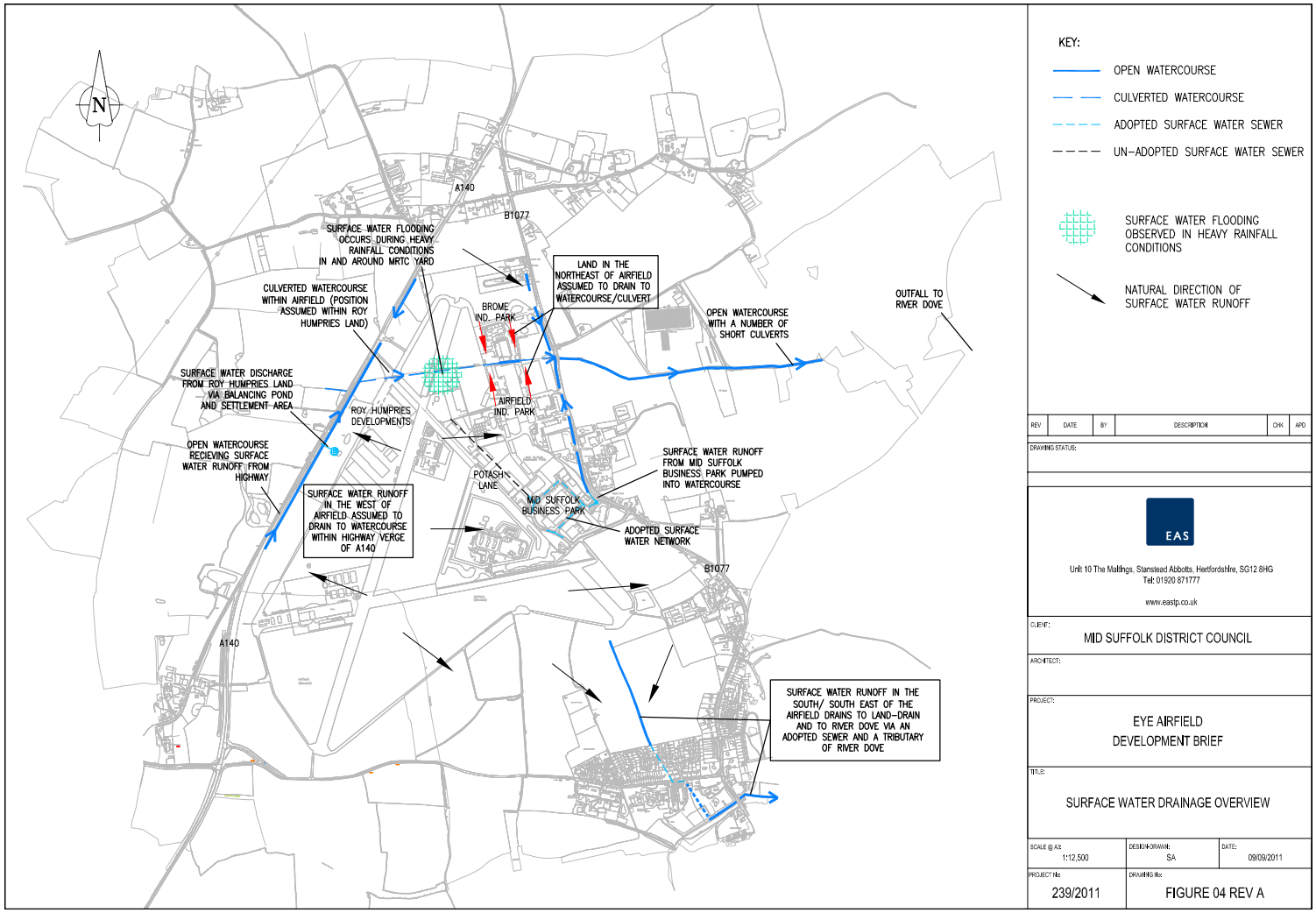
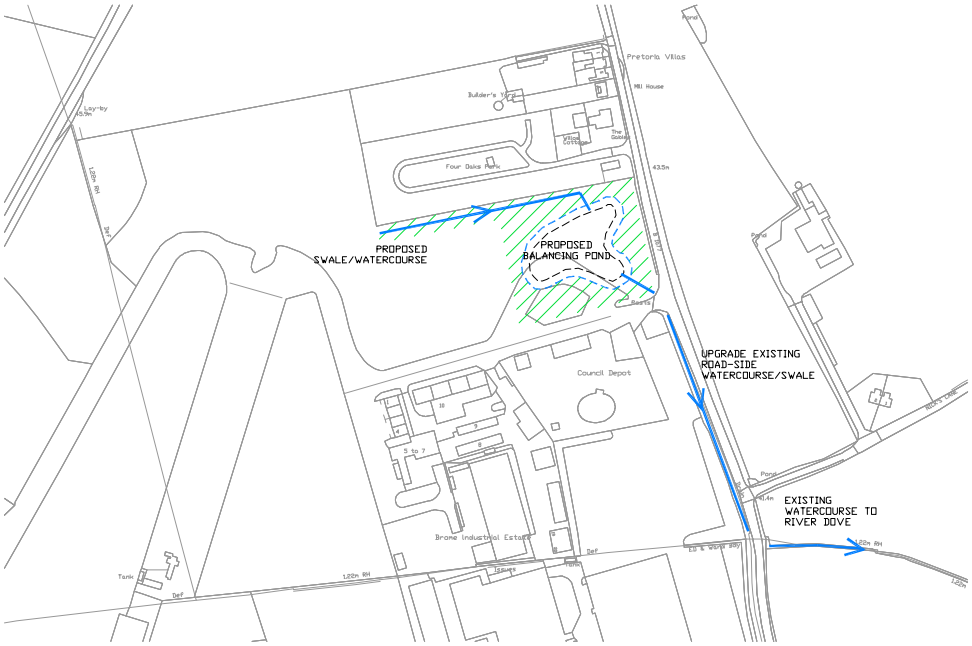
Appendices A01 to A06

Appendix A01 Surface Water Drainage





Possible solution for flood management north of the site: EAS

SUDS Guidance – for more detail contact

EAS
Unit 108 The Maltings Stanstead Abbotts Hertfordshire SG12 8HG

Tel 01920 871 777

www.eastp.co.uk

Eye Development Framework Sustainable Drainage Philosophy

Traditional drainage is designed to move rainwater as rapidly as possible from the point at which it has fallen to a discharge point; this can result in an increased risk of flooding downstream, as well as causing sudden rises in water levels and flow rates in watercourses. Additionally run-off can contain pollutants that can result in poor water quality in rivers and groundwater, affecting biodiversity, amenity value and potential water abstraction. By diverting rainfall to piped systems, water is stopped from soaking into the ground, depleting ground water and reducing flows in watercourses in dry weather.

It is proposed that new development on the Eye Airfield follow a Sustainable Drainage System (SUDS) philosophy. The philosophy of SUDS is to replicate as closely as possible the natural drainage from a site pre-development and to treat runoff to remove pollutants, resulting in a reduced impact on the receiving watercourses. The benefits of this approach are as follows:

- Reducing runoff rates, thus reducing the flood risk downstream.
- Reducing pollutant concentrations, thus protecting the quality of the receiving water body.
- Groundwater recharge.
- Contributing to the enhanced amenity and aesthetic value of development areas.
- Providing habitats for wildlife in developed areas, and opportunity for biodiversity enhancement. There are several processes that can be used to manage and control runoff and each option brings different opportunities for stormwater control, flood risk management, water conservation, amenity and wildlife benefits. These have been identified below along with potential SUDS components that should be considered for future development at Eye Airfield:

A. Infiltration: the soaking of water into the ground.

This provides a means to reduce surface water runoff, manage flood risk and recharge groundwater. However infiltration rates vary greatly with soil type and particular attention needs to be paid to the vulnerability of groundwater sources.

The British Geology Society mapping indicates that the site has a geology of superficial deposits of Lowestoft Formation (Diamicton which may be a mix of clays/silts/sands/gravels) over a Bedrock of Crag Group (Sands). Based on local knowledge at the site it appears that infiltration is not used in any great degree in the local area, and this is likely to indicate that the geology is not suitable for infiltration methods. However it is recommended that infiltration is considered further in the future. Parts of the airfield are within either the outer zone or total catchment for a Groundwater Source Protection Zone, and as such the Environment Agency should be consulted prior to specifying any infiltration components. Infiltration methods include: soakaways, infiltration trenches, infiltration basins, and infiltration via pervious surfaces.

