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Sent: 10 September 2021 10:21
To: Norfolk Boreas <NorfolkBoreas@planninginspectorate.gov.uk>
Subject: Oulton Parish Council 20022619 /comment on 'Updated information on cumulative and in combination effects with the Dudgeon and Sheringham Shoal Extension Projects'.

Dear Norfolk Boreas case team,

Oulton Parish Council wish to comment on one of the documents submitted by Norfolk Boreas in response to Secretary of State letter 9th July 2021.

The document - '**Updated information on cumulative and in combination effects with the Dudgeon and Sheringham Shoal Extension Projects**'.

OPC are concerned that some of the cumulative impacts assessed in the document may be misleading due to missing data.

I attach OPC's comments and DEP/SEP PEIR document on 'Main Compound Site Selection Report', in the hope they can be accepted.

Many thanks.

Yours sincerely,

Susan Mather
Chair, Oulton Parish Council



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DPC:76616c646f72



Oulton Parish Council (OPC) would like to comment on the Norfolk Boreas '**Response to Secretary of State Letter dated 9 July 2021 - Updated information on cumulative and in combination effects with the Dudgeon and Sheringham Shoal Extension Projects**'

OPC note that on pages 7-9 of the document '**cumulative and in combination effects with Dudgeon and Sheringham Shoal extension projects**', Norfolk Boreas note the potential cumulative impacts on traffic associated with Hornsea Three/Norfolk Vanguard & DEP/SEP in Oulton for Link 68...This highlights the limitations put on HGV traffic numbers along Link 68 (OPC have highlighted the appropriate text)

Extract...

*Norfolk Boreas onshore construction works are programmed to take place between 2023 and 2026 under Scenario 2, with peak construction traffic occurring in 2023/2024 associated with the cable duct installation and substation civil engineering works. In the absence of mitigation, two road links in proximity to the proposed DEP and SEP crossing point were identified as having potentially significant cumulative traffic impacts (cumulatively between Norfolk Boreas and Hornsea Project Three) during the peak construction year for Scenario 2 (2023) – Link 34 (B1145 through Cawston) and **Link 68 (The Street at Oulton)**. This is presented in Chapter 24 Traffic and Transport [APP-237]. A scheme of mitigation has been secured for each of these road links within the Outline Traffic Management Plan (Version 7) [REP18-021] that introduces a suite of measures to mitigate the potential for construction traffic impacts, including, passing places, parking restrictions, temporary speed limits and a cap to the maximum number of heavy goods vehicle (HGVs) that may use these routes. This limits the number of HGVs associated with the worst case Norfolk Boreas construction (Scenario 2) that may use Link 34 to 56 daily HGV deliveries (112 daily movements). The number of HGVs associated with the Norfolk Boreas construction that may use **Link 68 will be limited to 40 daily HGV deliveries (80 daily HGV movements)**.*

For Link 34 there is also a commitment from Hornsea Project Three to not exceed 63.5 daily HGV deliveries (127 daily HGV movements) and represents an overall limit of 239 daily HGV movements between Norfolk Boreas and Hornsea Project Three to avoid significant cumulative impacts along Link 34.

For Link 68 there is also a commitment from Hornsea Project Three to not exceed 59 daily HGV deliveries (118 daily HGV movements) and represents an overall limit of 99 daily HGV deliveries (198 daily HGV movements) between Norfolk Boreas and Hornsea Project Three to avoid significant cumulative impacts along Link 68 (The Street).

With these measures in place there would be no residual significant traffic impacts. Outside of the peak cumulative construction period (cumulative with Hornsea Project Three) no significant traffic impacts associated with Norfolk Boreas were identified.

During 2025 and 2026 Norfolk Boreas construction activities (under Scenario 2) are associated with the cable pull along the onshore cable route, which will generate significantly fewer HGV movements.

DEP and SEP onshore construction has three build out scenarios, the earliest of which would have an onshore construction start in 2025 and within the DEP and SEP PEIR the peak construction traffic is reported to occur in 2025. Within the DEP and SEP PEIR there is a commitment to not route any construction traffic through Cawston (B1145 -Link 34). The DEP and SEP PEIR does identify The Street (Link 68) as a route required for their construction traffic, with a maximum peak construction traffic of 9 daily HGV deliveries (18 daily HGV movements) during the peak construction year (2025).

The potential for cumulative construction traffic impacts between Norfolk Boreas and DEP and SEP was screened out within the DEP and SEP PEIR on the basis that there would be little to no overlap of the construction activities and peak construction activities do not overlap.

During 2025 construction traffic movements along Link 68 (The Street) associated with Norfolk Boreas would be limited to deliveries to the cable logistics area to support the cable pulling works, which would be five daily HGV deliveries (ten daily HGV movements). Hornsea Project Three would maintain 59 daily HGV deliveries (118 daily HGV movements) throughout their construction phase and DEP and SEP indicate the potential for 9 daily HGV deliveries (18 HGV movements) during 2025. These numbers are significantly lower than the 198 daily HGV movements combined cap that has been committed to by Norfolk Boreas and Hornsea Project Three to mitigate construction traffic impacts.

*Following a review of the available information provided within the DEP and SEP PEIR the Applicant concludes that there are **no likely significant cumulative effects** for traffic and transport because, there would be little overlap of construction activities, Norfolk Boreas construction traffic generation during 2025 would be extremely low, and DEP and SEP has committed to avoid routing any construction traffic through Cawston.*

Oulton Parish Council wish to point out that as well as the cable route construction traffic, which is proposed to go along 'The Street' at link 68 associated with DEP/SEP, there is also the potential for DEP/SEP siting their main construction compound at Oulton.

As part of Equinor's DEP/SEP phase 2 consultation there was a PEIR document *****Main Construction Compound site selection report**', in which Oulton is on the short list of potential sites.

The main issue was that during the Phase 2 consultations with Equinor there was no traffic data provided for the main construction compound, only traffic data for the cable route construction, landfall & substation. The traffic data for the main construction compound would not be available until the location was finalised, this is ongoing. This means there is a potential gap in the traffic data if Oulton is the final choice as a Main compound. Therefore the assumption by Norfolk Boreas that the traffic numbers for DEP/

SEP at Link 68 would be low may be incorrect. OPC have contacted Equinor in the hope of updated information, this is currently unavailable (*see email extract below). This lack of data would have a knock on effect for Noise/ air quality etc. at Oulton Link 68.

DEP/SEP main Construction Compound site selection report....

6.2 Emerging short-list options

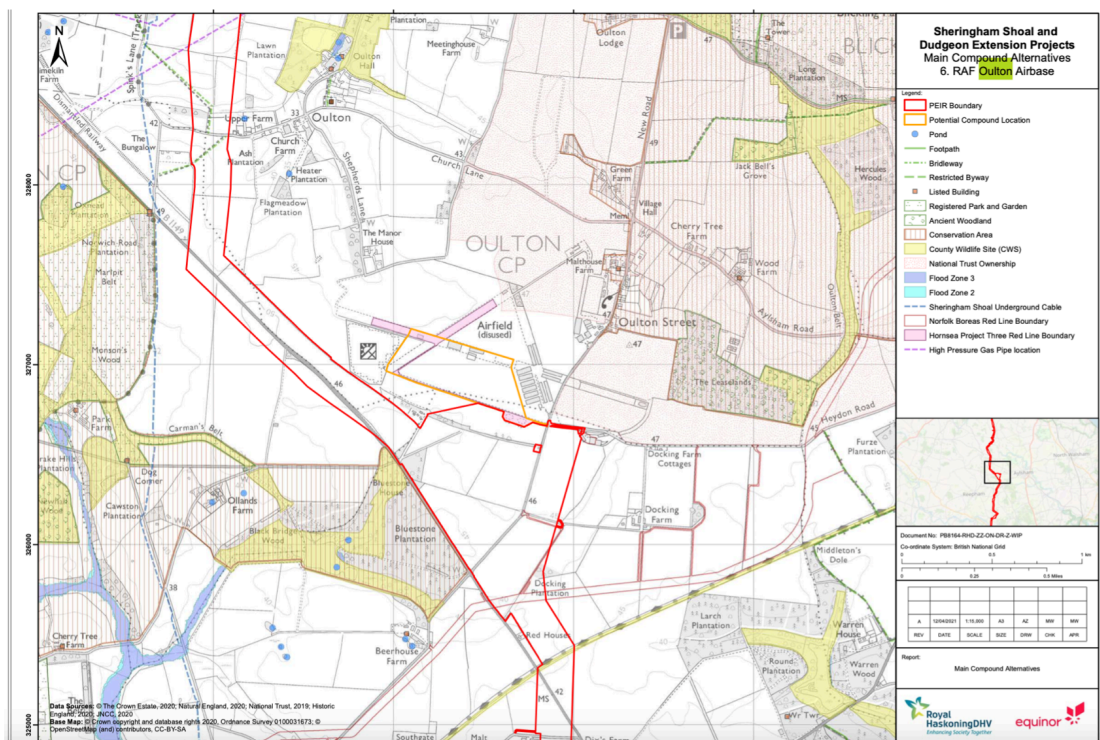
The sites at the A1067 Fakenham Road is considered the option with the fewest risks due to the distance of separation between it and the nearest residential properties, the proximity of the site to the works corridor and the transport links and accessibility.

The sites at Woodford Farm, the A1067 Norwich Road and RAF Oulton score next highest. However, RAF Oulton scores relatively worse for all the transport constraints and the risk of cumulative impacts with other projects, which is particularly sensitive when considering the road network in this part of Norfolk.

The site at RAF Attlebridge was confirmed as not available relatively early in the process, but is presented in the RAG assessment tables for completeness.

As such the sites being taken forward for further consideration comprise:

- A1067 Fakenham Road
- Woodforde Farm
- A1067 Norwich Road
- RAF Oulton



*** Email response from Equinor 31st August 2021 to a recent enquiry by Oulton Parish Council regarding the Main Compound location and further information.....**

A decision on the main compound location/s has not yet been finalised as it is subject to the additional traffic surveys we are undertaking as well as holding detailed conversations with Norfolk County Council about the proposed compound and access strategy. The technical team are also currently reviewing and updating the vehicle data to reflect changes that have occurred as a result of the phase two consultation. For example, the inclusion of additional trenchless crossings at certain locations.

We want to ensure that the decision on the main compound location/s is announced to all stakeholders at the same time, and so we are not able to offer any further information than we have done in the email to — We will be publishing a Phase Two Consultation Summary Report in October, which will include updates on the work that has taken place since our phase two consultation, including updates on the main compound location.

The same applies to the onshore cable corridor as we are in the process of refining our onshore cable corridor proposals following phase two consultation, to a width of 60 metres for our DCO application. We therefore cannot provide further information at this time regarding the routing in relation to the proposed solar farm and proposed Norfolk Boreas project. However, we expect that we will be able to provide you with further detail regarding the onshore cable corridor routing in October. In the same respect as the wider meeting offer to — to discuss your traffic questions, we would be happy to arrange a meeting following the publication of our Consultation Summary Report where we should be able to share more detail on the compound location/s, traffic and the onshore cable corridor in your local area.



Dudgeon and Sheringham Shoal Offshore Wind Farm Extensions

Main Construction Compound Site Selection Report

April 2021

REPORT

Dudgeon and Sheringham Offshore Wind Farm Extension Projects Onshore Main Construction Compound Site Selection

Emerging Short-List Report

Client: Equinor

Reference: PB8164-RHD-ZZ-XX-RP-Z-0059

Status: S0/P01.04

Date: 13 April 2021

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Main Construction Compound Site Selection

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Open



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1 Introduction

This report outlines the onshore main construction compound site selection activities undertaken for the proposed Dudgeon Offshore Wind Farm Extension Project (DEP) and Sheringham Shoal Extension Offshore Wind Farm Project (SEP) leading to the identification of the emerging short-list of options.

