

West Winch Growth Area

Ecology and Biodiversity Assessment



Client

Kings Lynn and West Norfolk
Borough Council

Date:

March 2023



Essex County Council

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1. Executive Summary

- 1.1. This document aims to identify any constraints to the delivery of the West Winch Growth Area in relation to ecological issues and the preservation and enhancement of biodiversity. It sets out the local policy situation and sets out the resources within and around the Growth Area that could be impacted by the delivery of the identified level of housebuilding. It also considers the broad requirements for mitigation and enhancement and assesses the feasibility of the delivery of the measures that would be most appropriate.
- 1.2. In January 2023, the Council adopted the West Winch Growth Area Framework Masterplan Supplementary Planning Document in support of its inclusion in the emerging Local Plan to deliver in the region of 3500-4000 new homes “in the fullness of time”. Housing development within the Growth Area is dependent on the construction of a Housing Access Road along its eastern edge, to alleviate traffic on the A10 through the existing settlement.
- 1.3. There are two gas pipelines and a high voltage overhead powerline crossing the Growth Area, each of which has a non-developable corridor associated with it.
- 1.4. The Growth Area is located on the edge of a plateau of sands and gravels, with slopes down to surrounding fenland and is predominantly a landscape of arable cultivation, with small, mostly horse-grazed, pastures around the edges of the existing settlement. There are small areas of secondary woodland and hedgerows on some field boundaries. The only site designated for nature conservation within the Growth Area is the Brook Watering Meadow County Wildlife Site (CWS), which is a small field of unimproved grassland, and it is recommended that it and adjoining semi-natural areas are protected from development. There are three CWS adjacent to the Growth Area boundaries.
- 1.5. Available survey information suggests the presence of populations of the following protected and Priority species: Great Crested Newts, bats, reptiles and breeding birds. Impacts to these populations will require mitigation measures within the Growth Area boundary, or compensation outside of it.
- 1.6. The general ecological impacts that will result from development within the Growth Area are:
 - Habitat loss, although no habitats of higher ecological significance will be lost, and in the longer term, there will be an increase in the extent of semi-natural habitats
 - Fragmentation, particularly as a result of the Housing Access Road, which could be mitigated by the inclusion of green bridges and underpasses in the road design to tie in with the Growth Area’s green infrastructure
 - Disturbance, caused by new residents and their recreational activity, which can be mitigated by careful design of adequate public access infrastructure and the overall layout of semi-natural habitats to avoid more sensitive areas
- 1.7. It will be necessary to demonstrate a minimum of 10% biodiversity net gain for each planning application submitted, and rough calculations show that this should be achievable within the Growth Area boundary taken as a whole. A deficit in the required level of biodiversity net gain could be overcome by purchasing habitat units outside of the Growth Area boundary.
- 1.8. The creation of new habitats for biodiversity net gain should be within fewer, larger blocks, with connections to the green infrastructure included within the layout of developed areas. The undevelopable corridors associated with gas pipelines and overhead power lines will be suitable for the creation of new habitats. Habitat creation should focus on grassland and heathland habitats with small fields divided by hedgerows, to preserve the open “farmland” landscape. Existing semi-improved grasslands and secondary woodland can be enhanced to provide greater biodiversity value.
- 1.9. The new buildings in developed areas should include in-fabric bird and bat boxes in order that they can contribute to enhancing populations of urban wildlife such as pipistrelle bats and Swift.

2. Introduction

- 2.1. Kings Lynn and West Norfolk Borough Council instructed Place Services to produce an assessment of the West Winch Growth Area as part of the evidence base supporting the examination of its Local Plan.
- 2.2. This document aims to identify any constraints to the delivery of the West Winch Growth Area in relation to ecological issues and the preservation and enhancement of biodiversity. It sets out the local policy situation and sets out the resources within and around the Growth Area that could be impacted by the delivery of the identified level of housebuilding. It also considers the broad requirements for mitigation and enhancement and assesses the feasibility of the delivery of the measures that would be most appropriate.
- 2.3. The habitats present across the Growth Area were assessed during a site visit on 17th March 2023. Although not an optimal time of year for habitat assessment or classification, broad categorisation is possible and particularly the differentiation between “improved” habitats – those that have been subjected to more intensive agricultural or other management practices – and semi-natural habitats. It is in the semi-natural habitats that the majority of biodiversity is found and so these represent the more important ecological resources, in a local sense at least.
- 2.4. No site access permissions had been obtained and so the assessment was limited to those features visible from public rights of way and the highway. Available air photos and historical maps have been used to augment this information. The limitations of season and access prevented any in depth species recording and consequently the identification of particular plant communities, and so a precautionary approach has been adopted.
- 2.5. Habitats were recorded according to the UK Habitat Classification, a system designed in association with Defra’s Biodiversity Metric, which is used for the calculation of Biodiversity Net Gain.

3. Policy and Strategy

National Policy and Strategy

- 3.1. Section 40 of the Natural Environment and Rural Communities Act 2006 (as amended) places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purposes of conserving and enhancing biodiversity. A key purpose of this duty is to embed consideration of biodiversity as an integral part of policy and decision making.
- 3.2. Managing the planning system is seen as one of the key areas in which the discharge of this duty can be demonstrated by local authorities. Within the strategy, policy and guidance produced by the Government to back up legislation, there is a range of documents and other sources of information that set out how things should be done, and those with sections of relevance and significance for the current assessment are summarised below.

National Planning Policy Framework

- 3.3. Section 15 of the National Planning Policy Framework (NPPF) covers the role of the planning system in conserving and enhancing the natural environment. Paragraph 174 states that planning policies should contribute to and enhance the natural and local environment by, amongst other things:
 - protecting and enhancing sites of biodiversity value;
 - minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.
- 3.4. Paragraph 175 goes on to state that development plans should distinguish between the hierarchy of site designations and take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure;
- 3.5. Paragraph 179 states that to protect and enhance biodiversity and geodiversity, plans should:
 - a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping-stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
 - b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.
- 3.6. Paragraph 180 restates the principle that in making planning decisions, a hierarchical approach should be followed, so that significant harm should be avoided, but if it can't be avoided must be adequately mitigated, or as a last resort compensated.
- 3.7. Paragraph 180 also introduces the idea of irreplaceable habitats, development resulting in the loss and deterioration of which should be refused apart from in exceptional circumstances and where a compensation strategy has been produced. Within the NPPF, the definition given for irreplaceable habitats is: "Habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen."

Making Space for Nature

- 3.8. Much of the government's approach to nature conservation strategy currently derives from this review for Defra published in 2010, often known as the "Lawton Report". The essence of the review is that sites designated for wildlife reasons in the UK are too small and too isolated. The conclusions of the report, in terms of what needs to be done to build a resilient and coherent ecological network, are: *more, bigger, better and joined*.
- 3.9. The report highlights five key actions to address this need:
- (i) Improve the quality of current sites by better habitat management.
 - (ii) Increase the size of current wildlife sites.
 - (iii) Enhance connections between, or join up, sites, either through physical corridors, or through 'stepping-stones'.
 - (iv) Create new sites.
 - (v) Reduce the pressures on wildlife by improving the wider environment, including through buffering wildlife sites. "
- 3.10. The report also sets out additional areas of improvement that can enable this action, such as proper planning of ecological networks, greater effort to secure multiple benefits from environmental management and consideration of the impacts of climate change within site designation and management.