B. Detention / Attenuation: the slowing down of surface water runoff before transfer downstream.

This will be required either for each development plot or group of plots in order to reduce the flood risk downstream of the site. Surface water runoff from the Eye Airfield will be required to be

restricted to a greenfield runoff rate for the critical storm durations (up to 1:100 year plus climate change). Detention has the additional benefit of reducing pollutants either via settlement, or vegetation to remove pollutants. Open ponds, basins, and wetlands also have significant potential to provide aesthetic, amenity, habitat and wildfire benefits.

Due to the size of the site, the time period over which the total site will be developed, together with potential maintenance and adoption issues; it is likely to be more appropriate to use a number of smaller attenuation components than one or possibly more large features, with provision of a lagoon or lagoons to be determined at a site-wide level for those areas of the site that cannot cope with their own requirements, necessitating a whole site approach best facilitated through implementation within the framework of this document.

It is preferable that attenuation is achieved in open features that have additional amenity and ecological benefits than by underground storage. Suitable features include: wet ponds, constructed wetlands, and extended detention basins. Additional methods that could also be considered on each plot include pervious surfaces and green roofs.

C. Conveyance: the transfer of water from one place to another.

This will ideally be achieved by SUDS principles using open channels (swales or ditches) and trenches; or by a more traditional means such as gravity sewer or pumped rising main. It is proposed that conveyance from development area to the receiving body is where possible achieved by open channel SUDs principles (depending on the volume of water and topographical levels). SUDS conveyance measures provide benefits over piped systems such as the removal of pollutants and the potential for habitat creation. Conveyance measures that could be considered within Eye Airfield include the following: swales, ditches, filter strips and filter drains. Further benefits may be seen with appropriate planting or grasses and reeds.

D. Rainwater Reuse / Harvesting

Rainwater from roofs and hard surfaces such as car parks can be stored and reused. The collected water can be used for non-potable purposes, such as watering gardens or flushing toilets. Such systems can be used to reduce the volume of runoff, and save on water resources and charges. The stored water is usually held in off-line storage tanks.

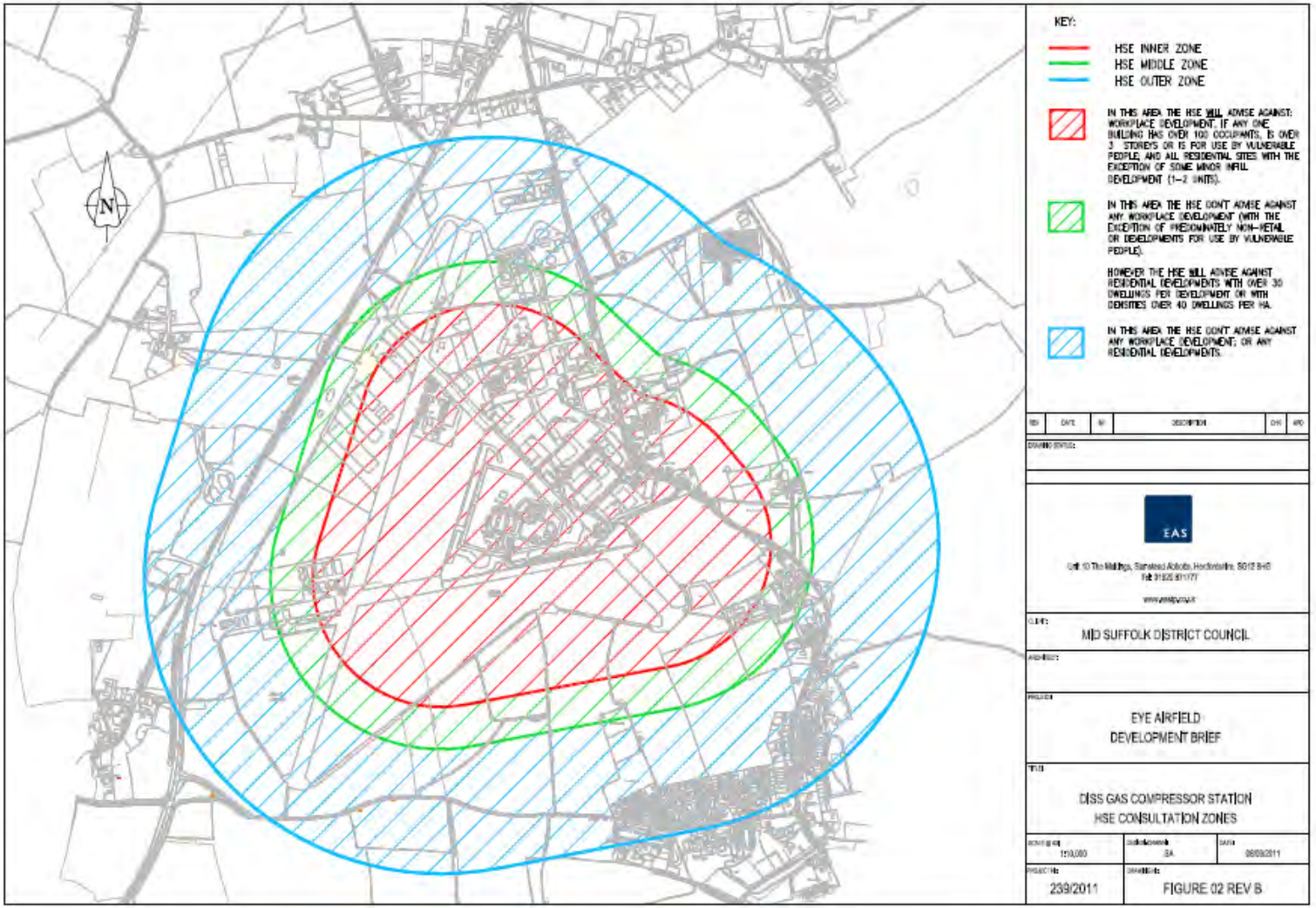
Consultation
Sustainable drainage systems should be designed in accordance with advice provided within planning policy, the requirements of the Environment Agency, the maintenance requirements of Suffolk County Council, requirements of Anglian Water, and with reference to the Mid Suffolk Strategic Flood Risk Assessment. Design guidance can be found in CIRIA documents such as C697 ‘The SUDS Manual’.

Suffolk County Council has responsibilities in determining surface water drainage applications and possible adoption relating to drainage systems, so it is recommended that they should be involved in the further discussions on implementing this framework for developments on the site. Where parts of the Eye Airfield being developed are Brownfield, the potential for contamination will need to be considered fully prior to determining the final suitability of SUDS features. Where SUDS are used on sites that are contaminated, it is essential to seek the advice of an experienced geo- environmental specialist who is familiar with contaminated land and groundwater risk assessment.

Appendix A02 HSE Zones

The plan on the following page sets out the HSE Zones.

Their significance is set out in the main text of the Development Framework.


KEY:
HSE INNER ZONE
HSE MIDDLE ZONE
HSE OUTER ZONE
IN THIS AREA THE HSE WILL ADVISE AGAINST: WORKPLACE DEVELOPMENT, IF ANY ONE BUILDING HAS OVER 100 OCCUPANTS, IS OVER 3 STOREYS OR IS FOR USE BY VULNERABLE PEOPLE, AND ALL RESIDENTIAL SITES WITH THE EXCEPTION OF SOME MINOR INFILL DEVELOPMENT (1–2 UNITS).
IN THIS AREA THE HSE DONT ADVISE AGAINST ANY WORKPLACE DEVELOPMENT (WITH THE EXCEPTION OF PREDOMINATELY NON-RETAIL OR DEVELOPMENTS FOR USE BY VULNERABLE PEOPLE).
HOWEVER THE HSE WILL ADVISE AGAINST RESIDENTIAL DEVELOPMENTS WITH OVER 30 DWELLINGS PER DEVELOPMENT OR WITH DENSITIES OVER 40 DWELLINGS PER HA.
IN THIS AREA THE HSE DONT ADVISE AGAINST ANY WORKPLACE DEVELOPMENT; OR ANY RESIDENTIAL DEVELOPMENTS.
EAS
MID SUFFOLK DISTRICT COUNCIL
EYE AIRFIELD
DEVELOPMENT BRIEF
DISS GAS COMPRESSOR STATION
HSE CONSULTATION ZONES
239/2011
FIGURE 02 REV B

Topple Zones

With respect to topple zones and the risk of the whole structure falling, the reference is to a zone of height to tip plus 10%. However, there is no statutory legislation on this and indeed there are many examples where turbines are adjacent to motorways, office units and car parking areas with frequent public access directly below the turbine (An example is Green Park in Reading, Ecotricity, adjacent the M4).

