for England and Scotland" (Countryside Agency and Scottish Natural Heritage, April 2002).

10.25 Character areas are defined as...'distinct, recognisable and consistent patterns of elements in the landscape that makes that landscape different from another'. Elements and features assessed include a number of different aspects such as the geological pattern, landform, land use, vegetation, ecology, scale and enclosure.

10.26 This characterisation process has already been completed to a district-wide level within the Borough Landscape Character Assessment - June 2001 (BLCA). However the areas within this are considered to be too large for assessment of landscape capacity. Therefore

the character areas within the BLCA were refined in order to produce smaller local-level character areas. This was carried out through desk-top study and on-site assessment using the above guidance.

Assessment of Landscape Capacity

10.27 Landscape Capacity is defined as 'the extent to which a particular area or type of landscape is able to accommodate change without significant effects on character or overall change in landscape type'. Ref - 'Topic Paper 6 - Techniques and criteria for judging capacity and sensitivity' (Countryside Agency and Scottish Natural Heritage, Jan 2004) and illustrates methods for assessing Landscape Capacity.

10.28 The Landscape Capacity is a combination of the sensitivity of the landscape character (both physical/aesthetic and visual) and the value attached to the landscape, and can be expressed as follows;-

10.29 This is adapted from *Figure 1(b): Summary of factors to consider in judging landscape capacity for a particular type of change. Page 5, 'Topic Paper 6 - Techniques and criteria for judging capacity and sensitivity' (Countryside Agency and Scottish Natural Heritage, Jan 2004)*

10.30 Note 1 - In order to provide a consistent assessment, the nature of the type of development that are likely to have an impact on the landscape needs to be defined. For the purposes of this study, it has been agreed that the likely form of development will consist of mainly 2-3 storey residential development with some 4 storey buildings; however, likely numbers of houses and layouts have not been defined but have been assumed to be in range of 35-50 houses per hectare.

10.31 Using this method, the Landscape Sensitivity and Visual Sensitivity of each character area are combined to produce an overall Landscape Character Sensitivity.

10.32 The Landscape Character Sensitivity is then combined with the Landscape Value of the area to produce the overall Landscape Capacity for each character area. The value of the landscape is important in the process as the value attached to certain landscapes will need to be considered in relation to the capacity of the landscape to accept change.

10.33 These aspects and the elements assessed within them can be defined as follows;-

| | | | | |
|---|---|--|---|-----------------|
| Landscape Capacity to accommodate specific type of change | = | Landscape Character Sensitivity Landscape Sensitivity plus Visual Sensitivity | + | Landscape Value |
|---|---|--|---|-----------------|

LANDSCAPE SENSITIVITY

10.34 This is based on judgements about sensitivity of physical and aesthetic elements in the landscape that are most likely to be affected. The level of sensitivity is based ona professional judgement about the degree to which the landscape in question is robust, in that it is able to accommodate change without adverse impacts on its character. This means making decisions about;-

- whether or not significant characteristic elements of the landscape will be liable to loss through disturbance;
- whether or not they could be easily restored and;
- whether important aesthetic aspects of character will be liable to change;
- the consideration of new elements, which may also have a significant influence on character.

10.35 These decisions need clear and consistent thought about three factors;-

- the individual elements that contribute to character; their significance and their vulnerability to change;
- the overall quality and condition of the landscape in terms of it's intactness; representation of typical character and condition; and
- the aesthetic aspects of landscape character – including scale; enclosure, diversity, form, colour,

line pattern and texture. These elements may have significance for judgements about sensitivity and are different from the perceptual aspects of landscape character which are much more subjective.

(Page 5-6, Topic Paper 6 - Techniques and Criteria for Judging Capacity and Sensitivity' (Countryside Agency and Scottish Natural Heritage, Jan 2004).

10.36 Assessment of these will help to measure the endurance of the landscape character representing the likelihood of change in relation to the degree to which the landscape is able to tolerate change.

10.37 The aspects most likely to be affected and illustrations as to how the level of sensitivity are assessed is based on the following;-

Natural Factors

10.38 Vegetation – the nature and extent of woodland and hedgerows will have different sensitivities (e.g. an area with a strong and extensive hedgerow structure will be more sensitive to change than a landscape with few hedges; natural woodland may be more sensitive than a plantation).

10.39 Extent and pattern of semi-natural habitat – presence, size and dispersal of seminatural habitats. There are areas which have greater sensitivity due to the nature of habitats (e.g. species rich grassland will be more sensitive than areas in continued arable crop

production).

10.40 Landform and drainage – presence of water courses, distinctive features (valleys, scarps etc), slopes and elevation all contribute to the sensitivity of the landscape (e.g. features such as prominent slopes, ridges and river valleys would be more sensitive to development than flat landscapes.

