



Deal Farm, Bressingham

Landscape and Visual Appraisal

May 2022

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1. Introduction

- 1.1 This Landscape and Visual Appraisal has been prepared to accompany proposals for the construction of an anaerobic digestion facility at Deal Farm, Bressingham.

Purposes of the Document

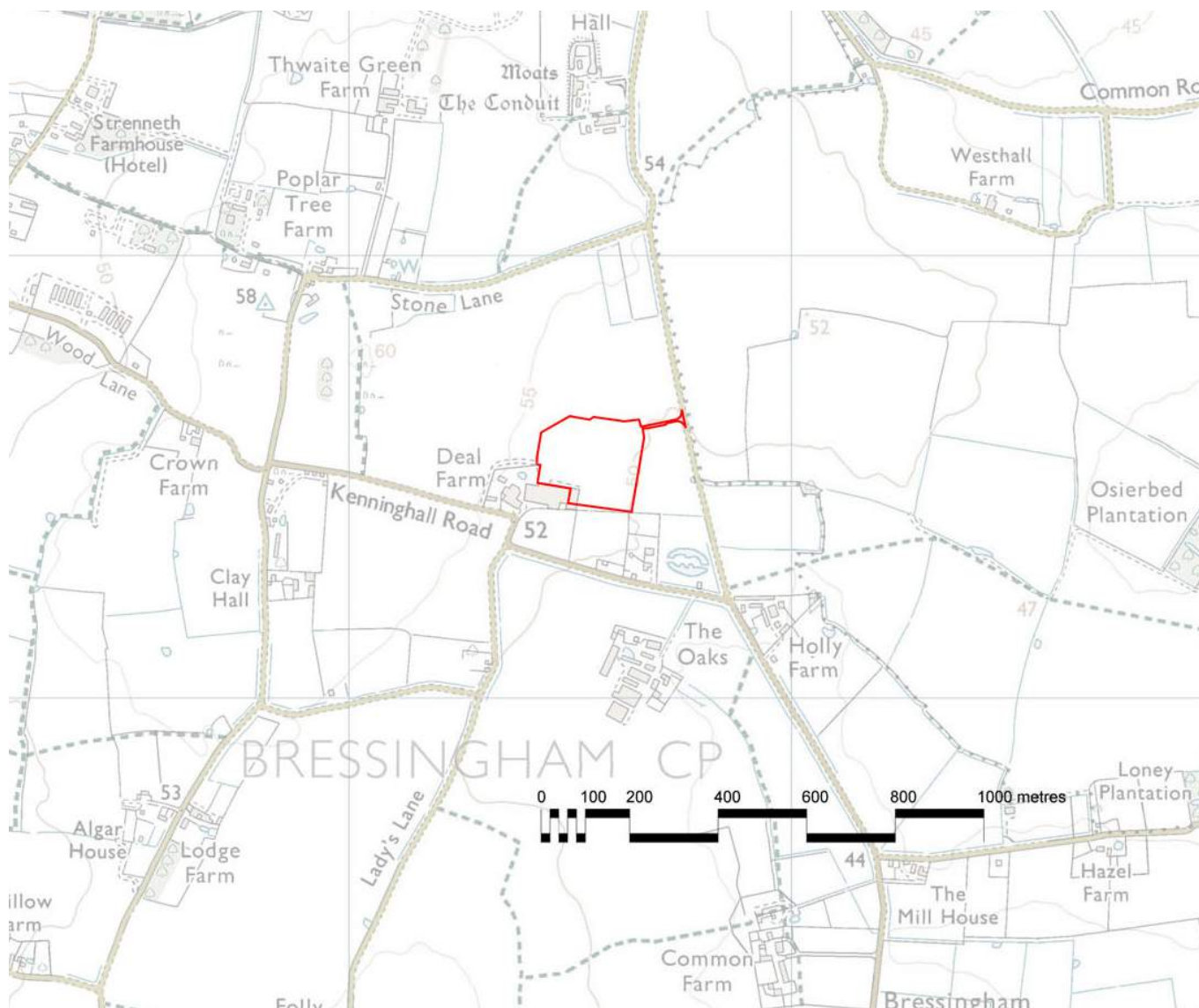
- 1.2 The purpose of this document is to review the landscape and visual character of the site environs and to determine the impacts of the development on the site, with particular reference to the previously approved planning permission 2015/ 0595.
- 1.3 This report is structured as follows:

Context

- 1.4 This section assesses, firstly the wider regional landscape context of the site, and, secondly, the local baseline landscape context which has a bearing on the capacity of the site to accommodate the development. These baseline factors include such elements as the local topography, hydrology, land use, field boundaries, settlement pattern and historic landscape features. These baseline features were analysed on the basis of a combination of desktop research and field walking and visual survey.

Site appraisal

- 1.5 This section assesses the landscape and visual impacts



Deal Farm - Location

of site operations, 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.

Conclusions

- 1.6 This section summarises the broader landscape context and assesses the impacts of the proposed development and associated activity on the site and provide landscape mitigation and enhancement proposals.
- 1.7 This landscape and visual appraisal 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 October 2021.

**This report has been prepared by Luke Broom-Lynne
CMLI MRTPI, Chartered Member of the Landscape
Institute and the Royal Town Planning Institute.**



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 Major recent projects have included

- University of East Anglia – Landscape Strategy
- Bewilderwood, Tatton Park and Hoveton – LVIA and Landscape Strategy
- Pembroke, North Weald AONB and Essex Coast - LVIA for new solar farms

- Future Biogas – LVIA and landscape strategy for various power plants in Lincolnshire, Staffordshire, 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