Chapter 25 of PPS22 is fairly clear in this regard but falls short of mentioning proximity to buildings: “Regional Spatial Strategies should not include specific policies relating to the impact of wind turbines on airport operation, radar and aircraft, neither they nor local development documents should include policies in relation to separation distances from power lines, roads, and railways. It is the responsibility of developers to address any potential impacts, taking account of civil aviation authority, ministry of defence and department for transport guidance in relation to radar and aviation, and the legislative requirements on separation distances, before planning applications are submitted. Local Planning authorities should satisfy themselves that such issues have been addressed before considering planning applications.”

Nordex were specifically asked about topple zones, ice throw and blade disintegration and they commented that the foundation design prevents any turbine from toppling and that various turbine mechanisms prevent ice throw and blade disintegration. It is their opinion that there does not need to be any zone where development cannot take place however they have a common sense approach to avoiding proximity to high voltage overhead electricity and have been asked by power companies (Scottish power) to calculate a minimum distance from these installations based on tip height + cable swing + 20m.

For clarity it appears that topple zones need not be a major factor in development constraints.

Ice Throw and Blade Disintegration

It is not just the toppling of the turbine which has been considered here, but also other factors with regard to the actual structure: ice throw and blade disintegration. Ice throw is not generally a problem in the UK as the weather conditions that cause ice build-up on a blade occur less than one day per year. In any event the turbine auto detects any slight change in the blade rotation caused by ice and automatically shuts down. Blade disintegration (due to severe winds and therefore over speeding blades) is also controlled by internal mechanisms as the intelligence in the turbine monitors and shuts down as necessary to avoid any damage to the turbine and structure. Paragraph 14 of the companion guide to PPS22 is relevant; “modern wind turbines also continuously monitor their own performance and if atypical vibrations caused by component imbalances are detected, or if connection to the local electricity grid is lost, all turbines must be capable of emergency stops. Most modern wind turbines undergo test certification procedures, which must confirm to the guidelines laid down by the International Elector -technical Commission (IEC).”

Nordex said that the design of or choice of each turbine is based on the air flow which is highly influenced by the ground conditions in the direction of the prevailing wind. Thus buildings in front of a turbine will influence the power generation of that turbine. However, this has been taken into account in the modelling of the site, to

allow for future development of buildings of up to 15m in height. It would be possible to also model the impact of buildings higher than 15m.

Flicker

Flicker occurs inside a building where the shadow appears on a window. Shadow flicker is caused by a variety of reasons including time of day and seasonal positions of the sun, rotor and turbine heights. Discussion with the manufacturers has confirmed that flicker effects can be modelled and the turbine can be programmed to shut down when the problem would occur.

Noise

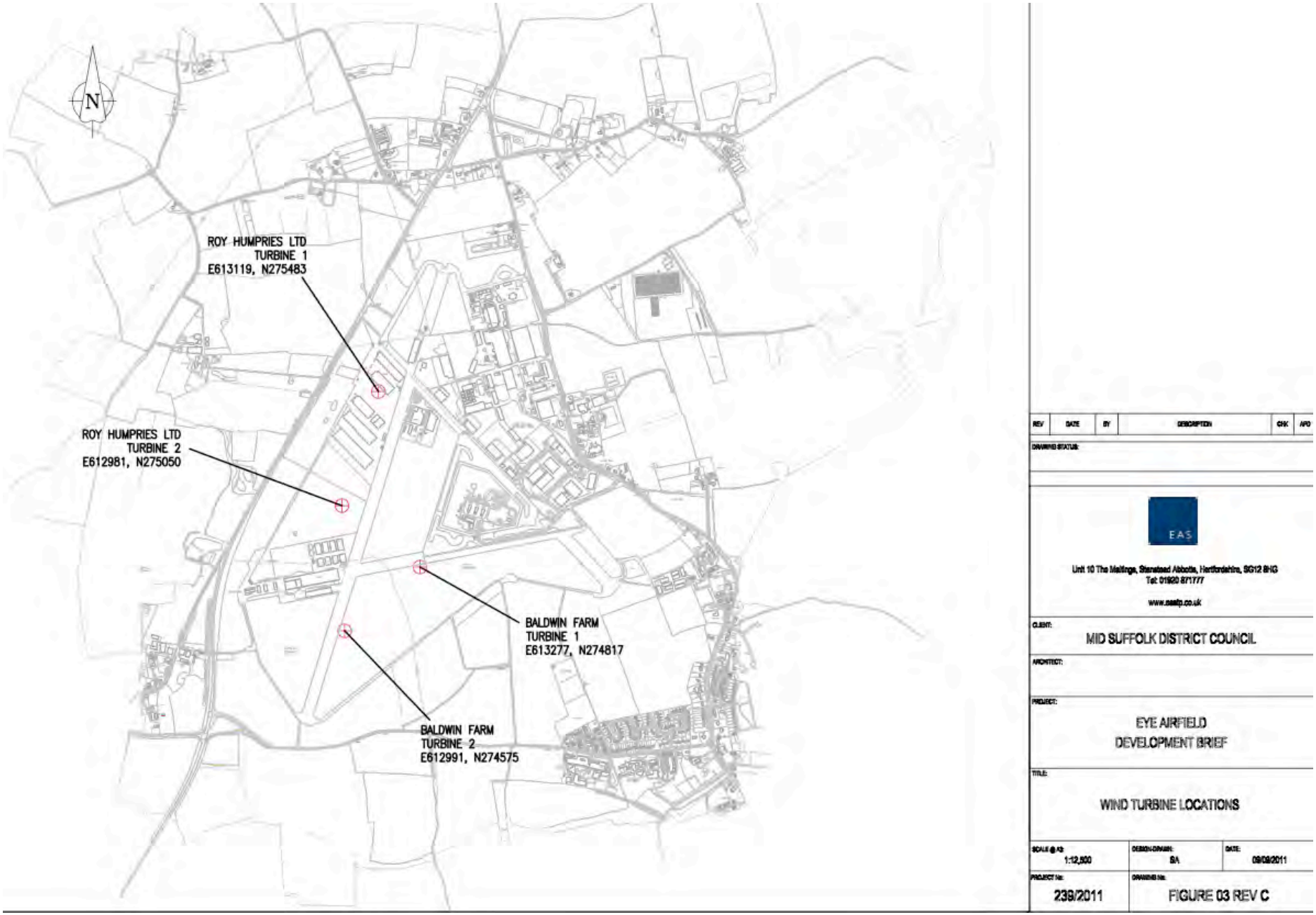
Noise from turbines does not appear to be an issue with respect to locality next to business and industrial uses. A document part quoted in PPS 22 Companion Guide 'The Assessment and Rating of Noise from Wind Farms', states '*Noise limits should be applied to external locations and should apply only to those areas frequently used for relaxation or activities for which a quiet environment is highly desirable'. It goes on to say 'noise from the wind farm should be limited to 5dB(A) above background for both day and night time, remembering that the background level of each period may be different'*.
PPS 22 companion guide Table 1 sets out indicative noise levels, some of which are useful for considering the relationship of wind farms to residential properties. A Wind Farm at a distance of 350m has an indicative noise level of 35-45 dB(A) and a rural night time background has an indicative noise level of 20 – 40 dB(A). Without further expertise from noise professionals, it would appear appropriate based on these figures to suggest locating any residential development 350m away from any known turbines (or visa versa) at this stage of the study process.

Spacing of Turbines

In the UK the prevailing wind is generally from the south west. Turbines are generally spaced (rule of thumb from companion guide to PPS 22) between 3 and 10 times the rotor diameter depending on the prevailing wind and local conditions. If a set of turbines is placed perpendicular to the wind, which would be optimum positioning, then it is expected that the minimum distance would apply of three times the rotor diameter. If positioning south-west to north east (the likely worst option), then ten times rotor diameter is used. Clearly other spacings would be calculated based on the exact layout and topography: this is evident from figure A03 as the 'Humphries Turbines' are 454m apart and are on a south / south west to north / north east alignment.
Both use the Nordex 100 turbine, which has an 80m height for the base columns and are130m high when measured to the tips of the blades. There are no statutory set distances between turbines and developments, but in terms of design sensitivity, recent studies elsewhere suggest:

- "Aim to create a simple image that respects the hierarchy of elements in the landscape, and does not compete with or create clutter when seen together with other man-made elements.
- Consistent turbine height layout and design are critical for clusters within 3-5 km."
- A range of colour options are available, consideration of the background should be given. Pale colors suit most elevated sites where turbines are mostly seen against skies." Source: Wind Energy Development in Northern Ireland Landscapes SPG page 49.