Biodiversity Net Gain

- 3.11. In December 2018, Government launched a consultation on Biodiversity Net Gain, considering whether net gain should be mandated and how that system could work as a means to allow for the level of infrastructure, commercial and residential development that is needed while improving the environment. This is achieved by more than compensating for the biodiversity loss that results from each development.
- 3.12. In response to the consultation, the decision to mandate biodiversity net gain was announced in the Spring Statement of 2019 and has since been enshrined in law by the Environment Act (2021). From November 2023, a general condition will be applied to all planning consents that will require a minimum 10% increase in habitat value for wildlife, which will be calculated using the Defra Biodiversity Metric. The metric considers the types of habitat present, their condition, the difficulties of recreating them and the risks associated with doing so, using a mathematical approach to calculate the extent of new or enhanced habitat required.
- 3.13. The Government favours a "spatial hierarchy" approach to incentivise on-site and local compensation, where appropriate. However, there will be an option to invest in national strategic habitat projects where no appropriate local option is available.
- 3.14. Net gain requirements will not undermine the existing range of protections, in planning policy and legislation, for irreplaceable habitats and protected sites. In relation to protected sites, net gain will only be enforceable following a planning decision which will consider the existing legal and planning policy requirements for protected sites in the usual way.

Local Policy and Strategy

Local Plan History

- 3.15. The principal of a growth area to the southeast of Kings Lynn was first identified as a in the King's Lynn and West Norfolk Core Strategy adopted in 2011, at which time it was planned to deliver 1600 homes by 2026. In 2016, a Site Allocations and Development Management

Policies Plan that carried forward this allocation was adopted setting out a strategic approach to the development of the West Winch Growth Area under Policy E2.1.

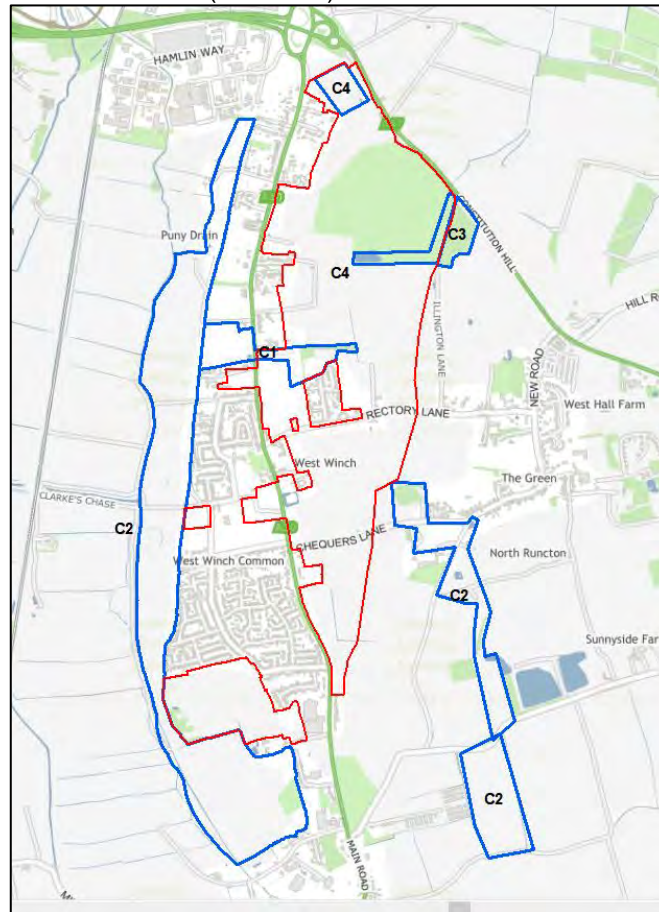
- 3.16. At Local Plan Review Pre-Submission Stage, the West Winch Growth Area was designated for in the region of 3500-4000 new homes “in the fullness of time” and it was considered that at least 2500 were likely to be delivered by 2036. In January 2023, the Council adopted the West Winch Growth Area Framework Masterplan Supplementary Planning Document to collate all of the strategic information necessary to effectively deliver the planned growth in one document. This document adjusts the timescale to fit the Local Plan schedule, with 2500 home now to be delivered by 2038.
- 3.17. The SPD sets out the need for the Growth Area to be considered as a whole in order to achieve the best potential for delivery of the intended level of development and all planning applications that are submitted will be assessed against its contents. It was produced to reflect the Masterplans included with the two extant planning applications affecting the Growth Area.
- 3.18. With respect to biodiversity, the SPD highlights the need for development to use opportunities to create or improve habitats and calls for the retention of hedgerows and mature trees. It also sets out the importance of landscaping, lighting schemes, and bird and bat boxes in the delivery of biodiversity enhancements. The SPD calls for significant areas of open space to create a network of connected green infrastructure with multiple functions including biodiversity enhancement.
- 3.19. The Growth Area is also dependent on the provision of the West Winch Housing Access Road, which is intended to serve as an alternative route around the eastern edge of the allocation, easing traffic issues on the A10 through the existing settlement. This road is being designed by Norfolk County Council and is at the end of a public consultation stage, with little detailed information available.

North Runcton and West Winch Neighbourhood Plan

- 3.20. This Neighbourhood Plan covers the whole of the Growth Area and sets out the communities’ views on how development in their parishes can be shaped to provide maximum benefit to the local area. Amongst its aims is the following focused on the environment: “To create a network of green spaces and corridors that sustain a sense of rural living and are utilised and respected by everyone. To sustain and safeguard agriculture in the parish in tandem with improved rural access and recreational opportunities for village residents whilst supporting local wildlife.”
- 3.21. The Neighbourhood Plan identifies ‘sites of local value’, areas that are considered, amongst other things, to make an important contribution to landscape character or that have biodiversity value. These represent assets that the residents wish to see protected. The following such sites are relevant to the Growth Area and this assessment:
- C1 – This is the Brook Watering Meadow and Rush Meadows County Wildlife Sites (CWS), with some adjacent horse-grazed pastures and woodland.
 - C2 – This includes the grazing commons of West Winch, North Runcton, Hardwick Narrows and Setchey, which includes the West Winch Common CWS.
 - C3 – Sheep’s Course Wood CWS, which is also common land.
 - C4 – A pond, woodland and grassland habitats associated with the Land West of Constitution Hill development site, including areas identified as more species-rich in the ecological surveys supporting the development.

3.22. C3 and C4 are within the Land West of Constitution Hill development area, but the indicative Masterplans submitted to support the application indicate that they will be retained as green infrastructure. C1 is partly within the Growth Area.

Figure 1 – Areas of Local Interest (blue lines) in relation to Growth Area boundary (red line)



Development Constraints

- 3.23. The Growth Area is crossed by two high pressure gas pipelines and a high voltage overhead power line. Each of these has an associated offset corridor within which development is either not permitted or is strictly limited, so taking these areas out of the developable area. These corridors can be used to deliver green infrastructure and biodiversity enhancements, but it may not be possible to use the land over the pipeline itself for biodiversity net gain because of the need for a legal agreement committing to management for 30 years.
- 3.24. There are no other known fixed constraints to development, although there may be constraints attached to the consideration of other environmental specialisms such as the heritage or landscape.

4. The Site

- 4.1. This chapter provides an overview of the ecological resources present within the Growth Area and is intended to provide the context by which those resources are valued and suggesting the priorities for biodiversity protection, enhancement, restoration and creation. Consideration is given to the potential for the creation of key habitats, considering factors of environment, landform and land use.