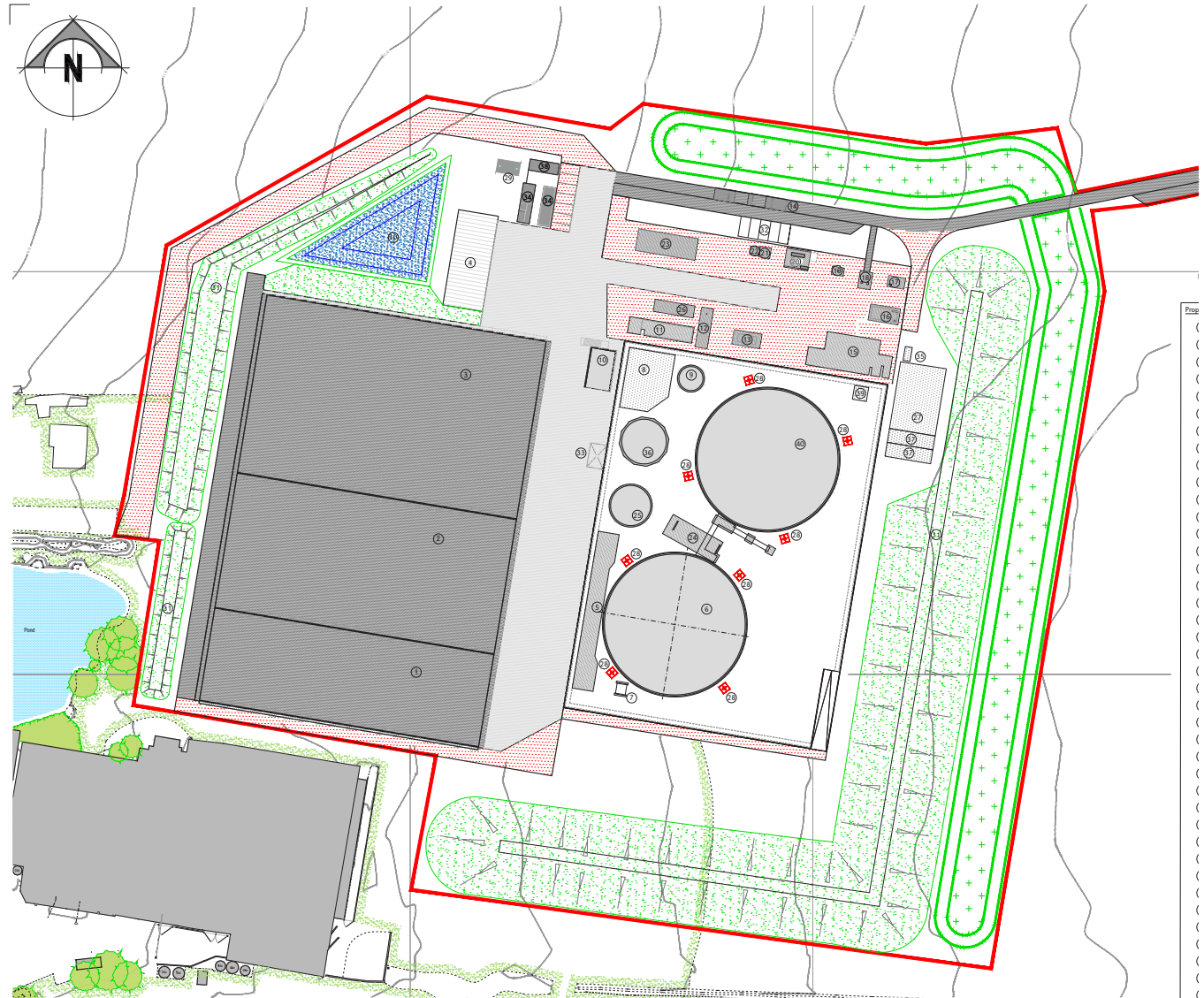
2.5 I believe that my submission complies with the requirements of the Codes of Professional Conduct of the Royal Town Planning Institute and the Landscape Institute.

3. Site Proposals

- 3.1 Planning permission was originally granted by notice dated 22nd October 2015 (ref. 2015/0595) for the construction of an anaerobic digestion plant.
- 3.2 The current application is for the construction of an Anaerobic Digestion facility (part retrospective), comprising:
- 1 no. digester tank and 1 no. secondary digester/ digestate storage tank, silage clamps;
 - liquid and dry feed system;
 - digestate separation, handling and pasteurization;
 - biogas upgrading and mains gas-grid connection;
 - carbon capture;
 - CHP;
 - agricultural building;
 - office buildings;
 - weighbridge;
 - 2 no. covered digestate storage lagoons;
 - and associated plant, vehicular accesses, roads and landscaping (including earth bunds)



Aerial view of existing site



Proposed Plant Key

- ① Rye Silage Clamp (23.50m x 70.00m)
- ② Grass Silage Clamp (34.00m x 70.00m)
- ③ Maize Silage Clamp (45.00m x 70.00m)
- ④ Manure Store
- ⑤ Feeding Unit (2No.)
- ⑥ Digester (36.00mØ)
- ⑦ Oxygen Generator
- ⑧ Hygienisation
- ⑨ Feeding Tank Separator
- ⑩ Separation Unit
- ⑪ CHP
- ⑫ Biogas Boiler
- ⑬ Flare
- ⑭ Weighbridge
- ⑮ Gas To Grid
- ⑯ GEU
- ⑰ Biomethane Compressor
- ⑱ ROV
- ⑲ PRS Skid
- ⑳ LV Distribution Board
- ㉑ Substation
- ㉒ Transformer
- ㉓ Propane Tanks
- ㉔ Pump Unit & Electric Container
- ㉕ Preliminary Pit
- ㉖ Biogas Treatment
- ㉗ CO2 Recovery Building
- ㉘ Lightning Conductors (8No.)
- ㉙ Below Ground Leachate Tank
- ㉚ Lined Fire Water Holding Lagoon
- ㉛ Topsoil Bund (3No.)
- ㉜ Car Park (5 No. Spaces)
- ㉝ Filling Station
- ㉞ Site Office/Facilities (2no. 32ft x 10ft)
- ㉟ CO2 Delivery System
- ㊱ Buffer Tank
- ㊲ CO2 Storage Tank (2No.)
- ㊳ Sample Store (24ft x 9ft)
- ㊴ Water Cooling System
- ㊵ Secondary Digester & Digestate Store (36.00mØ)