At Eye the strong elements of pylons to the west of the site already figure in key views towards the airfield from Mellis and Thrandeston, and from the edge of Eye. The power station chimney is also a punctuation that is already clearly visible from some distance.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ROY HUMPRIES LTD
TURBINE 1
E613119, N275483
ROY HUMPRIES LTD
TURBINE 2
E612981, N275050
BALDWIN FARM
TURBINE 1
E613277, N274817
BALDWIN FARM
TURBINE 2
E612991, N274575
REV
DATE
BY
DESCRIPTION
CHK
APD
DRAWING STATUS:
EAS
Unit 10 The Maltings, Stanstead Abbotts, Hertfordshire, SG12 8HG
Tel: 01920 871777
www.eastp.co.uk
CLIENT:
MID SUFFOLK DISTRICT COUNCIL
ARCHITECT:
PROJECT:
EYE AIRFIELD
DEVELOPMENT BRIEF
TITLE:
WIND TURBINE LOCATIONS
SCALE @ A3:
1:12,500
DESIGN DRAWN:
SA
DATE:
09/09/2011
PROJECT No:
239/2011
DRAWING No:
FIGURE 03 REV C

Appendix A04 Sustainability

A4.1 Introduction

In line with the sustainable ethos of the Development Framework, the site should be self-sustaining wherever possible and use resources wisely.

The framework is formulated to ensure that the land maintains a mix of uses to extend the usefulness of the site whilst allowing for future flexibility and adaptation.

A4.2 Community

The Eye Airfield development provides excellent opportunities for reuse and regeneration of previously used land at the heart of Suffolk.

The site has strong agricultural and industrial uses, combined with good access routes and close proximity to local amenities. The site would benefit from a mix of uses and therefore seeks proposals to reinforce the site's identity, whilst increasing the amenity linkages with the adjacent sites.

Skills can be developed both in the site construction stage and in the management of the businesses and buildings that will be widely applicable elsewhere.

A4.3 Energy

The development proposals should be in line with current legislation, although in order to future proof development and to attract investment, proposals should encourage all development to be exemplary in terms of efficiency of building mass, layout and robustness, thereby reducing energy use in operation.

Good passive design will be encouraged to assist achieving a reduction in energy load. Early consideration is also required to explore the energy sources for the site. This may promote a combined approach to energy generation, heat recovery and reuse, depending on the proposed site uses. Proposals should include details of energy studies carried out together with a comparison of energy use with different options.

The site strategy should be informed by a target to work towards zero carbon developments, bearing in mind the government's targets for zero carbon homes by 2016 followed by non-domestic buildings by 2019.

Low and Zero Carbon Technologies will be assessed for their benefits in assisting the energy strategy of the site over the development life cycles.

A4.4 Waste

Development proposals would be welcomed that seek to produce no waste to landfill, (including the export of existing materials off site), and reuse of materials, and developers are strongly encouraged to put a process into place to minimise waste from construction activities by initiating WRAP (Waste & Resources Action Programme) guidelines for Designing Out Waste (during the design); and to review construction and delivery processes to eliminate waste production.

A4.5 Water

As with all site resources, proposals should seek to make best use with techniques to maximise site-wide water attenuation. Landscaping proposals will be encouraged to harvest surface water, and reuse it within the site. Consideration should be given to the use of SUDS (Sustainable Urban Drainage Systems) and their incorporation to any site amenity feature. More detail on these landscaping aspects is available in the Landscape Strategy for the whole development area in Appendix A05.

See also the detailed SUDS guide in Appendix A01 above.

A4.6 Material Specification

In line with the criteria for development proposals to be efficient, designers should ensure that buildings are designed using robust details, with due consideration for air tightness and ease of construction.

The designers should consider using materials with low embodied energy and natural building materials, with a preference given to local materials and manufacture.

Choices in both materials and construction methods should be founded on an evaluation of the life cycle of a product or process to determine the least impact to the environment for the buildings' life and also consideration for deconstruction and reuse.

A4.7 Accident Data

A brief review of road accidents occurring in the vicinity of Eye Airfield has been undertaken for the most recent 5-year period Suffolk records ending 30th June 2011. 36 PIA's have occurred in the study area as shown on the plan A05. Broken down by injury severity there were 2 fatal (red stars), 7 serious (blue triangle) and 27 slight (yellow circle). 9 of the 36 accidents have involved an HGV, 1 of these was fatal (also involving a motorcyclist) 2 were serious and the remainder were slight. The accidents are generally located at junctions and bends. There are no significant clusters but loosely converging clusters have occurred especially around the A140/B1077 junction and the crossroads at the B1077/Rectory Road (The Street) which was the site of one fatality and 12 PIA's overall. A further lose cluster is in the vicinity of the north to south-west bend midway along the B1077 (5 PIA's including one serious). Other accidents are generally more dispersed within the study area and notably to the south-east corner of the area. Far fewer accidents occurred in the south-west corner of the site. The accident types have been compared by severity to national accident data.

The accidents are potentially at the higher end of the national average in terms of severity although care needs to be taken with this interpretation as overall numbers are too low for statistical analysis.

There is a significant contrast to the national average with respect to daylight versus dark accidents with a much higher proportion occurring in daylight at the study site. The levels of dry surface versus wet surface are very similar to the national average.

With respect to clusters of accidents consideration should be given to improvement of the northern triangle formed by the A140/B1077 junction and the crossroads at the B1077/Rectory Road (The Street). Reducing the use of the crossroads junction would be worthy of consideration by way of reducing traffic flows along The Street between the A140 and the B1077.

The accidents occurring at the south-east corner of the airfield site are within the more residential areas of the study area and so any new access and development should seek to avoid increase of traffic in these areas. There have been fewer accidents at the south-west corner of the airfield site and so this area would naturally lend to any increase in traffic flows and a site access.

A4.8 Buses and rail

The site is not currently directly accessible by public transport. The bus map below shows there are few routes in the area and very few bus stops, with no buses penetrating the large landmass of the airfield itself. To develop more sustainably, better public transport links are required, especially to Eye and Diss and the rail station at Diss with its good links to Norwich, Ipswich and London.

A potential new road link between the A140 and the B1077 goes through the existing Brome Industrial Estate. This link could be used to enable bus services to go through the site, including the possibility of diverting existing services via the Eye Airfield. Sheltered bus stops should be provided on this new access road at

suitable points to serve new and existing employees and also other existing users in the locality. The possibility of increasing the frequency of bus services that could serve the site should be explored with key stakeholders and this should be undertaken within the Eye Airfield Green Travel Plan Co-ordination Group.

There are also opportunities to provide bus shelters on the key stops at the entrances to the Airfield Business Park and to the Castleton Way entrance for the businesses on the south of the airfield.

A4.9 Pedestrian and Cycle routes

The option of creating clear connecting routes for sustainable transport modes through the airfield site was endorsed at the consultation event and in subsequent responses.

Possible indicative routes are shown in the draft masterplan. There is one through route passing the site, National Cycle Route 30, see plan below.

These pedestrian and cycle routes should also aim to encourage residents of Eye to use the site, for example to access the proposed "common", and for employees to walk into town. The pedestrian and cycle routes should link into the wider rights of way and routes beyond the airfield itself. For example, the cycle route from the southern site area should consider linking to the National Cycle Route 30 or possibly diverting this route from Castleton Way.

The A140 and the B1077 are not currently suitable pedestrian or cyclist environments, particularly given the accident records associated with these roads. Suffolk County Council could investigate creating safe cycle routes and crossings.

However, possible safe options to allow walking and cycling between the Brome Triangle and the rest of the site should be explored by developers.

A4.10 Rights of Way and footpaths

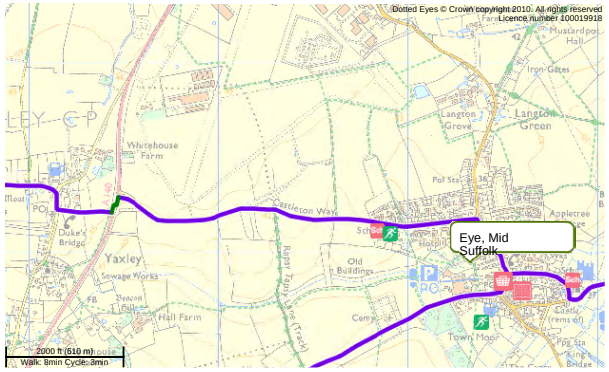
The Rights of Way as currently existing are shown on the plan here, also available as a separate pdf, and proposed new routes for foot and cycle paths for public access are shown on the masterplan and also on the landscape strategy plan in appendix A05.