Environmental Conditions

Geology and Soils

- 4.2. The Growth Area sits on the edge of a plateau of sedimentary sands, dropping down to the tidal flats deposits on underlying clay in the fenlands to the west and south. On the surface of the plateau are patches of chalky boulder clay deposited by glacial action alongside other sands and gravels. To the west of Main Road are head deposits, formed by the movement of materials down the slope during periods of waterlogging associated with glacial thawing.
- 4.3. The resulting soils on the plateau are generally slightly acidic, but with some localised base-rich contribution from the thin layer of boulder clay. The drainage is slightly impeded in places, leading to seasonal waterlogging. The soils on the slope are free-draining and slightly acidic, with low fertility, while the fenland soils on the western edge of the Growth Area are naturally wet and highly suited to grassland habitats.

Hydrology

- 4.4. To the north of Chequers Lane, the land generally drains to the west through field boundary ditches, with the most significant channel crossing east to west to the north of Coronation Avenue. To the south of Chequers Lane, the land drains to the south, towards the Nar Valley. Ponds are present at a relatively high density, some of which are likely to be marl ponds, resulting from the excavation of the chalky boulder clay to spread on fields to reduce their acidity.

National Character Areas

- 4.5. National Character Areas (NCA) are areas that share similar landscape characteristics, and their mapping is dictated by landscape features rather than administrative boundaries. The NCA profiles highlight cultural and natural features of the areas in order to guide strategic decisions at a wider landscape level, reacting to the historical and current drivers of change.
- 4.6. The Growth Area sits on the boundary between two NCA, The Fens (NCA 46) and North West Norfolk (NCA 76), which are considered in the following sections.

The Fens (NCA 46)

- 4.7. This area covers the low-lying, flat lands that mark out the former natural extent of the The Wash, as an estuarine feature. The area has been reclaimed from the sea over thousands of years to create the predominantly agricultural landscape that is now present, its river systems canalised to provide the drainage necessary to allow for cultivation. Arable and horticultural farmland is dominant, with grazing land in narrow corridors along the main river channels. There is little woodland and field boundaries are generally marked by recti-linear ditch systems rather than hedgerows, except at the fenland edge.

- 4.8. Opportunities that are identified in the profile are generally focussed on agricultural systems, but mention is made of the importance of creating semi-natural habitats to slow the passage of water through the hydrological network.
- 4.9. This NCA only covers the western and southern most edges of the Growth Area, including the two separate sections, to the west of the A10.

North West Norfolk (NCA 76)

- 4.10. This NCA is characterised by light soils that provide good agricultural land, in a generally rolling landscape with a dispersed settlement pattern. Particularly in the west of the area, river valleys are associated with grazing land, and the overall pattern is of large arable fields with hedges and mature trees forming field boundaries. Semi-natural woodland is generally scarce, most wooded areas being plantations associated with large houses and their parkland settings. Some areas of heathland and mire remain.
- 4.11. Opportunities that are identified in the profile and that may be relevant to this assessment include the creation of new woodland, grassland, and heathland habitat, and improving the connectivity between fragmented semi-natural habitats.
- 4.12. The majority of the Growth Area falls within this NCA.

Local Ecological Networks

International Designations

- 4.13. The following internationally designated sites – and the nationally designated SSSIs on which they are based – lie within 10km of the Growth Area’s boundaries:
- Roydon Common Ramsar site, 5.7km to the northeast
 - Roydon Common and Dersingham Bog SAC, 5.7km to the northeast
 - The Wash SPA and Ramsar site, 6.8km to the northwest
 - The Wash and North Norfolk Coast SAC, 6.8km to the northwest
- 4.14. In addition, the Growth Area lies within the evidenced Zones of Influence of the following internationally designated sites – and the SSSIs on which they are based – for recreational disturbance from residents, as set out within the Norfolk Green Infrastructure and Recreational Impact Avoidance and Mitigation Strategy¹:
- Breckland SPA and SAC, 13.7km to the southeast
 - Dersingham Bog Ramsar site, 10.7km to the north, northeast
 - North Norfolk Coast SPA, 26.5km to the north, northeast

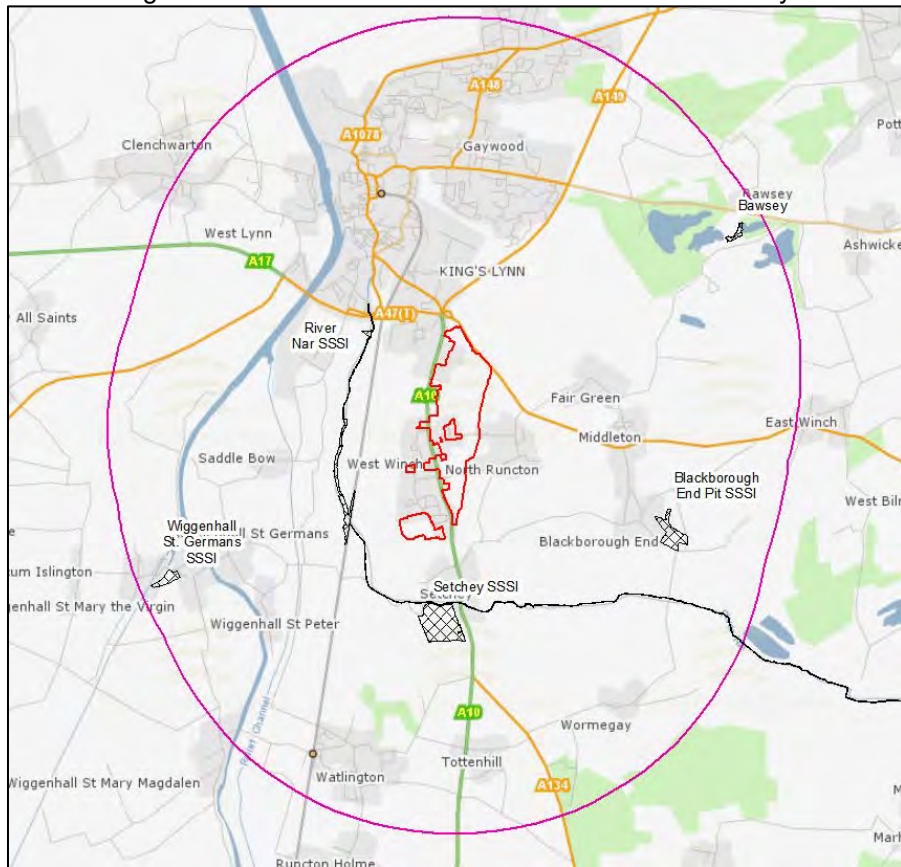
Sites of Special Scientific Interest (SSSI)

- 4.15. The following nationally designated SSSIs lie within 5km of the Growth Area boundaries (as shown on Figure 2):
- River Nar SSSI, 0.63km to the west
 - Setchey SSSI, 1.03km to the south

¹ https://www.north-norfolk.gov.uk/media/7417/girams_strategy_march-2021.pdf

- Wiggshall St Germans SSSI, 3.68km to the west
- Blackborough End Pit SSSI, 3.18km to the east
- Bawsey SSSI, 4.4km to the northeast

