



West Winch Housing Access Road

Environmental Statement, Chapter 2: The Existing Site

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1 The Existing Site

1.1 Introduction

1.1.1 This chapter provides an overview of both the Site (shown on Figure 1-1: Site Location Plan) and the surrounding area. Key spatial boundaries are illustrated in Figure 1-2: Environmental Features Plan. Table 1-1 provides an overview of key environmental receptors of the Proposed Scheme; further information is provided within the technical chapters 6 to 17.

1.1.2 The Site is approximately 68.8 hectares (ha) including site compounds, located within land to the east of West Winch village, approximately 2 kilometres (km) south of the centre of Kings Lynn, Norfolk. The Proposed Scheme is located within the administrative area of Norfolk County Council (NCC) and the Borough Council of King's Lynn and West Norfolk (BCKLWN). NCC, as local highway authority, is working in partnership with BCKLWN to expediate housing delivery and co-ordinate the provision of the required highway infrastructure in the West Winch area. This comprises the West Winch Housing Access Road (WWHAR) which comprises a new housing access road between the A47, just east of Hardwick Interchange, and the A10, to the south of the village of West Winch, together with improvements to the Hardwick Interchange and dualling of the A47 between that interchange and the proposed new WWHAR. The OS National Grid References for the approximate endpoints of the Proposed Scheme are from TF 63384 18297 to TF 63461 14543. The Proposed Scheme location is illustrated in Figure 1-1: Site Location Plan.

1.2 The Proposed Scheme and Surrounding Area

1.2.1 The Proposed Scheme is required to facilitate and provide access to the proposed housing developments east of West Winch which have been identified within the emerging BCKLWN Local Plan. The area is allocated for the development of approximately 4,000 new dwellings. The route of the WWHAR passes between the settlements of West Winch to the west and North Runcton to the east.



- 1.2.2 West Winch is a civil parish in the county of Norfolk, within the district of King's Lynn and West Norfolk. West Winch is located approximately 2 km south of the centre of Kings Lynn, Norfolk.
- 1.2.3 The existing A10 is a former trunk road and part of the major road network. It is a key north-south route between London, Ely, Cambridge and King's Lynn and surrounding areas. Serving these strategic locations means the road is heavily used by commuters, freight traffic and tourists. The A10 between Watlington and King's Lynn, including West Winch, experiences some of the highest traffic levels on the road, with 17,850 vehicles daily, of which over 11% are HGVs (Ref. 2.5). The village of West Winch borders the A10, with many residential properties situated adjacent to the road. The continual traffic flows subject these properties to high levels of noise and pollution. Further the high traffic volumes on the road present safety implications for vehicles emerging from side roads and properties to join the A10.
- 1.2.4 The A47 is one of the main east-west economic corridors in East-Anglia and connects Lowestoft and Great Yarmouth in the east with Norwich, King's Lynn and beyond to the Midlands and the rest of the UK. It has strategic importance for the local economy, generating a high level of HGV circulation. It is part of the Trans-European Network and the Strategic Road Network (SRN). The A47 provides a link to a number of important international gateways and economic sites in the area including:
- Norwich International Airport
 - Great Yarmouth, King's Lynn and Lowestoft Ports
 - Regional Enterprise Zones
- 1.2.5 The A10 is single carriageway road routing north to south between Cambridge and King's Lynn. The A10 forms a key strategic link in the area, providing a connection to residents of Milton, Waterbeach, Ely, Littleport, Downham Market and West Winch. The speed limit along the A10 varies significantly



along its stretch. On approach to more populated areas, it varies between 30 and 40mph from 60mph.

- 1.2.6 Both the A10 and A47 experience issues of congestion due to road capacity and network resilience. The A10 and the A47 feed into the Hardwick Interchange to the north. At peak times, this interchange suffers from acute congestion with single carriageways carrying traffic levels which exceed their design flow.
- 1.2.7 To fully realise the potential of King's Lynn and West Norfolk and bring forward the housing potential of the West Winch Growth Area , it is necessary to provide the transport infrastructure to connect the allocation to the region, divert through traffic away from West Winch village, and provide capacity on the road network for the additional demand and for future growth. Without the WWHAR, no more than 300 homes could be built in this area, given the capacity of the highway network at present.
- 1.2.8 The Proposed Scheme requires the diversion of the National Grid Feeders 2 and 4 high pressure gas pipelines, which will be completed as part of ancillary works. The approximate location of the diversion is given by the coordinates: 563667E 315498N and 563964E 316841N for Feeder 2 and Feeder 4 respectively. The Feeder 2 diversion is of length approx. 135m. The route of the new pipeline will cross the proposed road perpendicularly and be installed at a sufficient depth to clear the construction depth of the road. The Feeder 4 diversion is of length approx. 210m at this location. At the location of Feeder 4, the new road is considered, to be a high-density traffic route and as such, requires the installation of heavy wall pipe extending a minimum of one Building Proximity Distance (BPD) from the road verge.