A4.11 Climate Change – Suffolk commitment

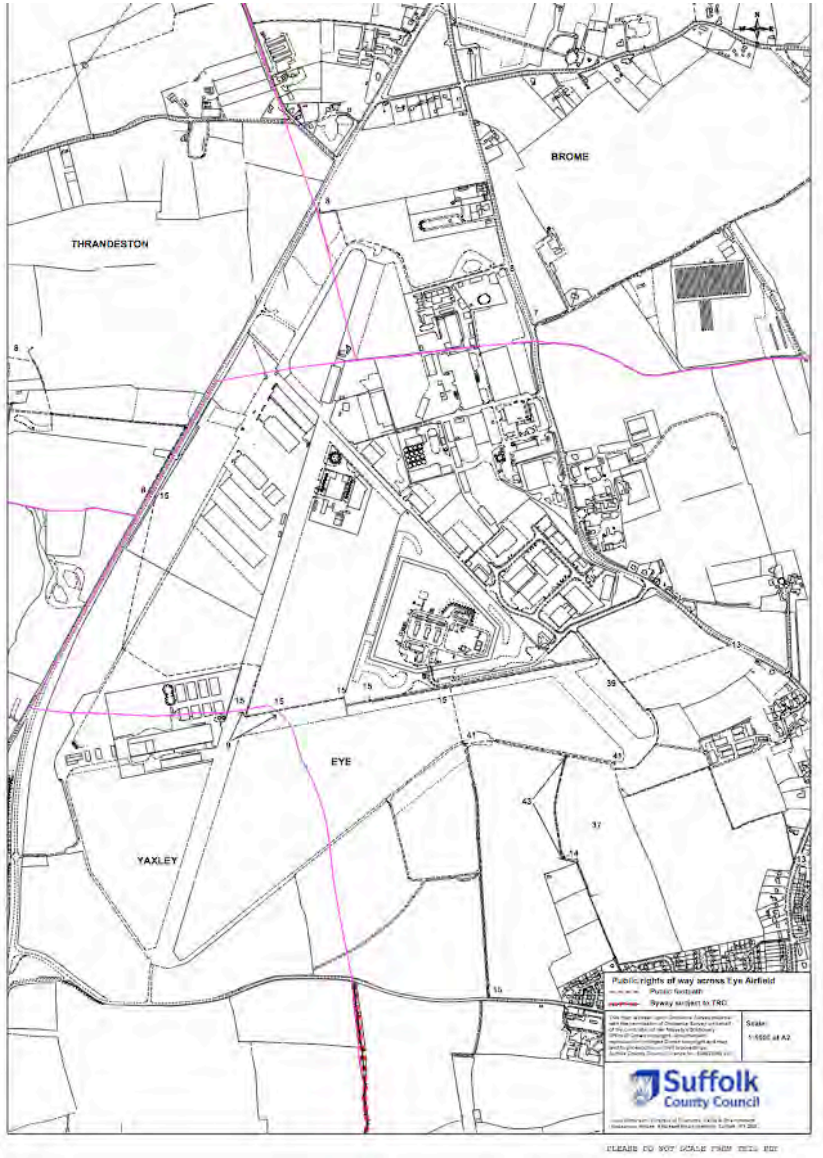
Both the district and county councils have recently recommitted, through the second Suffolk Climate Action Plan, to the following objective:

'Suffolk wants to be an exemplar in tackling climate change and protecting and enhancing its natural…environment…to be the county with the greatest reduction in carbon emissions'

Every opportunity to deliver on this objective should be taken and, in line with paragraph 95 of the NPPF, this site should be planned to reduce greenhouse gas emissions. The county council also welcomes the commitment to improving biodiversity, which would also support the Creating the Greenest County objective" SCC consultation response.



Sustrans is the UK's leading sustainable transport charity
Sustrans is a registered charity no. 326550 (England and Wales) SCO39263 (Scotland)



A4.11 New Road Access

The consultation suggested a need for better road accessibility if development here is to be significant. We therefore suggest a new road connection, to be triggered when a significant level of new development is being sought for planning.

This potential access solution for the northern part of the site shows a ghost island right turn from the A140 and a simple priority junction onto the B1077. Whilst there is not considered to be a need for a roundabout, the design of these accesses would be subject to modelling to demonstrate they would be adequate to meet expected demand, taking into account all potential future development on site and other relevant committed development.

The proposed road has the potential to divert existing industrial estate traffic from the B1077 north of Eye onto the A140 and so avoid the B1077/A140 and B1077/Rectory Road junctions. This could have a beneficial impact upon accidents. However, any new access link should not encourage or divert local traffic into Eye via the B1077 given the accident record of this link southwards into Eye. Solutions such as electronic control could be sought.

Vehicular access to the southern part of the site should be from Castleton Way. The form of this new access should be safe and not encourage any additional traffic to continue into Eye from the A140.

All internal roads and accesses should be built to adoptable standards and should be suitable for industrial estates and their expected traffic. Road and junction designs will need to be agreed with Suffolk County Council as part of the Transport Assessments for any new development.

An initial indicative plan for the route proposed is shown here, in figure 9 below.

A 4.12 Transport Assessment and Green Travel Plans

In line with the Suffolk County Transport Plan policy T14, the development of the airfield for employment use should be accompanied by a comprehensive transport impact assessment (TA). This assessment should demonstrate how the proposed development contributes to minimising the need to travel and encouraging journeys by means other than the car. As part of the assessment a Green Travel Plan should be prepared.

It is proposed that an Eye Airfield Green Travel Plan should be produced that sets out measures for promoting site-wide non-car travel and site-wide monitoring of all modes of travel. This Eye Airfield Green Travel Plan should encourage existing as well as new employees to use non-car modes where possible. The Eye Airfield Green Travel Plan should include the setting up and running of a Co-ordination Group. This group should include representatives from all key stakeholders including: new employers and employees, existing employers and employees, Eye residents and businesses, Mid Suffolk District Council, Suffolk County Council and transport operators. The funding for the development of the Eye Airfield Green Travel Plan, including any costs associated with setting up and maintaining a Travel Plan Co-ordination Group, would come from a pooled S106 fund.

The Eye Airfield Green Travel Plan should have realistic and achievable objectives. For example, whilst non-car commuting may be possible for those living close to rail and bus services, it is unrealistic to expect the majority of site employees to use non-car modes to commute to the site. However, it is realistic to encourage employees to car share where possible. It is also realistic to encourage all site users to not use their car during the working day, but to still encourage them to move around the site and between the site and Eye on foot or by cycling.

The Eye Airfield Green Travel Plan will include a pedestrian and cycle strategy to promote walking and cycling within the airfield site itself and also between the site and Eye. As part of this strategy, shared pedestrian and cycle routes will need to be provided between the northern site area and Eye and between the southern site area and Eye. These routes will need to ensure that all new (and if possible existing) development is linked by footways. The reason for developing such a walking and cycling network is to help promote use of all non-car modes. For example, in order to encourage bus use and site-wide car-sharing, it is important that all new (and if possible existing) employees can reach their employment sites on foot via reasonably direct and high quality pedestrian/cycle routes from the proposed new access roads and possible new bus stops.

Possible indicative new internal access road – see figure 9 below.

Transport Assessments accompanying new development should include a strategy of signing or other means to ensure industrial traffic avoids Eye and uses the most appropriate routes to and from the A140, including minimising the use of the B1077 where possible.