This report also sets out the methodology, rationale and design assumptions used to inform the site selection and assessment of alternatives process for the onshore main construction compound.

A critical part of the Environmental Impact Assessment (EIA) process is to review the alternatives considered during the evolution of the project and set out why they have been discarded in favour of preferred sites.

Several satellite compound locations will be required along the onshore cable corridor, with up to two main compound locations for project offices, welfare facilities, staff parking, and material and equipment storage. The size of the main compound will be up to 6ha, approximately 14.8 acres, however it may be preferable to use two smaller sites.

Whilst the onshore construction compound(s) will only be a temporary site required during the onshore construction works, this would still represent 36 months for the single project or two-project concurrent scenario and up to 72 months under the two-project consecutive scenario. Equinor recognises that the main works compound will be the subject of a continuous construction presence throughout the onshore works and on this basis a decision has been made to adopt the same level of assessment for the identification of this site to that taken for the permanent infrastructure.

2 Legislation, Guidance and Best Practice

The site selection process for offshore wind farms in the UK is governed by the existing legislative, policy and guidance framework for the development of electrical infrastructure and for environmental assessment within the UK. The key pieces of legislation, policy and best practice guidance which set the framework for site selection and the assessment of alternatives for offshore wind farms in the UK, and upon which this methodology has been based, are summarised in **Table 2.1** below.

Table 2.1 Legislation, Policy and Guidance considered during the site selection and assessment of alternatives process

Legislation, Policy & Guidance	Details
Legislation	
Environmental Impact Assessment Regulations	<p>The consideration of alternatives and major design decisions made during the development of a project has been part of EIA Legislation since the adoption of the original EIA directive in UK law under the European Union (EU) EIA Directive 85/337/EEC (as amended by Directives 97/11/EC, 2003/35/EC and 2009/31/EC).</p> <p>The Infrastructure Planning (Environmental Impact Assessment) Regulations (2009) require the applicant to provide “an outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for his choice, considering the environmental effects”.</p> <p>The new EIA Regulations (2017) amend the wording slightly but do not significantly change the position. The new Regulations require an Environmental Statement (ES) to include “a description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by</p>

Legislation, Policy & Guidance	Details
	<i>the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects”.</i>
The Electricity Act 1989	<p>Section 36 of the Electricity Act 1989 provides the legal framework for the consenting regime for offshore wind farms in the UK. Schedule 9 of The Electricity Act 1989 sets out the obligations for a generation installation to mitigate the effects on the environment, including “<i>shall have regard to...preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest</i>”.</p> <p>In addition, Section 9 of the Act sets out the duties of an electricity distributor that are relevant to the site selection process, including that “<i>It shall be the duty of an electricity distributor to develop and maintain an efficient, co-ordinated and economical system of electricity distribution</i>”.</p>
The Planning Act 2008	The Planning Act 2008 (as amended by the Marine and Coastal Access Act 2009, the Localism Act 2011, the Growth and Infrastructure Act 2013, and the Infrastructure Act 2015) is the primary legislation that established the legal framework for applying for, examining and determining applications for Nationally Significant Infrastructure Projects (NSIPs) taking into account the guidance in National Policy Statements (NPSs).
National Policy	
Overarching NPS for Energy (EN-1)	The Overarching NPS for Energy (EN-1) is clear that although “ <i>from a policy perspective this NPS EN-1 does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option</i> ”, in the execution of a competent EIA “ <i>applicants are obliged to include in their ES, as a matter of fact, information about the main alternatives they have studied.</i> ”
Planning Inspectorate Advice Note Nine: Rochdale Envelope	The Rochdale envelope enables and facilitates a degree of flexibility within the project design at consent. Planning Inspectorate Advice Note Nine: Rochdale Envelope states “ <i>The need for flexibility is identified in a number of National Policy Statements (NPS), which suggest the Rochdale Envelope as an approach to address uncertainties inherent to the Proposed Development e.g. changing market conditions. However, Energy (EN-1), the NPS for Renewable Energy Infrastructure (EN-3) and the NPS for National Networks all stress the need to ensure that the significant effects of a Proposed Development have been properly assessed</i> ”.
Planning Inspectorate Advice Note Seven: EIA	The Planning Inspectorate Advice Note Seven suggest the EIA needs to explain “ <i>the reasonable alternatives considered and the reasons for the chosen option considering the effects of the Proposed Development on the environment</i> ”.
Guidance	
EIA Guide to Shaping Quality Development (IEMA)	<p>IEMA’s EIA Guide to Shaping Quality Development states that considering the key environmental and consenting risks alongside the engineering requirements of a project can influence design in many ways. The earlier the interaction commences, the more likely it is that cost effective, positive outcomes will be achievable. This can be considered in several ways:</p> <ul style="list-style-type: none"> • The review of site selection of alternative development sites to avoid key sensitive receptors; • Alternating the layout to work within a site’s existing natural systems; • Amending the design of a specific aspect of the development to manage impacts; • Specifying construction techniques to avoid effects on receptors; and • Changing materials to reduce volume and/or transport impacts
The Horlock Rules	In order to identify the most appropriate location to site the onshore substation, National Grid’s Guidelines on Substation Siting and Design (‘The Horlock Rules’) (National Grid Company (NGC), 2006) will be taken into consideration. These guidelines document National Grid’s best practice for the consideration of relevant constraints associated with the siting of onshore substations.

3 Methodology

3.1 Overview





Site selection is an iterative process that is informed through constraints mapping, assessment and consultation providing a transparent audit trail setting out the assumptions and decisions that ultimately lead to the identification of the preferred site. To demonstrate that the site selection process is iterative and has been informed by investigative work and stakeholder consultation, some flexibility over the location must be allowed for during the initial stages of site selection to allow for further refinement during the subsequent stages of the EIA process.

The identification of a series of transparent design principles and engineering assumptions are necessary to govern the decisions made at each stage of the site selection process. These design principles and engineering assumptions cover environmental, physical, technical and commercial, and are set out in **Section 4** below. Each step of the process then involves gathering data from a number of different sources including environmental, engineering, land and stakeholder data and using this information to define and assess the options for each element of project infrastructure.

Workshops are typically held at key stages of the site selection process to collate and review the data gathered to date, and to reach cross-discipline decisions to further refine the options. A further key driver is the consultation undertaken as part of this process, which is further described in **Section 7.1**.

3.2 Black-Red-Amber-Green (BRAG) assessment

A BRAG assessment provides a way to compare each option based on defined consenting risks. Higher risk options are given a red rating, whilst those with medium risks are coded amber and those with the least risk are assigned green. Black options are those which are not feasible from an engineering, land or environmental perspective. The aim is to ascertain which option carries the least risk with respect to the assessment criteria applied and based upon the professional judgement. A summary of the option classification system is provided below:

-  Black indicates a no-go area in terms of environment, consenting and engineering risk
-  Red indicates a high environment, consenting and engineering risk
-  Amber indicates a medium environment, consenting and engineering risk
-  Green indicates a low environment, consenting and engineering risk

Once the BRAG assessments are completed for each criteria, they provide an aid to the decision-making process of site selection and will ultimately help inform the options which may be discounted from the site selection process, and which options should be taken forward for further consideration. The BRAG assessment also identifies areas where further work and information may be required in order to feed into the decision-making process.

An example of the typical criteria used within each BRAG assessment is provided in **Table 3.1**

Table 3.1 An indicative table for EIA Topic 'Traffic and Transport' to demonstrate some of the early key constraints associated with the site selection and design considerations.

Topic	Criteria	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Traffic and Access	Highway network constraints (Red - road not wide enough for two vehicles unable to widen; Amber - road generally not wide enough for two vehicle potential to widen; Green - Road generally wide enough for two vehicles to pass)	Few constraints assuming access direct from XX Road	No suitable access	No suitable access	No suitable access	Few constraints assuming access direct from the B Road	Few constraints assuming access direct from XX Road
	Access constraints (Red - Access not achievable; Amber - Achievable with accommodation works; Green - Existing access available)	No suitable access location direct from XX Road	n/a	n/a	n/a	Possible with accommodation works	Possible with accommodation works
	Sensitive receptors (Red - High concentrations of sensitive receptors Amber - low concentrations of sensitive receptors Green - Few sensitive receptors)	n/a	n/a	n/a	n/a	Route to option passes a number of high sensitive receptors	Route to Options 6 passes a number of high sensitive receptors
	Road safety (Red - More than three collisions clustered Amber - Three collisions clustered Green - No existing collision clusters)	n/a	n/a	n/a	n/a	No issues	No issues
	Summary	No suitable highway access options available, therefore alternative access would need to be identified	No suitable highway access options available, therefore alternative access would need to be identified	No suitable highway access options available, therefore alternative access would need to be identified	No suitable highway access options available, therefore alternative access would need to be identified	Highway network constraints and access constraints limited but passes through a high sensitive area	Highway network constraints and access constraints limited but passes through a high sensitive area

The BRAG assessment methodology is an effective tool for comparing a number of different factors which need to be considered during the site selection process where:

- Each discipline has the opportunity to assess the key risks and opportunities;
- The ranking process itself is a clear process by which it is possible to compare factors between each site; and
- It provides a consistent and repeatable framework in which to make decisions.

Furthermore, it is important to note:

- Each decision is led by expert opinion and applying professional judgement of the different assessments; and
- The decision at key stages of the site selection process will be led by a workshop to bring together the different workstreams to make sure and ground truth and test the decisions being made.

The outcome of this process is:

1. An initial identification of a 'lowest risk' options based on the balance of risks.
2. The identification of further studies that are required to support the conclusions reached through the BRAG assessment.

4 Onshore construction compound design assumptions and site selection principles

The site selection process is underpinned by a series of design assumptions and site selection principles which are used as a transparent framework for making site selection decisions at each stage of the site selection process.

4.1 Design assumptions

- Construction compound footprint – up to 6ha (one site or two smaller sites)
- Two way vehicular access (heavy goods vehicles – HGVs) required

4.2 Site selection principles

- Avoid residential titles (including whole garden) where possible;
- Avoid direct significant impacts to internationally and nationally designated areas (e.g. SACs, SPAs, and SSSIs etc.);
- Minimise significant impacts to the special qualities of Areas of Outstanding Natural Beauty;
- Avoid mature woodland and historic woodland;
- Avoid areas that fall within Flood Zone 3;
- Areas of local amenity value, important existing habitats and landscape features including ancient woodland, historic hedgerows, surface and ground water sources and nature conservation areas should be protected as far as reasonably practicable;
- Locations should take advantage of the screening provided by land form and existing features and the potential use of site layout and levels to keep intrusion into surrounding areas to a reasonably practicable minimum;
- Options should keep the visual, noise and other environmental effects to a reasonably practicable minimum; and
- The space required should be limited to the area required for development consistent with appropriate mitigation measures and to minimise the adverse effects on existing land use and Public Rights of Way.