Plan view of proposals

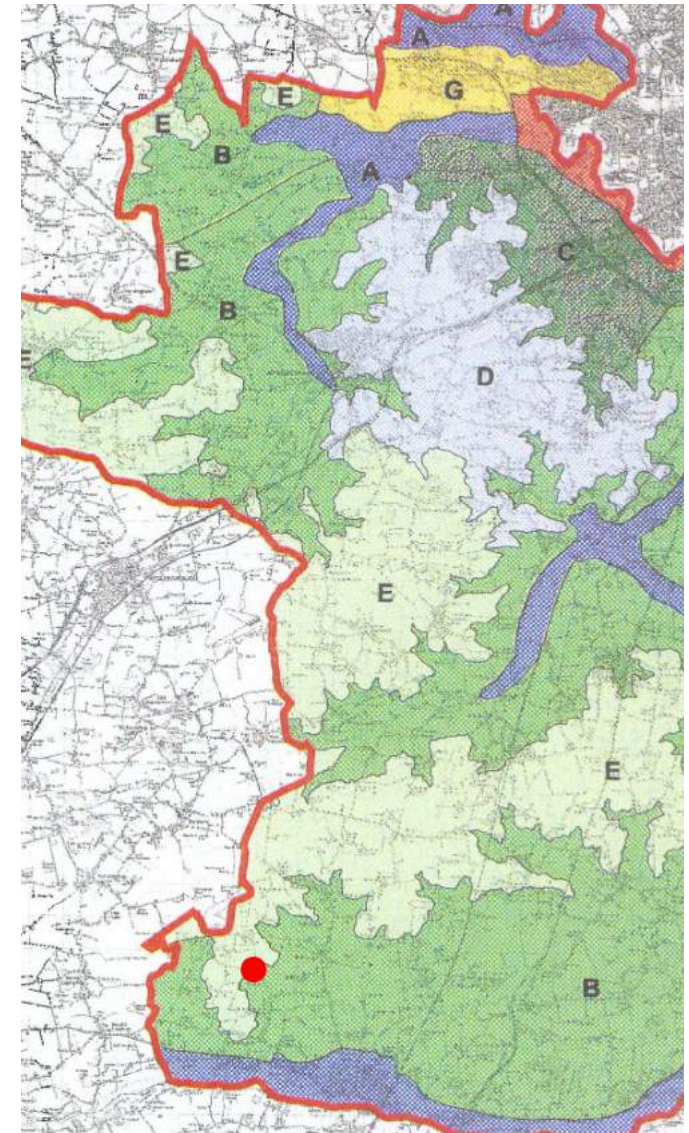
4. Landscape Planning Issues

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 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



Extract from the South Norfolk Landscape Character Assessment

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

local landscape;

- Policy DM 3.13 Amenity, noise and quality of life**

4.11 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

- 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.

4.9 Planning permission will be granted for development that has been designed to, where relevant to the proposed development:

- respect adjoining structures, spaces, routes and

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- Policy DM 4.5 Landscape Character and River Valleys**
- 4.13 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**
- 4.14 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**
- 4.15 Where appropriate, detailed development proposals must demonstrate a high quality of landscape design, implementation and management as an integral part of the new development.
- 4.16 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

- 4.17 An understanding of the landscape context of the site is fundamental, and specific reference is made to the South Norfolk Landscape Character Assessment.
- 4.18 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**
- 4.19 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.
 - 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

- 4.20 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

4.21 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

4.22 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

4.23 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.

4.24 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

4.25 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

4.26 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.

4.27 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

4.28 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:

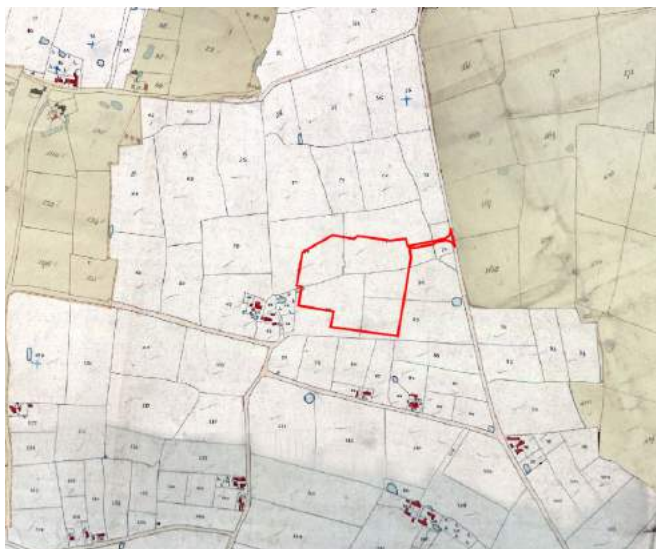
- conserve the rural peaceful character, with the pattern of small villages and settlements set within the agricultural landscape, but not dominating it;
- conserve the character and individual identity of the villages either set around greens or loosely following roads. Infilling or extension of settlements 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 Character

- 5.1 Analysis of historic mapping shows how the landscape of this area has developed, primarily in the second half of the 20th Century.
- 5.2 The earliest accurate mapping, dating from the 1840s Tithe maps, shows the area as agricultural land with a patchwork of small, largely rectangular, fields. Deal Farmhouse was clearly present here at this time, along with a number of ancillary buildings. Other individual farmsteads were scattered in the area, such as The Oaks and Holly Farm to the south and east.
- 5.3 The First Series Ordnance Survey mapping of around 1890 shows much the same layout with a little more details, such as scattered field boundary trees. The application site itself was at this time part of a group of three separate fields.
- 5.4 By the time of the 1946 aerial photographs, much of the original field boundaries remain, although some fields in the general vicinity have been amalgamated. Some of the boundary trees still remain, although it does appear that there was a relatively low density of boundary trees in the area compared with other parts of South Norfolk.
- 5.5 During the latter part of the twentieth century, the agricultural landscape became radically cleared of hedgerows and trees. Around the application site, what were originally 10-12 small fields became one