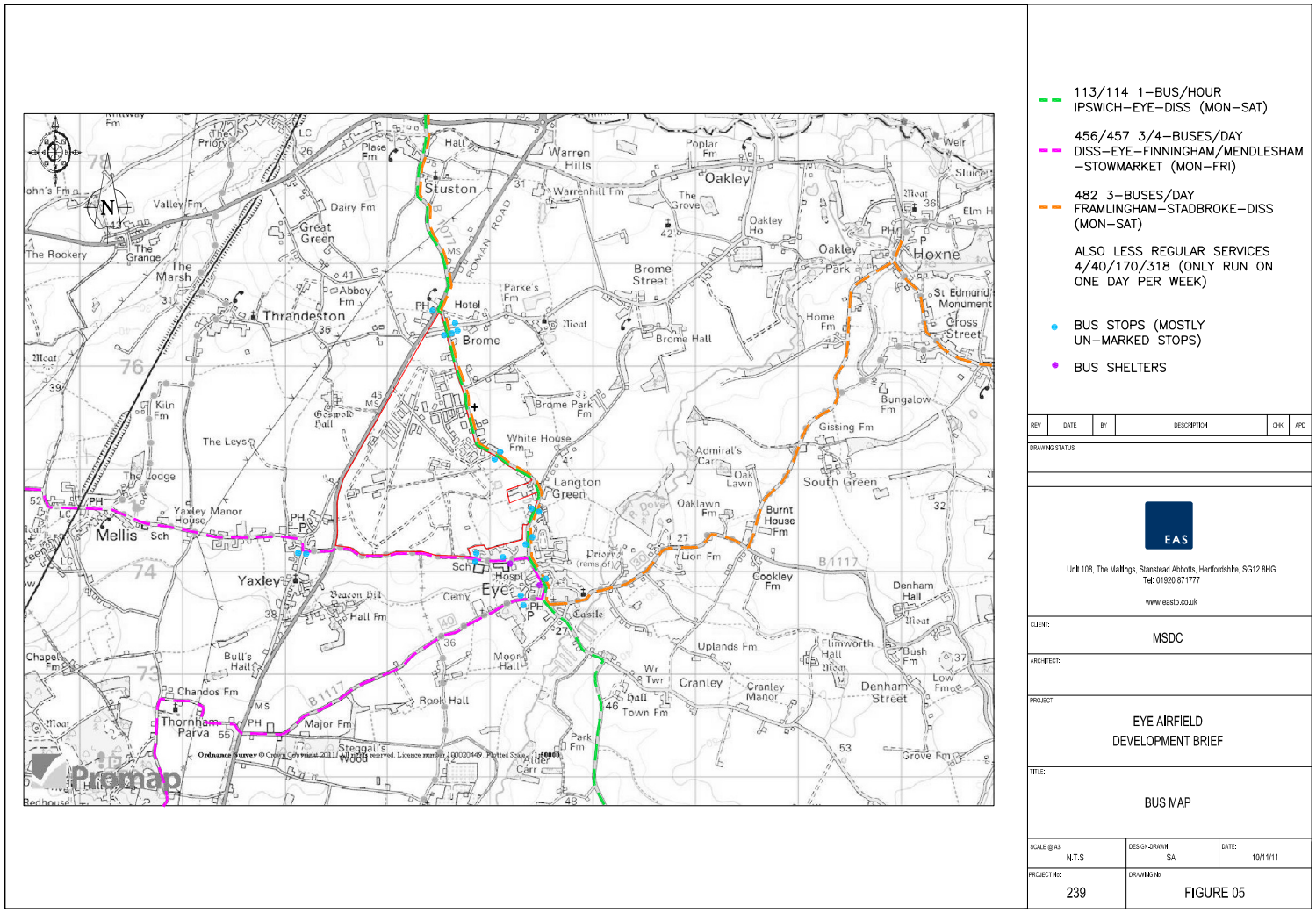
Because development of the airfield is likely to be phased, individual phases should assess their impact taking account of the potential complete development impact. Individual phases should also commit to Travel Plan measures that will work within the Eye Airfield Green Travel Plan.

Cycle and car parking for development should be in line with local and national guidelines and should be based upon need as identified by the individual development Transport Assessment and Travel Plan. Servicing needs should also be considered as part of the Transport Assessment and service areas designed to accommodate expected need.

The layout of car parks and service yards should have regard for the need to promote walking and cycling within the airfield. The location and design of cycle and pedestrian routes and cycling parking should therefore inform the layout of car parking, service areas and vehicular accesses, rather than the other way around.

Figure 5 Existing Bus Routes and Stops Map

Next page.



113/114 1–BUS/HOUR
IPSWICH–EYE–DISS (MON–SAT)

456/457 3/4–BUSES/DAY
DISS–EYE–FINNINGHAM/MENDLESHAM –STOWMARKET (MON–FRI)

482 3–BUSES/DAY
FRAMLINGHAM–STADBROKE–DISS (MON–SAT)

ALSO LESS REGULAR SERVICES 4/40/170/318 (ONLY RUN ON ONE DAY PER WEEK)

BUS STOPS (MOSTLY UN–MARKED STOPS)

BUS SHELTERS

REV	DATE	BY	DESCRIPTION	CHK	APD

DRAWING STATUS:

EAS
Unit 108, The Maltings, Stanstead Abbotts, Hertfordshire, SG12 8HG
Tel: 01920 871777
www.eastp.co.uk

CLIENT: MSDC

ARCHITECT:

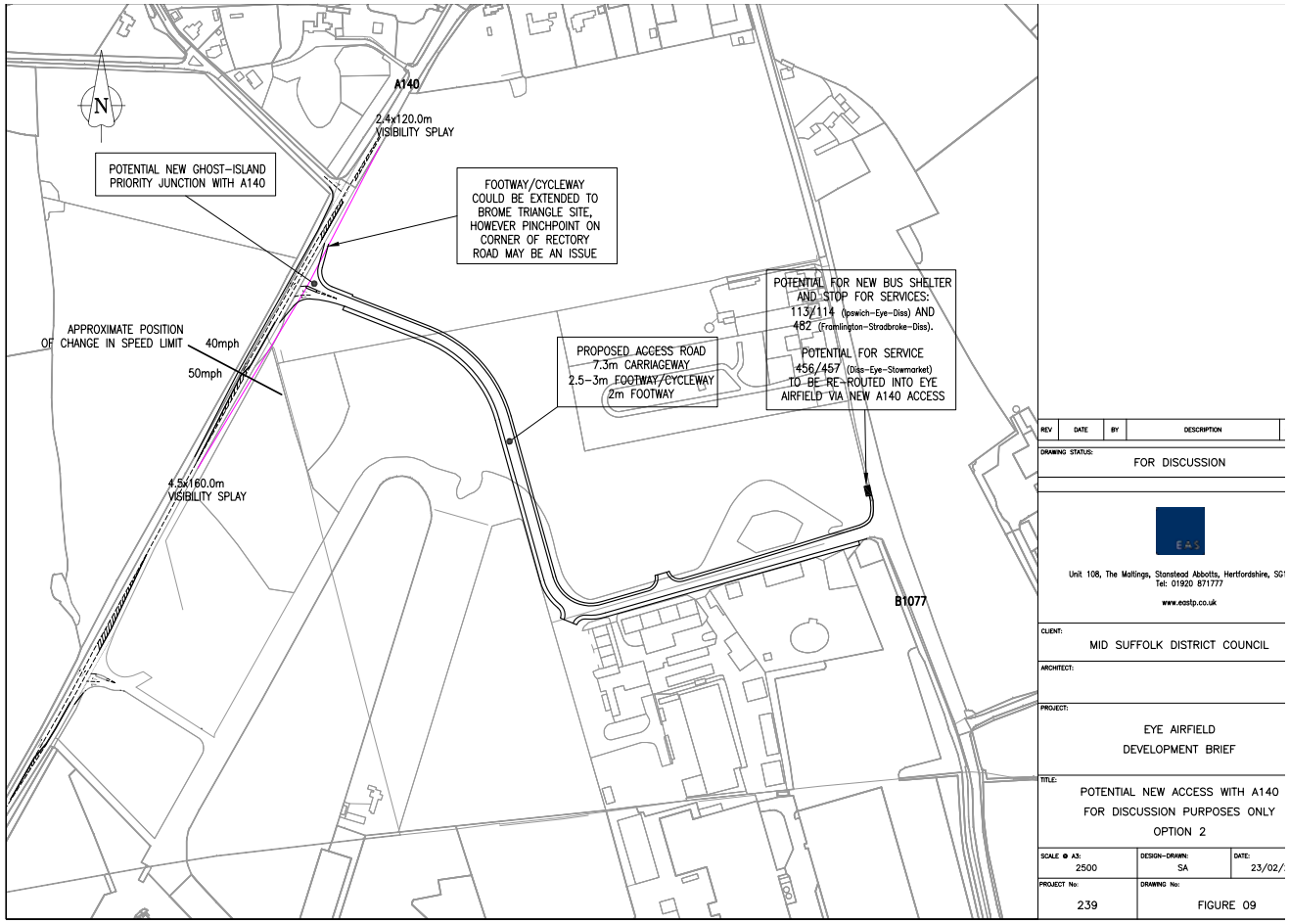
PROJECT: EYE AIRFIELD DEVELOPMENT BRIEF

TITLE: BUS MAP

SCALE @ A3:	DESIGN-DRAWN:	DATE:
N.T.S	SA	10/11/11

PROJECT No:	DRAWING No:
239	FIGURE 05

Figure 9 New Road indicative proposal – (note junction details are only indicative)



Heritage Records

There are records of finds on many parts of the airfield site from many periods and the site is flanked on its west by a roman road: these suggest that any developer will be likely to be asked for an archaeology assessment.

However for the purposes of this brief, the key historical record we have used to guide the proposals, and especially the landscape proposals, is the WW2 airfield record. This is set out in full below: further information is available from Suffolk County Council.