5 Identification of Potential Main Compound Locations

Following the identification of the route of the onshore cable corridor to inform the Preliminary Environmental Information Report (PEIR) the project engineering team and land team sought to identify potentially suitable locations to accommodate the main construction compound. Options were identified based on available space to accommodate the 6ha footprint (may be two smaller sites), positioned to provide support along the full length of the cable corridor, proximity to the cable corridor and proximity to the existing road network. Potential sites identified as a result of ongoing landowner discussion were also included in the assessment. Eight potential sites were identified following this exercise, which are shown in **Appendix 1**:

1. RAF Attlebridge
2. A1067 Fakenham Road, Attlebridge
3. East of Cawston
4. Woodforde Farm, Weston Longville
5. Longwater Business Park
6. RAF Oulton Airbase
7. Felthorpe
8. A1067 Norwich Road

For each of these potential options the following constraints were mapped:

- Special Protection Areas (SPA)
- Special Area of Conservations (SAC)
- Ramsar sites
- Areas of Outstanding Natural Beauty (AONB)
- Sites of Special Scientific Interests (SSSI)
- Local Nature Reserves (LNR)
- National Nature Reserves (NNR)
- County Wildlife Sites (CWS)
- Registered Parks and Gardens
- Ancient Woodland
- RSBP reserves
- National Trust land
- Common land
- Public Rights or Way
- Main Rivers
- Flood Zones 2 & 3
- Scheduled Monuments
- Conservation Areas
- Listed buildings
- Historic Environment Records
- Historic landfill sites
- Source Protection Zones (SPZ)
- Other proposed Nationally Significant Infrastructure Projects (Hornsea Project Three)

The proximity of the nearest residential properties was also determined based on aerial imagery. Figures for each location with these constraints mapped are provided in **Appendix 1**.

6 BRAG Assessment

A BRAG assessment was undertaken for the eight main construction compound options (refer to methodology set out in Section 3.2) using defined BRAG criteria to identify the risks and opportunities associated with each option. Higher risk options were given a red rating, whilst those with medium risks were coded amber and those with the least risk are assigned green. Black options are those which are not feasible from an engineering, land or environmental perspective. The aim was to ascertain which options carry the least risk with respect to the assessment criteria applied and based upon professional judgement.

As part of the BRAG assessment for each option, the following was undertaken:

- Review of the relevant datasets and development considerations;
- Define the criteria to be used in the BRAG, and the scoring system to classify the BRAG for each;
- Populate the BRAG assessment spreadsheet giving each long list option a BRAG classification for each development consideration identified and a brief explanation within each cell – a copy of the assessment spreadsheet is included as **Appendix 2**; and
- A short written summary, which is presented within this section, to provide a narrative and context to support the information presented in the BRAG spreadsheet.

Given the temporary nature of the construction compound this assessment of alternatives has focussed on the following key aspects of the main construction compounds:

- Engineering feasibility
 - Proximity to the cable corridor
 - Location along the cable corridor
 - Existing hard standing
 - Available space
 - Existing services
- Land
 - Availability during construction
- Community / disturbance effects
 - Proximity to nearest residential properties
 - Proximity to nearest Public Rights of Way (PRoW)
 - Cumulative community impacts with other similar projects
- Traffic / transport
 - Highway network constraints
 - Access constraints
 - Proximity of access routes to sensitive receptors (schools, retirement homes, residential dwellings, etc)
 - Road safety
- Nature conservation
 - Proximity to sites designated for nature conservation
- Historic environment
 - Proximity to sites designated for historic significance

6.1 BRAG summary findings

The following sections represent short summaries providing a narrative and context to support the information in the BRAG spreadsheet presented in full in Appendix 2. Table 6.1 provides a visual summary of the BRAG assessment outputs. A simple scoring system is used to understand how each option compares overall against the others – red = 1 point, amber = 2 points and green = 3 points; those receiving more greens and ambers will score relatively more favourably than those receiving more reds and ambers. Any site receiving a black rating for any category is in effect identified as not feasible.

6.1.1 Engineering / Land

The sites to the east of Cawston and RAF Oulton both benefit from central locations along the cable corridor, in addition the Cawston site would have a direct connection to the cable corridor itself. RAF Oulton also benefits from existing hard standing and good opportunities to connect to existing utilities. However, the site is a commercial site without a guarantee of its availability during construction. It is also the location of the Hornsea Project Three main compound and interactions with this project introduce additional complexity.

The site along A1067 Fakenham Road benefits from its position immediately adjacent to the cable corridor but does not have any existing hard standing or services, and Woodforde Farm has good availability and opportunities to connect to utilities.

These four sites are all marginally preferable from an engineering perspective.

The next highest scoring sites are the A1067 Norwich Road and Felthorpe. Both of these sites are away from a preferred central location and a relatively smaller options than the four previously discussed. The A1067 Norwich Road site does benefit from existing hardstanding and both sites have good opportunities to connect to utilities.

The Longwater Business Park site scores relatively poorly across all the engineering criteria.

RAF Attlebridge has been confirmed as not available and is not discussed further.

6.1.2 Community disturbance

Longwater Business Park scores marginally best in this category. This site is an existing commercial site in excess of 500m from any residential properties and in excess of 250m from any PRowS.

A1067 Fakenham Road, A1067 Norwich Road and Woodforde Farm also score highly in this category. Whilst these as they are located relatively closer the nearest residential properties (200m, 210m and 175m respectively); however, this distance of separation is not expected to represent a significant potential for noise disturbance.

These four sites represent the preferred options in relation to potential impacts on local communities.

RAF Oulton and the site east of Cawston both score poorly when considering the risk of cumulative impacts on local communities given that Hornsea Project Three, Norfolk Vanguard and Norfolk Boreas are all present in this area, and there are construction traffic caps placed on all those projects for many of the roads serving those communities. The three other sites are all within 100m of the nearest residential properties with the site east of Cawston and the Felthorpe site both within 20m of residential properties.

6.1.3 Traffic and Transport

The A1067 Fakenham Road and the A1067 Norwich score relatively higher than the other options from a transport perspective. These all have either no, or very minor, constraints related to access, highway network and proximity to sensitive transport receptors. These two sites are all considered to be equally preferable.

The sites at Woodforde Farm and Longwater Business Park score very marginally lower as typically some form of localised road widening (passing places) would be required.

The site east of Cawston scores relatively lower in relation to sensitive receptors. Whilst the site itself is located on the B1149, which has very few sensitive receptors, it is located on the junction with the B1145 at Cawston. The B1145 is a route with sensitive receptors and these are reflected in the scoring.

The other site options are not currently served by routes that are wide enough for two-way construction traffic, and with little scope to introduce measures to widen them, making them less preferable to the other site options.

6.1.4 Archaeology / Nature Conservation

None of the options are considered to represent a concern in relation to the historic environment. A number of the sites are located approximately 150m from the nearest listed buildings, however, given the temporary nature of the works this distance of separation is not considered to represent a risk to the significance of the setting of these buildings.

RAF Oulton and the site at Felthorpe are marginally preferable from a nature conservation perspective. However, none of the sites scored worse than amber for this category and are not considered to represent significant risks to any sites designated for nature conservation.

6.2 Emerging short-list options

The sites at the A1067 Fakenham Road is considered the option with the fewest risks due to the distance of separation between it and the nearest residential properties, the proximity of the site to the works corridor and the transport links and accessibility.

The sites at Woodford Farm, the A1067 Norwich Road and RAF Oulton score next highest. However, RAF Oulton scores relatively worse for all the transport constraints and the risk of cumulative impacts with other projects, which is particularly sensitive when considering the road network in this part of Norfolk.

The site at RAF Attlebridge was confirmed as not available relatively early in the process, but is presented in the RAG assessment tables for completeness.

As such the sites being taken forward for further consideration comprise:

- A1067 Fakenham Road
- Woodforde Farm
- A1067 Norwich Road
- RAF Oulton

Topic	Considerations	1	2	3	4	5	6	7	8
		RAF Attlebridge	A1067 Fakenham Road	East of Cawston	Woodforde Farm	Longwater Business Park	RAF Oulton Airbase	Felthorpe	A1067 Norwich Road
Engineering	Distance (m) to cable corridor Red = >500m Amber = 100 - 500m Green = < 100m	1	3	3	1	1	1	1	1
Engineering	Location along cable corridor Red = >20km from middle point along cable corridor Amber = 10-20km from middle point along cable corridor Green = within 10km of middle point along cable corridor	2	2	3	2	1	3	2	2
Engineering	Existing hard standing Red - No existing hardstanding (greenfield site) Green - Existing hardstanding	3	1	1	1	1	3	1	3
Engineering	Available space Red = < 30,000m ² Amber = 30,000 - 60,000m ² Green = > 60,000m ²	3	3	3	3	1	2	1	1
Engineering	Existing services Amber = no services Green = Services present	2	2	1	2	1	3	2	2
Land	Availability / Planning Risk Black = Confirmed not available Red = Commercial site (not guaranteed to be available when construction starts) or known local planning restriction Green = Non-commercial site (subject to landowner agreement) / no known local planning restriction Amber =	0	3	1	3	1	1	3	1
Local community	Distance (m) from nearest residential property Red = <100m Amber = 100 - 400m Green = > 400m	1	2	1	2	3	3	1	2
Local community	Number of ProW in proximity (<250m) Red = >1 Amber = 1 Green = 0	1	3	3	3	3	3	1	3
Local community	Cumulative impacts with other projects Red = Significant potential risk of cumulative impacts with another project Amber = Potential cumulative risk Green = No obvious cumulative risk	3	3	1	3	3	1	3	3
European Nature Conservation Designated Sites	Proximity (m) to SPAs, SACs, Ramsar sites Red = 0m Amber = 1 - 3,000m Green = >3,000m	2	2	2	2	2	3	3	2
National Nature Conservation Designated Sites	Proximity (m) to SSSIs, Ancient Woodlands, National Nature Reserves Red = 0m Amber = 1 - 1,000m Green = >1,000m	2	2	2	2	2	3	3	2
Local Nature Conservation Designated Sites / CWS	Proximity (m) to Local Nature Reserves Red = 0m Amber = 1 - 100m Green = >100m	3	2	3	3	2	3	2	2

Topic	Considerations	1	2	3	4	5	6	7	8
		RAF Attlebridge	A1067 Fakenham Road	East of Cawston	Woodforde Farm	Longwater Business Park	RAF Oulton Airbase	Felthorpe	A1067 Norwich Road
Known designated heritage assets	Presence of known designated heritage assets in proximity to the compound location Red = impact on designated asset with limited mitigation options Amber = impact on designated asset with mitigation options available Green = no designated assets present, no impact	3	3	3	3	3	3	3	3
Transport	Highway network constraints Red - road not wide enough for two vehicles unable to widen; Amber - road generally not wide enough for two vehicle potential to widen; Green - Road generally wide enough for two vehicles to pass	2	3	2	2	3	1	1	3
Transport	Access constraints Red - Access not achievable; Amber - Achievable with accommodation works; Green - Existing access available	3	2	3	3	3	2	3	3
Transport	Sensitive receptors Red - High concentrations of sensitive receptors Amber - low concentrations of sensitive receptors Green - Few sensitive receptors	2	3	1	3	2	1	1	3
Transport	Road safety Red - More than three collisions clustered Amber - Three collisions clustered Green - No existing collision clusters	3	3	1	1	1	1	1	1
	Score	36	42	34	39	33	37	32	37
	Rank	5	1	6	2	7	3	8	3

7 Next steps

7.1 Stakeholder and community engagement

Stakeholder and community engagement is an integral part of the site selection process and ensures that the views and recommendations of stakeholders and the local community are incorporated into the site selection process. Stakeholder engagement is crucial to ensuring that the output of the site selection process is robust and stands the best chance of being accepted at the consenting stage of the project.