Utilities

- 1.2.9 Following Utilities are present in the area as provided below:
- Gas (National Grid Gas, Gas NHP, GTC Gas, Last Mile Gas and ESP Gas)



- Water (United Utilities Water (UU))
- Sewer(United Utilities Water (UU))
- British Telecommunications (BT)
- Electricity (Last Mile Electricity)

Access

Countryside and Rights of Way Act Open Access Land and Common Land

1.2.10 There are areas of registered Common Land that lie partially within or adjacent the Proposed Scheme boundary (red line boundary), these are listed below along with their closest proximity to the Proposed Scheme:

- CL110 - Hardwick Narrows and CL311 – Land additional to Hardwick Narrows, partially within the Proposed Scheme boundary. These areas of Common Land are predominantly located adjacent to the west of the Hardwick Interchange, they comprise a mixture of grassland, scrub and informal tracks. Changes to the highway layout in this area will involve the removal of parts of these areas of land.
- CL433 – Land abutting the A47, partially within the Proposed Scheme boundary. These areas of Common Land are split across two locations within the Proposed Scheme boundary, immediately adjacent to the east and west of the A47. They comprise a mixture of roadside verges, vegetation and two highway laybys. The close proximity to the Proposed Scheme means views will be unavoidable. Changes to the highway layout in this area will involve the removal of parts of these areas of land.
- CL111- Sheepscourse, partially within the Proposed Scheme boundary. This area of Common Land is located immediately adjacent to the Proposed Scheme at the point where the A47 meets the Proposed WWHAR. North Runcton RB3 bisects the area north-east to south-west. Woodland covers much of the area, limiting views in and



out, however views are possible from the southern and eastern boundaries.

- CL112 – North Runcton Common, adjacent to the eastern boundary. This area of Common Land connects a number of land parcels over a length of approximately 1.35km, to the east of the Proposed Scheme. The part to the north of Chequers Lane lies immediately adjacent to the Proposed Scheme boundary, views from this location are largely obscured by existing field boundary vegetation to the west. Views from the area to the south of Chequers Lane are initially partially obscured by buildings and vegetation associated with the Manor Farm Estate (Manor Farm, Manor Farmhouse and Manor Farm Bungalow), before westerly views towards the Proposed Scheme open up from the area further to the south and east of Setch Road.
- CL60 - The piece of land adjacent to the east side of the King's Lynn to Downham Market Road. Easterly views towards the Proposed Scheme are partially obscured by existing vegetation along the eastern boundary. There is a gap between existing buildings and vegetation associated with No's 263, 269 and 271 Lynn Road which affords easterly views across farmland. These views are restricted by vegetation surrounding 'High Orchard' to the north of Chequers Lane, narrowing the aperture of visibility considerably.

National Trails

1.2.11 There are no National Trails within 2km of the Proposed Scheme.

Long Distance Routes

1.2.12 There are three Long Distance Routes that run through the study area, these are listed below:

- The Nar Valley Way which runs for 33 miles between King's Lynn and Gressenhall Farm, passes approximately 1km to the west of the PSS at its closest point;



- The Cross Norfolk Trail which runs for 96 miles between King's Lynn and Great Yarmouth, passes approximately 1km to the west of the PSS at its closest point; and
- The Fen Rivers Way which runs for 50 miles between King's Lynn and Cambridge, which passes approximately 1950m to the west of the PSS at its closest point.

1.2.13 The Nar Valley Way and the Cross Norfolk Trail follow the same route. The route starts in King's Lynn and follows the course of the River Nar, which encloses the study area on two sides approximately 1km to the south and 2km to the west. The route is very open, often with long views across fields, however views towards the Proposed Scheme are largely obscured by the existing development at Hardwick to the north and West Winch further to the south, as well as by intervening field-boundary vegetation.

Public Rights of Way (PROW)

1.2.14 There are two PROWs that lie partly within the Proposed Scheme boundary (red line boundary), these are listed below:

- North Runcton Bridleway BR4 – which runs north-south between Rectory Lane and Chequers Lane. Bridleway connects Rectory Lane in the north with Chequers Lane in the south and is partly within the boundary for the Proposed Scheme. The northern section of the bridleway sits within the Site Boundary, then runs adjacent to it through an open field with clear views of the PSS. The southern section becomes more enclosed, running adjacent to some wooded CROW land which filters views towards the PSS.
- North Runcton Restricted Byway RB3 – which runs north-south between Constitution Hill and Rectory Lane. Byway leads from the A47 (Constitution Hill) in the north and connects to Rectory Lane in the south. The northern section of the byway sits outside the Site Boundary and traverses a block of wooded CROW land, so views into the PSS would be filtered to some degree. The route then turns and heads



south, entering the PSS boundary and running parallel to the Proposed Scheme until it reaches Rectory Lane to the south.

Cycle Routes

1.2.15 There are no cycle routes within the Proposed Scheme boundary.

SUSTRANS National Route 1 - runs along the bank of the River Great Ouse at King's Lynn, 1900m to the west of the Proposed Scheme and there are several National Cycle Network (NCN) link routes connecting with it, mainly centred around King's Lynn.

Highways

1.2.16 There are highways that directly connects the Proposed Scheme, these are listed below, with their direction:

- A10 which connects King's Lynn with Ely and passes through West Winch to the west and connects with the Proposed Scheme at the Hardwick Interchange to the north and Setchey to the south. The route is lined by intermittent residential development for much of its length, which partially obscures easterly views towards the PSS. Views towards the Proposed Scheme are oblique to the direction of travel except for where the route joins the PSS to the north and south.
- Gravelhill Lane, West Winch, which connects with the Proposed Scheme to the south. Gravelhill Lane is a residential street, with housing on both sides. It runs east-west and connects with the Proposed Scheme from the west. Narrow views of the PSS are possible between housing along the length of the route, with wider views possible towards the east of the route where it meets the A10.
- Westland Chase is a small residential road with housing on both sides, located 15m to the west of the PSS. Views of the Proposed Scheme are largely obscured by existing residential properties, however oblique views of the Proposed Scheme are possible from the junction of Westland Chase and Gravelhill Lane, which connects directly into the Proposed Scheme.