Suffolk HER Number (Pref. Ref.):	EYE 072
Unique number (MonUID):	MSF18652
Type of Record:	Monument
Parish:	BROME AND OAKLEY, MID SUFFOLK, SUFFOLK EYE, MID SUFFOLK, SUFFOLK THRANDESTON, MID SUFFOLK, SUFFOLK YAXLEY, MID SUFFOLK, SUFFOLK
NGR:	TM 13 75

Summary

Second WW airfield near Eye, originally part of an American families Cornwall estate. For detailed history and description see (S1)(S2)

Appendix A05 Heritage and Landscape

Monument Types

Archaeology and Historical Records

- HANGAR (Modern - 1942 AD to 1945 AD) Flying Boat Warehouse
- MILITARY AIRFIELD (Modern - 1942 AD to 1945 AD)
- AIRFIELD (Modern - 1944 AD to 1962 AD)

Associated Finds: None recorded

Protected Status: None recorded

Description

2nd World War Airfield - Eye. Originally part of an American families Cornwall estate. It was developed by 827th and 859th Battalions (Engineering). During construction it was known as Brome Airfield. It is situated about half a mile from Eye to the SE of the perimeter fence. The tower was active for just 12 months. Eight of the hard standings are situated on the west side of the A140 road. It was home in 1944 to the American 490th Bomb Group. Then it was taken over by the 93rd Combat Bomb Wing of the 3rd division along with the other two B-24 Groups and 34th at Mendlesham. A lot of the runway still survives as well as a lych-gate (S1), including 50 hardstandings, 2 T2-type hangers and Nissen hut and other temporary type buildings. The hardstandings on the west of the road meant a permanent guard was needed to halt traffic when aircraft taxied from them, as well as gates. Runways had a screeded surface finish instead of tarmac. Technical and admin buildings and living quarters were on the NE side and Eye church lay on the approach to the southern end of the NW-SE runway. After the war it was sold in 1962-3 and a factory for processing straw was established in the hangers. St Ives Sand & Gravel cleared unwanted concrete and two Mushroom Farms were established, one was gone by 1977. **T2 hanger considered worthy of preservation (S3).**

Sources

S1 Bibliographic reference: Smith, Graham. 1995. Suffolk Airfields in the 2nd World War. Smith Graham, 1995 (SSF50090)

S2 Bibliographic reference: Freeman, Roger A. 1978. Airfields of the Eighth - Then and Now. Freeman Roger A, 1978 (SSF50091)

S3 Bibliographic reference: Email. Cuthbert M to Pendleton C (SCCAS), 27 October 2004 (SSF50153)

Landscape

The revised landscape strategy drawing on the next page is also available on request as a separate PDF as a large A2 size plan.

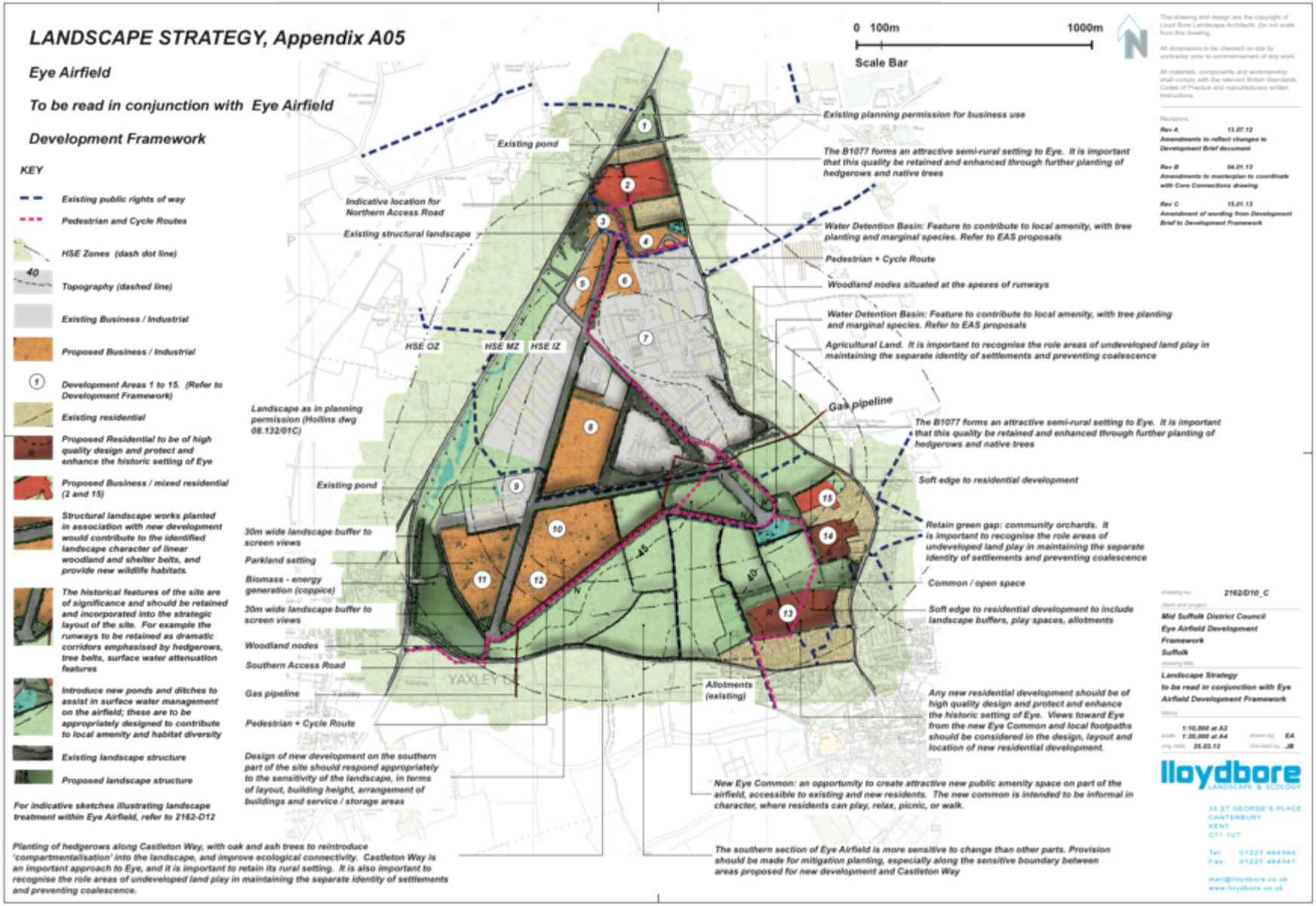
The final Landscape Baseline report from Lloyd Bore is also available on request.

Landscape Strategy Principles

1. A consistent approach to the need for strategic landscape planting across the site to require strategic planting to mitigate and minimise the landscape and visual impact of development, such as for areas 1,2,5,10 and 12.
2. The landscape strategy has a clear principle that existing established boundary vegetation should be retained and enhanced wherever possible.
3. The landscape strategy has a clear principle that proposals for landscape mitigation and planting should be commensurate with the landscape and visual impacts of development proposals.
4. The landscape strategy has a clear principle that lighting, particularly exterior lighting, should be designed and installed such that it minimises detrimental landscape and visual impacts.

More locally tailored guidance with regard the appropriate species to be used, and particularly the species used in relation to National Grid Infrastructure, should be considered as part of more detailed plans for development.