Since all four sites score very similarly, community and stakeholder engagement will be undertaken on the the emerging short-list of options for the main construction compound(s). Feedback received during this engagement process, along with ongoing technical and environmental studies of the short-list options, will inform the process of identifying a preferred option to take forward within the application for development consent.

8 References

Department for Energy and Climate Change (DECC) (2011a) Overarching National Policy Statement for Energy (EN-1)

Her Majesty's Government (1989) The Electricity Act

Institute of Environmental Management and Assessment (IEMA) (2015) IEMA Environmental Impact Assessment Guide To Shaping Quality Development

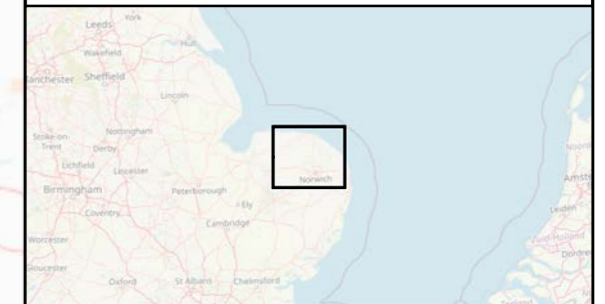
Appendix 1 - Figures

Sheringham Shoal and Dudgeon Extension Projects Main Compound Alternatives Overview

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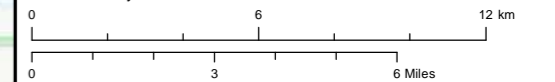
- PEIR Boundary
- Potential Compound Location

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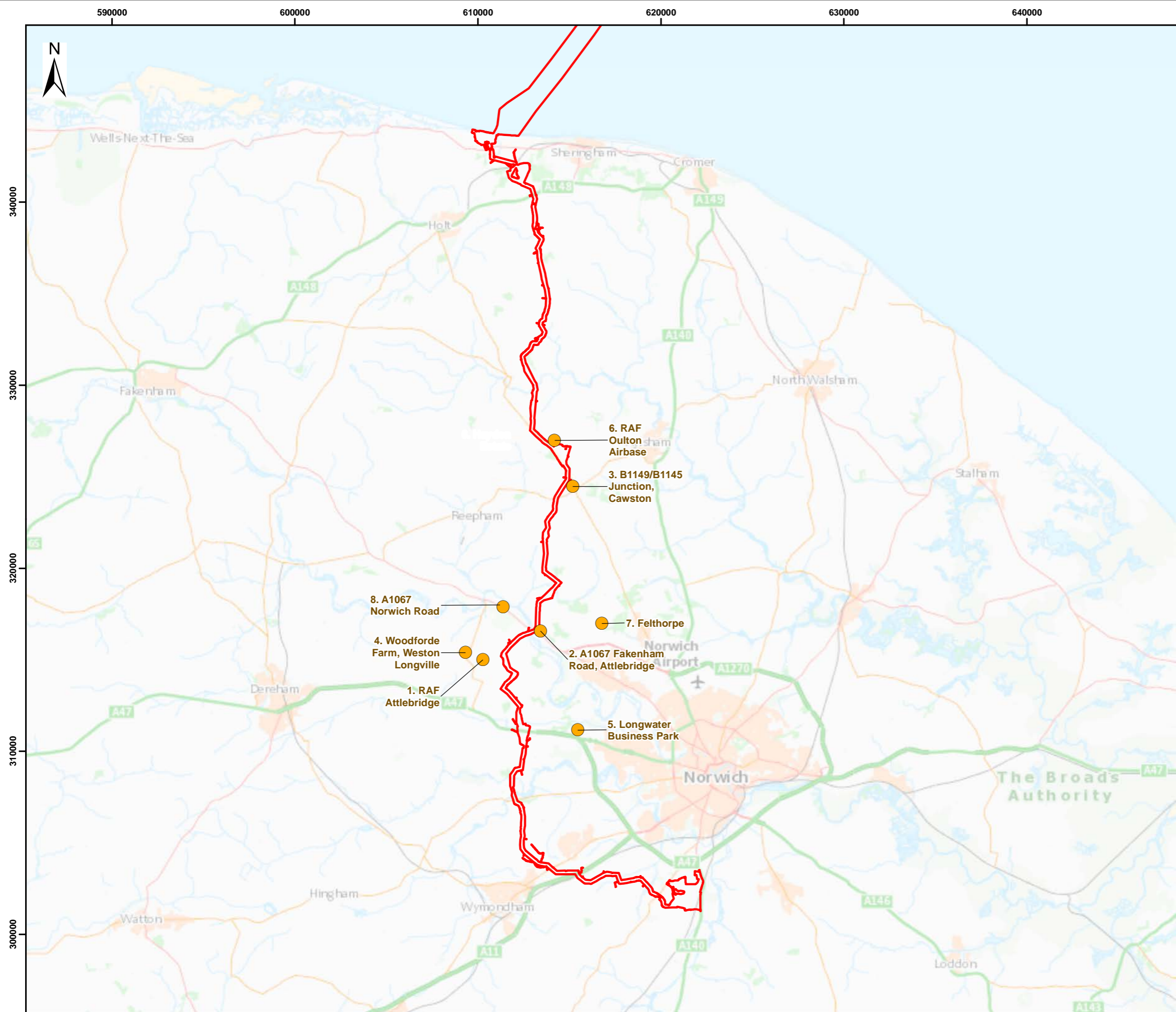
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Main Compound Alternatives

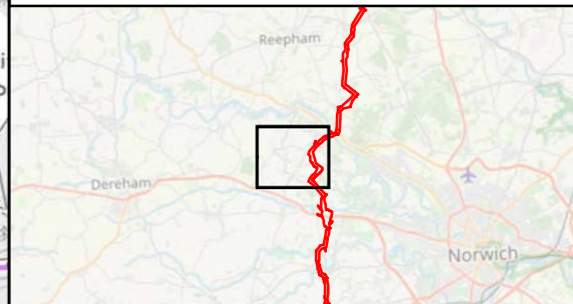
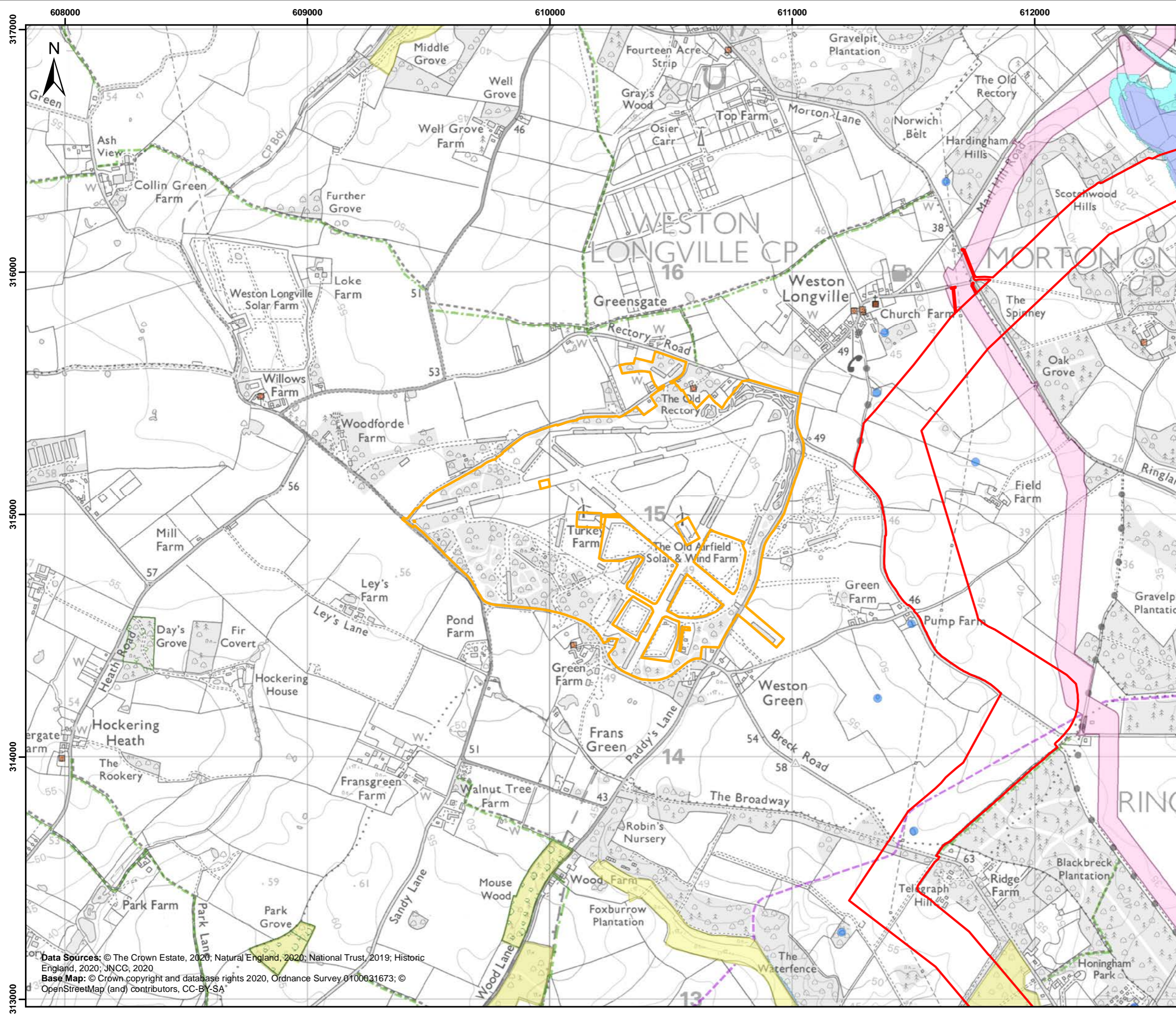


Sheringham Shoal and Dudgeon Extension Projects

Main Compound Alternatives

1. RAF Attlebridge

- Legend:
- PEIR Boundary
 - Potential Compound Location
 - Pond
 - Bridleway
 - Restricted Byway
 - Listed Building
 - Ancient Woodland
 - County Wildlife Site (CWS)
 - Flood Zone 3
 - Flood Zone 2
 - Hornsea Project Three Red Line Boundary
 - High Pressure Gas Pipe location



Document No: PB8164-RHD-ZZ-ON-DR-Z-WIP
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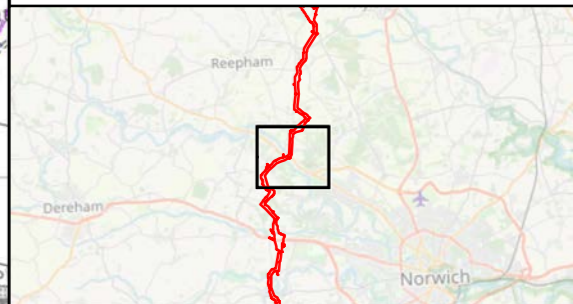
Report: Main Compound Alternatives

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Sheringham Shoal and Dudgeon Extension Projects Main Compound Alternatives 2. 1067 Fakenham Road, Attlebridge