- Rectory Lane passes east-west through the boundary of the Proposed Scheme connecting the A10 to the west and New Road (at North Runcton) to the east. Pockets of residential development feature mainly to the north of the route. The southerly aspect is largely open, with little roadside vegetation, offering largely uninterrupted views towards the PSS. To permit the construction of the WWHAR, the central part of Rectory Lane is elevated, crossing the HAR via an overbridge.
- The A149 (Queen Elizabeth Way) connects with the Proposed Scheme at Hardwick from the north-east. It is a major road, lined by large buildings on Hardwick Industrial Estate to the north and generally open arable fields to the south. The open southerly aspect permits south-westerly views of the PSS.

1.3 Environmental Characteristics

1.3.1 Key environmental features are identified in Figure 1-2: Environmental Features Plan and described below, with further detail available in technical chapters 6 to 17.

Environmental Designations

Ground Conditions

1.3.2 The Proposed Scheme is located within agricultural land (Grades 2 and 3) with the exception of an area of scrubland where the proposed WWHAR joins the A47. The site of the Proposed Scheme is underlain by Superficial deposits comprising Topsoil, alluvium, Raised beach deposits, Head Deposits and Tottenhill Gravel Member. These units are classified as Secondary A (Alluvium, Raised beach deposits Tottenhill Gravel Member) and Secondary undifferentiated aquifers (Head Deposits). (Ref. 2.1).

1.3.3 The bedrock geology comprises from north (A47) to south (A10 at Setch Road). Lowestoft Formation, Kimmeridge Clay Formation (predominantly mudstone) and Sandringham Sand Formation (comprising silty and clayey



sands). The Sandringham Sand Formation is subdivided into the following Members: Roxham Member and Runcton Member, Mintlyn Member and Leziate Member. These units are classified as Secondary undifferentiated (Lowestoft Formation), Principal aquifers (Sandringham Sand Formation) and unproductive strata (Kimmeridge Clay Formation). These deposits underlie the area at shallow depth (Ref. 2.1).

1.3.4 The Proposed Scheme is not located within a Coal Mining Reporting area, and there are no records of mining or quarrying having been undertaken within the Proposed Scheme boundary. However, the following information on areas of potential concern with respect to contaminated land, have been identified to date:

- Agricultural land use with a potential of use of herbicides and pesticides;
- Current and historical roads due to possibility of migration of contamination via fugitive dust or surface flow from any road spills;
- Historical railway located towards the north of the Proposed Scheme;
- Inactive clay pit located towards the north of the Proposed Scheme;
- Current and historical landfills located within 500m of the southern extent of the Proposed Scheme;
- Mineral extraction sites located within 380m of the western extent of the Proposed Scheme; and
- Petrol filling station located 500m to the west of the Proposed Scheme at the northern extent.

Archaeology and Heritage

1.3.5 There is no nationally designated (protected) heritage assets, such as scheduled monuments, listed buildings or registered parks and gardens within the Proposed Scheme boundary. There is one listed building adjacent to the Site: The Old Rectory at 20m east. A two-storey brick house and former



rectory located 20m east of the Site. Listed at Grade II (National Heritage List of England (NHLE) ref: 1077652).

- 1.3.6 There has been one archaeological trial trench evaluation, one geophysical survey and one archaeological watching brief undertaken within the Site. A Roman settlement and industrial site south-west of the A47 was found to loosely follow the Site boundary, extending 500m south-west. Within this part of the evaluation area, residual finds suggested evidence for Neolithic, early Bronze Age and Middle Iron Age all of which were located outside of the Site boundary.
- 1.3.7 A geophysical survey was undertaken as part of this project in 2023 covering a total of 31ha of the Site. This identified a small number of anomalies including a partial rectilinear enclosure immediately north of High Orchard and Chequers Lane as well as a number of linear, curvilinear and discrete anomalies across the Site of uncertain origin.
- 1.3.8 A watching brief during improvements on the Hardwick Roundabout in 2002 recovered no archaeological material.
- 1.3.9 There have been nine archaeological excavations within 500m of the Proposed Scheme boundary. Roman remains have been found at two sites, Medieval remains at one site, post-medieval remains at two sites and either post-medieval or modern remains at another site.

Archaeology

- 1.3.10 Moderate to low potential for prehistoric remains. Remains from the Palaeolithic to the Iron Age have been recorded within the Site boundary and within 500m of the Proposed Scheme. These remains have mainly comprised finds of stone tools and pottery.
- 1.3.11 Moderate to high for Roman remains. The Site is located 10km from The Fen Causeway to the south and The Icknield Way to the east. A Roman settlement and industrial area have been recorded within the immediate vicinity of the Site comprising a rectangular enclosure that extends to within



50m of the Site and isolated finds of Roman material have been recorded within the Site and within 500m of its boundary.

1.3.12 Moderate potential for early medieval (Saxon) remains. Early settlement is thought to have been in West Winch, Hardwick and North Runcton nearest to the Site. An earthwork bank known as the Green Dyke possibly dates to the early medieval period and extends to within 10m of Site at the Hardwick Roundabout and isolated early medieval finds are also recorded within the Site and 500m study area.

1.3.13 Moderate to high potential for medieval remains. Located 1.5km south-west of the main medieval settlement at Kings Lynn and within the vicinity of West Winch, Hardwick, North Runcton and Setchey.

1.3.14 Low potential for post-medieval remains. Available historic maps show much of the Site as fields and woodland throughout the post-medieval period. Post-medieval remains related to agriculture would be of low value, derived from archaeological and historical value.