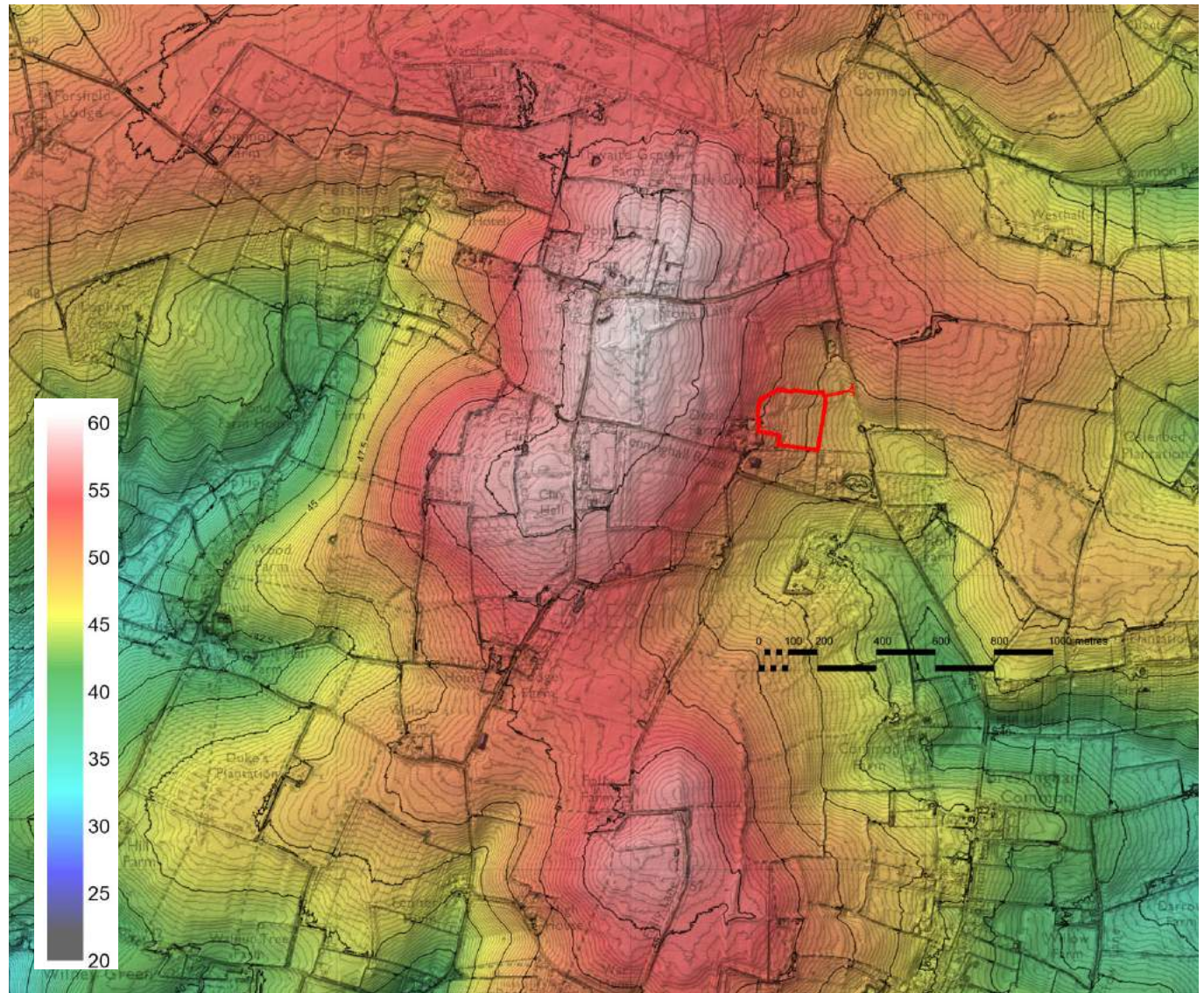
Site Location. Top: 1840. Bottom 1946



Top: 1890. Bottom: 1988

large arable field. The wider landscape has developed a much more industrial arable character. Blocks of trees and isolated boundary trees still remain, however, and are important features in the somewhat denuded landscape.

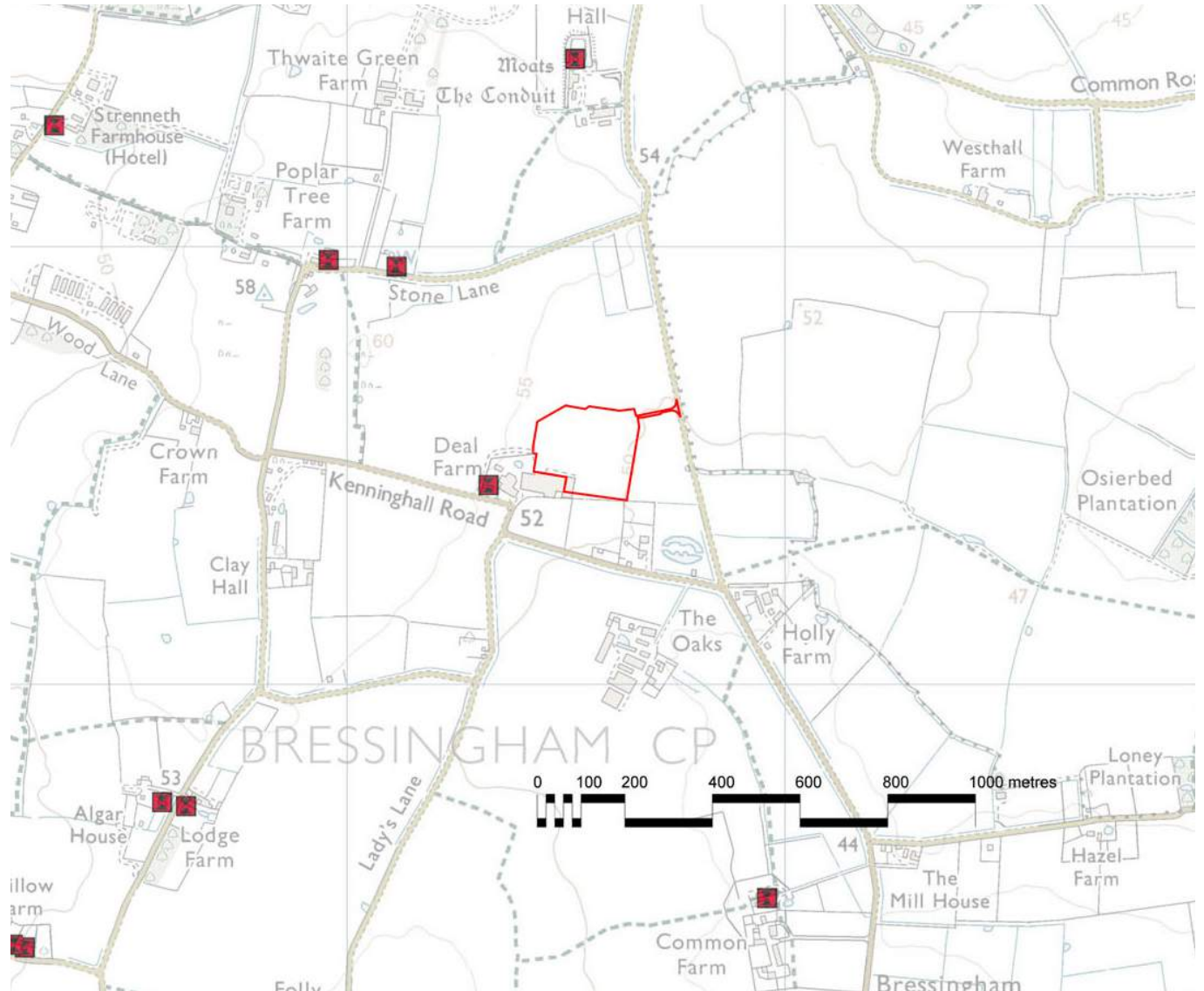
- 5.6 The topographical map here shows that the site is located on the eastern side of an area of higher land which reaches an elevation of around 60 metres around one kilometre west of the site on Stone Lane. Here, there are established hedgerows and blocks of trees which limit views somewhat for viewers at eye level. The site itself ranges from around 53 metres Above Ordnance Datum in the west, to around 47 metres in the east.
- 5.7 The ridges of land to the west and north of the site creates screening on the site from this direction.
- 5.8 The landscape can be defined as ordinary quality landscape according to general criteria: *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.*