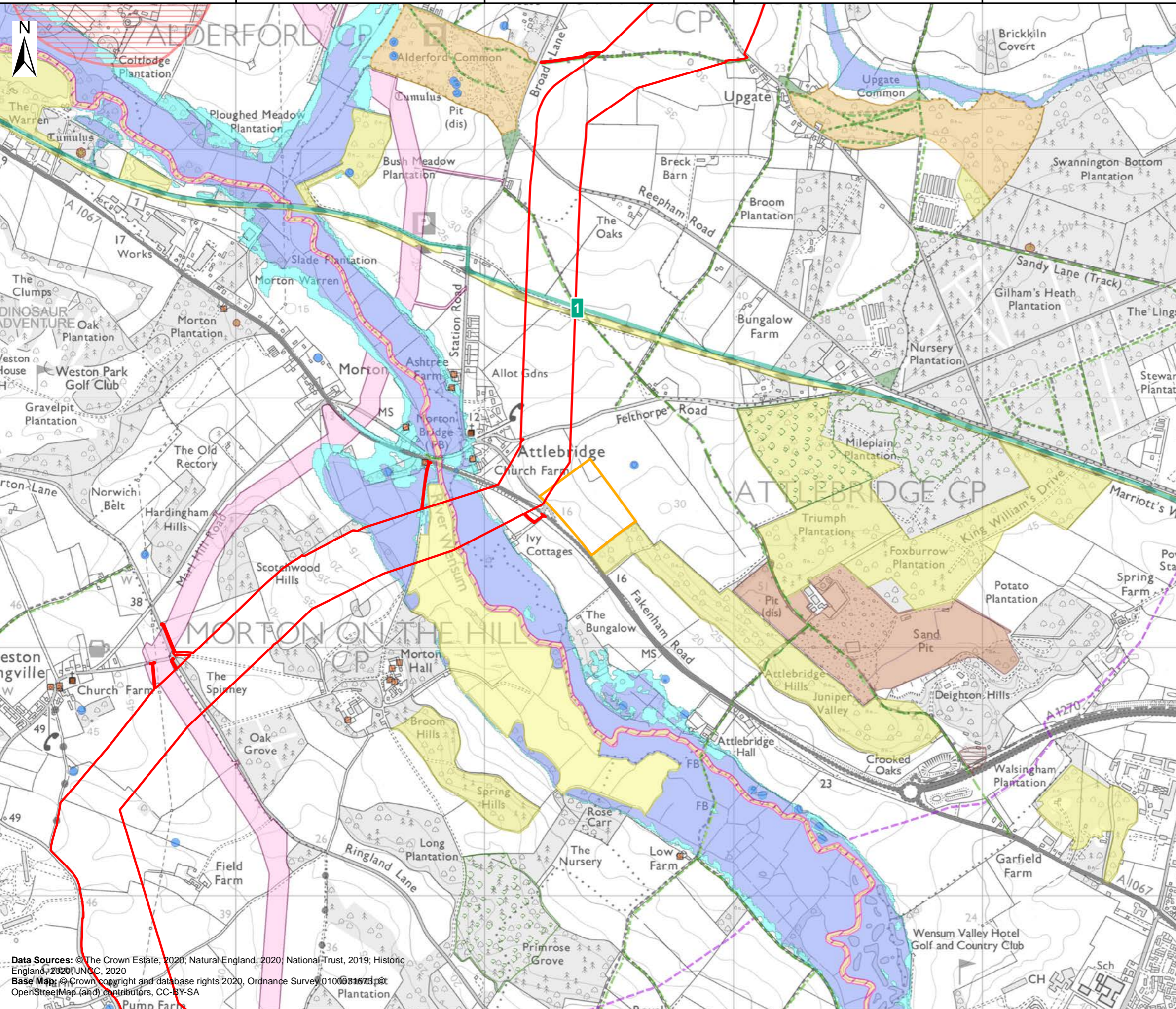
- Legend:
- PEIR Boundary
 - Potential Compound Location
 - Pond
 - Footpath
 - Bridleway
 - Restricted Byway
 - National Cycle Route
 - Listed Building
 - Scheduled Monument
 - Ancient Woodland
 - County Wildlife Site (CWS)
 - Special Area of Conservation (SAC)
 - Sites of Special Scientific Interest (SSSI)
 - Authorised Landfill Site
 - Historic Landfill Site
 - Source protection zone I
 - CRoW Registered Common Land
 - Environment Agency Main River
 - Flood Zone 3
 - Flood Zone 2
 - Hornsea Project Three Red Line Boundary
 - High Pressure Gas Pipe location



Document No: PB8164-RHD-ZZ-ON-DR-Z-WIP
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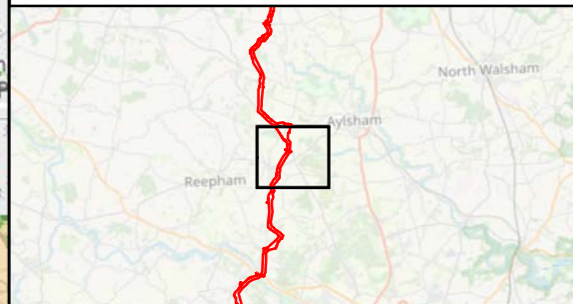
Report: Main Compound Alternatives



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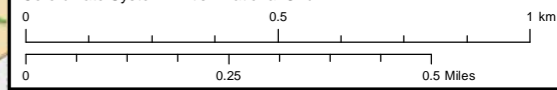
Sheringham Shoal and Dudgeon Extension Projects Main Compound Alternatives 3. East of Cawston

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- PEIR Boundary
 - Potential Compound Location
 - Pond
 - Footpath
 - Bridleway
 - Restricted Byway
 - Listed Building
 - Registered Park and Garden
 - Ancient Woodland
 - Conservation Area
 - County Wildlife Site (CWS)
 - Sites of Special Scientific Interest (SSSI)
 - Source protection zone I
 - Flood Zone 3
 - Flood Zone 2
 - Sheringham Shoal Underground Cable
 - Norfolk Boreas Red Line Boundary



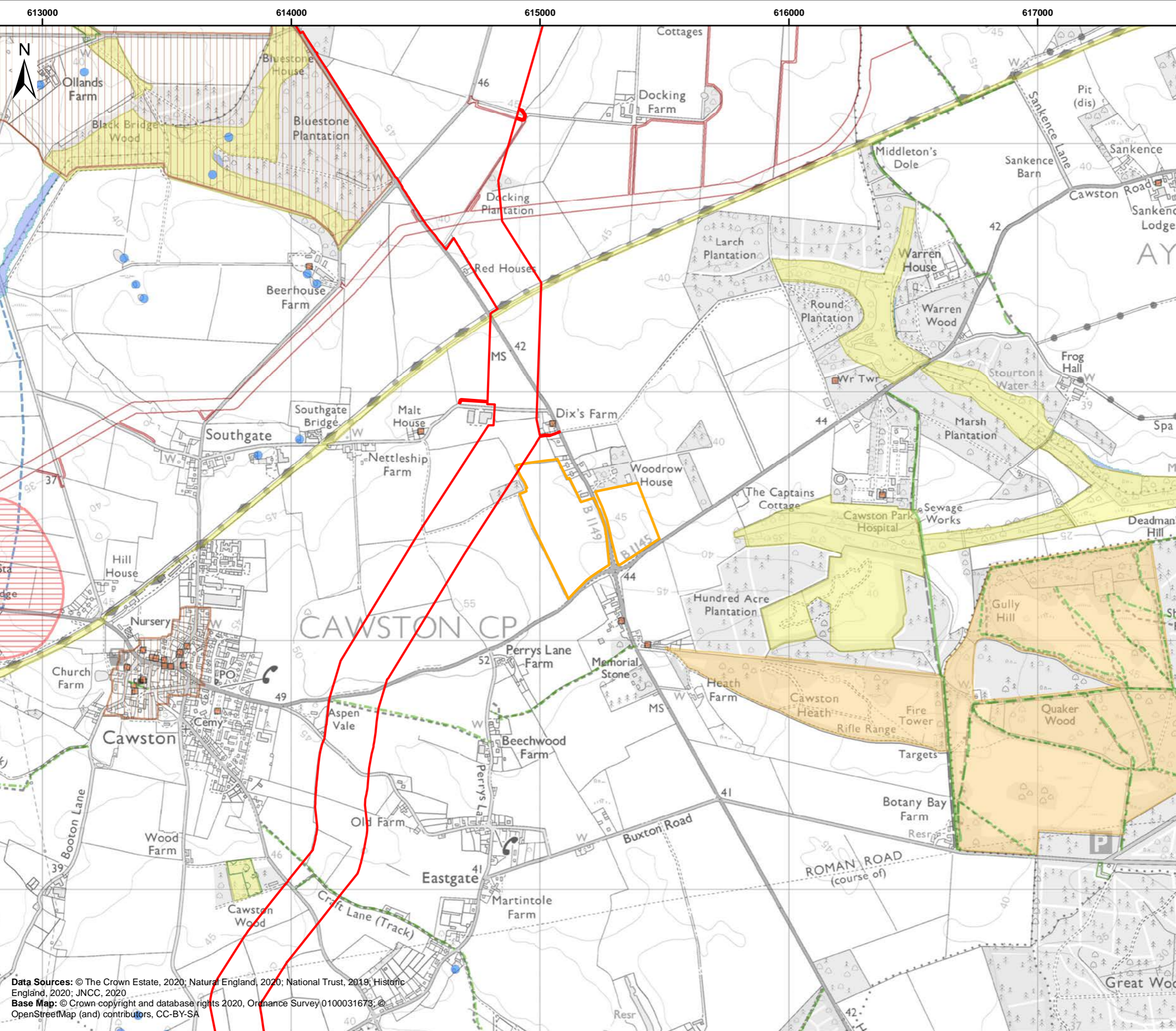
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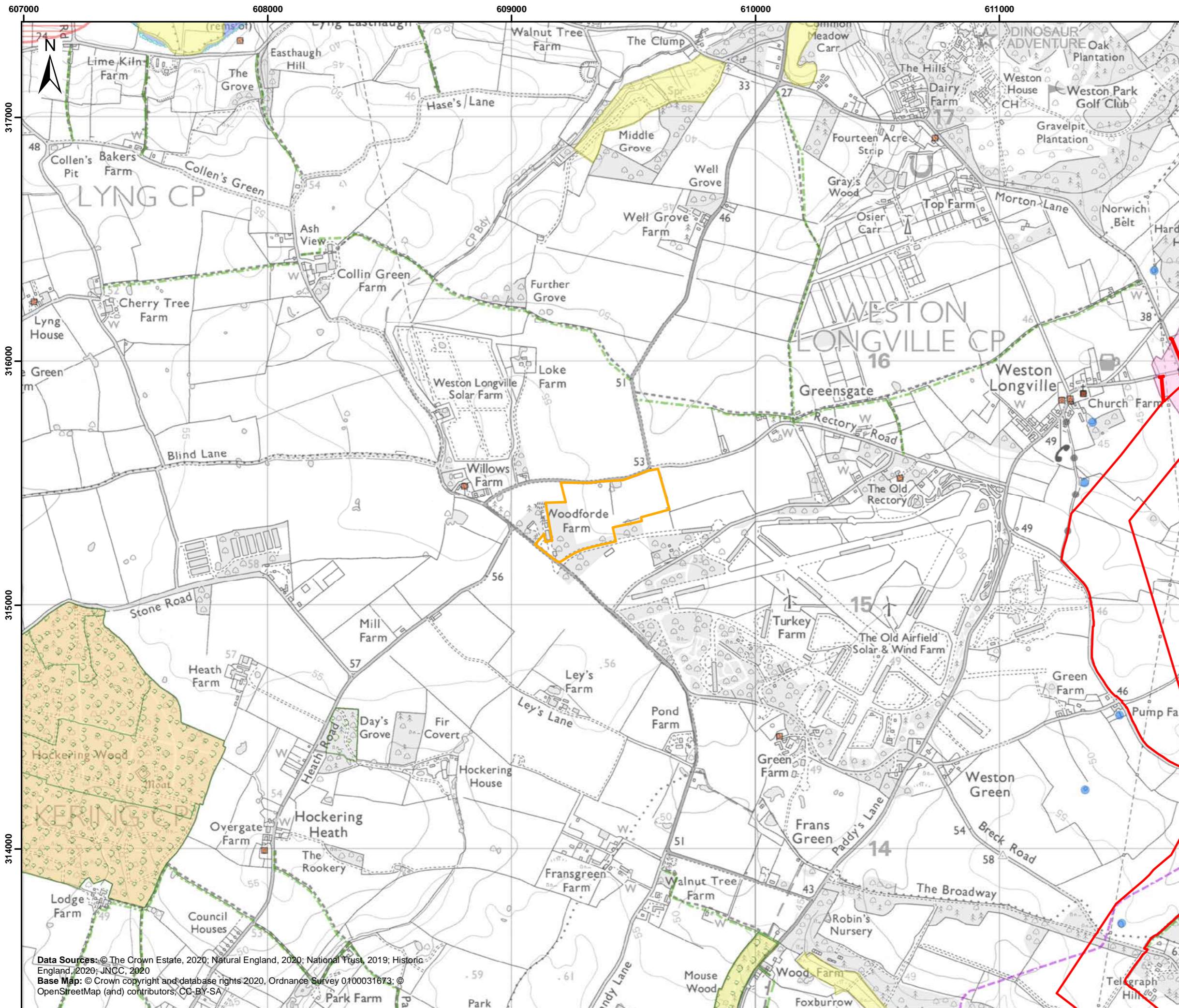