Ecology

1.3.15 The Proposed Scheme is located within an area of arable farmland situated between West Winch and North Runcton. Semi-natural habitats are present in the northeast of the Scheme, comprising woodlands, grasslands and scrub which forms a large expanse of habitat that extends beyond the Scheme Boundary. The arable fields are bounded by drainage ditches, trees and hedgerows. A number of these habitats are priorities for nature conservation. Urban habitats are found along the existing roads including the A10, A47, Chequers Lane and Rectory Lane.

1.3.16 The habitats within the Scheme Boundary and surrounding area are suitable for a range of protected species, including species that are a priority for nature conservation such as birds, mammals, reptiles, amphibians, fish and invertebrates.



1.3.17 Designated sites for nature conservation are in proximity to the Proposed Scheme and include County Wildlife Sites, Sites of Special Scientific Interest, Special Protection Areas, Special Areas of Conservation and Ramsar sites. Ancient woodland can also be found in the wider area.

Landscape

1.3.18 The landscape within and surrounding the Proposed Scheme is generally flat with very gentle undulation. It lies approximately 10-20m Above Ordnance Datum (AOD). The low topography is due to the close proximity to the River Nar which is situated west and south of the Proposed Scheme.

1.3.19 The Proposed Development site (PDS) and Study Area are located within the following two national character areas: NCA 46 – The Fens and NCA 76 – North West Norfolk.

1.3.20 The section of the Saddlebow and Wormegay LCA within the Study Area is predominantly rural, wrapping around the west and south of the PDS and encompassing the floodplain and catchment of the River Nar, around 500m from the Proposed Development at its closest point. There will be no direct effects, however some indirect effects are likely due to intervisibility with neighbouring LCA's (G3 and to a lesser degree G2), although these will be limited to some degree by drainage earthworks and field boundary vegetation.

1.3.21 The Proposed Scheme is located on predominantly greenfield agricultural land (Grade 2 and 3) with the exception of an area of scrubland where the proposed WWHAR joins the A47. None of the land within the Proposed Scheme boundary is subject to any landscape designations.

1.3.22 A number of infrastructure / industrial elements feature in the landscape including the A47 highway to the north and large-scale electricity pylons with overhead wires to the south.

1.3.23 There are no Areas of Outstanding Natural Beauty (AONB), National Parks or Country Parks within 5km of the Proposed Scheme.



1.3.24 The Proposed Scheme lies within the North West Norfolk National Character Area (NCA76) and the Fens National Character Area (NCA46). The National Character Areas cover vast areas. At a more detailed level, BCKLWN published a Landscape Character Assessment for King's Lynn and West Norfolk ([King's Lynn and West Norfolk Landscape Character Assessment by Chris Blandford Associates, published March 2007](#)) .

1.3.25 The Proposed Scheme is situated within two Landscape Character Assessment (LCAs) - G2: Middleton and G4: West Winch, which lie within the LCT - G: Farmland with Woodland and Wetland. LCA G1: Bawsey and Leziate, is located approximately 1.7km northeast of the Proposed Scheme. Directly south of the Proposed Scheme, is the boundary with LCA E2: Saddlebow and Wormegay which lies within LCT - E: The Fens – Open Inland Marshes.

Air Quality

1.3.26 The route corridor of the Proposed Scheme is not located within an Air Quality Management Area (AQMA). There are two AQMAs just outside the proposed Scheme boundary. These are Railway Road AQMA and Gaywood Clock AQMA, which were both declared for NO₂ by BCKLWN. The main sources of NO_x are road traffic emissions from the A149, A47 and A10.

1.3.27 Defra's predicted roadside NO₂ concentrations within the Study area are well below the 40µg/m³ standard. The highest concentration for 2019 is 21.0µg/m³ on the A149 (census ID 802048405).

Noise and Vibration

1.3.28 There is one Noise Important Area (NIA) (ID 5191) located within the Proposed Scheme boundary, other NIAs (ID 5187, 11358, 5189, 14279, 5190, and 11359) are located along the A10 West Winch Main Road.

1.3.29 Sensitive receptors (Dwellings) are noted on the A10, A47, Chequers Lane, Rectory Lane and in North Runcton. Other sensitive receptors such as Schools (the nearest being the West Winch Primary School, located



approximately 570m to the west of the Proposed Scheme) are also likely to be located within the Study area as defined in DMRB LA 111 guidance.

- 1.3.30 Commercial properties (Hardwick Narrow Industrial Estate) are located along the A47, which is adjacent to the west of the Proposed Scheme.

Water Resources, Flood Risk and Drainage

- 1.3.31 The Proposed Scheme falls in the North West Norfolk Management Catchment ([England | Catchment Data Explorer](#)), within the Anglian River Basin District. The Study Area features two watercourses monitored against the objectives of the WFD (2019). The Country Drain (ID: GB105033047770) (also known as Puny Drain) flows from east to west on the south side of the Proposed Scheme, crossed by the existing A10 at NGR 563625, 313567.

- 1.3.32 The northern extent of the Proposed Scheme crosses The Middleton Stop Drain (ID: GB105033047670) (also known as Pierpoint Drain) which flows from east to west, draining numerous adjacent unnamed field drains. The Middleton Stop Drain is crossed by the existing A149 at NGR 563715, 318567, then flows west, is crossed again by the A149 at NGR 562606, 318718, then continuing to its confluence with the River Nar at NGR 562202, 318774, immediately after being crossed by the existing A148.