Local topography

6. Statutory Designations

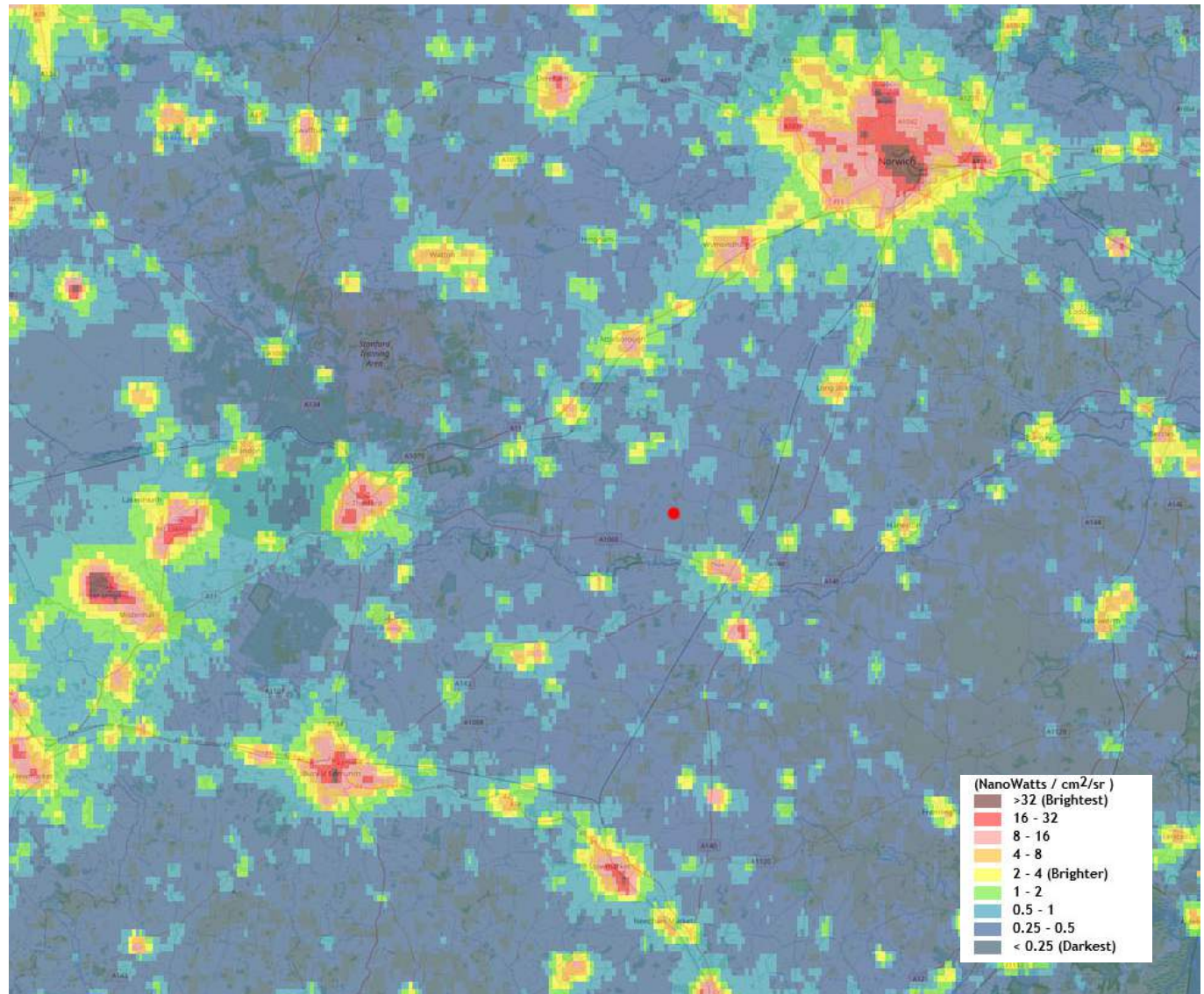
- 6.1 The site is not directly covered by any statutory designations.
- 6.2 There are, however, a number of Grade II listed buildings in the vicinity. Notably, Deal Farmhouse itself, adjacent to the site, is listed as a c. 17th century timber-framed house. It is located immediately adjacent to the existing pig farm which partly obscures views of the AD Plant and, in consultation with the Council's heritage officer, additional tree planting is proposed immediately east of the pond to further screen the plant from the property.
- 6.3 It is heavily influenced by the existing farm activities and its setting would also have been affected by the original planning permission. The heritage officer in their response to the S73 application noted that it would have been "more" impacted on by the original permission and the new application moves the AD tank/ dome features further away and further behind the existing pig sheds.



Grade II Listed buildings

7. Light Spillage

- 7.1 The Campaign to Protect Rural England (CPRE) has long fought for the protection and improvement of dark skies, and against the spread of unnecessary artificial light. CPRE recommends that 'developers should ensure new developments have well designed lighting schemes that do not cause light pollution.' Apart from the impact on people's experience of the countryside, there is an increasing awareness of the effect that light pollution can have on wildlife, by interrupting natural rhythms including migration, reproduction and feeding patterns. Furthermore a 2010 survey by CPRE found that light pollution can cause a great deal of distress to humans too, including disrupted sleep. Advances in lighting technology mean that upward light pollution can be minimised without compromising road safety or increasing crime.
- 7.2 It is noted that Deal Farm is located within an area of notably dark skies, with the primary lighting element in the area being the Deal Farm complex itself.
- 7.3 National Planning Policy Framework acknowledges the importance of dark skies and states that planning policies and decisions should ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should *limit*



CPRE Light Pollution and Dark Skies map

the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

- 7.4 South Norfolk Council's Policy IMP 25 – (Outdoor lighting) states that outdoor lighting schemes will be expected to demonstrate that: i) The proposed lighting is the minimum required for security or working purposes, ii) Light spillage and glare are minimised, particularly in areas of open countryside or on the edge of settlements and, iii) There is no detrimental impact on residential amenity, highway safety or to sites of nature conservation value.
- 7.5 In order to minimise light pollution, it is therefore recommend that external lighting should kept to the absolute minimum and that any outdoor lights associated with this proposed development should be:
- fully shielded (enclosed in full cut-off flat glass fitments);
 - directed downwards (mounted horizontally to the ground and not tilted upwards);
 - switched on only when needed (no dusk to dawn lamps);
 - white light low-energy lamps (LED) and not orange or pink sodium sources.



CPRE Light Pollution and Dark Skies map

8. Visualisation

8.1 To aid the assessment, a 3-dimensional model of the existing and original proposals was prepared, and indicative visualisations of the site in context were superimposed over site photographs. In accordance with good practice, the images :

- are intended to be reproduced at a size and level of geometric accuracy to permit impact assessment, which must include inspection at the location where the photograph was taken;
- are based on a replicable, transparent and structured process, so that the accuracy of the representation can be verified, and trust established;
- use techniques, with appropriate explanation, that in the opinion of the landscape professional best represent the scheme under consideration and its proposed environment accurately as possible;
- are easily understood, and usable by members of the public and those with a non-technical background;
- are based on a good quality photographic image taken in representative weather conditions

Camera

8.2 The original photograph was taken using a Canon 6d Digital Single Lens Reflex camera, The lens was set at a focal length of 50mm, which when stitched together

into a panorama are considered to provide a view as close to the perception of human vision as possible. The original images were saved in both JPEG and RAW format.