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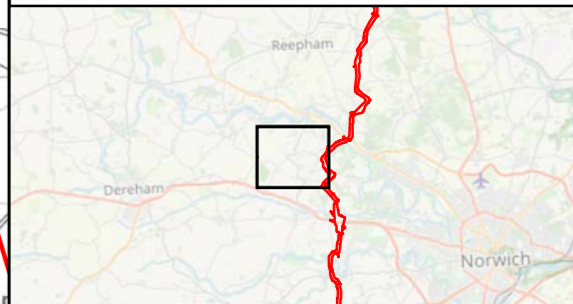


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Sheringham Shoal and Dudgeon Extension Projects Main Compound Alternatives 4. Woodforde Farm, Weston Longville

- Legend:**
- PEIR Boundary
 - Potential Compound Location
 - Pond
 - - - Bridleway
 - - - Restricted Byway
 - Listed Building
 - Ancient Woodland
 - County Wildlife Site (CWS)
 - Sites of Special Scientific Interest (SSSI)
 - Source protection zone 1
 - Flood Zone 3
 - Flood Zone 2
 - Hornsea Project Three Red Line Boundary
 - - - High Pressure Gas Pipe location



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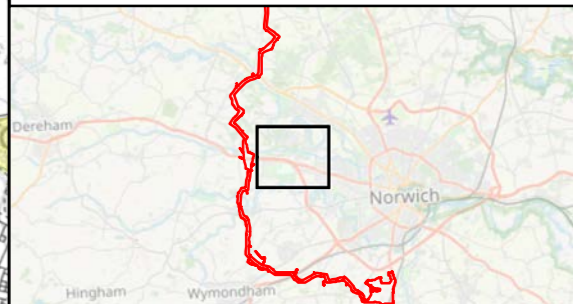
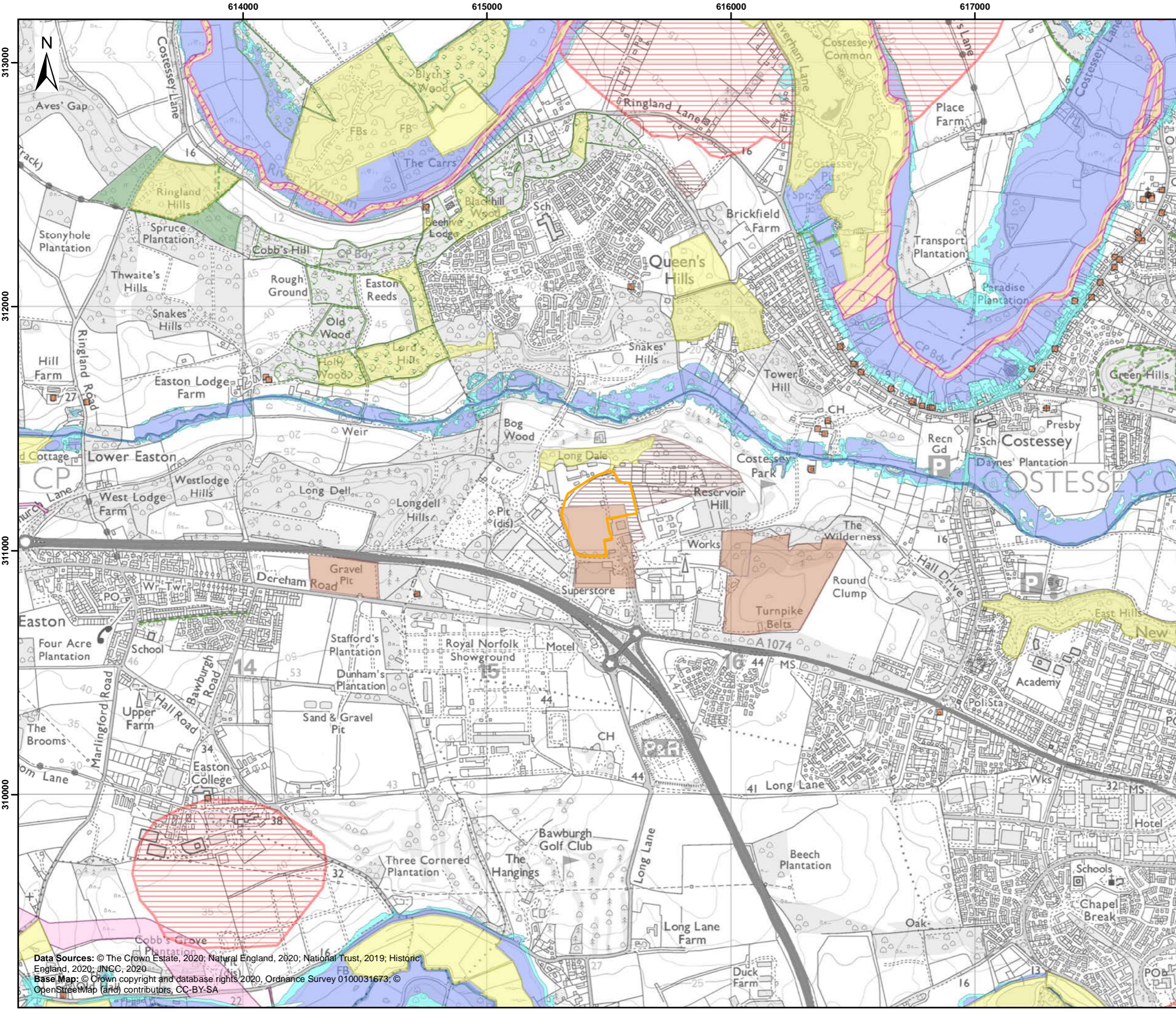
Report: Main Compound Alternatives

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Sheringham Shoal and Dudgeon Extension Projects Main Compound Alternatives 5. Longwater Business Park

- Legend:
- Potential Compound Location
 - Footpath
 - Bridleway
 - Listed Building
 - Ancient Woodland
 - County Wildlife Site (CWS)
 - Special Area of Conservation (SAC)
 - Sites of Special Scientific Interest (SSSI)
 - Authorised Landfill Site
 - Historic Landfill Site
 - Source protection zone I
 - CRoW Registered Common Land
 - Environment Agency Main River
 - Flood Zone 3
 - Flood Zone 2
 - Hornsea Project Three Red Line Boundary



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Report: Main Compound Alternatives

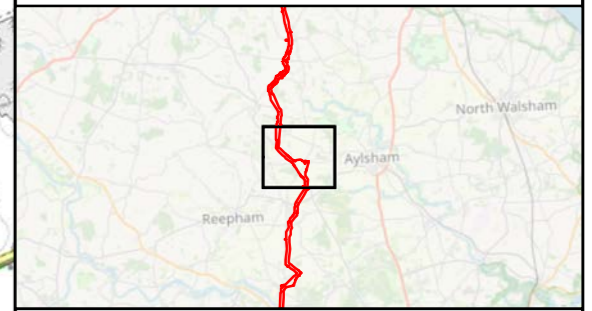
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Sheringham Shoal and Dudgeon Extension Projects Main Compound Alternatives 6. RAF Oulton Airbase

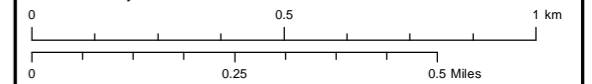
Legend:

- PEIR Boundary
- Potential Compound Location
- Pond
- Footpath
- Bridleway
- Restricted Byway
- Listed Building
- Registered Park and Garden
- Ancient Woodland
- Conservation Area
- County Wildlife Site (CWS)
- National Trust Ownership
- Flood Zone 3
- Flood Zone 2
- Sheringham Shoal Underground Cable
- Norfolk Boreas Red Line Boundary
- Hornsea Project Three Red Line Boundary
- High Pressure Gas Pipe location



Document No: PB8164-RHD-ZZ-ON-DR-Z-WIP

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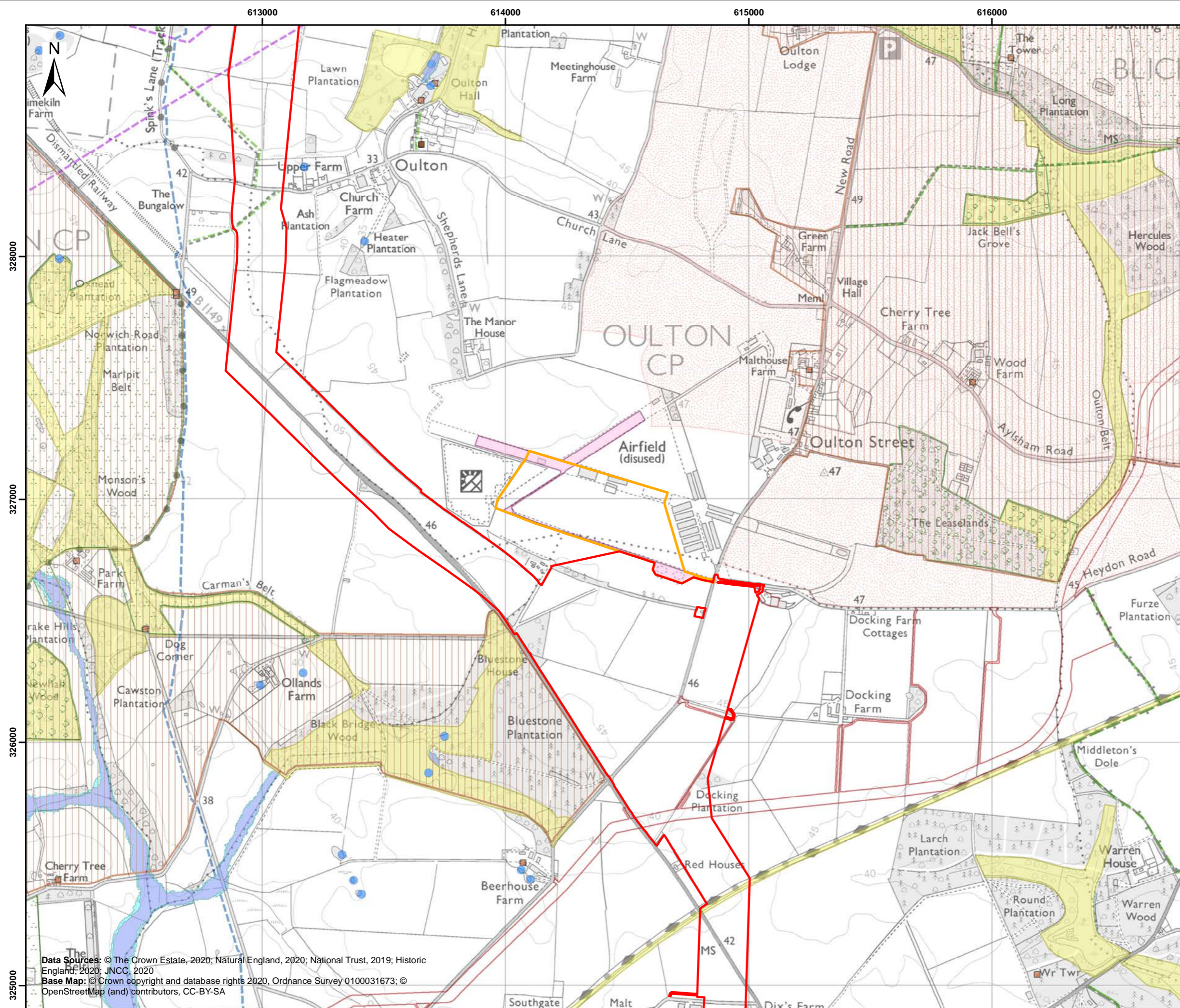