Cultural factors

10.41 Land use/function of the area – the nature of land use, the level of scarcity and resilience to change will all have a level of sensitivity attached (e.g. an area of woodland would be more sensitive to change than area of urban fringe activities such as paddocks)

10.42 Settlement Patterns – nature and extent of settlement patterns, would they be sensitive to change (e.g. sprawling urban fringe may be less sensitive to change than a clear town/country divide)

10.43 Historical features – the presence of historical features adds to the sensitivity because of the need to preserve their integrity. Features such as historical parks, Scheduled Ancient Monuments (SAM), Roman roads and scarce/uncommon historical landscape types. The level of sensitivity will depend on their presence, nature and extent.

Landscape quality and condition

- 10.44 Representation of typical character – this will indicate how similar the area is to the landscape character area within which it exists, how many of the typical features it exhibits.
- 10.45 Intactness – this indicates how well the landscape has survived over a period of time and whether significant features have been lost (e.g. hedges, woods).
- 10.46 State of repair – this assesses how well the landscape is looked after and whether elements such as hedges have been managed consistently.

Aesthetic Factors

- 10.47 The aesthetic value of the character areas includes an assessment of sensitivity of the following elements – scale, enclosure, diversity, texture, form, pattern and prominence of skyline. (e.g. areas which are small scale; open character; display a greater level of unity rather than fragmentation; possess a number of local visual horizons could all have a greater level of sensitivity).

VISUAL SENSITIVITY

- 10.48 The study will also take account of the visual sensitivity of the landscape and consideration as to the way people see the landscape. This depends on; -

General Visibility

- 10.49 This considers the level of visibility (or intervisibility)

in the area, based on the nature of the landform and vegetation cover. Landscapes with higher levels of intervisibility are more sensitive to change.

- 10.50 This will also consider any key views and the contribution the area makes to the visual setting of an area (including visual links to the wider landscape). Areas containing wider panoramas across areas of countryside will be more sensitive.

Population

- 10.51 This element will consider the number (magnitude) of people likely to perceive change in the landscape. The higher the number of people then the greater the level of magnitude.
- 10.52 The purpose of viewers being within an area (sensitivity) is considered, as the nature of activity will have a bearing on how visually sensitive the landscape is (e.g. residential and recreational pursuits (e.g. walking) are considered to be more sensitive than transient views of people travelling through or where there are views from workplaces).

Mitigation Potential

- 10.53 This aspect considers the likelihood of change being mitigated, without the mitigation measures themselves having an adverse effect (for example, planting trees to screen a development in a large-scale open landscape could have as great an impact as the development itself). The level of sensitivity

relates to how appropriate mitigation may be in an area, for example, in an area where mitigation is more appropriate the sensitivity would be lower.

LANDSCAPE VALUE

- 10.54 The value of the landscape is an important element in assessing the overall landscape capacity of an area. These are more subjective, experiential or perceptual aspects that can also reflect the local value of a landscape to a community and includes both designated and non-designated elements. These include; -

Designations

- 10.55 The value of a landscape can be recorded by some form of formal designation – from national down to local level. The nature, number and extent of the designation may also indicate the level of sensitivity of the landscape to change – whether physical, visual or historical and is recorded within the assessment as such.

Perceptual Aspects

- 10.56 The perceptual value of character areas need to be considered within the assessment. The tranquillity of an area can be defined by the extent of noise sources within an area; the absence of views of development and the absence of human activity. The scenic beauty of an area is the subjective value given to an area

Matrix M1 Calculation of Significance of Effects

Sensitivity of Receptors lies along a continuum from very high to very low, depending on where the view is from (the status of that place) and the activities of the viewer at that location

| | Very High including viewers within nationally designated townscape features, (such as the setting of and Area of Outstanding Natural Beauty). Users of such areas are often very aware of the value of views | High Including viewers looking from windows of their own residential properties or recreational viewers using public rights of way or the setting of a Grade II* listed building. | Medium Including views from people engaged in outdoor sports or recreation. Such users are not wholly focused on the landscape around them. | Low Including people within cars and on other transport routes. | Very Low Including people working inside who are not focused on views outside. |
|---|---|--|--|--|---|
| Magnitude of effect lies along a continuum from severe to none with an overlap between each defined category. This will depend on the amount of view affected, the number of viewers affected and the duration of the effect | Severe A complete change in the view | Major | Major | Moderate | Moderate |
| | Major | | Moderate | | Minor |
| | Major A significant change in the view | Major | Moderate | Moderate | Minor |
| | Moderate | Moderate | | Minor | |
| | Moderate A noticeable change in the view | Moderate | Moderate | Minor | Minor |
| | Minor | | Minor | | Negligible |
| | Minor A perceptible change in the view | Moderate | Minor | Minor | Negligible |
| | Negligible | Minor | | Negligible | |
| | Negligible A barely perceptible change in the view | Negligible | Negligible | Negligible | Negligible |
| | None No change | Negligible | Negligible | Negligible | Negligible |
| | None | None | None | None | None |

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