Source: Suffolk County Council consultation letter 7 Sept 2012


LANDSCAPE STRATEGY, Appendix A05
Eye Airfield
To be read in conjunction with Eye Airfield
Development Framework
KEY
Existing public rights of way
Pedestrian and Cycle Routes
HSE Zones (dash dot line)
Topography (dashed line)
Existing Business / Industrial
Proposed Business / Industrial
Development Areas 1 to 15. (Refer to Development Framework)
Existing residential
Proposed Residential to be of high quality design and protect and enhance the historic setting of Eye
Proposed Business / mixed residential (2 and 15)
Structural landscape works planted in association with new development would contribute to the identified landscape character of linear woodland and shelter belts, and provide new wildlife habitats.
The historical features of the site are of significance and should be retained and incorporated into the strategic layout of the site. For example the runways to be retained as dramatic corridors emphasised by hedgerows, tree belts, surface water attenuation features
Introduce new ponds and ditches to assist in surface water management on the airfield; these are to be appropriately designed to contribute to local amenity and habitat diversity
Existing landscape structure
Proposed landscape structure
For indicative sketches illustrating landscape treatment within Eye Airfield, refer to 2162-D12
0 100m 1000m
Scale Bar
Existing planning permission for business use
The B1077 forms an attractive semi-rural setting to Eye. It is important that this quality be retained and enhanced through further planting of hedgerows and native trees
Existing pond
Indicative location for Northern Access Road
Existing structural landscape
Water Detention Basin: Feature to contribute to local amenity, with tree planting and marginal species. Refer to EAS proposals
Pedestrian + Cycle Route
Woodland nodes situated at the apexes of runways
Water Detention Basin: Feature to contribute to local amenity, with tree planting and marginal species. Refer to EAS proposals
Agricultural Land. It is important to recognise the role areas of undeveloped land play in maintaining the separate identity of settlements and preventing coalescence
HSE OZ
HSE MZ
HSE IZ
Gas pipeline
Landscape as in planning permission (Hollins dwg 08.132/01C)
The B1077 forms an attractive semi-rural setting to Eye. It is important that this quality be retained and enhanced through further planting of hedgerows and native trees
Existing pond
Soft edge to residential development
30m wide landscape buffer to screen views
Parkland setting
Biomass - energy generation (coppice)
30m wide landscape buffer to screen views
Retain green gap: community orchards. It is important to recognise the role areas of undeveloped land play in maintaining the separate identity of settlements and preventing coalescence
Common / open space
Soft edge to residential development to include landscape buffers, play spaces, allotments
Woodland nodes
Southern Access Road
Gas pipeline
Pedestrian + Cycle Route
Allotments (existing)
Any new residential development should be of high quality design and protect and enhance the historic setting of Eye. Views toward Eye from the new Eye Common and local footpaths should be considered in the design, layout and location of new residential development.
Design of new development on the southern part of the site should respond appropriately to the sensitivity of the landscape, in terms of layout, building height, arrangement of buildings and service / storage areas
New Eye Common: an opportunity to create attractive new public amenity space on part of the airfield, accessible to existing and new residents. The new common is intended to be informal in character, where residents can play, relax, picnic, or walk.
The southern section of Eye Airfield is more sensitive to change than other parts. Provision should be made for mitigation planting, especially along the sensitive boundary between areas proposed for new development and Castleton Way
Planting of hedgerows along Castleton Way, with oak and ash trees to reintroduce 'compartmentalisation' into the landscape, and improve ecological connectivity. Castleton Way is an important approach to Eye, and it is important to retain its rural setting. It is also important to recognise the role areas of undeveloped land play in maintaining the separate identity of settlements and preventing coalescence.
Rev A 13.07.12
Amendments to reflect changes to Development Brief document
Rev B 04.01.13
Amendments to masterplan to coordinate with Core Connections drawing
Rev C 15.01.13
Amendment of wording from Development Brief to Development Framework
2162/D10_C
Mid Suffolk District Council
Eye Airfield Development Framework
Suffolk
Landscape Strategy
to be read in conjunction with Eye Airfield Development Framework
1:10,000 at A2
1:20,000 at A4
EA
25.03.12
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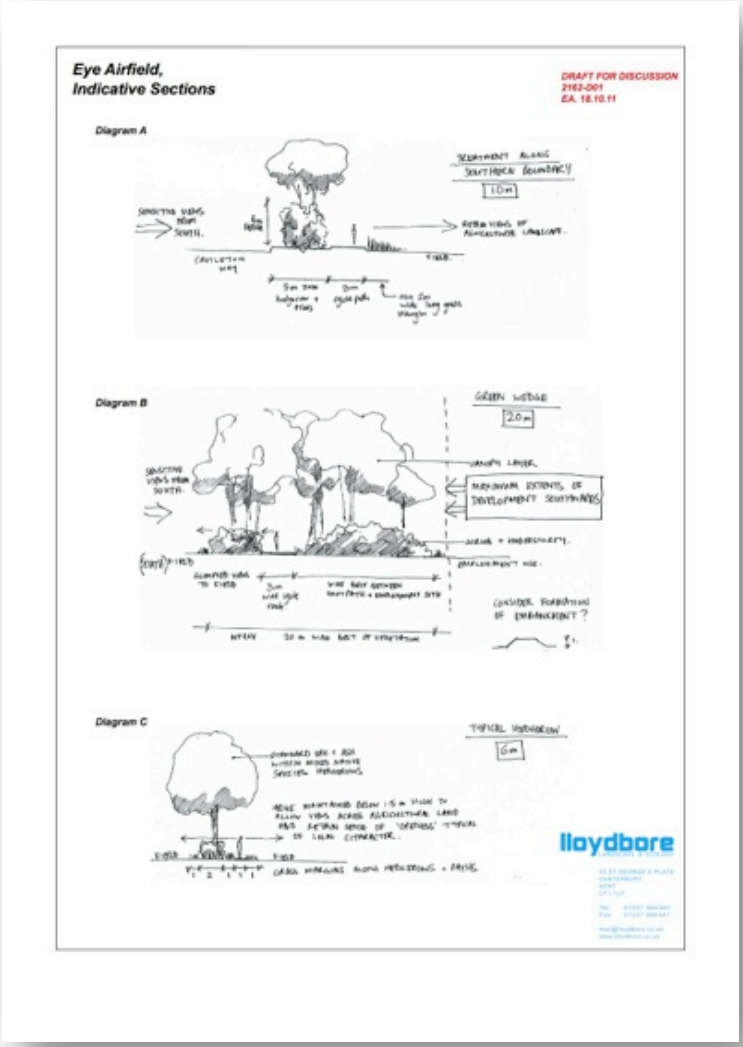

National Grid Guidelines for planting

Large species of poplar and willow above	10 m from pipeline
Large conifers and deciduous forest trees	6 m from pipeline
Dwarf stock fruit trees, field maples up to	6 m from pipeline
Shrubs up to	3 m from pipeline
Hedge and ground cover up to	1.5m from pipeline

Previous page: Landscape Strategy - Drawing 2162 – D10_C
Please refer to the drawing 2162/D10 and document 2162 – R02 Landscape Baseline Appraisal by Lloyd Bore for details.
Left: Typical section sketch

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Appendix 06 The benefits of sprinklers

Fire Safety

Any new development at this location will have an impact upon the demand for the services provided by a number of statutory bodies, including those provided by the Fire and Rescue Service (FRS), both local to the development and county wide in terms of specialist provision. The county council recommends that this Development Framework includes consideration of a site-wide approach to fire safety matters, perhaps through the inclusion of a Fire Safety strategy (to an appropriate level of detail) within the design.

The Fire and Rescue Service are required to have an Integrated Risk Management Plan (IRMP) in which risks within its area are identified and suitable risk mitigation measures are put in place. Whilst this is a complex process, put simply, larger scale developments will increase both risk and demand significantly. In some cases, the increase in risk posed by such large-scale development could warrant significant investment in additional Fire and Rescue resources. Whilst this may be offset by Section 106 requirements of the developer, longer term, they would pose a significantly increased burden upon the council tax payer.

The provision of Fire and Rescue Service assets (Fire Stations, Fire Appliances and Crews) to respond to fire and rescue incidents should be seen as an expensive last resort with sensible planning control and the provision of preventative measures in buildings the preferred option

Suffolk Fire and Rescue Service (FRS) believes that a far more cost effective and sustainable approach is to fit sprinkler systems to all residential and commercial premises in any new developments, and this is particularly important in developments remote from existing FRS resources. The fitting of sprinklers may also allow developers design freedoms and flexibilities when designing developments that would otherwise prove costly to achieve through conventional design and planning constraints.

As part of a Fire Safety strategy, reference is therefore be made in this document to the importance of sprinkler systems as, whilst sprinklers are not a requirement of development, the benefits of sprinklers to the users of buildings, the environment and the wider community are such that applicants for development at this site need to be made aware of them. Please see the text below in this appendix for further information on the benefits of sprinkler systems.

Economic Benefits of Sprinkler Systems

HM Governments 2011 report ‘Economic Cost of Fire’ (for 2008) estimates that nationally fire costs the country £8.2 billion annually. Each fire fatality is estimated to cost the economy £1.65 million and each serious injury £185,000. **Nobody has ever died as a result of a fire in a building protected by sprinkler systems in the UK.**

The average cost of a fire in a building is estimated at £44k for a domestic building, £63k for a public sector building and £75k for a commercial building. This includes the cost fire repair, loss of business, cost to victims, cost of re-housing etc. In commercial developments, sprinklers will improve business continuity and significantly reduce potential sub-sequential loss from fire. Many businesses that have suffered a fire often close down temporarily or permanently resulting in direct job losses and affecting other businesses in the supply chain.

Social Benefits of Sprinkler Systems

The simple fact is that sprinklers save lives. They also prevent small fires developing into large fires and subsequently the cost of repair is significantly reduced. The need for re-housing is less likely and the subsequent insurance claim is significantly reduced. Businesses that remain in operation continue to provide employment and community buildings remain available for use or are reinstated far more quickly if they have been fitted with a sprinkler system. Fire spread and subsequent loss are far more unlikely in buildings fitted with sprinkler systems. Fire fighters face less danger when dealing with the smaller controlled fires that result from sprinkler systems being fitted and are able to prevent further damage more effectively.

Environmental Benefits of Sprinkler Systems

Buildings fitted with sprinkler systems will emit far less CO2 and other pollutant substances if they are involved in a fire. Typically, the amount water required to extinguish a fire by a sprinkler system is 0.2 % of that used by the fire service when extinguishing a fire. Less water used to extinguish a fire means less contaminated water run-off and less potential for pollution.

Text provided by SCC in consultation response September 2012

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