- 1.3.33 The Proposed Scheme is located within the Country Drain Surface Water Nitrate Vulnerable Zone (ID: 388).

- 1.3.34 There are no statutory main rivers within the Proposed Scheme boundary; however, there are two main rivers: the River Nar and the River Great Ouse. Approximately 1.3km of the River Nar before it confluences within the River Great Ouse is hydrologically connected to the Proposed Scheme via the two drains described above.

- 1.3.35 The River Nar Site of Special Scientific Interest (SSSI) (ID: 1001656) is located approximately 220m west of the northern extent of the Proposed Scheme and is designated for its progression from chalk river to fen river. The extent of the River Nar which is designated is upstream of the confluence with



the two drains described above. Although the Proposed Scheme is drained by the two named drains and unnamed land drains, these watercourses discharge into the River Nar just downstream of the SSSI designation and therefore the Proposed Scheme is not hydrologically connected to the SSSI.

1.3.36 The Setchey SSSI (ID: 1001984) is located approximately 1.2km south of the southern extent of the Proposed Scheme and is designated for its flandrian deposits. The SSSI is located within the River Nar catchment but it is not hydrologically connected to the Proposed Scheme.

1.3.37 The Groundwater Vulnerability Map shows the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological and hydrogeological properties within a single square kilometre. The Sandringham Sand Formation (north of the Proposed Scheme) is classified as High and Medium risk which means that these units can transmit pollution to groundwater easily. The Tottenhill Gravel Member and Lowestoft Formation are classified as Medium – Low risk which indicates that if there is a pollution event on the surface the area will offer some groundwater protection.

1.3.38 The sandstone bedrocks to the east are classified as Principal Aquifers. These are defined as layers of rock or drift deposits that have high intergranular and/or fracture permeability, meaning they usually provide a high level of water storage and transmission. They may support water supply and/or river base flow on a strategic scale.

1.3.39 The Proposed Scheme is not located within a Groundwater Source Protection Zone.

1.3.40 There are no public surface water sewers within the site boundary.

1.3.41 The nearest surface water sewer to the site is located approximately 200m north of Rectory Lane where it discharges into a land drain approximately 100m east of the Site. The size of this sewer is currently unknown. No other surface water sewers are known to be located near the Site.



1.3.42 A review of the Environment Agency's Flood Map for Planning indicates that the vast majority of the Site is located within Flood Zone 1. Flood Zone 1 is classed as having a Low Probability of flooding and is assessed as land having a 1 in 1,000 annual probability of river flooding. There is a small area located towards the east of Hardwick roundabout adjacent to the A47 that is located within Flood Zone 2 and Flood Zone 3. The fluvial flood risk is associated with the River Great Ouse. Review of the Environment Agency's Flood Risk from Surface Water maps indicates that there are small pockets of high, medium and low flood risk from surface water along the Proposed Scheme. The areas of risk are associated with areas of low topography or the unnamed land drains throughout the Site.

1.4 Key Sensitive Receptors

1.4.1 There are a number of sensitive receptors that have been identified as relevant to the Proposed Scheme, and these have been taken into consideration within the assessments presented in technical chapters 6 to 17. The key sensitive receptors are summarised in Table 1-1 below.

Table 1-1 Key Sensitive Receptors

Topic	Sensitive Receptor
Air Quality	<ul style="list-style-type: none"> • Residential dwellings located adjacent to the A10, A47, Rectory Lane and Chequers Lane. Schools and community buildings are noted within 1km of the Proposed Scheme. • Designated habitats - including Ramsar sites, Special Protection Areas, Sites of Special Scientific Interest, priority habitats- where there are features sensitive to changes in nitrogen deposition.
Archaeology and Heritage	<ul style="list-style-type: none"> • One listed building is located adjacent to the Proposed Scheme: The Old Rectory. A two-storey brick house and former rectory located 20m east of the Site. Listed at Grade II (NHLE ref: 1077652). • Positioned near the River Great Ouse, there is a slight incline from west to the east. • Moderate to low potential for prehistoric remains. • Moderate to high for Roman remains. • Moderate potential for early medieval (Saxon) remains. • Moderate to high potential for medieval remains. • Low potential for post-medieval remains.
Ecology	<ul style="list-style-type: none"> • The Wash Ramsar and SPA • Roydon Common Ramsar • River Nar SSSI • Setchey SSSI • Sheep's Course Wood County Wildlife Site (CWS), West Winch Common CWS, West Winch Common CWS, Rush Meadow CWS, Adj. River Narr CWS, Plantation Wood CWS, South of Gaywood Park CWS, Saddlebow Reedbeds CWS and Old Hall Farm CWS • Broadleaved Woodland, • Dense/continuous Scrub, scattered Scrub, • Improved and semi-improved grassland (Local Value) • Standing water (G1) • Hedgerows • Arable • Deciduous Woodland • Bats • Badgers • Birds (wintering and breeding) • Reptiles • Amphibians (GCN) • Otter (River Nar & ditches) • Water Vole (ditches within survey area)