Figure 2 – SSSIs within 5km of the Growth Area boundary



Local Nature Reserves

4.16. There are no Local Nature Reserves within a kilometre of the Growth Area.

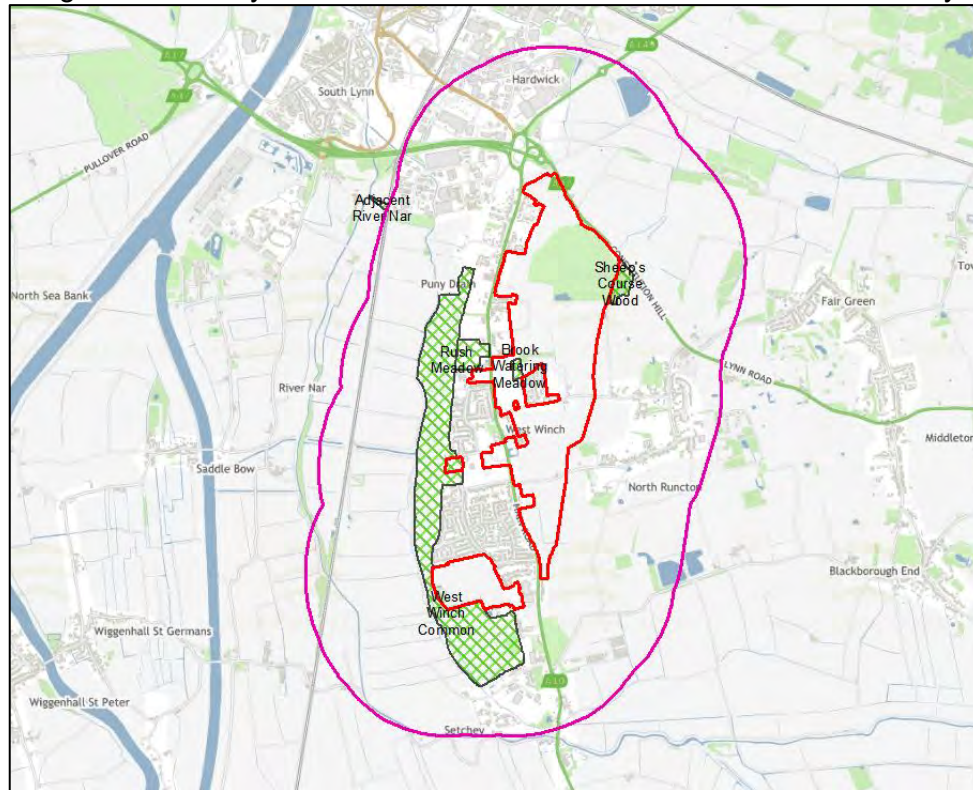
County Wildlife Sites

4.17. The following County Wildlife Sites (CWS) are located within 1km of the Growth Area boundaries:

- Brook Watering Meadow (CWS2079), consisting of a small, unimproved meadow, is located wholly within the Growth Area boundary, to the northwest of the Coronation Avenue housing estate.
- A small part of West Winch Common (CWS390) lies within the Growth Area boundary, to the west of Hall Road, although this field has been in arable cultivation, so it would not meet CWS selection criteria now. The same County Wildlife Site is immediately adjacent to the southwestern block of the Growth Area boundary, to the west of Main Road. The site consists of an extensive series of fenland edge neutral grasslands, divided by hedges and ditches, some of which are unimproved.
- Rush Meadow (CWS399) is immediately adjacent to the Growth Area to the west of Main Road and consists of a series of small meadows with patches of herb-rich sward, divided by mature hedgerows.

- Sheep's Course Wood (CWS2265) is immediately adjacent to the northeastern corner of the Growth Area boundary, to the south of Constitution Hill. It is mature, secondary woodland, dominated by Pedunculate Oak (*Quercus robur*)
- Adjacent River Nar (CWS402) lies 990m to the west of the northern end of the Growth Area, to the west of the railway line. It consists of seasonally wet unimproved neutral grassland and fen vegetation on either side of a disused railway line.

Figure 3 – County Wildlife Sites within 1km of the Growth Area boundary



4.18. There is no statutory protection for County Wildlife Sites, although there is a presumption that they will be protected by the planning system. Many are in private ownership, which creates a vulnerability not only to development pressure, but to inappropriate management or neglect.

Biodiversity

Habitat Assessment

4.19. The following section describes the habitats present within the Growth Area and their relative ecological value. The total area is approximately 185 hectares, and existing properties and their gardens amounted to about six hectares in total. The alpha-numeric codes and habitat types are taken from the UK Habitat Classification, which is used in the Defra Biodiversity Metric. Mapping has been simplified without the usual addition of secondary codes, and so only the primary habitat is shown. (See Map in Appendix 1).

Agricultural Land

4.20. The majority of the Growth Area (60%) is under arable cultivation or has been in the recent past, amounting to approximately 110 hectares. Away from any boundary features this land use provides very limited potential for biodiversity, with the notable exception of Skylark, a Priority Species known to be present. The arable fields are generally larger than other habitat

blocks and many of their field boundaries are marked only by ditches or defunct hedges, creating a very open landscape. The majority of the hedgerows present that are in better condition are those that separate arable land from other land uses, including residential properties and the highway.

Grassland

- 4.21. Grassland habitat was generally identified either as 'g4 modified grass', dominated by species used for agricultural modification and with little diversity, or 'g3c other neutral grass', which is generally slightly more diverse in plant species and lacks agriculturally favoured species. The g4 classification also includes grasslands managed for amenity purposes, such as sports pitches, but none were found within the Growth Area. Approximately 27 hectares of agricultural grassland was identified, with the most significant block of nearly 20 hectares forming an isolated section of the Growth Area to the west of the A10 at the southern end.
- 4.22. Approximately 40 hectares were recorded as 'g3c other neutral grass', about 21% of the Growth Area. The majority of this (27.4 hectares) was in a single block within the Land west of Constitution Hill planning application boundary, which appears to have been subject to some large-scale modification, with a change in ground level along its southern edge, a new, large pond, and the loss of historic field boundaries during the first half of the 20th Century. This block of habitat is varied, with significant volumes of scattered scrub and dense scrub patches within a mosaic of grassland and lowland fen communities. Drainage appears to be impeded with standing water in places and some stands dominated by tall grass, swamp species such as Common Reed (*Phragmites australis*), Reed Canary-grass (*Phalaris arundinacea*) and Wood Small-reed (*Calamagrostis epigejos*). The developer's ecological consultants identified a section of more species-rich grassland at the southern edge of this area, which may constitute Lowland Meadows Priority Habitat.
- 4.23. Two blocks of similar habitat are found at the northern end of the Growth Area, one of which appears to be derived from abandoned arable land, and the other maybe of significant age, associated with Hardwick Hall. This area is identified as a 'site of local value' in the Neighbourhood Plan.
- 4.24. The remaining sections of 'g3c other neutral grassland' consist of small meadows and paddocks, some of which are horse grazed. None of these appeared to be particularly species rich.
- 4.25. The Brook Watering Meadow has been recorded as 'g3a Lowland Meadows, due to its CWS status, but it was not visited during this assessment.

Woodland

- 4.26. The most significant piece of woodland is just outside the Growth Area, being Sheep's Course Wood. Map evidence shows that this is not Ancient Woodland, having been open ground until at least the mid-20th Century, or possibly wood pasture/heathland with scattered trees. However, it now has a mature woodland structure and qualifies as Lowland Mixed Deciduous Woodland Priority Habitat.
- 4.27. Two other areas of Lowland Mixed Deciduous Woodland are shown In Natural England's Priority Habitat Inventory, but neither is considered to justify this classification. A strip of woodland along the western section of the southern boundary of the Land west of Constitution Hill development site appears to be made up of developing broad-leaved woodland, but without the characteristics that would allow it to be classified as Priority Habitat. This area extends to the east in a strip all along the southern boundary of the development area and expands into a broad belt along the eastern edge, where it appears to be entirely due to natural regeneration.