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Report: Main Compound Alternatives

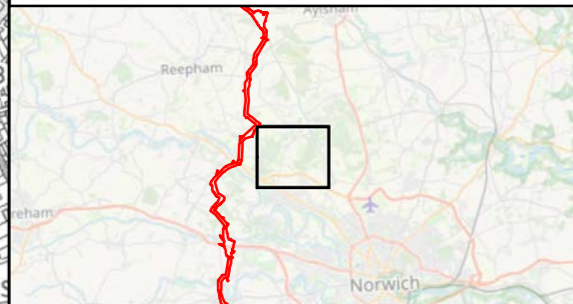
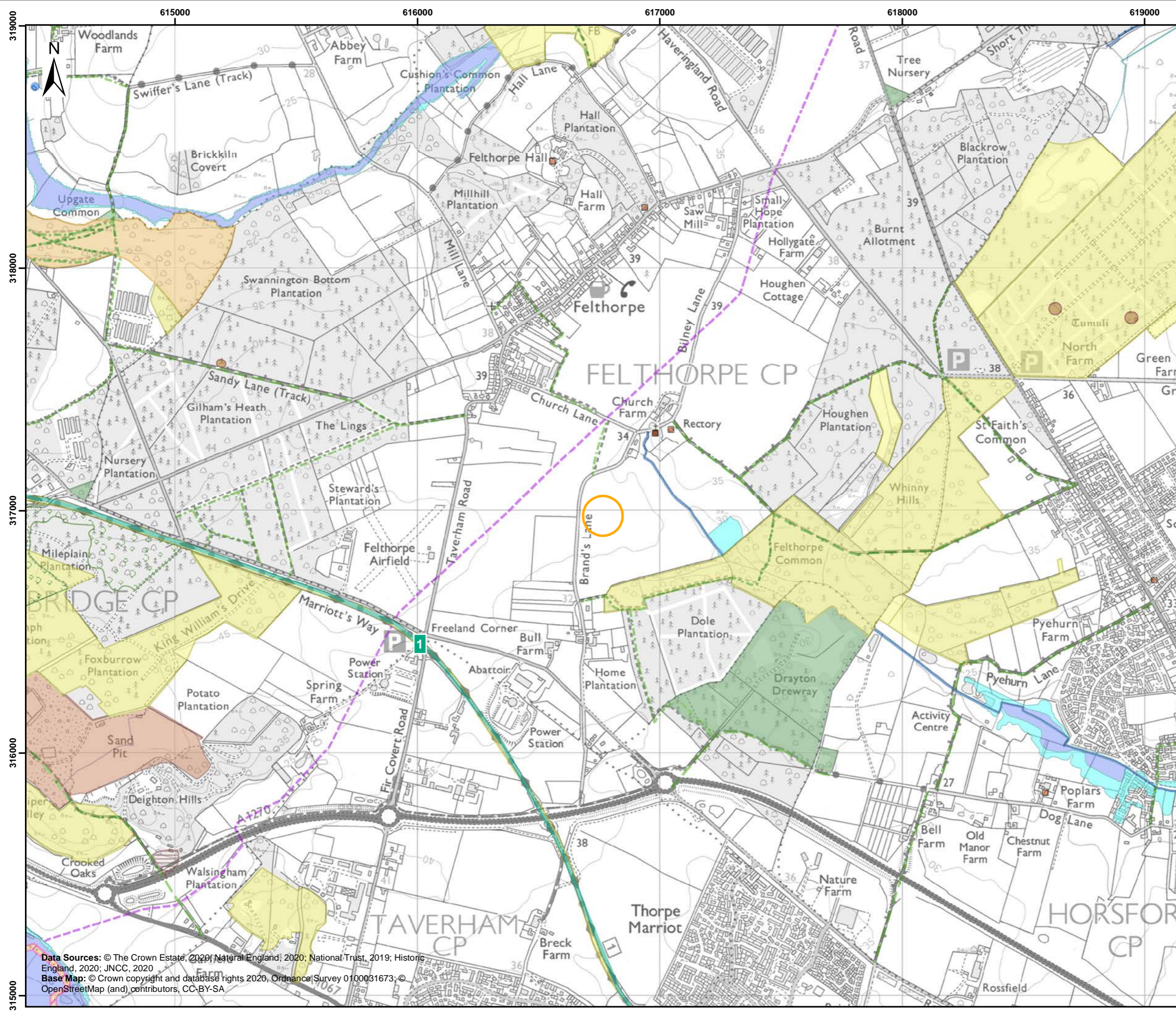


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Sheringham Shoal and Dudgeon Extension Projects Main Compound Alternatives 7. Felthorpe

- Legend:
- Potential Compound Location
 - Pond
 - Bridleway
 - Restricted Byway
 - National Cycle Route
 - Listed Building
 - Scheduled Monument
 - Ancient Woodland
 - County Wildlife Site (CWS)
 - Special Area of Conservation (SAC)
 - Sites of Special Scientific Interest (SSSI)
 - Authorised Landfill Site
 - Historic Landfill Site
 - CRoW Registered Common Land
 - Environment Agency Main River
 - Flood Zone 3
 - Flood Zone 2
 - High Pressure Gas Pipe location



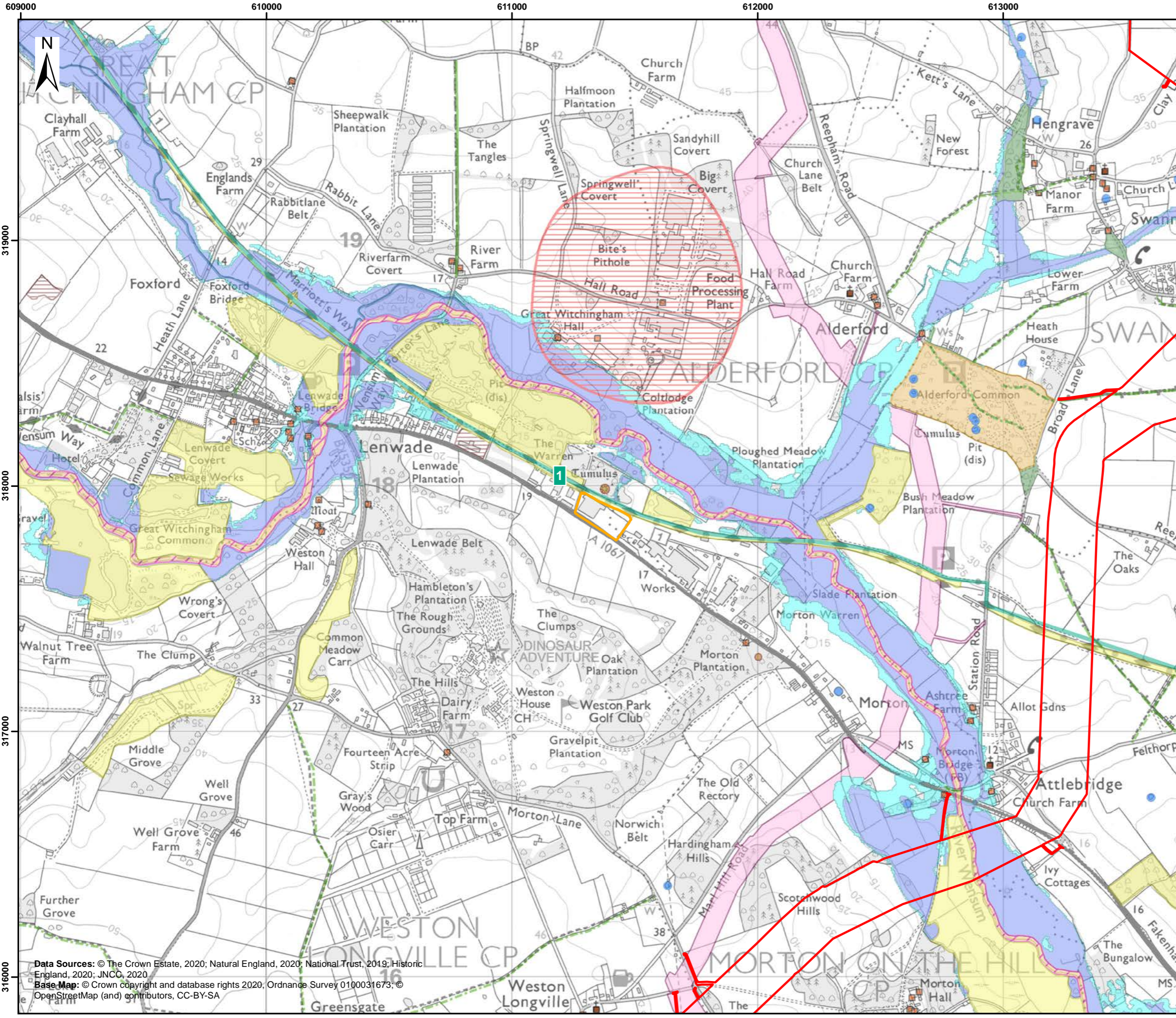
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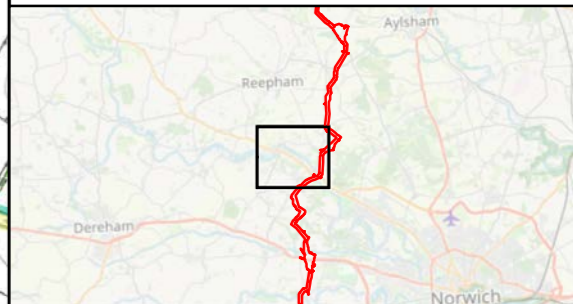
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Sheringham Shoal and Dudgeon Extension Projects Main Compound Alternatives 8. A1067 Norwich Road