Topic	Sensitive Receptor
Landscape and Visual	<ul style="list-style-type: none"> • Landscape receptors: <ul style="list-style-type: none"> • Topography • Agricultural fields • Watercourse • Significant vegetation • Settlement Pattern • Cultural Heritage Assets • PRowS • Land use • Visual receptors: <p>Residents of properties and residential cul de sacs to the east of the A10 through West Winch, including Babingley Place, Willow Drive and Hunters Rise; Mill Lane and Millfield Lane to the east of the A10; No's 139 – 221 along the eastern side of the A10 / Main Road through West Winch; No's 217 – 221 along the eastern side of the A10 / Main Road through West Winch; 263 Lynn Road along the eastern side of the A10 through West Winch; No's 331 - 365 along the eastern side of the A10 / Main Road through West Winch; Willow Drive to the east of the A10 / Lynn Road; at the eastern end of Gravelhill Lane, Poplar Road and Westland Chase; Long Lane, Chapel Lane, on Rectory Lane; No's 1 and 2 Rectory Lane; No's 19 - 24 Rectory Lane; Rosendell on Rectory Lane; Glendawn on Rectory Lane; Orchard House on Rectory Lane, Coronation Avenue and Freebridge Haven, which have an easterly or southerly aspect; west of the A10/West Winch Road, north of Willow Drive; Chequers Lane; Manor Farm Estate on Chequers Lane, including Manor Farm Bungalow, Manor Farm and Manor Farm House; Manor Farm Cottages; Common Lane; east of New Road between School Lane and Cedar Grove.</p>
Noise and Vibration	<ul style="list-style-type: none"> • Residential receptors: <ul style="list-style-type: none"> • Dwellings on the A10 approximately 20m southeast of the new junction with the Proposed Scheme. • Dwellings on the section of the A47 Constitution Hill which is proposed to be dualled*. • Dwelling on Chequers Lane to the west of the Proposed Scheme boundary. • Dwelling on Chequers Lane to the east of the Proposed Scheme boundary. • Dwellings on Rectory Lane to the west of the Proposed Scheme boundary. • Dwellings accessed from Chequers Lane approximately 85m east of the Proposed Scheme boundary.
Population and Human Health	<ul style="list-style-type: none"> • During the construction phase, the sensitive receptors have been identified as the following: <ul style="list-style-type: none"> • Dwellings noted on the A10 west winch road, A47, chequers lane and Rectory lane. • Businesses (Hardwick Narrow Industrial Estate and Hardwick Industrial Estate) noted on the A47. • Users of the two PRowS. • In the operational phase, the sensitive receptors have been identified as the following: <ul style="list-style-type: none"> • Dwellings noted on the A10 west winch road, A47, chequers lane and Rectory Lane. • Businesses (Hardwick Narrow Industrial Estate and Hardwick Industrial Estate) noted on the A47. • Users of the two PRowS.

Topic	Sensitive Receptor
Traffic and Transport	<ul style="list-style-type: none"> • The following sensitive receptors have been identified for Traffic and Transport: <ul style="list-style-type: none"> • A10 West Winch Road, • A47 Constitution Hill, • A149 Hardwick Road • A149 Queen Elizabeth Way • Hardwick Interchange • A10 Main Road • Beveridge Way • Willow Drive • Hunters Rise • Regent Avenue • Babingley Place • Rectory Lane • Chequers Lane • New Road • Common Lane
Water Environment	<ul style="list-style-type: none"> • The following sensitive receptors have been identified: <ul style="list-style-type: none"> • Unnamed field drains • The County Drain • Middleton Stop Drain • The River Nar • Surface water abstractions • Principal bedrock aquifer – Sandringham Sands (Leziate, Mintlyn, Roxham and Runcton) • Bedrock Secondary Aquifer – Lowestoft Formation • Superficial deposits – Alluvium, Raised Beach Deposits, Tottenhill Gravel, Head (Secondary aquifers) • Third party flood risk receptors • Flood risk to the Proposed Scheme
Geology and Soils	<ul style="list-style-type: none"> • The following sensitive receptors have been identified: <ul style="list-style-type: none"> • Human Health – Construction Workers, Current and adjacent users, maintenance workers, future user and adjacent users • Controlled Waters - Groundwater – Secondary (A) and Principal Aquifers • Surface waters, ponds and small streams • Below Ground Services – Potable Water Supply Pipes, Buried Concrete and Foundations • Agricultural Land

Topic	Sensitive Receptor
Greenhouse Gas	<ul style="list-style-type: none">• The following sensitive receptors have been identified:<ul style="list-style-type: none">• Buildings and infrastructure receptors (e.g. equipment, materials and building operations);• Human health receptors (e. g. construction workers, occupants and Proposed Scheme’s users); and• Environmental receptors (e. g. integrity of landscape features, habitats and species).



1.5 Future Baseline

1.5.1 Schedule 4(3) of the EIA Regulations 2017 requires an outline of the likely evolution of the current state of the environment (baseline scenario) without implementation of the Proposed Scheme, as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge. Whilst there are considerable limitations to the predictions that can be made about baseline conditions at a future point in time, some assessments require projections to account for future change, such as traffic growth. This section summarises the future baseline that will be used to inform these elements of the assessment.

Air Quality

1.5.2 Pollutant concentrations in the future are anticipated to decrease. This is due to the replacement of older, more polluting vehicles with newer, cleaner vehicles as emissions technologies improve and with the introduction of electric vehicles into the fleet.

Archaeology and Heritage

1.5.3 For buried heritage assets within the Site boundary, the future baseline is expected to be the same as the present. Such remains are a static resource, which have reached equilibrium with their environment and do not change (i.e., decay or grow) unless their environment changes as a result of human or natural intervention.

Biodiversity

1.5.4 Climate change is the single most prevalent factor when attempting to predict the future baseline of an ecosystem or species community. Climate change affects ecology via multiple pathways. Impacts on species are considered to include changes in distribution and abundance, the timing of seasonal events and habitat use and, as a consequence, there are likely to be changes in the composition of plant and animal communities. Habitats and ecosystems are



also likely to change in character. Importantly, impacts are expected to increase as the magnitude of climate change increases.