4.28. The other wooded area is to the northeast of the Brook Watering Meadow CWS, which was open ground in the 1950s and still relatively open in places as recently as 2000. It does support a high density of mature trees, including Pedunculate Oak, Alder (*Alnus glutinosa*) and willows (*Salix* spp.), but these are primarily derived from field boundaries and a stream side. It is likely that this is a damp corridor that is naturally becoming wooded due to a lack of management but is unlikely to be classified as Priority Habitat, despite some similarities to Wet Woodland. However, it does form part of a significant block of semi-natural habitat, with adjoining meadows including the Brook Watering Meadow CWS.

Hedgerows

4.29. There are approximately 9 km of hedgerows across the Growth Area, although there is no strong overall network and many remaining hedge sections are in poor condition. The stronger hedges tend to be along roadsides and forming the boundaries of residential properties. While many of these hedge sections would fall within the inclusive definition applied to the Hedgerows Priority Habitat, their contribution to biodiversity is relatively low.

Ancient and Veteran Trees

4.30. There are few recorded Veteran Trees in and around the Growth Area, although a systematic survey would be likely to identify more within the remaining field boundaries. Veteran Trees are considered as irreplaceable habitat by the definition used in the NPPF and should therefore be retained within any development layout plan.

Priority and Protected Species

4.31. The timescale and limitations of the methodology of this assessment did not allow for any systematic recording of animal species, and so the information presented here is derived from available records, largely presented in the ecological information supporting the two extant planning applications.

Great Crested Newts

4.32. This species has been recorded in the Land West of Constitution Hill development area and has previously been recorded further south in the Growth Area, within 100m of the Land at West Winch development area. From available maps, there appears to be a relatively high frequency of ponds at the northern end of the Growth Area, but fewer centrally and to the south. Arable land is generally unsuitable as terrestrial habitat, but meadows, hedgerows and ditch banks could provide suitable habitat.

Bats

4.33. A total of 12 species of bats were recorded in the Land West of Constitution Hill development area during 2021, but most were very infrequent. Only Common and Soprano Pipistrelles and Noctule were present in significant numbers. At the Land at West Winch development area during 2019, eight bat species were recorded, but it was only Common and Soprano Pipistrelles that were frequent. Both of these species were shown to roost in buildings at Manor Farm.

4.34. There are numerous roosting opportunities in the existing residential properties, the church, and farm buildings within and to the west of the Growth Area, in addition to mature trees.

4.35. Much of the habitat within the Growth Area is of limited suitability for bat foraging activity, being under arable cultivation. The Land West of Constitution Hill development area is likely to be the most important block of habitat for bats, with the seasonally wet habitats there likely to be productive in terms of flying invertebrates that make up the majority of their prey. The

woodland, stream and pasture complex north of Coronation Avenue is also likely to provide good foraging opportunities.

- 4.36. With respect to commuting activity, there are few connected hedgerows or other linear habitats that would facilitate movement through the landscape. The strongest corridors of suitable commuting habitat are north to south along the western edge of the Growth Area, adjacent to the existing settlement, east to west along Rectory Lane, and east to west through the Land west of Constitution Hill development area.

Reptiles

- 4.37. Slow Worm, Grass Snake and Common Lizard were all recorded in the Land West of Constitution Hill development area, which is the largest block of suitable habitat in the Growth Area. Surveys across pastures and arable field margins within the Land at West Winch development area did not find any populations of reptiles, and this is likely to represent the situation across much of the Growth Area, where the small pockets of suitable habitat are isolated within an arable landscape.

Birds

- 4.38. The overall landscape of the Growth Area is unlikely to support a significant diversity of bird species due to a lack of semi-natural habitats, and even the farmland bird community is likely to be impoverished because of the poor quality and abundance of hedgerows. The exception may well be Skylark, a Priority Species which is known to be present and favours open arable fields and pastures. Breeding bird surveys for the Land at West Winch development area in 2019 only recorded territories outside of their boundary, although the larger fields to the east of the site would appear to be suitable.
- 4.39. Barn Owls have been recorded breeding in farm buildings at Manor Farm, but the majority of nearby grassland habitat favoured by hunting Barn Owls is present to the west of the A10 outside of the Growth Area. There is a small block of grasslands to the north of Coronation Avenue that would also be suitable.

Badger

- 4.40. Low levels of Badger activity have been recorded in both of the development sites, which shows that this species is present within the Growth Area, but the scale of the population and the locations of main setts are not known.

Invertebrates

- 4.41. An assemblage assessed to be of county importance was recorded within the Land West of Constitution Hill development area. This is the only habitat block with raised habitat suitability for invertebrates within the Growth Area, with most of the arable land and pastures having only marginal value.

Adjacent Habitats

- 4.42. The main part of the Growth Area, to the east of the A10, is poorly connected to semi natural habitats. To the north is the A47, with an extensive area of arable cultivation beyond, and to the east is a continuation of the arable landscape that dominates the Growth Area itself. At the northern end, the Sheep's Course Wood CWS borders the Land West of Constitution Hill development area, but it is then bordered by a large arable field.
- 4.43. Further south, North Runcton Common, which although undesignated in nature conservation terms, is close to the Growth Area boundary and supports semi-natural grassland and heath vegetation. There is no existing habitat continuity between the two.

4.44. The isolated parts of the Growth Area to the west of the A10 are adjacent to the West Winch Common CWS, and the south-western block has similar grassland habitat. The West Winch Common CWS provides connectivity north to south on the western edge of the existing settlement

Other Allocations

4.45. In the Local Plan Review Pre-Submission Stage documents, under Policy E1.12 King's Lynn - Employment Land Policy, there are two allocations to the south of Kings Lynn. Allocation E1.12-SAD, 1300m to the west of the Growth Area boundary is approximately 23 hectares of agricultural land between Saddlebow Road and the King's Lynn - Cambridge/London railway line. Allocation E1.12-HAR is approximately 27 hectares of former agricultural land adjacent to the Hardwick Industrial Estate, 660m north of the Growth Area boundary. It is allocated as a strategic employment site for the county and brought forward from the 1998 Local Plan.

4.46. Due to their recent history, neither of these sites is likely to have any substantive ecological value and neither is well connected ecologically to the habitats within the Growth Area, not least because of significant infrastructure barriers between them.

4.47. There are no other Local Plan allocations in close proximity to the Growth Area and none with any substantial ecological connection to it. It is therefore concluded that there are no likely cumulative ecological impacts as a result of development within the Growth Area.

Summary of Key Ecological Features

4.48. The following features are of sufficient ecological significance to be a key consideration in relation to the master planning within the Growth Area and could constitute a constraint to development:

- Brook Watering Meadow CWS, within the Growth Area
- CWS adjacent to the Growth Area: West Winch Common, Rush Meadow, and Sheep's Course Wood
- Lowland Meadow Priority Habitat within the Land West of Constitution Hill development area
- Priority Habitat hedgerows
- Ancient and veteran trees

Other Ecological Features

4.49. The following features are of lower ecological significance, but should preferentially be retained, or will be likely to generate a requirement for mitigation:

- Grassland blocks considered to be 'Other Neutral Grassland'
- 'Other broadleaved woodland' habitat blocks

Impact of Ecological Constraints on Developable Area

4.50. In summary, outside of the area covered by the existing planning application on Land to the West of Constitution Hill, there is only one block of habitat that is of sufficient ecological value to be proposed for retention within the Growth Area (see Fig. 4). This area is just over 5 ha and includes the Brook Watering Meadow CWS, which is unimproved grassland, together with adjacent pastures that can help to buffer it from adverse impacts, and which can be enhanced to extend its value. Also included is the streamside woodland to its northeast, which shares some features with Wet Woodland Priority Habitat. It forms part of the C1 Area of Local Interest identified in the North Runcton and West Winch Neighbourhood Plan.