Position

8.3 The location of the photograph was selected as providing the most useful indication of the proposals from within the selected significant vantage points, and the precise co-ordinates of the photograph was obtained using GPS.

Image processing

8.4 The image was processed using Adobe Photoshop, with the minimum amount of manipulation, apart from adjustments of brightness and contrast to enhance the appearance of the photographs. The panoramic photograph was stitched using the photomerge command. The precise field of view of the finished panorama was determined by cross-referencing with digital mapping.

Modelling

8.5 A model of the indicative proposals was created using Autocad and the 3-dimensional modelling software Sketchup.

8.6 A view of the model was created, using a viewpoint at the precise co-ordinates of the panoramic photograph.

8.7 The view was then superimposed onto the panorama and scaled by using existing features as reference points. It is considered that this technique provides an acceptably realistic representation of the form of the buildings in relation to their setting.



View of digital model used in the visualisations

Top: Original proposals. Bottom: Current scheme

9. Visual Assessment

- 9.1 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.
- 9.2 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

This is the view westwards from a location close to Common Road, approximately 270 metres from the closest dome, although the direct view from the road is largely screened by roadside hedgerow, and new hedgerow and tree planting will further reduce its impact and enhance the local landscape structure. The new bund surrounding the site has greened over effectively, and screens all lower-level activity on the site. The upper parts of the two new domes are noticeable at this close location, particularly on days when the light grey structures are sunlit against a blue sky, although the screening of activity at ground level greatly reduces any visual impacts here. On duller days, the impact is considerably lower. Comparison of the current scheme and the original is visualised on the next two pages. The original proposals would have the domes set further into the site, and thus less prominent from this location, but still a significant feature in the landscape.

Camera:
Canon 6d Full Frame DSLR
Lens: 50mm focal length
Height: 1.70 metres
Field of view: 80°

Location:
52.4086°N, 1.068757°E, 47.14m
TM0882683385
608826, 283385

Viewpoint 1 - Location





Viewpoint 1

Top: Existing view. Bottom: Proposed view of original proposals (ref. 2015/0595)



Viewpoint 2

View south-southwest from Common Road, approximately 190 metres from the closest dome, at the entrance to the site. The field is particularly open at this location, with no boundary hedgerow. The existing bunding effectively screens ground-level vehicular activity, with the new domes forming a simple bold feature in the landscape. Although prominent at this close location, and a clear day with light grey domes against the blue sky, it sits visually within the existing complex of farm buildings and other activity. Mitigation, in the form of boundary and roadside hedgerow and tree planting, will provide long-term screening and enhancement of the landscape structure. The new hedgerow would effectively screen much of the site for travellers along Common Road. Comparison of the current scheme and the original is visualised on the next two pages. The original proposals would have the domes set further into the site, and thus less prominent from this location, but still a significant feature in the landscape, with the silage clamps prominent in the foreground.

Camera:
Canon 6d Full Frame DSLR
Lens: 50mm focal length
Height: 1.70 metres
Field of view: 80°

Location:
52.410942°N, 1.06809°E, 49.64m,
TM0877083644
608770, 283644

Viewpoint 2 - Location





Viewpoint 2

Top: Existing view. Bottom: Proposed view of original proposals (ref. 2015/0595)



Viewpoint 3

View south-southwest from Common Road, similar to the previous viewpoint, approximately 243 metres from the closest dome, at the entrance to the site. The field is particularly open at this location, with no boundary hedgerow. The existing bunding effectively screens ground-level vehicular activity, with the new domes forming a simple static feature in the landscape. Although prominent at this close location, it sits visually within the existing complex of farm buildings and other activity. Mitigation, in the form of boundary hedgerow and tree planting, will provide long-term screening and enhancement of the landscape structure, largely screening the development for travellers on Common Road. Comparison of the current scheme and the original is visualised on the next two pages. The original proposal would be a significant feature albeit set slightly further back to the west, and thus less prominent from this location, but still a significant feature in the landscape, obscuring the existing farm structures and with the silage clamps being visually prominent in the foreground.

Camera:
Canon 6d Full Frame DSLR
Lens: 50mm focal length
Height: 1.70 metres
Field of view: 80°

Location:
52.414752°N, 1.0668289°E, 54.25m,
TM 0866684064
608666 , 284064

Viewpoint 3 - Location





Viewpoint 3

Top: Existing view. Bottom: Proposed view of original proposals (ref. 2015/0595)



Viewpoint 4

View southwards from higher land at the junction of Stone Lane and Common Road, approximately 500 metres from the site. The farm complex is prominent in the middle distance, and the new domes are prominent, extending above the skyline and creating a bold feature amongst the more traditional farm buildings. Mitigation, in the form of boundary hedgerow and tree planting, will provide some long-term screening and enhancement of the landscape structure. This view, captured on a dull day, demonstrates the considerably reduced visual impact, with the simple light grey domes blending in with the similar-toned sky. Comparison of the current scheme and the original is visualised on the next two pages. The original proposals would have three domes, rather than two, domes set further to the west, and would have been an equally significant feature in the landscape.

Camera:
Canon 6d Full Frame DSLR
Lens: 50mm focal length
Height: 1.70 metres
Field of view: 80°

Location:
52.413679°N, 1.0597482°E, 58.5m,
TM 0866684064
608666 , 284064

Viewpoint 4 - Location





Viewpoint 4

Top: Existing view. Bottom: Existing view including the position of the original proposals (ref. 2015/0595) for comparison



Viewpoint 5

View south-eastwards from higher land on Stone Lane and Common Road, approximately 500 metres from the site. The farm complex is prominent in the middle distance, and the new domes are prominent, extending partially above the skyline and creating a bold feature amongst the more traditional farm buildings. However, this view demonstrates how the simple lines and plain light grey finish of the domes helps them blend in against the grey sky. Comparison of the current scheme and the original is visualised on the next two pages. The original proposals would have three domes, rather than two, domes set further to the west, and likely to be of equal or greater significance in the landscape.