- 1.5.5 The distributions of many species are shifting northwards, including some species which have colonised the UK from mainland Europe while some species are seen to be utilising habitats at a higher altitude than known previously.

Whilst there may be some changes in species populations and distribution in the longer term, the majority of species and habitats in the area of the Proposed Scheme are likely to remain stable. It is therefore considered unlikely that the ecological baseline will change significantly without the Proposed Scheme.

Landscape and Visual

- 1.5.6 The absence of any clear design/scale/layout information in relation to the proposed housing development to the west of the PSS (beyond outline planning) means that undertaking a reasonable assessment of likely visual effects in the future baseline scenario is not feasible at this stage. It would be fair to say that views towards the Proposed Scheme from the west are likely to be at least partially obscured by the introduction of 4000 homes to the west of the PSS, however the extent to which this will affect individual receptors cannot reasonably be assessed given the lack of detailed design information at this stage, hence it is not included in the Assessment.

Noise and Vibration, Geology and Soil, Material Assets and Waste, Greenhouse Gas Emissions

- 1.5.7 If the Proposed Scheme is not implemented, it is anticipated (based on professional judgement) that the baseline conditions at the site would remain the same.

Population and Human Health

- 1.5.8 A number of demographic factors are likely to experience natural fluctuation and change, including total population and the proportion of working age residents. According to the ONS Subnational population projections, the



resident population in KLWN is expected to increase by 5.5% between 2018 and 2043. An increase in population will create greater demand for jobs and services in the locality, as well as increased pressure on the local housing market, which in turn has the potential to increased congestion from residents, employees, and commuters using the A10 and A47.

Traffic and Transport

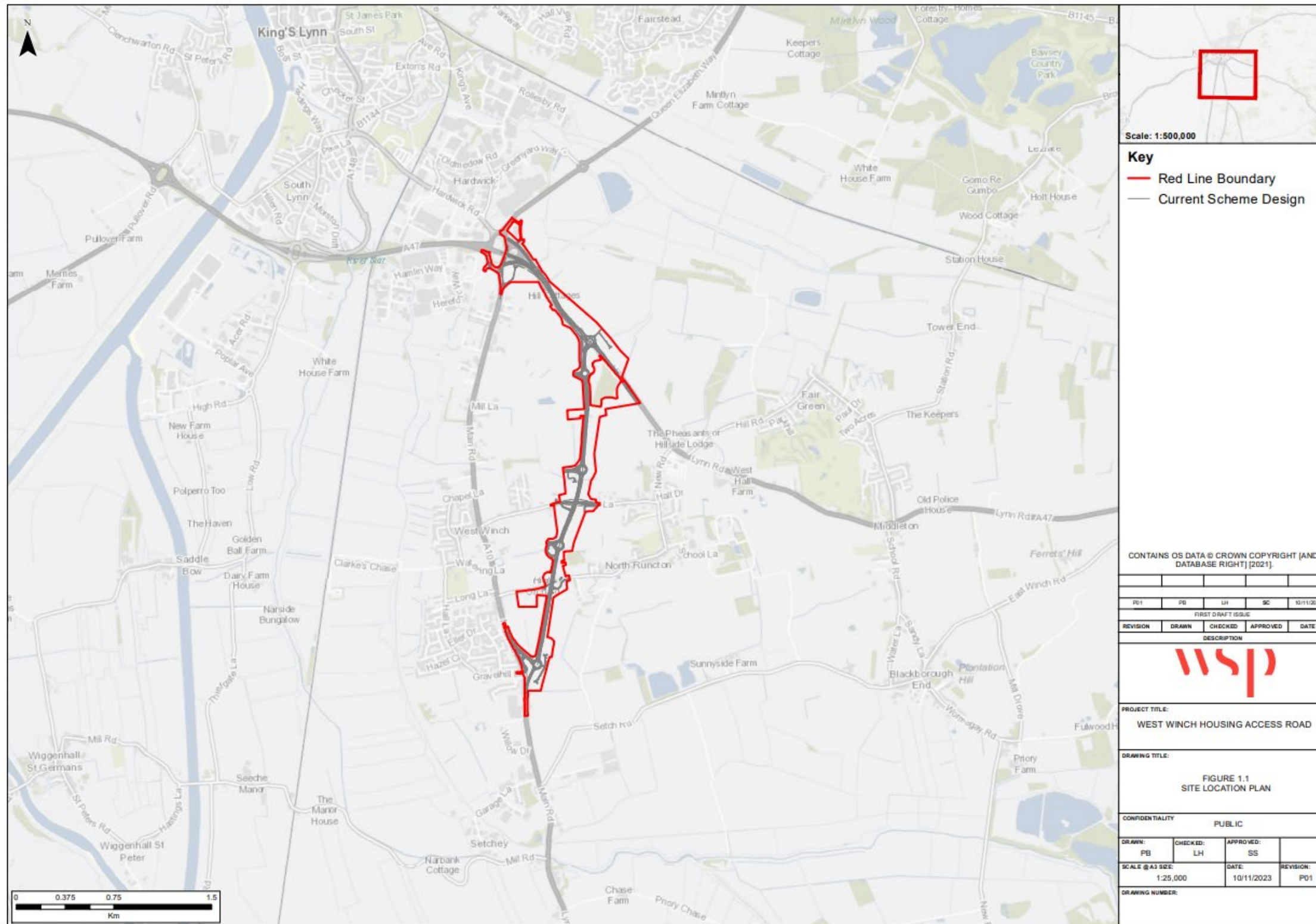
- 1.5.9 The existing highway network is constrained in terms of highway geometry as set out within the TA (Document Reference: NCC/4.01.00/WWHAR) and the Do Minimum scenario is characterised by increased traffic on key routes such as the A10 and rural roads that are not designed to cater for strategic traffic movements. This makes them less attractive for active travel.
- 1.5.10 Any assessment that uses traffic modelling would have inherently taken into consideration of the housing allocation and detailed further in technical chapters **16: Traffic and Transport, 10: Noise and Vibration, 06: Air quality and 14: Climate Resilience and Greenhouse Gas.**