4.51. There are no other significant, fixed ecological constraints to development within the Growth Area, but the next section considers strategic ecological impacts and the need for mitigation measures.

Figure 4 – Land proposed for retention for ecological reasons



5. Ecological Mitigation and Compensation

Extant Planning Applications

5.1. Planning applications have been submitted for two sites within the Growth Area, and these are currently awaiting determination. Consideration of the ecological impacts of allocating the Growth Area must take into account the status of these applications, which complicates the analysis of potential net gain.

13/01615/OM Land West of Constitution Hill

5.2. This is an outline application for the delivery of up to 1110 residential units, a primary school, a local centre (Class E, F2), public open space, landscaping, and highway access onto the A47 and A10. The site is located at the northern end of the Growth Area, between the existing settlement and the A47. The application lies entirely within the allocation boundary and is at an advanced stage, with an expectation that it will be determined during 2023.

5.3. An updated Ecological Impact Assessment (addendum) was produced by ecological consultants on behalf of the developers in November 2021. The site consists of large areas of neutral, seasonally wet grassland and two arable fields. The significant ecological impacts identified within the document are:

- The loss of about 23 hectares of neutral grassland
- The loss of a population of the Nationally Scarce Divided Sedge
- The loss of 2.4ha of broad-leaved woodland
- The loss of scrub habitat within the grassland
- The loss of a pond supporting Great Crested Newts, and one other pond
- The loss of terrestrial habitat supporting the Great Crested Newt population
- The loss of the breeding and wintering bird assemblages
- The loss of habitat supporting a significant invertebrate assemblage
- The loss of reptile populations with habitat removal

5.4. Mitigation measures are based upon the retention and enhancement of some grassland and woodland habitat, the creation of new ponds as part of the site's SUDS, and the translocation of reptiles and Great Crested Newts to another site.

5.5. Although this outline application is likely to be determined before there is a mandatory requirement for 10% biodiversity net gain, the subsequent reserved matters applications are certain to be subject to that general condition. The high proportion of semi-natural habitat within the application boundary will result in a high baseline habitat unit value and consequently a significant extent of habitat creation and enhancement in order to achieve the required gain in habitat units. No Defra Metric calculations have yet been provided, but it appears unlikely that the required level of gain could be achieved within the planning application boundary.

18/02289/OM Land at West Winch (Manor Farm)

5.6. This is an Outline Application for up to 500 homes, a neighbourhood centre, associated landscaping, parking and supporting infrastructure. The site is located predominantly to the east of the A10 around Manor Farm, with a small section to the west of the A10. Parts of the planning application boundary are outside of the allocated Growth Area. The majority of the site is currently under arable cultivation, with several small improved and semi-improved pastures.

- 5.7. An Environmental Impact Assessment has been prepared by ecological consultants in July 2023 on behalf of the applicants and was submitted in February 2023. The significant ecological impacts identified within the document are:
- The risk of hydrological impacts to the River Nar SSSI and West Winch Common CWS
 - The loss of buildings used by roosting bats and breeding Barn Owls
 - Recreational disturbance to nearby SSSIs and CWS
- 5.8. Suggested mitigation measures include licensed method statements in relation to bats and Barn Owls, wildlife sensitive lighting design, appropriate SUDS design, and a combination of on-site and off-site measures in relation to recreational impacts.
- 5.9. The likely timescales for the determination of this application are unknown, but in any case, reserved matters applications are very likely to be subject to the forthcoming mandatory requirement to demonstrate a minimum of 10% biodiversity net gain. No Defra Metric calculations have yet been provided, but the baseline is likely to be relatively low and the illustrative masterplan suggests that approximately 20% of the site will be semi-natural open space. It is therefore anticipated that close to the required level of gain could be achieved within the planning application boundary.

Strategic Ecological Impacts

Habitat and Biodiversity Loss

- 5.10. Taking the Growth Area as a whole, loss of habitat is a relatively minor impact, with the majority of the land area currently taken up by habitats with low biodiversity value. However, granting consent for the Land West of Constitution Hill planning application affects the biggest block of semi-natural habitat of biodiversity value within the Growth Area. Current mitigation proposals only involve the retention of a relatively small proportion of the site. Applying the forthcoming requirement of a minimum 10% biodiversity net gain will require a solution that is outside of the planning application boundary but should preferentially be within the Growth Area.

Fragmentation

- 5.11. The necessity for the creation of the Housing Access Road along the eastern edge of the Growth Area to achieve the delivery of the development aspirations will inevitably lead to the creation of an ecological barrier between West Winch and land to the east. The resulting fragmentation and isolation of existing or new semi-natural habitats will affect the way that species can safely move through the landscape, and potentially limit the biodiversity value of those habitats.
- 5.12. Depending on the layout of housing, the extent of garden spaces, the arrangement of gardens in relation to other gardens, and the boundary treatments of the new properties, there can also be fragmentation effects that limit the penetration of species into the developable areas and so reducing the contribution that they can provide to local biodiversity. Having gardens that back on to each other with boundary features that permit the movement of wildlife from one to another creates a larger block of garden habitat more capable of supporting species populations and assemblages. Having access to wildlife in this way has been shown to have a positive benefit on the health and wellbeing of residents.

Disturbance

- 5.13. The increase in the local population that will result from the projected level of housebuilding will have a significant impact on the remaining open space in a number of ways:

- An increase in informal recreational use, which results in trampling and compaction of soils, and nutrient inputs from dog waste products, both of which have a negative impact on vegetation communities and the abundance and diversity of wild plants
- Additional noise and visual disturbance, which affects mammal and bird species that are more sensitive to human activity
- A change in the landscape character from rural to sub-urban, which affects species that favour open, farmed landscapes
- An increase in domestic pets such as cats, which are “unnatural” predators of birds and small mammals in semi-natural habitats around housing

Positive Impacts

5.14. As opposed to the Growth Area’s current, predominantly arable landscape, the development process should result in an increase in semi-natural habitats in some locations, due to the requirements for the provision of open space and the delivery of biodiversity net gain. This is a significant benefit for species populations, creating reservoirs of biodiversity that can then permeate the whole landscape, including those areas with residential development.

Mitigation Requirements

Designated Sites

5.15. Aside from the requirements set out in the Norfolk Green Infrastructure and Recreational-impact Avoidance and Mitigation Strategy, there are not likely to be any mitigation requirements associated with the statutory protected sites around the Growth Area. The River Nar SSSI is hydrologically connected to the Growth Area, but normal requirements for surface water management will ensure that there are no adverse impacts.

5.16. The Brook Watering Meadow CWS is within the Growth Area, and it has been suggested here that it and adjoining habitats should be protected from development, and their management enhanced to create a reservoir of biodiversity. A buffer may be required to protect the CWS from environmental changes that could result from housebuilding and, as unimproved grassland is sensitive to human activity, access should not be permitted.

Protected and Priority Species

5.17. Within the current acceptable systems for mitigation within planning, and based upon available survey information, it is unlikely that there will be any impacts on protected or Priority species that cannot be adequately mitigated in one way or another.

5.18. Information provided in support of the Land west of Constitution Hill development includes strategies for species mitigation that include licensed translocation of Great Crested Newts and reptiles to land outside of the planning application boundary. In order to retain the distribution of these species’ populations, the receptor site should ideally be within the Growth Area, or very close to it.