Camera:
Canon 6d Full Frame DSLR
Lens: 50mm focal length
Height: 1.70 metres
Field of view: 80°

Location:
52.413679°N, 1.0597482°E, 58.5m,
TM 0819083924
608190, 283924

Viewpoint 5 - Location





Viewpoint 5

Top: Existing view. Bottom: Existing view including the position of the original proposals (ref. 2015/0595) for comparison



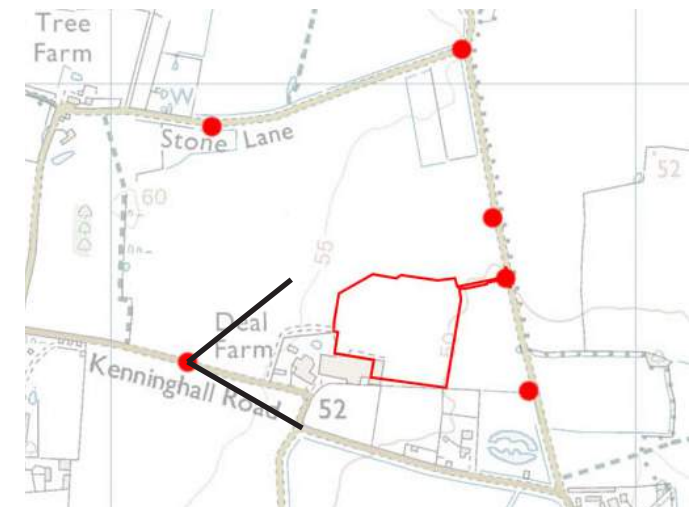
Viewpoint 6

View eastwards from Kenninghall Road, approximately 300 metres west of the site. The field is particularly open at this location, with no boundary hedgerow. The new domes are noticeable behind and above the existing buildings of Deal Farm. It is worth noting how the light grey domes become a recessive feature on an overcast day such as this photograph demonstrates. Although noticeable at this close location, the original proposals would have had a greater impact from this location, being closer and having 3 domes, rather than 2. Mitigation, in the form of boundary and roadside hedgerow and tree planting, will provide long-term screening and enhancement of the landscape structure. Comparison of the current scheme and the original is visualised on the next two pages.

Camera:
Canon 6d Full Frame DSLR
Lens: 50mm focal length
Height: 1.70 metres
Field of view: 80°

Location:
52.409565°N, 1.0592171°E, 57.0m,
TM 0817383465
608173, 283465

Viewpoint 6 - Location





Viewpoint 6

Top: Existing view. Bottom: Existing view including the position of the original proposals (ref. 2015/0595) for comparison

10. Summary

- 10.1 An appraisal was undertaken to determine the potential landscape and visual impacts of proposed redevelopment at Deal Farm, Bressingham.
- 10.2 The aim of the appraisal was to determine the impacts on both the local environment and also the wider landscape character, with particular reference to the South Norfolk Landscape Character Assessment, in relation to the scheme already approved (2015/0595)
- 10.3 Deal Farm is located in a gentle valley, within a somewhat open and denuded landscape of large arable fields and fragmented hedgerow and boundary trees. There are thus expansive views from the higher land.
- 10.4 When crop height permits, there are views toward Deal Farm from Stone Lane to the north, from where the farm complex presents itself as a typical sprawling farm complex of barns, silos and older residential farmhouse buildings. The new development is an integral part of this complex. The two domes are substantial and their clean bold lines and light grey finish can stand out in the landscape. However, the impact is very weather-dependent, with them being much more recessive when seen against an overcast sky.
- 10.5 Despite the general openness of the landscape, the overall topography and local screening by trees, hedgerow and other features results in the site being better screened from viewers further north than

Stone Lane, and from viewers to the south. Extensive trees around Villa Farm adjacent to the proposed development provide a significant screen. From this direction, the development is also seen behind the existing farm complex, thus visually appearing as an integral part of that farm complex.

- 10.6 The site is most noticeable from Common Road, when in close proximity owing to the lack of hedgerow (which shall be mitigated by planting of trees and hedgerow) - however, even here it is seen as part of the existing pole barn, piggery and farm complex, with any ground level activity screened by the new earth bund.
- 10.7 Whilst the development is a prominent feature it is similar in character to the scheme already approved, which itself would have been a very imposing feature in the landscape for the same reasons. It is also important to note that the original tanks would also have required tall lightning poles similar to those on the current scheme, even though they were not shown on the original planning application plans.
- 10.8 It is prominent for viewers to the east and north-east and in close proximity, and of greater visual impact than the original approved scheme from this direction. However, it is considered that the impact from more western viewpoints is comparable to, or lower than, the original proposals. The current scheme has thus transferred the greatest impact from west to east, as well as reducing the impact on the listed building.

10.9 Landscape mitigation, involving field and roadside tree and hedgerow planting, will provide longer-term landscape structure and ameliorate the impact of the proposals. As discussed, the landscape has become very fragmented, with most historic hedgerows and boundary trees having been lost in past decades.

- 10.10 In view of the relative lack of lighting in the area and the consequent dark night skies here, it is therefore recommend that external lighting should be kept to the absolute minimum and that any outdoor lights associated with this proposed development should be (in accordance with CPRE recommendations):
- fully shielded (enclosed in full cut-off flat glass fittings);
 - directed downwards (mounted horizontally to the ground and not tilted upwards);
 - switched on only when needed (no dusk to dawn lamps);
 - white light low-energy lamps (LED) and not orange or pink sodium sources.
- 10.11 In terms of summarising the potential impacts on the key landscape and townscape elements of this area, these are set out in the table on the following page. The impact has been coded in three levels:
- Red: Potential negative impacts for which it might not be possible to completely mitigate
 - Amber: Potential impacts which could be mitigated by sensitive design
 - Green: Positive or no noticeable impacts

LCA Development Considerations	Impact of proposed development
Consider potential effects of potential large-scale developments (for example relating to airfield sites); Any development in the area must respect the character of the Great Moulton Plateau Farmland Character Area; maintain the essentially open, unsettled character	The site is located within a valley and amongst existing farm development, having limited impact on open views. Activity is consistent with agricultural usage and farm diversification
Conserve the Great Moulton Plateau Farmland with its expansive skies, created by its elevated landform, dominance of arable farming and lack of settlement strong sense of openness, long views and expansive skies and open views, particularly from the edge of the plateau	The site is located within a valley and amongst existing farm development, having limited impact on open views. Activity is consistent with agricultural usage and farm diversification
Conserve mature hedgerow oaks and hedgerow boundaries where they remain	No impact on any hedgerow or trees. Landscape mitigation will enhance these assets
Amenity, noise and quality of life: Minimising artificial light	Ensure that lighting is kept to a minimum and accords with CPRE advice
Consider opportunities to reinstate hedgerows where they have been lost, and particularly along roadsides	Landscape mitigation includes landscaping which will enhance these assets
Consider impact on key views from adjoining character areas.	The site is set at a relatively low elevation, with higher land to the west and north, providing some screening.
Impact on designated heritage elements: listed buildings, ancient monuments, etc.	Potential impact on listed Deal Farmhouse nearby. Setting is already affected by existing farm activity, and current proposal has a lower impact than the original. Further mitigation comprising tree planting is proposed.
Impact on public rights of way	No impact on such assets
Impact on neighbouring residential amenity	Light grey dome selected to better fit into the skyline. Extensive new hedgerow and tree planting will obscure views of the plant

11. Mitigation

- 11.1 Landscape mitigation proposals are detailed on the following page.
- 11.2 In line with the recommendations of the South Norfolk Landscape Character Assessment, the primary aim of the proposals are to provide significant new hedgerow and trees to ameliorate the impact of the new development and also to reinstate some of the landscape structure which has been lost in the past century.
- 11.3 Thus, the following lengths of hedgerow and trees are proposed:
- 775 metres along Kenninghall Road and around the northern perimeter of the site;
 - 293 metres along the foot of the bunding on the eastern part of the site;
 - 454 metres along Common Road to the east of the site;
 - Additional tree planting of English Oak and Wild Service Tree North-east of Deal Farmhouse to provide long-term screening and enhancement to the landscape setting of the listed farmhouse.