1.6 References

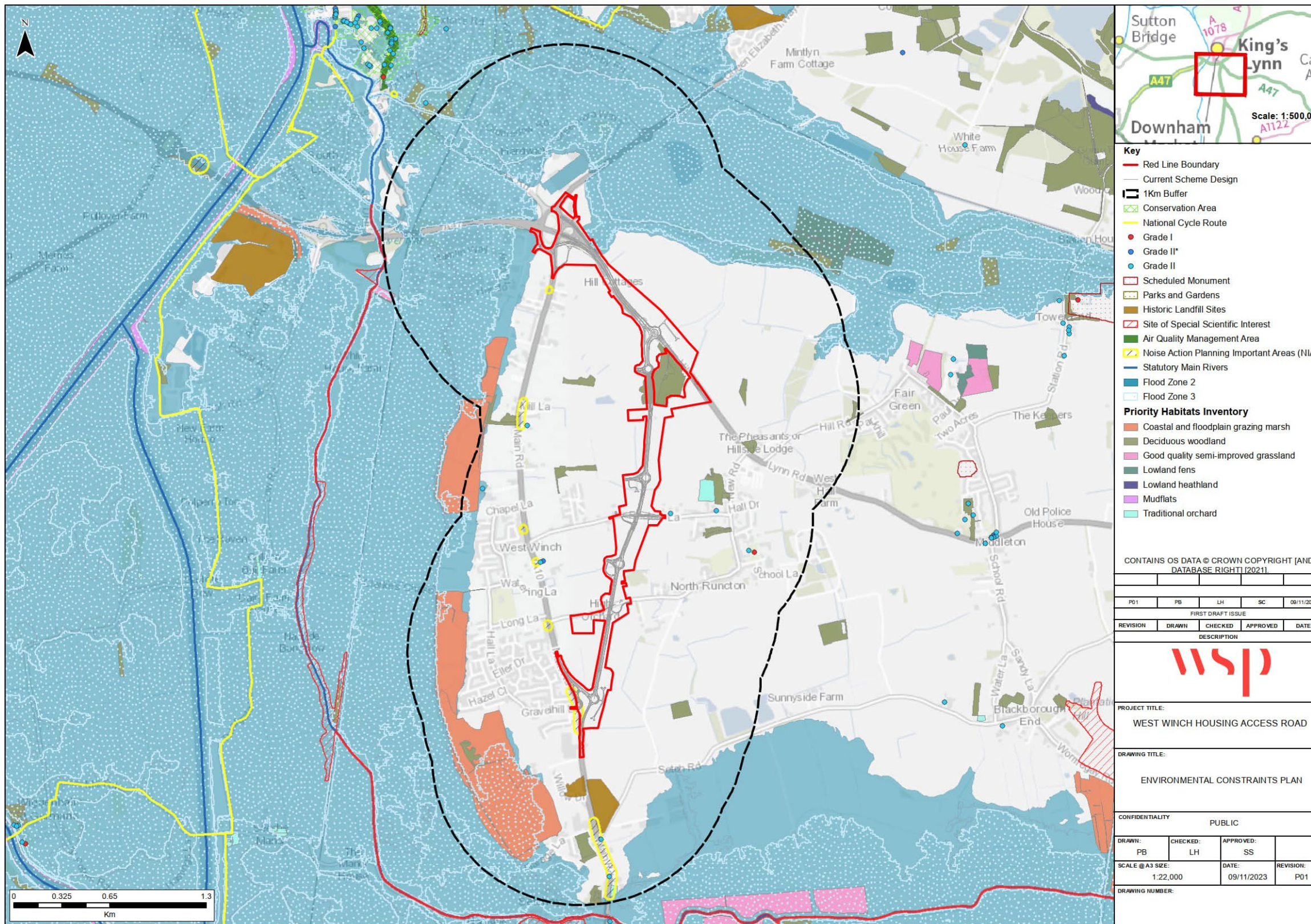
- **Reference 2.1:** British Geological Survey, Geology of Britain Viewer. [Online] accessed via [BGS Geology Viewer \(BETA\)](#) [Accessed November 2023]
- **Reference 2.2:** National Character Areas: King's Lynn and West Norfolk Landscape Character Assessment by Chris Blandford Associates, published March 2007.
- **Reference 2.3:** Environment Agency, Data Catchment Explorer. [Online] accessed via [England | Catchment Data Explorer](#) [Accessed November 2023]
- **Reference 2.4:** [King's Lynn & West Norfolk Borough Council Local Development Framework - Core Strategy](#). [Accessed November 2023]
- **Reference 2.5:** DfT Road Traffic Statistics.

Figure 1-1 Site Location Plan



\\uk.wspgroup.com\Central Data\Projects\7010055\701005518 - West Winch Housing Access Road - PMO\03 WPI\EQ EGIA\CRIC GIS\MXD\Figure 1.1 - Site Location Plan.mxd

Figure 1-2 Environmental Features Plan



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