5.19. Land within the pipeline and overhead wires offsets could be suitable for this purpose, and to mitigate any other species impacts that are identified, provided that they contain or are connected to sufficient extents of habitats and other resources needed for the populations to thrive.

Connectivity

- 5.20. The proposed Housing Access Road could effectively isolate any habitats created within the Growth Area, closing the eastern edge of a triangular ecological barrier with the existing and A10. Opportunities should be secured within the development encouraged within the Growth Area to overcome that barrier effect wherever possible.
- 5.21. The Framework Masterplan within the SPD currently indicates two corridors of green infrastructure crossing the main section of the Growth Area where the gas pipelines prevent housebuilding. Consideration should be given to measures to continue those corridors across the Housing Access Road, allowing the continuous movement of species beyond the Growth Area boundaries. The southern corridor aligns to North Runcton Common.
- 5.22. The best options for connectivity across the road would be green bridges and/or underpasses, each of which serve different species. Underpasses in association with appropriate fencing allow larger mammals to safely cross the road without the risk of a road traffic accident. Green bridges provide a continuous habitat connection for small mammals and less mobile invertebrates and can also offer safer passage for bat and bird species.
- 5.23. Including semi-natural habitats along the corridor of the new road would improve north to south connectivity and help to direct wildlife to these safer crossing points.
- 5.24. Where possible, habitat features should also be created at the other end of these corridors to provide opportunities to encourage species to cross the A10 to the west, connecting to West Winch Common CWS and beyond.

Disturbance

- 5.25. Some of the impacts of disturbance can be avoided by careful consideration of habitat layout and design, and the way that this relates to footpaths and other infrastructure. Habitats that are vulnerable to physical disturbance and those designed to encourage species of wildlife that are not compatible with human activity should be located away from public access points and protected by buffering habitats that discourage people from reaching them, such as dense scrub.
- 5.26. Providing well-designed and easy to use routes for dog walkers and other recreational uses will ease pressure on other areas of open space within and around the development and the species that use them, including the internationally designated sites across the wider landscape. It may also be appropriate to support improvements to access infrastructure at nearby sites, limiting the impact of additional visitor pressure.
- 5.27. There is an increase in disturbance that is inevitable with the switch from a rural landscape to an urban or suburban one and species with a close affinity for farmland are certain to be lost, including Skylark. This can be addressed by a requirement for a farmland bird mitigation strategy, which would involve the delivery of measures proven to increase populations of farmland birds on nearby agricultural land where they are not already in place. This will help to maintain population levels at the landscape scale, in the short-term at least.

Biodiversity Net Gain

- 5.28. With a mandatory requirement for a minimum of 10% net gain in biodiversity on most planning applications from November 2023, it is likely that all development proposals within the Growth Area will have to demonstrate the ability to deliver the necessary level of habitat creation or enhancement needed to reach that figure.

- 5.29. In the language of biodiversity net gain, an increase in habitat units can be achieved by creating new habitats or by improving the condition of existing habitats. Condition of habitats is assessed according to a defined set of criteria, which are set out for each habitat type in information that accompanies the Defra Biodiversity Metric. The calculation process results in more habitat units being generated where habitats are considered to be of more significance to biodiversity, which is expressed in the Metric as 'Distinctiveness'.
- 5.30. With a lack of semi-natural habitats within the Growth Area, the creation of new habitats will be needed to provide the majority of biodiversity net gain, and maximum value will be generated by focusing habitat creation on higher distinctiveness habitats in good condition.
- 5.31. For the purposes of estimating the impact of a 10% biodiversity net gain requirement, and bearing in mind the ecological and other constraints that apply within the Growth Area, it can be divided up into several different categories:
- Extant planning applications; the land already the subject of applications for planning consent
 - Development exclusion areas; the land with the offsets associated with the gas pipelines and overhead power cables
 - Habitat retention areas; land identified in this report to have biodiversity value that should be retained as part of the Growth Area's green infrastructure network
 - Developable area; remaining areas of low ecological value that are therefore available for development
- 5.32. Rough calculations of the baseline habitat unit values of the land parcels in these different categories have been completed in order to indicate the approximate scale of mitigation required as a result of development, and the potential contribution of habitat units in those areas that will be retained as semi-natural habitat (See Table 1 below).
- 5.33. It should be noted that these are desk-based assessments only, and actual calculations will depend on the additional survey information available to applicants, with their more detailed classification of habitats. A cautious approach has been followed, with the assumption that only 'Medium' distinctiveness habitats would be created, although they would achieve 'Good' condition. The calculations are intended to indicate the approximate scale of net gain implications rather than attempting any precise assessment.
- 5.34. Although these figures should be treated with caution, they do indicate that the Growth Area should have the capacity to deliver 10% Biodiversity Net Gain in Habitat Units if treated as a whole, and with a small amount of compensation habitat outside of the Growth Area boundary.
- 5.35. The requirement for 10% biodiversity net gain will also apply to Hedgerow Units and Watercourse Units, which are calculated separately from Habitat Units.
- 5.36. There are approximately 9 km of hedgerows within the Growth Area, but many are boundaries with existing residential or commercial properties and others are in poor condition. While calculations have not been undertaken, as hedge creation will be highly dependent on the layout of developments, it is considered likely that through retention and enhancement of existing hedges and the creation of new ones, a 10% net gain will be readily achievable.
- 5.37. Watercourse Unit calculations are not possible without following a detailed and bespoke survey methodology, which was not possible as part of this study. There are some notable networks of drains within the Growth Area, although the majority are within open arable areas and so are likely to be in 'poor', or at best 'moderate', condition. Careful design of SUDS within new developments should deliver the improvement that will allow for the necessary 10% gain,

through enhancement of existing or the creation of new, with off-site compensation able to address any shortfall.

Table 1 – Habitat Unit calculations

Category	Baseline Habitat Units	Existing habitats	On site BNG potential	Additional Habitat Unit requirement
Land west of Constitution Hill development area	330	Other neutral grassland, cereal crops, other broad-leaved woodland	210 Habitat Units from retained and enhanced habitats, gardens, allotments and green infrastructure ²	10% net gain would mean 360 Habitat Units, leaving a deficit of 150, 90% of which must be of Medium or higher distinctiveness
Land at West Winch development area	50	Cereal crops, modified grass, other neutral grass	50 Habitat Units from retained and enhanced habitats, gardens, allotments and green infrastructure ¹ . Masterplan illustrates the inclusion of 2.6ha of green infrastructure outside of the Growth Area, which could generate an additional 30 habitat units, giving a	10% net gain would mean 55 Habitat Units, leaving a surplus of 25 Habitat Units available
Developable area	210	Cereal crops, modified grassland, other neutral grassland	170 Habitat Units from retained and enhanced habitats, gardens, allotments and green infrastructure ¹ .	10% net gain would mean 230 Habitat Units, leaving a deficit of 60 Habitat units, 11% of which must be of Medium or higher distinctiveness
Habitat retention areas	70	Lowland Meadows, other neutral grassland, other broadleaved woodland	Potential to increase to 80 Habitat Units by improving the condition of woodland and grassland habitats	Surplus of 10 Habitat Units available
Development exclusion areas	100	Cereal crops, modified grassland, other broadleaved woodland	Potential to increase to at least 280 Habitat Units by improving the condition of grassland and woodland habitats and creating a mixture of grassland and scrub habitats	Surplus of 180 Habitat Units available
Total	760			Surplus of 5 Habitat Units