- Legend:
- PEIR Boundary
 - Potential Compound Location
 - Pond
 - Footpath
 - - - Bridleway
 - - - Restricted Byway
 - National Cycle Route
 - Listed Building
 - Scheduled Monument
 - County Wildlife Site (CWS)
 - Special Area of Conservation (SAC)
 - Sites of Special Scientific Interest (SSSI)
 - Historic Landfill Site
 - Source protection zone I
 - CRoW Registered Common Land
 - Environment Agency Main River
 - Flood Zone 3
 - Flood Zone 2
 - Hornsea Project Three Red Line Boundary



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REV	DATE	SCALE	SIZE	DRW	CHK	APR

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Appendix 2 - BRAG Assessment Spreadsheet

Topic	Considerations	1	2	3	4	5	6	7	8
		RAF Attlebridge	A1067 Fakenham Road	East of Cawston	Woodforde Farm	Longwater Business Park	RAF Oulton Airbase	Felthorpe	A1067 Norwich Road
Engineering	Distance (m) to cable corridor Red = >1,000m Amber = 1 - 1,000m Green = < 1m	1,800m	0m	0m	1,900m	2,500m	1,700m	3,300m	2,000m
Engineering	Location along cable corridor Red = >20km from middle point along cable corridor Amber = 10-20km from middle point along cable corridor Green = within 10km of middle point along cable corridor								
Engineering	Existing hard standing Red - No existing hardstanding (greenfield site) Green - Existing hardstanding								
Engineering	Available space Red = < 30,000m ² Amber = 30,000 - 60,000m ² Green = > 60,000m ²	>60,000m ²	66,000m ²	165,000m ²	72,000m ²	29,500m ²	30,000m ²	>16,000m ²	26,700m ²
Engineering	Existing services Red = No services in vicinity Amber = Opportunity to connect nearby Green = Services present								
Land	Availability / Planning risk Black = Confirmed not available Red = Commercial site (not guaranteed to be available when construction starts) or known local planning restriction Green = Non-commercial site (subject to landowner agreement) / no known local planning restriction Amber =		No known issues	Access would be required off the B1149 for this site. Norfolk County Council has previously rejected an application for a large construction compound to take a new access off the B1149 in proximity to this site	No known issues	Commercial site	Commercial site and already identified for use by Hornsea Project Three	No known issues	Commercial site
Local community	Distance (m) from nearest residential property Red = <100m Amber = 100 - 400m Green = > 400m	75m	200m	20m	175m	550m	550m	20m	210m
Local community	Number of ProW in proximity (<250m) Red = >1 Amber = 1 Green = 0	5	0	0	0	0	0	3	0
Local community	Cumulative impacts with other projects Red = Significant potential risk of cumulative impacts with another project Amber = Potential cumulative risk Green = No obvious cumulative risk	No obvious cumulative risk	No obvious cumulative risk	Hornsea Project Three's main construction compound is located in proximity to this site combined with traffic Norfolk Vanguard both projects have had to commit to a significant reduction in construction traffic and additional measures on the roads in and around Cawston. Whilst DEP and SEP commit to not routing traffic through Cawston, the proximity of this site to Cawston would inevitably risk traffic periodically routing through Cawston even with controls in place, which would generate significant cumulative traffic impacts on the local communities.	No obvious cumulative risk	No obvious cumulative risk	Hornsea Project Three has already secured this site for its main construction compound and combined with traffic also using The Street associated with Norfolk Vanguard both projects have had to commit to a significant reduction in construction traffic on the nearest roads to avoid significant impacts. Any additional traffic routed along The Street, in combination with these two projects, would require significant additional mitigation to avoid significant cumulative traffic impacts on the local communities.	No obvious cumulative risk	No obvious cumulative risk

European Nature Conservation Designated Sites	Proximity (m) to SPAs, SACs, Ramsar sites Red = 0m Amber = 1 - 3,000m Green = >3,000m	2,100m	400m	2,800m	2,100m	1,100m	4,600m	3,050m	240m
National Nature Conservation Designated Sites	Proximity (m) to SSSIs, Ancient Woodlands, National Nature Reserves Red = 0m Amber = 1 - 1,000m Green = >1,000m	1,600m	400m	425m	1,600m	1,100m	3,200m	3,050m	240m
Local Nature Conservation Designated Sites / CWS	Proximity (m) to Local Nature Reserves Red = 0m Amber = 1 - 100m Green = >100m	800m	1m	330m	800m	1m	450m	1m	1m
Known designated heritage assets	Presence of known designated heritage assets in proximity to the compound location Red = impact on designated asset with limited mitigation options Amber = impact on designated asset with mitigation options available Green = no designated assets present, no impact	Listed building present within approximately 150m. The construction presence and increased HGV traffic could represent a temporary impact to the setting of this site. However, this would be temporary in nature and would not represent a long term change to the significance.	Listed building present within approximately 350m. However, given the distance of separation and the temporary nature of the construction compound no impacts are anticipated on the settings of these features.	Listed building present within approximately 200m. The construction presence and increased HGV traffic could represent a temporary impact to the setting of these features. However, this would be temporary in nature and would not represent a long term change to the significance of these features.	Listed building present within approximately 150m. The construction presence and increased HGV traffic could represent a temporary impact to the setting of this site. However, this would be temporary in nature and would not represent a long term change to the significance.	No historic features in proximity to this site.	Heydon and Salle Conservation Area and Historic Park and Garden located on the opposite side of the B1149. Visibility of the works compound would be limited to a small section of this historic site adjacent to the B1149. In addition, the construction compound would only be present for relatively short period (up to 36 months) and would not represent any permanent change to the significance of these sites.	Listed building present within approximately 150m. The construction presence and increased HGV traffic could represent a temporary impact to the setting of this site. However, this would be temporary in nature and would not represent a long term change to the significance.	Scheduled Monument approximately 40m north of the site (Tumulus in the Warren). No other heritage assets within proximity of the site. Whilst the site is close to this scheduled monument, the site is already an active commercial facility for storage and industrial activities and the proposed use of the area as a works compound would not constitute a change of use or represent any significant change to the setting of this feature.
Transport	Highway network constraints Red - road not wide enough for two vehicles unable to widen; Amber - road generally not wide enough for two vehicle potential to widen; Green - Road generally wide enough for two vehicles to pass	Rectory Road feeds directly into the A1067 whilst the unnamed road feeds into B1535 which in turn feeds into the A47. Honningham Road also feeds into the A1067 and the A47. All routes to the wider highway network are generally wide enough to accommodate two-way HGV movements however there are some potential pinch points. The highway geometry of the roads could potentially limit the widening options at these locations.	Old Fakenham Road feeds directly into the A1067. Both roads are wide enough to accommodate two-way HGV movements.	Both the B1149 and the B1145 are main B-roads. An access strategy similar to that in the Preliminary Environmental Impact Report (PEIR) would be appropriate for the site. This access strategy involves the routing of traffic on the B1145 to the A140 to avoid Horsford. The route is generally wide enough to accommodate two-way HGV movements however there are some potential pinch points along the B1145 route.	Rectory Road feeds directly into the A1067 whilst the unnamed road feeds into B1535 which in turn feeds into the A47. Both the A1067 and A47. Both routes to the wider highway network are generally wide enough to accommodate two-way HGV movements however there are some potential pinch points. The highway geometry of the roads could potentially limit the widening options at these locations.	Both John Hyrne Way and William Frost Way are modern industrial type roads with direct access to the A1074. The roads are wide enough to accommodate two-way HGV movements.	The Street is a single lane road that feeds directly onto the B1145. It is proposed by Hornsea Project Three (HP3) to locate a compound off the Street and to facilitate access passing places are proposed. It is envisaged that the cumulative impact with HP3 traffic would warrant more extensive road widening, i.e. widening the entire road to two lanes.	Brand's Lane is not wide enough to accommodate two-way HGV movements and there is limited opportunity for road widening.	The site provides direct access to the A1067 which is a main A road suitable for two-way HGV movements.

<p>Transport</p>	<p>Access constraints</p> <p>Red - Access not achievable; Amber - Achievable with accommodation works; Green - Existing access available</p>	<p>Access to the site is available via existing accesses on Honningham Road, Rectory Road and an unnamed road.</p>	<p>An access from the A1067 should be discounted as it would not be possible to provide appropriate separation from the junction with Old Fakenham Road. This review therefore assumes that access would be taken from Old Fakenham Road.</p> <p>Due to the proximity of the existing junctions, an access on Old Fakenham Road would potentially require further land acquisition (to the north) to ensure appropriate junction spacing. There would also be a requirement for vegetation clearance to accommodate visibility.</p>	<p>Two potential access points are considered, the B1149 and the B1145. Both locations are considered feasible but would require some localised vegetation clearance to accommodate visibility.</p>	<p>Two potential access points are considered, Rectory Road and an unnamed road. Both locations are considered feasible as points of access but would require localised vegetation clearance to accommodate visibility.</p>	<p>Two potential access points are considered on John Hyme Way and William Frost Way. Both locations are considered feasible as points of access but would require localised vegetation clearance to accommodate visibility.</p>	<p>Access to the site is available via an existing access on The Street. This route does not currently support two-way traffic but temporary passing places are proposed for Hornsea Project Three. Similar measure would be required for DEP/SEP construction traffic to access this site.</p>	<p>Access to the site is achievable from Brands Lane but would require some localised vegetation clearance.</p>	<p>Access to the site is available via existing accesses from the A1067.</p>
<p>Transport</p>	<p>Sensitive receptors</p> <p>Red - High concentrations of sensitive receptors Amber - low concentrations of sensitive receptors Green - Few sensitive receptors</p>	<p>The Honningham Road access route passes through Weston Longville which has extensive frontage developments.</p> <p>Other access routes include roads that have minimal frontage development.</p>	<p>Whilst the site is within proximity of Attlebridge, all traffic would be directed to the A1067 and would therefore avoid the village.</p>	<p>The B1149 is a main B road with minimal frontage development. However, the B1145 is a narrower route with frontage development through Cawston.</p>	<p>Both access routes include roads that have minimal frontage development.</p>	<p>The site is located within a business park, a cluster of sensitive receptors is present. However, there are pedestrian facilities present and it is considered that the highway environment could accommodate a change in traffic.</p>	<p>The main access would require vehicles to travel along The Street. Whilst there are very few properties along this route, the road not able to accommodate 2-way traffic and has no pavement resulting in increased sensitivity to pedestrians and residential receptors.</p>	<p>Not considered further due to access limitations.</p>	<p>The site located within an existing industrial estate with good links to the A1270. The A1067 however passes through a small settlement (Morton on the Hill) with minimal frontage development.</p>
<p>Transport</p>	<p>Road safety</p> <p>Red - More than three collisions clustered Amber - Three collisions clustered Green - No existing collision clusters</p>	<p>There is a cluster of collisions on the Rectory Road, as well as its junction with the A1067. There is also a cluster of collisions at the B1535's junction with the A47</p>	<p>No collisions clusters identified.</p>	<p>There is a cluster of collisions along the B1145.</p>	<p>There is a cluster of collisions on the Rectory Road, as well as its junction with the A1067. There is also a cluster of collisions at the B1535's junction with the A47</p>	<p>Multiple locations with collision clustered are identified at the entrance to the business park.</p>	<p>There is a cluster of collisions along the B1145.</p>	<p>Not considered further due to access limitations.</p>	<p>There is a cluster of six collisions at the junction of the A1067/ Marl Hill Rd and The Street to the south of the site.</p>