Standard hedgerow mix

Following species planted in double staggered rows, 500mm between rows and 500mm between plants in the rows. Protected with mulch mats and 75cm Tubex tree shelters. All to be 45-60cm bare-rooted 3-year transplants, except for the holly which should be 3L pot-grown specimens.

50%	300no.	Crataegus monogyna	Hawthorn
7.5%	450no.	Prunus spinosa	Blackthorn
15%	900no.	Acer campestre	Field Maple
10%	400no.	Corylus avellana	Hazel
5%	300no.	Ilex aquifolium	Holly
7.5%	450no.	Malus sylvestris	Wild Apple
5%	300no.	Euonymus europaeus	Spindle



Hedgerow trees

Trees planted within the hedgerow at average 25 metre spacing, and allowed to grow untrimmed above the hedgerow. To be 60-90m whips, protected with Tubex tree shelters

33 no.	Quercus robur	English Oak
20 no.	Sorbus terminalis	Wild Service Tree

Instructions

Carry out work between 1 November and 31 March.

Prepare the ground along a 1.5m wide strip to provide good soil conditions and as little competition from other vegetation as possible.

Apply any herbicide to the 1.5m strip in the August or September prior to planting only.

Plants must be kept clear of weeds until they are established.

Remove individual guards and tree shelters once the plants are established.

Replace all failures in the following planting season.

Trim the newly planted hedge in at least the first 2 years to encourage bushy growth, allowing the hedge to become taller and wider at each cut.

Prevent livestock and grazing animals from damaging the hedge by setting fencing at least 1.2m from the centre of the hedge, or, if there is a bank, as close to the base of the bank as possible



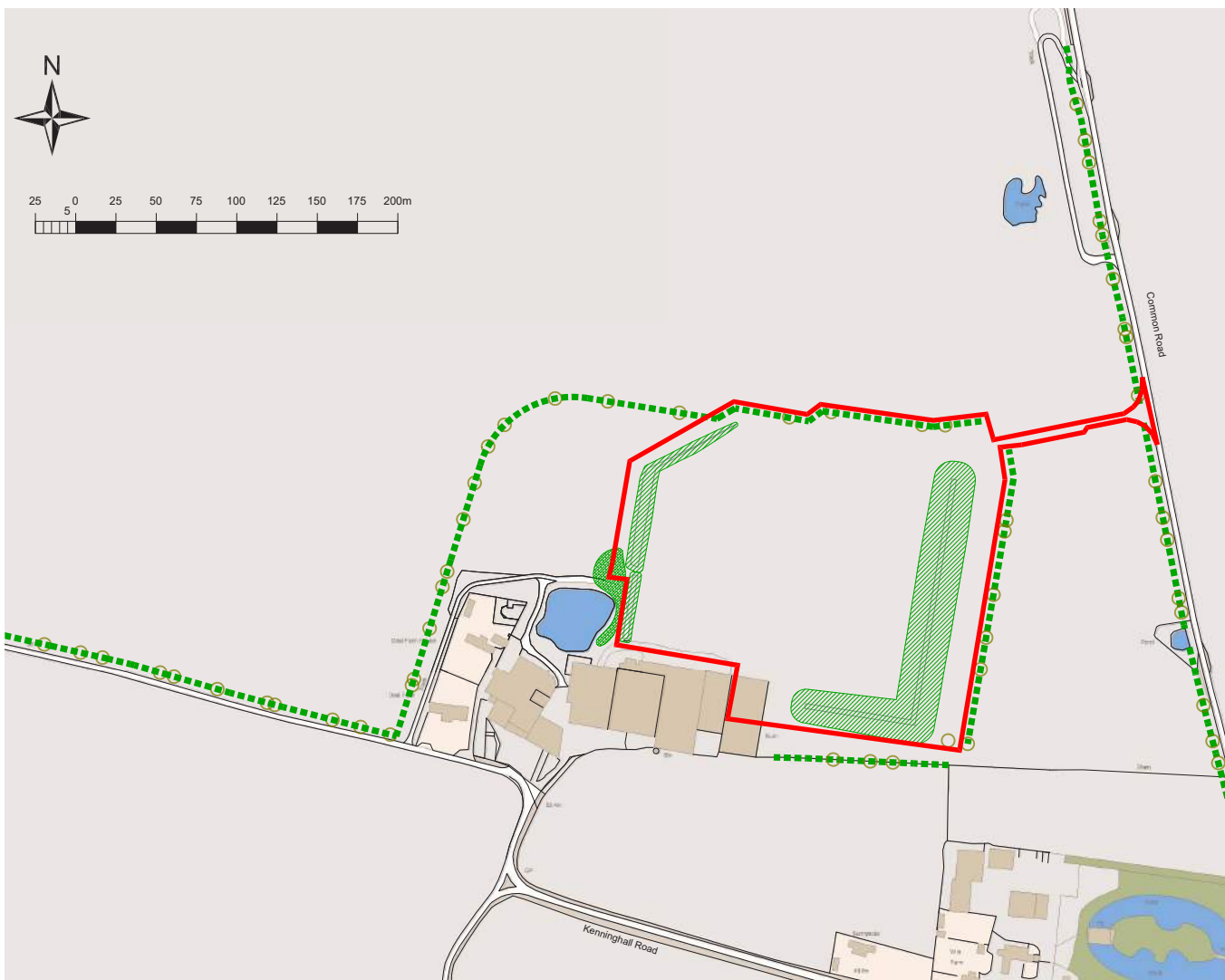
Native Meadow Mixture for Clay Soils on new bunding, using locally-occurring species



Infill planting where space allows to provide some screening between listed Deal Farmhouse and new development.

Trees to be feathered bare-rooted specimens, 175-200cm height, staked and tied and fitted with 1x1m mulch mat and rabbit guard. Excavated tree pit to be 600 x 600 x 600mm. Fork over the bottom of feathered tree pits to a depth of 150mm and other tree pits to a depth of 225mm and leave slightly domed to assist drainage. Roughen any smooth sides to pits. Topsoil excavated from planting pits is to be mixed with compost and used for backfilling.

10 no.	Quercus robur
10 no.	Prunus padus
10 no.	Tilia cordata
10 no.	Acer campestre



Landscape mitigation

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