² Calculation assumes 40% built (buildings and infrastructure), 30% vegetated gardens, 20% functional greenspace (recreation, SUDS, allotments, etc.), 10% natural greenspace

Habitat Creation, Restoration and Enhancement Opportunities

- 5.38. This section sets out the types of habitats that should be the targets for creation or enhancement measures to deliver net gain for biodiversity. The identification of the most appropriate and beneficial locations for habitat creation involves two main strands: identifying locations that will buffer or extend existing designated sites; and identifying locations that are most environmentally suitable for the creation of new biodiverse habitat. In some cases, these two strands will overlap, where the best place to create some new habitat is adjacent to an existing designated site, or to put it the other way around, where the land needed to buffer an existing designated site has all the characteristics that allow for high quality habitat to be created.
- 5.39. Within the Growth Area, environmental conditions and site history are more or less consistent, meaning that there are no particular reasons to focus habitat creation in any specific area. As a result, the exclusion areas around pipelines and overhead cables will be the most significant factor in determining where semi-natural habitats should be located. There is nothing about those corridors that prevent them from being the focus for new habitat creation in relation to the rest of the site.
- 5.40. Habitat creation for biodiversity net gain should be focussed in one or more large blocks rather than dispersed within the developed areas so as to maximise value and retain some open countryside aspects. This corresponds to the constraints of the Growth Area set out above. However, it is important that green infrastructure within the developed areas allows species to move across the landscape and penetrate into those new urban areas.
- 5.41. Structurally speaking, within the main habitat creation areas, creating smaller fields divided by good quality hedgerows will create a mix of habitats that will favour some of the birds associated with farmland that would otherwise be lost from the area.
- 5.42. The most significant 'High' distinctiveness habitats of relevance to the location and environmental conditions of the Growth Area include the Priority Habitats 'lowland dry acid grassland', 'lowland heathland' and 'lowland meadows'. With these habitats, the soil conditions will be the most important factor in determining which can be achieved, and this can be aided by removing topsoil or other forms of nutrient stripping. Creating low nutrient status soils encourages species diversity and reduces the level of management effort required, resulting in habitats that can be sustainably maintained more easily. Other neutral grassland is a 'Medium' distinctiveness habitat, with lower species diversity than those mentioned above, but it is reliably deliverable.
- 5.43. Existing areas of unimproved or semi-improved grassland could be enhanced to improve their condition, meaning increased floristic diversity and better sward structure. This can be achieved by introducing management based upon specific nature conservation outcomes, preferably involving grazing, supported by the introduction of green hay from a local species-rich grassland or seeding with locally appropriate species.
- 5.44. Semi-natural woodland habitats are not a feature of the Growth Area currently, nor are they widespread in the surrounding area. Woodland creation also generates fewer biodiversity units due to the time taken for such habitats to achieve maturity. More benefit can be derived from diversifying existing areas of tree cover and managing them to improve their structure. Such actions can increase the natural speed of succession and development towards habitat maturity, such that biodiversity benefits can accrue more rapidly.
- 5.45. Within the developed areas, requiring the provision of an appropriate and targeted mix of "in fabric" bird and bat boxes in a high proportion of new buildings could have a positive impact on urban

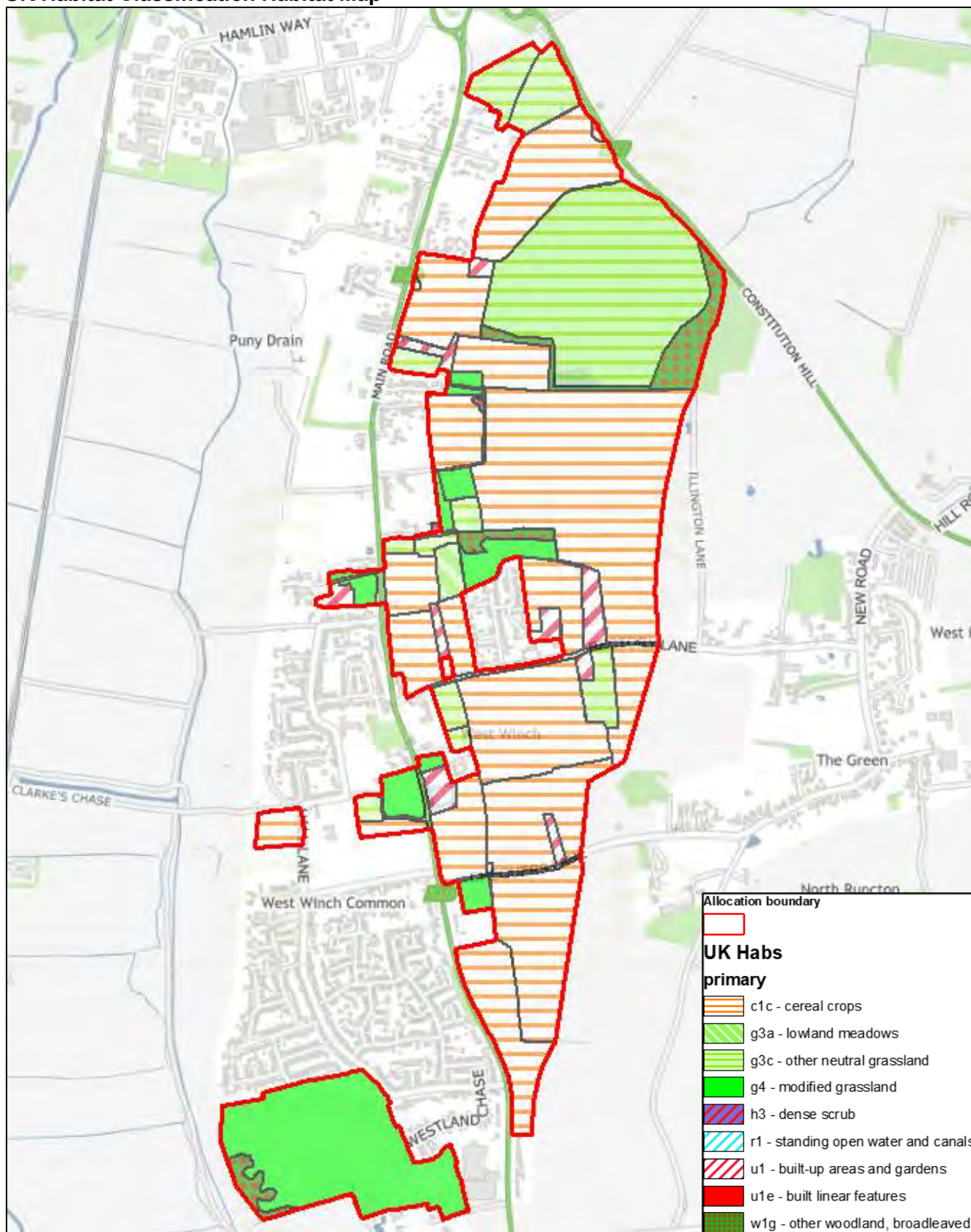
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Ecology and Biodiversity Assessment

species of high conservation priority, such as pipistrelle bats, Swift, House Martin, House Sparrow and Starling. The locations of these boxes should be informed by the relationship between the buildings and the surrounding green infrastructure, enabling easy access to the required resources to maximise the chances of their occupations. For example, bat boxes should be positioned with easy access to linear features (hedges, lines of trees or water courses) so that the bats can readily commute to semi-natural foraging habitat.

Appendix 1

UK Habitat Classification Habitat Map



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